Remedial Investigation/Feasibility Study

Go East Corp Landfill Site
Everett, Washington
Ecology Agreed Order No. DE 18121

for
Washington State Department of Ecology on Behalf of Century Communities

May 17, 2024

GeoEngineers
Earth Science + Technology

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File No. 26410-001-01

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ACRONYMS AND ABBREVIATIONS

AESI	Associated Earth Sciences, Inc.
ARARs	Applicable or Relevant and Appropriate Requirements
bgs	below ground surface
CAAs	cleanup action alternatives
CAP	Cleanup Action Plan
cPAH	carcinogenic polycyclic aromatic hydrocarbons
CQAR	Construction Quality Assurance Report
CSM	Conceptual Site Model
CU	conditional use
CULs	cleanup levels
DCA	disproportionate cost analysis
DO	dissolved oxygen
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FS	feasibility study
HOAs	Kings Ridge Homeowners Association and 108th Street Point Homeowners Association
IACR	Interim Action Completion Report
Landfill	Former Go East Landfill
LFCP	Landfill Closure Plan
MCLs	Maximum Contaminant Levels
MCLGs	Maximum Contaminant Level Goals
mg/L	milligrams per liter
MNA	monitored natural attenuation
MTCA	Model Toxics Control Act
NAVD88	North American Vertical Datum of 1988
NFA	No Further Action
ORP	oxidation-reduction potential
PAHs	polycyclic aromatic hydrocarbons

PCBs	polychlorinated biphenyls
PCHB	Pollution Control Hearings Board
PCOCs	potential chemicals of concern
Permit	SCHD Solid Waste Facility Permit # SW-027
PQLs	practical quantitation limits
RCW	Revised Code of Washington
Rekoway	Rekoway, Inc.
RI	remedial investigation
SCC	Snohomish County Code
SEPA	State Environmental Policy Act
SHA	Site Hazard Assessment
SCHD	Snohomish County Health Department (formerly Snohomish Health District)
SMCL	Secondary Maximum Contaminant Level
SMS	Sediment Management Standards
SVOCs	semi-volatile organic compounds
Qal	Alluvium deposits
Qtb	Transitional beds formation
Qva	Vashon advance outwash formation
Qvr	Vashon recessional outwash formation
Qvt	Vashon till formation
USGS	United States Geological Service
VOCs	volatile organic compounds
WAC	Washington Administrative Code
µg/L	micrograms per liter
µS/cm	microsiemens per centimeter

EXECUTIVE SUMMARY

GeoEngineers, Inc. (GeoEngineers) has prepared this Remedial Investigation/Feasibility Study (RI/FS) report on behalf of Century Communities of Washington, LLC (Century Communities) for the Go East Corp Landfill Site (Site) located at 4330 108th Street SE in Everett, Washington. This report complies with the Washington State Model Toxics Control Act as required under an Agreed Order with the Washington State Department of Ecology (Ecology). The Go East Landfill is a closed, limited-purpose landfill situated on a 41-acre property currently (2023) owned by Century Communities.

The Site is located on an escarpment above the Snohomish River Valley (see Figure 2-1), where the Vashon advance outwash sand formation outcrops above the underling Quaternary transitional beds formation that exists as the surficial formation in the Snohomish River Valley. The Go East Corp. Landfill is located in a former ravine where sand mining was performed between 1969 to 1972. Wood waste and construction materials were disposed in the landfill between 1972 and 1983. Snohomish County Health Department (SCHD) permitted the landfill under Chapter 173-301 of the Washington Administration Code (WAC), which was repealed as an antiquated regulation in 1985 and succeeded by WAC 173-304 and later by WAC 173-350. The landfill was closed as a limited purpose landfill under current regulations in WAC 173-350-400 as part of the redevelopment of the property.

Site grading and landfill closure activities were performed between March 2021 and July 2022 pursuant to Land Disturbing Activity permits issued by Snohomish County Planning and Development Services and a Solid Waste Facility Permit issued by the Snohomish County Health Department. The permitted landfill closure activities (see Figure 2-4) included:

- Excavation of landfill material from the peripheral areas of the landfill (i.e., the wedge area) and the placement of the landfill material in the center of the landfill, which reduced the landfill area from approximately 9.6 to 6.0 acres.
- Closure of the landfill with an engineered cover that includes a 60-mil high density polyethylene (HPDE) membrane, a composite drainage layer, and soil cover.
- Construction of two stormwater detention ponds on the southeast portion of the landfill to reduce the peak stormwater runoff from the adjoining residential development. The stormwater ponds are underlain by a double liner with an interstitial leak detection layer.
- Construction of a geomembrane-lined landfill gas collection trench along the periphery of the landfill to collect and ventilate any accumulated methane beneath the landfill liner.
- Preservation of the steep, wooded northeast landfill slope and construction of a rock buttress at the toe of the slope to increase its structural stability.

Additional site development activities included:

- Diversion of a small surface water stream. Stream 1 originates from urban stormwater drainage and wetlands near the west property boundary. Stream 1 originally extended through the ravine that contains the landfill. Stream 1 was diverted to the ravine south of the landfill to accommodate sand mining and landfill construction. As part of the current site development, Stream 1 was diverted to a lined channel near the base of the regraded west slope of the property. Stream 1 discharges down a steep slope through HDPE pipe to an energy dissipation mat that adjoins Stream 2.

- A groundwater interceptor trench was constructed beneath the lined Stream 1 channel. The interceptor trench collects perched groundwater within the advanced outwash formation and diverts the groundwater to Stream 2.
- The property was regraded for residential development, which included filling the wedge area with clean onsite and imported soil.
- During construction, a mudflow occurred beyond the landfill property in September 2021. The mudflow originated when the construction contractor placed approximately 500 to 700 cubic yards of clean fill material on a cut of the steep slope above Stream 3, which originates from the base of the landfill. The mudflow occurred when precipitation and seepage mobilized the fill material, causing a mudflow of transitional bed soil and trees to the wetlands at the base of the landfill. The current property owner has voluntarily worked with Ecology's Shorelands and Environmental Assistance Program to purchase wetland mitigation credits and to revegetate and monitor the recovery at the wetlands at the base of the landfill.

Landfill closure activities are described in the Construction Quality Assurance Report (PACE Engineers, 2022).

The former property owner entered in an Agreed Order with Ecology under the state's cleanup law, the Model Toxics Control Act (MTCA), which requires the owner to perform an interim action during landfill closure and to prepare a Remedial Investigation/Feasibility Study (RI/FS) and Cleanup Action Plan (CAP) for the Site.

The interim action consisted of supplemental landfill waste characterization and soil sampling to confirm that potentially contaminated soil was removed from beneath the wedge area. The interim action also included reconnaissance of the steep, vegetated northeast landfill slope and confirmation soil sampling associated with debris removal. The interim action also included soil testing beyond the landfill boundary associated with debris removal, characterization of fill material, and stormwater management. The interim actions are summarized in the Final Interim Action Completion Report (GeoEngineers 2021b). GeoEngineers (2022a, 2022b) describe supplemental interim actions for the northeast landfill slope reconnaissance and the stormwater management area.

This RI/FS Report describes the Site background, environmental setting, previous investigations, and the remedial investigation sampling investigation. Groundwater in the Vashon advance outwash sand formation and urban stormwater runoff discharge to numerous surface water streams that originate along the escarpment above the Snohomish River Valley. Groundwater beneath the landfill discharges toward Stream 3 at the toe of the northeast landfill slope (see Figures 3-2A to 3-2D). The impact of water infiltration through the landfill is evident in three groundwater wells constructed through the wedge area and in surface water and two shallow monitoring wells that were constructed near the toe of landfill. Leachate has increased the alkalinity and reduced the oxygen in groundwater, which has reduced ferric iron and manganese to more mobile divalent species in groundwater and surface water. Polycyclic aromatic hydrocarbons (PAHs) are detected in groundwater, surface water, and sediment downstream of the landfill, and pesticide compounds have been detected in sediment upstream and downstream of the landfill.

The Remedial Investigation develops cleanup levels for groundwater, surface water, and sediment that are protective of human health and the environment. PAHs were detected at concentrations slightly above the cleanup levels in two wedge area groundwater monitoring wells during one sampling event at each well. PAH compounds were also detected in surface water at the toe of the landfill, but at concentrations below the cleanup levels. Pesticides, presumably from urban stormwater drainage, were detected in sediment upstream and downstream of the landfill. The pesticide compound heptachlor was detected at concentration of six times the cleanup level in sediment prior to the mudflow event. Upstream and post-development downstream sediment contains heptachlor at concentrations below the cleanup level.

The primary contaminants at the Site are mobilized naturally occurring metals. The cleanup levels for arsenic, iron, and manganese were adjusted to their site-specific natural background concentrations calculated from non-impacted wells upgradient of the landfill. Arsenic, lead, and nickel were detected slightly above their cleanup levels in monitoring well MW-7, which is completed in groundwater beneath the wedge area. Manganese and iron are detected above the cleanup levels in groundwater and surface water at the Site. Manganese is detected at concentrations up to 2,400 micrograms per liter (µg/L) in groundwater and surface water, which exceeds the 354 µg/L natural background concentration and the 750 µg/L health-based cleanup level for drinking water. Iron sporadically exceeds the natural background concentration in groundwater, but is consistently detected in surface water at the toe of the landfill at concentrations ranging from 5,000 to 12,000 µg/L, which exceeds the 3,010 µg/L natural background concentration. Groundwater beneath the wedge area is recovering because the overlying landfill material has been removed. Iron and manganese readily oxidize as the surface water at the toe of the landfill mixes with ambient air, which results in the precipitation of the oxidized metals in the downstream sediment. This is evident by the rust-colored iron deposits observed downstream of the landfill.

The Feasibility Study screens remedial technologies and develops three cleanup alternatives for evaluation. The cleanup alternatives include:

- Alternative 1. Consists of the completed landfill closure activities.
- Alternative 2. Adds monitored natural attenuation and natural recovery. Groundwater and surface water are monitored to evaluate their recovery following removal of landfill waste from the wedge area and the construction of the final landfill cover. Although the sediment is compliant with the cleanup levels, the property owner is voluntarily monitoring the recovery of the wetlands associated with Stream 3 following their revegetation after the mudflow event.
- Alternative 3. Adds active surface water treatment for the manganese and iron and potentially for organics that are encountered below the cleanup levels.

The RI/FS recommends Alternative 2, as active surface water treatment is unnecessary, potential disruptive, and potentially requires additional permitting to discharge the treated water. Groundwater and surface water monitoring are required under the solid waste regulations in WAC 173-350-400(7) and -500 until the groundwater meets the groundwater quality standards.

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

1.0 INTRODUCTION AND REGULATORY BACKGROUND

GeoEngineers, Inc. (GeoEngineers) has prepared this Remedial Investigation/Feasibility Study (RI/FS) report on behalf of Century Communities for the Go East Corp Landfill Site (Site) located on property at 4330 108th Street in Everett, Washington. The Go East Landfill Site has been assigned Facility Site ID 2708 and Clean Site ID 4294. The approximate Site coordinates are 47.89783 N latitude, 122.17186 W longitude. The property where the Site is located is shown in Figure 1-1. Washington State Department of Ecology's (Ecology's) website[1] for Go East Corp Landfill has electronic documents, photos of the stages of the landfill work, and photos of landfill closure in a Flickr link.

The Go East Corp Landfill (Landfill) is a closed, limited-purpose landfill as defined in Washington Administrative Code (WAC) Chapter 173-350-400. The Landfill and the 41-acre property on which it is located (Property) are currently (2023) owned by Century Communities of Washington, LLC (Century Communities).

This RI/FS was completed following Landfill closure activities, which are described in the *Go East Landfill Closure Plan* (LFCP) (PACE Engineers, Inc. [PACE] 2018) and Construction Quality Assurance Report (CQAR) (PACE 2022). The Landfill area was reduced from 9.6 acres to a final area of approximately 6 acres by excavating and relocating landfill material from the outer margin of the Landfill to the interior portion of the Landfill as part of Landfill closure. Native soil was sampled at the base of the excavation following removal of landfill material from the outer margin of the Landfill area. Native soil samples were collected to confirm the native soil does not contain Landfill-related contaminants at concentrations exceeding risk-based regulatory criteria. This confirmation soil sampling was part of an interim action conducted by the former Property owner P&GE under Agreed Order No. DE 18121 with Ecology (Agreed Order). The interim action was completed in 2021 as described in the Final Interim Action Completion Report (GeoEngineers 2021b). The outer margin area of the Landfill that was excavated and relocated is identified as the "interim action excavation area" or the "wedge area."

An engineered capping system was installed over the Landfill. The landfill cap prevents direct contact with landfill materials, reduces stormwater infiltration, and controls landfill gas emissions.

Undeveloped land on the west, south, and east sides of the Landfill, including the wedge area, is being developed with residential lots post-Landfill closure as part of the Bakerview (Alpine Estates) Plat Subdivision. The LFCP describes the planned development of the Bakerview Plat Subdivision, which is now being referred to as the Alpine Estates Subdivision. The Snohomish County Health Department (SCHD) and Ecology approved the LFCP as part of SCHD Solid Waste Facility Permit # SW-027 (Permit), subject to the development and written approval of Landfill closure construction plans comprising final design drawings, construction specifications, and CQAR pursuant to WAC 173-350-400(5). The Landfill closure construction plans were reviewed by SCHD and Ecology and approved by SCHD in August 2020. The CQAR was finalized July 1, 2022.

Agreed Order No. DE 18121 identifies remedial actions required to be performed to comply with the Washington State Model Toxics Control Act (MTCA) (Revised Code of Washington [RCW] Chapter 70A.305).

[1] https://apps.ecology.wa.gov/cleanupsearch/site/4294

The Agreed Order also requires the owner/operator to prepare this RI/FS Report in addition to the interim action performed in 2021. The purpose of the RI is to collect data necessary to adequately characterize the Site for the purpose of developing and evaluating cleanup action alternatives (CAAs). The purpose of the FS is to develop and evaluate CAAs and to select the cleanup action for the Site. MTCA allows containment to be the preferred remedy for soil/debris at historical landfills under WAC 173-340-370(3). The landfill was closed under the jurisdiction of SCHD.

The owner/operator has prepared a Cleanup Action Plan (CAP) in accordance with applicable requirements of the MTCA Cleanup Regulation (WAC 173-340), the Washington State Solid Waste Handling Standards (WAC 173-350), and the Washington State Sediment Management Standards (WAC 173-204).

2.0 SITE BACKGROUND

This section describes the Property and the Landfill operational history and regulatory background.

2.1. Property Description

This section describes the Property location and physiographic setting, the spatial extent of the Landfill, vegetation and structures on the Property, surrounding land use, and the planned future land use of the Property.

2.1.1. Location and Physiographic Setting

The Property (Snohomish County Parcel Number 280521-004-002-00) is located at 4330 108th Street Southeast in Everett, Washington, in the northwest quarter of the southeast quarter of Section 21, Township 28 North, Range 5 East, Willamette Meridian. The Property is situated on a bluff overlooking the Snohomish River Valley that is approximately at sea level. The Snohomish River is approximately 1.8 miles north-northeast of the Property. Silver Lake is approximately 1.4 miles west of the Property. The location of the Property relative to regional physiographic features is shown in Figure 2-1.

The Landfill is situated within a former eastward-sloping ravine that previously existed in the northern half of the Property. A map showing the historical topography, surficial geology, and original Stream 1 orientation through the former ravine beneath the Landfill is shown in Figure 2-2. Sand and gravel were mined from the walls of the ravine from 1969 until the early 1970s prior to beginning landfilling operations. The sand and gravel mine was a source of aggregate fill material for local construction projects. The mining operations widened the ravine before landfilling activities began in the early 1970s. Portions of the steep bank below the plateau areas in the western and northwestern areas of the Property likely represent relic cut faces from the mining operations. The approximate shape of the widened ravine created by the mining activities has been estimated by others (Associated Earth Sciences, Inc. [AESI] 2009a) and is depicted in Figure 2-2. Landfilling operations began in the early 1970s (after sand and gravel mining ceased) and continued until 1983 (see Section 2.2).

2.1.2. 2019 Site Conditions

The 2019 Site conditions (prior to the excavation of the wedge area and landfill closure) are depicted in Figure 2-3. Two eastward-sloping drainage ravines are present in the southern half of the Property ("Stream 2" and an unnamed ravine to the south). These ravines merge near the eastern Property boundary and become a single, northward-sloping ravine that extends to the Snohomish River Valley. The ground surface generally slopes gently to the east in the western and southwestern portions of the Landfill. The ground surface slopes steeply to the northeast in the northeastern portion of the Landfill where the ground surface is heavily vegetated. A bifurcated Stream 1 flowed into Stream 2. Stream 1 has been modified as discussed in Section 2.1.3 below. Stream 3 emanated from the northeast toe of the landfill slope and flowed into Stream 2. Stream 3 has been modified as discussed in Section 2.1.3. Figure 2-3 shows the wedge area (highlighted yellow) prior to excavation and consolidation into the final landfill boundary. Figure 2-3 also shows historical investigation locations including test pits, monitoring wells, and gas probes. These locations are discussed in Section 4.

2.1.3. 2023 Site Conditions

The 2023 Site conditions (after excavation and fill of the wedge area and landfill closure) are depicted in Figure 2-4. Figure 2-4 shows the following major changes to the Site, which are described in the Landfill Construction Quality Assurance Report (PACE 2022):

- The former extent of the wedge area is shown in Figure 2-4 (the area between the former extent of wedge area and the final landfill limit). The interim action included the collection of confirmation soil samples from the wedge area to ensure that landfill material and any residual soil contamination was removed during landfill closure. The wedge area was filled with clean soil. The Interim Action Completion Report (GeoEngineers 2021b) describes the soil testing of the extents of excavation and the imported fill.
- All landfill material excavated from the wedge area was consolidated centrally within the final Landfill area. Figure 2-4 shows the final landfill limit. The cleared portions of the landfill were capped with an engineered cap. The engineered cap consists of a prepared subgrade, a minimum 6-inch sand layer, a 40-mil linear low-density polyethylene (LLDPE) geomembrane, a geosynthetic drainage layer, and a minimum 12-inch soil cover. The steep northeast slope of the landfill was preserved and a geomembrane cap was not constructed, per engineering rationale as discussed and agreed upon in the Amended Decision of the Snohomish County Hearing Examiner (“the Amended Decision”) (Snohomish County 2018). Additionally, a rock buttress was constructed at the toe of the northeast landfill slope.
- The cleared portions of the landfill were graded and capped, and a stormwater detention system was installed consisting of two double-lined stormwater ponds on the southern side of the landfill. The stormwater ponds discharge to Stream 2 to the south.
- Stream 1 was modified and channeled into one stream that flows south into a storm drain pipe and into Stream 2.
- A groundwater interceptor trench, consisting of an approximate 12-inch-thick rock-filled trench with an 8-inch perforated drain pipe, was installed at the toe of a slope in the western portion of the Property beneath Stream 1. The interceptor trench is overlain by a welded 40-mil LLDPE geomembrane and a minimum of 12-inches of sand. The interceptor trench drains groundwater to Stream 2 using the Stream 1 storm drain pipe discussed above.
- A weir box was installed within the rock buttress at the toe of the northeastern landfill slope. The weir box collects leachate that discharges into Stream 3.

2.1.4. Vegetation

The capped portions of the landfill and planned development area have been cleared, and remaining vegetation consists of the undisturbed portions of the 41-acre Property west of the Landfill and in ravine areas south of the Landfill (Figure 2-4). These areas contain various vegetation including red alder, big leaf maple, Western hemlock, salmonberry, sword fern, filaree, and piggy-back plant. The northeast landfill slope was preserved with native vegetation and was not capped.

2.1.5. Groundwater Monitoring Wells and Landfill Gas System

Four groundwater monitoring wells were installed in 2009 (MW-1 through MW-4) and six monitoring wells were installed in 2021/2022 (MW-5 through MW-10). Groundwater was not observed in monitoring well MW-4 during multiple sampling events. Well MW-4 was decommissioned in 2021. The monitoring wells are discussed further in Section 4.2.

A passive landfill gas collection system was installed for venting and monitoring purposes as part of the landfill closure. The passive landfill gas collection system is described in the CQAR (PACE 2022).

2.1.6. Surrounding Land Use

Land use in the vicinity of the Property consists of residential parcels and open space with limited commercial development. The Property is bounded on the north by The Point residential subdivision and an open space tract; on the west by King's Ridge Division 1 residential subdivision and an open space tract; on the south by the Waldenwood West Division 1 and the Pinehurst at Waldenwood Division 2 open space tracts; and on the east by an Olympic Pipeline easement and the Pinehurst at Waldenwood Division 2 open space tract (Figure 2-3).

The Snohomish River Valley (beginning at Lowell Larimer Road) is approximately 1,000 feet northeast of the Property (Figure 2-1) at an approximate elevation of 25 feet North American Vertical Datum of 1988 (NAVD88). The Snohomish River Valley is approximately 235 feet below the surface of the landfill and approximately 85 feet below the toe of the landfill. Agriculture is the predominant land use within the Snohomish River Valley.

2.2. Landfill Operational History and Regulatory Background

Detailed descriptions of the Landfill operational history are provided in the Agreed Order, the LFCP, and the *Amended Decision of the Snohomish County Hearing Examiner: Amended Decision Affirming SEPA Threshold Determination, Approving Rezone, and Approving Preliminary Subdivision with Conditions* (Amended Decision) (Snohomish County 2018). The Agreed Order and the Amended Decision also provide detailed summaries of the Landfill regulatory background. The summary presented below is based on information contained in the Agreed Order.

The former ravine beneath the Landfill was used as a source of sand and gravel aggregate materials beginning in 1969 when a permit was issued for excavation and sand reclamation for a two-year period. Sand and gravel were mined from the walls of the ravine for several years prior to beginning landfilling activities.

Rekoway, Inc. (Rekoway) purchased the Property in February 1972 and received a conditional use (CU) permit in March 1972 to perform sand and gravel excavation and operate a solid waste landfill accepting wood, mineral, and concrete solid materials, but not garbage or putrescibles (i.e., solid wastes that contain organic materials such as food waste or wastes of animal or vegetable origin, which readily biodegrade in a landfill environment). In 1974 or 1975, Rekoway sought authorization to accept tires and bulk packaging such as cardboard, pallets, large parcel wrappings, shredded paper, and warehousing waste materials. Snohomish County issued a CU permit allowing additional types of waste in September 1975.

In August 1974, Rekoway accepted approximately 200 cubic yards of baghouse dust containing magnesium, phosphate, and aluminum dusts from Northwest Wire and Rope in Seattle (Ecology & Environment, Inc. 1987). The initial intermixing of these waste materials caused fires when the materials were first deposited in the Landfill. The fire hazard was eliminated when the different types of wastes were separated using a front-end loader. The fires caused by the metal dusts soon burned out and the remaining waste materials were covered with soil (Ecology & Environment, Inc. 1987). Rekoway also accepted partially burned trees and stumps that may have contributed to ongoing smoldering through 1977, when SCHD and Snohomish County suspended Rekoway's CU permit.

Go East conditionally purchased the Property from Rekoway in 1979 and applied to Snohomish County to reinstate the CU permit and approve its transfer to Go East. Go East applied for a new wood waste landfill permit following Snohomish County's conditional approval of these requests. Both the CU permit and the wood waste landfill permit were conditioned on extinguishing existing fire(s) left by Rekoway. Go East excavated smoldering wood waste debris (primarily large tree stumps) associated with Rekoway's previous operations and extinguished the smoldering fires from November 1979 through early 1980. Full Landfill operations commenced in early 1980 after the Snohomish County Fire Marshal formally verified that Go East had successfully extinguished the fires. Thereafter, the CU permit and the wood waste landfill permit were renewed until 1982 when the CU permit expired. SCHD renewed the wood waste landfill permit in 1983. SCHD frequently oversaw and inspected the operations and the imported waste materials without finding problems under its regulations throughout Go East's operation of the Landfill. SCHD issued a stop work order in 1983 and Go East stopped accepting waste in the summer of 1983.

An additional fire began on the surface of the Landfill's northeastern slope in October 1983. The soil cover in the area where this fire started was washed away when the local fire district sprayed water on the slope in an effort to extinguish the fire. This caused the fire to spread across the top surface of the Landfill without penetrating to the lower disposal cells. The fire subsequently burned out in January 1986. There have been no other fires at the Landfill since January 1986.

SCHD prepared a Site Hazard Assessment (SHA) under MTCA in May 2004 (SCHD 2004). SCHD recommended that future residential development of the Property include and implement a landfill closure plan based on the SHA findings. SCHD further recommended No Further Action (NFA) at the Site under MTCA. SCHD subsequently issued an NFA letter in June 2004 that stated Ecology had made an NFA determination for the Site based on the SHA.

P&GE acquired the Property from Go East in May 2009 and subsequently developed plans to close the Landfill as part of Property redevelopment. SCHD issued the Permit to P&GE on May 11, 2018. The Permit authorized a limited-purpose landfill subject to WAC 173-350-400 and required P&GE to close the Landfill in accordance with the approved LFCP. Ecology's Solid Waste Management Program has provided technical support to SCHD for the authorization and oversight of the Permit.

The Kings Ridge Homeowners Association and the 108th Street Point Homeowners Association (collectively, the HOAs) appealed SCHD's issuance of the Permit to the Washington State Pollution Control Hearings Board (PCHB). PCHB found that the HOAs had not met their burden to prove either that the LFCP or the Permit violated applicable landfill closure regulations following an adjudicative hearing on the appeal. The PCHB determined that the LFCP met the closure requirements specified in WAC 173-350-400(8) and that additional design evaluation and components could be added to the Permit-required design drawings, construction specifications, and construction quality assurance plan if necessary and appropriate.

Ecology prepared an Initial Investigation Field Report for the Site in June 2019 based on information contained in the report *Go East Landfill – Information for MTCA Assessment* (Practical Environmental Solutions [PES] 2019) that was submitted to Ecology in March 2019 on behalf of the HOAs. The Initial Investigation Field Report stated that concentrations of total and dissolved arsenic and total chromium, iron, lead, and/or manganese reported in groundwater samples collected from three groundwater monitoring wells in 2009 exceeded MTCA default cleanup levels and recommended that the Site be listed on Ecology's Confirmed and Suspected Contaminated Sites List.

Ecology rescinded its 2004 NFA determination on June 18, 2019, and added the Site to Ecology's Confirmed and Suspected Contaminated Sites List. The Cleanup Site Identification Number is 4294 and the Facility/Site Identification Number is 2708.

P&GE performed an interim action in April through July of 2021 in accordance with the Ecology-reviewed Interim Action Work Plan. The interim action activities were performed in concurrence with the landfill closure activities, and intended to confirm that any potential soil contamination be removed from the beyond the final landfill boundary. The interim action activities are documented in the Final Interim Action Completion Report (IACR) (GeoEngineers 2021b). Table 1 and Figure 3 from the IACR include results of the interim action soil sampling and are included as Appendix A to this RI/FS.

P&GE closed the landfill in accordance with the requirements for limited purpose landfills (WAC 173-350-400) and the LFCP beginning in March 2021 and concluding in July 2022 as documented in the CQAR (PACE 2022). See the CQAR for a complete description of activities. A summary of major landfill closure and associated activities pertinent to this RI/FS include the following:

- The excavation of landfill material from the wedge area and placement and capping of the landfill material beneath an impermeable landfill cap; thus reducing the landfill footprint from approximately 10 to 6 acres.
- Excavation of clean soil from the western portion of the Property to use as backfill within the interim action excavation and in other areas of the Property as needed.
- Installation of a groundwater interceptor trench at the toe of the western slope that discharges water to Stream 2.
- Additional clearing and grading.
- Placement of clean imported fill on portions of the Property.
- Installation of an engineered cap over the final limits of the landfill, except where natural vegetation was preserved on the steep northeast landfill slope.
- Construction of access path and rock buttress at the toe of the northeast slope of the landfill.

- Construction of permanent stormwater facilities including detention ponds that discharge stormwater to Stream 2.

Century Communities purchased the Property in 2022. Century Communities is developing the Property as a residential development.

The RI/FS field investigation activities discussed in this report occurred from approximately 2021 to 2022.

3.0 ENVIRONMENTAL SETTING

This section describes the climate, geology, hydrology, and hydrogeology of the Site and/or Everett area. Groundwater use, ecological habitat, and post-development setting are also discussed.

3.1. Climate

Western Snohomish County has a temperate marine climate characterized by cool, wet winters and warm, dry summers. Air temperatures are moderated by the Pacific Ocean and Puget Sound, which provide a large supply of moisture for storms that typically move from west to east across the County (USGS 1997). The temperature in the Everett area is rarely below 26 degrees Fahrenheit (°F) or above 87°F (weatherspark.com 2020). The record high temperature for Everett is 98°F with the record low temperature is 0°F. The average monthly maximum temperature is about 73°F in July and August, and the average monthly minimum temperature is about 33 to 34°F in December, January, and February (en.wikipedia.org 2020).

The Everett area receives precipitation 163 days per year on average. The average annual precipitation is approximately 36 inches. The average annual snowfall is approximately 7 inches. Most of the precipitation occurs October through April with an average of 27 inches of precipitation falling during these months and 120 days receiving measurable precipitation. The wettest months are November through January which historically have averaged approximately 4.5 to 5.0 inches of precipitation per month. The driest months are July and August which historically have averaged approximately 1.0 to 1.5 inches of precipitation per month (en.wikipedia.org 2020). The highest monthly rainfall total was approximately 9.8 inches recorded in January 1971 (komonews.com 2020). The 100-year rainfall amounts in the Everett area are approximately 1.8 inches, 3.4 inches, 6.5 inches, and 8.0 inches (Otak, Inc. 2015) for a 6-hour, 24-hour, 4-day, and 7-day storm, respectively.

The predominant average hourly wind direction in Everett varies throughout the year. The predominant wind direction from October through March usually ranges from south to east. The predominant wind direction from May through August usually ranges from west to north. Mean hourly wind speeds in Everett generally range from approximately 1 to 8 miles per hour, with only minor seasonal variation over the course of the year (weatherspark.com 2020). Peak historical wind gusts recorded in the Everett area are on the order of 45 miles per hour (komonews.com 2020).

Barometric pressure in the Everett area ranged from approximately 29.1 to 30.6 inches of mercury in 2019. The largest pressure fluctuations occurred in the fall and winter with a periodicity of approximately 7 to 15 days. Barometric pressure fluctuations in the spring and summer were typically one tenth to one half the amplitude of the fall and winter pressure fluctuations (wxug.org 2020).

3.2. Regional Surface Water Hydrology

The Property is situated in the Marshland Tributaries drainage basin within the City of Everett Snohomish River watershed (Otak, Inc. 2017). The Marshland Tributaries basin constitutes 3.5 square miles (30 percent) of the City's 11.6 square-mile Snohomish River watershed. Most of this basin lies southeast of the Everett city limits but within the Everett Urban Growth Area. The headwaters of the basin's tributaries are located within the upland bluffs along the western margin of the Snohomish River Valley. The upland bluffs are heavily urbanized with a significant amount of residential land use and some commercial use. The tributaries receive surface water drainage from the bluff areas and flow through steep ravines in an easterly to northeasterly direction before discharging to a series of agricultural drainage channels in the Snohomish River floodplain. The floodplain drainage channels discharge to the Snohomish River (Otak, Inc. 2017). As of 2004 there were 565 acres of land irrigated with surface water collected within a 2-mile radius downgradient of the Property (SCHD 2004). The land acreage currently irrigated with downgradient surface water including water obtained from floodplain drainage channels and the Snohomish River is unknown.

The historical development in the residential and commercial areas of the Marshland Tributaries basin has resulted in degraded water quality conditions. The significant urban footprint of the upland bluff areas produces surface water runoff with a variety of pollutants including metals, fertilizers, pesticides, nutrients, and fecal coliform bacteria. Commercial agriculture and pasture lands dominate land uses in the Snohomish River Valley. These land uses likely contribute sediment, nutrient, and bacterial contamination to receiving waters through disturbed soils, application of fertilizers, and livestock grazing (Otak, Inc. 2017).

Surface water quality in the Marshland Tributaries basin is generally poor based on 2002 data. Elevated concentrations of fecal coliform, copper, and lead have been reported (Otak, Inc. 2017). Pet wastes and failing septic systems are likely sources of fecal coliform. The elevated copper and lead concentrations are likely a result of untreated stormwater from roads and parking lots. High sediment loads have been reported and are likely due to erosion from the steep streams on the bluffs. Elevated nutrient concentrations also have been reported and are likely a result of fertilizer use in upland residential areas (Otak, Inc. 2017).

A 2002 study conducted by the Snohomish County Public Works Department predicted increased residential infill development in the Marshland Tributaries basin (Otak, Inc. 2017). These land use changes typically increase pollutant levels in surface water runoff due to increased impervious surfaces, roadway traffic, and accompanying commercial activity. The 2002 study predicts water quality problems will persist and potentially worsen due to increased development including potential increases in nutrient loading and fecal coliform concentrations (Otak, Inc. 2017).

3.3. Site Surface Water Hydrology

The site is bordered on the north and west by existing residential developments including stormwater infrastructure associated with the developments. The stormwater infrastructure to the west discharges to the site (into "Wetland A") and Stream 2 as discussed below. Stormwater from urbanized areas often contains higher concentrations of stormwater pollutants compared to undeveloped land, and this appears to be the case for the Go East site and surrounding development. Stormwater that discharges to Wetland A likely contains contaminants associated with urban runoff including metals and organics (e.g., pesticides and polycyclic aromatic hydrocarbons), as evidenced by detections of heptachlor in Wetland A sediment (sample SEDB-3 shown in Table 6-4 and Figure 5-1A) and low-level detections of polycyclic aromatic hydrocarbons in Stream 2 (samples SP2 and SP3 shown in Table 6-3 and Figure 5-1A) as discussed in Section 6 below.

There are three streams (Streams 1 through 3) in the vicinity of the Landfill (Figure 2-4). Stream 1 enters the west property boundary through Wetland A, which is now routed to flow south in a graded channel before descending through a drainage pipe and gabion mat where it discharges to Stream 2. The groundwater interceptor trench installed beneath Stream 1 captures shallow groundwater that discharges from the west hillside and discharges the groundwater through the same drainage pipe to Stream 2.

Stream 2 flows onto the Property near the southwest property boundary and then east through the drainage ravine south of the Landfill. Stream 2 is conveyed through a culvert and drop structure near the Olympic Pipeline easement, and then flows north beyond the eastern property boundary. Stream 3 discharges into Stream 2 beyond the northeastern corner of the Property. Stream 2 drains to the Snohomish River Valley. Two water rights are associated with this stream – Water Rights Record/Document Numbers S1-036523CL and S1-005837CL.

Stream 3 previously originated as several leachate seeps at the toe of the landfill in the northeast portion of the Property. A collection channel was constructed within the rock buttress at the toe of the landfill to collect water from the various seeps and direct the flow into a weir box. This activity was done as part of landfill closure activities. Water discharges from the weir box and flows east off the Property where it joins Stream 2.

Rekoway (the operator of the Landfill prior to Go East's acquisition of the Property) allegedly installed a subdrain on the bottom of the former ravine beneath the Landfill at the direction of SCHD and PDS before landfilling activities began (P&GE 2020). The subdrain reportedly consists of a perforated pipe embedded in gravel. The drainage pipe was not observed during construction of the rock buttress at the toe of the landfill. The operational status of the drainage pipe is unknown although the pipe is likely clogged and potentially crushed. Nevertheless, groundwater likely flows in the Qva deposits near the base of the Landfill and discharges through overburden on the northeast landfill slope, where it discharges from seeps and is collected in the weir box and onto the Qtb formation (lacustrine silt and other pre-Vashon deposits) at the base of the landfill slope. As described in Section 3.4, the Stream 3 channel also includes deposed sand from historical erosion. The weir box provides the headwater for Stream 3.

3.4. Site Geology

Three geologic units have been mapped on the Property (Figure 2-2). Refer to Figures 2-2, 2-4, and 3-1 in the discussion below. Figure 2-2 shows the surface geology. Figure 2-4 shows two geologic cross sections; Section A–A' extends through the centerline of the historical ravine and Section B–B' transverses the historical ravine. The cross sections are shown in Figure 3-1.

The three geologic units on the Property consist of approximately 10 to 60 feet of Vashon glacial till (Qvt) (a mixture of sand, silt, pebbles, cobbles, and boulders with low permeability), underlain by approximately 80 to 120 feet of Vashon glacial advance outwash (Qva) (primarily sand with some gravel with high permeability), underlain by pre-Vashon glacial lacustrine silt deposits (with low permeability). Glacial lacustrine silt deposits have been identified throughout the Snohomish River Valley and adjacent bluff areas. The glacial lacustrine silt deposits constitute the upper portion of the transitional beds stratigraphic sequence (Qtb) within the Property boundary. The glacial till (Qvt) mantles the plateau areas in the western and northwestern portions of the Property at elevations greater than approximately 280 feet NAVD88. Directly beneath the Qvt, the advance outwash (Qva) deposits constitute the ridges, walls, and floors of the ravines at elevations between approximately 180 to 280 feet NAVD88. The lacustrine silt deposits of the upper Qtb constitute the walls and floors of the ravines at elevations below approximately 180 feet NAVD88. Some sand present near the toe of the landfill could represent historical erosion and subsequent deposition of advance outwash sand before or during the mining operations, or sand eroded and subsequently deposed from the soil cap that was placed over the landfill's northeast slope after landfill operations ceased.

The *Geologic Map of the Everett 7.5-Minute Quadrangle, Snohomish County, Washington* (USGS 1985) indicates that the Qtb unit comprising the lacustrine silt and other pre-Vashon deposits are laterally continuous across a broad area of the bluffs along the western margin of the Snohomish River Valley including the areas north, northeast, and east of the Property. This suggests the lacustrine silt is present below the Qva unit throughout the Property. The lacustrine silt was encountered below the Qva deposits in the groundwater monitoring well borings drilled in 2009 and 2020 (see Section 4.2).

3.5. Regional Hydrogeology

The USGS published a report in 1997 that describes the groundwater system and groundwater quality in western Snohomish County (USGS 1997). Most of the information presented in this section is summarized from this USGS report.

Western Snohomish County is underlain by up to 1,200 feet of unconsolidated Quaternary deposits that are mostly of glacial origin. Six hydrogeologic units have been defined in the Quaternary deposits. The two upper units include the alluvium (Qal) and the Vashon glacial recessional outwash (Qvr) that have been defined as aquifers. The Qal ranges from approximately 40 to 120 feet thick and the Qvr ranges from approximately 40 to 250 feet thick. Neither of these units is present on the Property.

The Qvr is underlain by the Qvt (Vashon glacial till) which acts as an extensive confining unit that ranges from approximately 70 to 250 feet thick. The Qvt is underlain by the Qva (Vashon glacial advance outwash) that ranges from approximately 120 to 350 feet thick. The Qva is considered western Snohomish County's principal aquifer in terms of use and lateral extent. The Qva is underlain by the Qtb deposits (transitional beds) which constitute a confining unit that ranges from approximately 100 to 400 feet thick, and the undifferentiated sediments (Qu), which constitute a poorly-defined heterogenous unit (due to sparse data) that ranges from approximately 500 to 1,000 feet thick (USGS 1997).

The groundwater system in western Snohomish County is estimated to receive an average of about 24 inches of recharge per year from infiltration of precipitation. Groundwater flow generally follows the land surface gradient with groundwater migrating toward the major streams and lowlands. There is also a downward component of groundwater flow in most areas. Groundwater discharges to streams, springs, lakes, and seepage faces on bluffs (USGS 1997).

The regional groundwater system has no known widespread groundwater contamination. The most common and widespread water quality impacts result from natural causes. High iron and manganese concentrations are common. The median and maximum concentrations of iron reported in groundwater samples collected from 297 wells in 1993 and 1994 were 0.038 milligrams per liter (mg/L) and 26 mg/L, respectively (USGS 1997) (i.e., 38 and 26,000 micrograms per liter, µg/L). Twenty percent of the samples exceeded the current Washington State and United States Environmental Protection Agency (EPA) Secondary Maximum Contaminant Level drinking water standard for iron of 0.3 mg/L (300 µg/L).

The median and maximum concentrations of manganese reported in the 297 groundwater samples collected in 1993 and 1994 were 0.031 mg/L and 0.91 mg/L (i.e., 31 and 910 µg/L), respectively (USGS 1997), with 41 percent of the samples exceeding the current Washington State and EPA Secondary Maximum Contaminant Level of 0.05 mg/L (50 µg/L).

Arsenic was detected in 63 percent of the 295 groundwater samples analyzed for arsenic in 1993 and 1994. The median and maximum arsenic concentrations reported in the samples were 0.002 mg/L and 0.28 mg/L (i.e., 2 and 280 µg/L), respectively (USGS 1997). The arsenic concentrations reported in 52 wells throughout the study area exceeded the current EPA Maximum Contaminant Level of 0.01 mg/L (10 µg/L). Most of the higher arsenic concentrations were detected in wells located between Granite Falls and Arlington, approximately 15 to 20 miles north of the Property. The USGS considers the elevated iron, manganese, and arsenic concentrations in western Snohomish County groundwater to be a result of natural anoxic, reducing conditions in the regional system (USGS 1997).

The regional hydrogeologic units of interest on the Property include the Qvt, Qva, and Qtb. Section 3.4 describes where these units occur on the Property. Western Snohomish County's primary aquifer, the Qva, generally terminates abruptly in bluffs due to erosion by rivers and streams. It occurs at a higher elevation than the Snohomish River Valley and therefore is absent beneath the Valley. The Qva outcrops in bluffs and ravines along the western margin of the Snohomish River Valley (USGS 1997). Its lower boundary is the top surface of the Qtb confining unit, which is represented by the glacial lacustrine silt unit on the Property. Groundwater flow in the Qva generally follows the land surface gradient because the Qtb restricts vertical groundwater flow. Groundwater in the Qva generally migrates horizontally from higher-elevation recharge areas toward lower-elevation discharge areas along bluffs or in stream valleys. On the bluffs at the western margin of the Snohomish River Valley, groundwater in the Qva generally flows east or northeast toward the Valley and discharges from seeps at or above the contact between the Qva and Qtb. The median estimated horizontal hydraulic conductivity of the Qva aquifer in western Snohomish County is 40 feet per day. Horizontal hydraulic gradients in the Qva are typically on the order of 0.02 foot per foot (USGS 1997).

3.6. Site Hydrogeology

Ten groundwater monitoring wells (wells MW-1 through MW-10) have been installed at the Site that inform the Site hydrogeology[2]. MW-1 to MW-8 were installed in the Qva formation north and west of the Stream 2 ravines, whereas MW-9 and MW-10 were constructed in the Stream 3 deposits in the Qtb formation at the base of the Stream 3 ravine. The monitoring well installation and groundwater sampling activities are described in further detail in Section 4.2. Groundwater was measured at depths of approximately 30 to 60 feet below ground surface (bgs) in Qva wells MW-1 through MW-8, while groundwater was measured within about 1 foot of the ground surface in Stream 3 deposit wells MW-9 and MW-10.

Groundwater on the Property occurs as perched groundwater in the Qva above the low-permeability lacustrine silt unit (AESI 2009a) and likely is not connected to deeper aquifers in the regional groundwater system due to the presence of the lacustrine silt deposits (Golder Associates Inc. 2016). Groundwater recharges laterally from the western property boundary and discharges through the former ravine beneath the landfill toward Stream 3 and to outcrops above Stream 2 (e.g., Seep-1 and Seep-2 along the east ravine). Additionally, shallow, perched groundwater within the Qva is intercepted beneath Stream 1 and

[2] Groundwater was never observed in well MW-4 during repeated sampling events over multiple years. MW-4 was therefore decommissioned in 2022.

discharged south to Stream 2. Figures 3-2A through 3-2D depict groundwater elevations contoured from the four RI sampling events in 2022. Groundwater in the vicinity of the landfill flows northeast towards the weir box/Stream 3 as shown in each figure.

Slug testing was conducted at monitoring wells MW-1 and MW-2 in 2009 to estimate the hydraulic conductivity of the Qva aquifer in the vicinity of these two wells (AESI 2009a). The Qva within the screened intervals of these wells consists of fine sand to silty very fine sand. The slug tests yielded hydraulic conductivity estimates of approximately 1 to 3 feet per day. These estimates are consistent with published hydraulic conductivity values for silty fine sand (AESI 2009a). The estimated horizontal groundwater seepage velocity beneath the Property is approximately 0.4 foot per day (146 feet per year). This estimate was calculated using a hydraulic conductivity of 3 feet per day, a horizontal hydraulic gradient of 0.02 foot per foot, and an effective porosity of 0.15 (AESI 2009a).

Available information suggests that groundwater in the Landfill area occurs near or below the bottom of the Landfill waste material. Groundwater occurrence relative to the bottom of the Landfill is based on several lines of evidence including the Site geology and surface water hydrology, the elevation of the bottom of the Landfill as estimated from the historical topography of the former ravine beneath the Landfill, the reported presence of a subdrain beneath the Landfill (described in Section 3.3), measured groundwater levels in monitoring wells MW-1 through MW-10, and regional groundwater studies. The subdrain likely drains groundwater beneath the Landfill and discharges it toward the base of the Landfill's northeastern slope as noted in Section 3.3. Even if the subdrain pipe is clogged or potentially crushed, potential pipe bedding may provide a preference flow path for groundwater. However, it is unlikely that groundwater will rise to significant levels within the landfill due to the coarse material content in the landfill (primarily woody debris) and the inferred high bulk permeability of the landfill material. Groundwater occurrence relative to the bottom of the Landfill is depicted conceptually in Figure 3-1.

A groundwater divide exists in the Qva deposits along the former topographic divide that separated the former ravine beneath the Landfill and the ravine south- and east-adjacent to the Landfill (i.e., the ravine containing Stream 2). Groundwater to the north and west of the groundwater divide flows toward the north and west (i.e., toward the Landfill), while groundwater to the south and east of the groundwater divide flows toward the south and east (i.e., toward Stream 2). These groundwater flows on the Property are confirmed by comparing concentrations of constituents in seeps and groundwater monitoring wells as discussed further in Section 6.

Groundwater occurrence and migration in the Qtb deposits below the Qva is likely limited due to the low permeability of the Qtb silt and clay deposits.

3.7. Groundwater Use

The primary uses of groundwater in western Snohomish County include public and private potable water supply, irrigation, and livestock uses (USGS 1997). The population in the vicinity of the Property is served by the Everett public water system (SCHD 2004) that includes the residential areas to the north, south, and west and the Snohomish River Valley east and hydraulically downgradient of the Property. SCHD conducted a private well survey within a 1-mile radius east and southeast (i.e., downgradient) of the Property in 2003 and concluded that none of the residences in the search area used or maintained private wells (SCHD 2004). There were 180 acres of land irrigated with groundwater within a 2-mile radius downgradient of the

Property as of 2004 (SCHD 2004). The land acreage currently irrigated with downgradient groundwater is unknown.

Ecology's online water well report database (Ecology 2023) was reviewed to identify potential water supply wells within 1 mile north, northeast, and east (i.e., downgradient) of the Property. Two domestic wells were identified in this search area. One of the wells was installed in 1978 approximately 0.75-mile northeast of the Property in the Snohomish River Valley and was screened from 154 to 159 feet bgs (Denny Moe, SW/4 of SW/4 of Section 15, Township 28N, Range 5E of Willamette Meridian). The other well was installed in 1985 approximately 1-mile northeast of the Property in the Snohomish River Valley and was screened from 103 to 108 feet bgs (Brook Wilson, SE/4 of SW/4 of Section 15, Township 28N, Range 5E of Willamette Meridian). The well reports indicate that the proposed use of both wells was for domestic water supply. The current presence and use of these wells is unknown. The current land use where the wells were reportedly installed appears to be agricultural with no homes in the vicinity based on review of Google Earth aerial photographs from 1990 to present.

The community/public water supply well and critical aquifer recharge area data available through the online PDS Map Portal (PDS 2020) was reviewed to identify other wells near the Property. The nearest community water supply wells include a Mountain View Community Church well located approximately 1.25 miles southeast of the Property based on this review. No other public water supply wells were identified within 3 miles of the Property.

3.8. Ecological Habitat

Snohomish County critical area maps and Washington Department of Fish and Wildlife and Washington Department of Natural Resources (DNR) information sources indicate that fish do not use Streams 1, 2, or 3 or the agricultural drainage channels in the Snohomish River floodplain (PDS 2020; Wetland Resources, Inc. 2010). Fish are deterred from using the floodplain drainage channels by a pump station located adjacent to the Snohomish River and by poor water quality in the drainage channels (Wetland Resources, Inc. 2010).

Streams 1 and 2 are classified as Type Np streams (Wetland Resources, Inc. 2022), and Stream 3 is classified as Type Ns. Type Np and Ns streams are defined as non-fish bearing streams that may have spatially intermittent dry reaches. Type Np and Ns streams do not meet the physical criteria to be potentially used by fish (DNR 2020). All available information indicates that fish do not utilize the on-site streams, and that this conclusion appears accurate because:

- Fish access to these streams is blocked by a pump station located adjacent to the Snohomish River.
- Water quality is poor in the downstream ditches of the Marshlands Tributaries Basin.
- Gradient barriers are present downstream of the Site.

Two depressional wetlands (Wetlands A and B) were identified on the flat, historically graded area west and southwest of the Landfill prior to the Property grading and landfill closure (Figure 2-3). During grading of the property allowed under the Land Disturbing Activity Permit, Stream 1 was re-routed and Wetlands A and B were filled in the old stream channels. As shown in Figure 2-4, Wetlands A is now limited to the western portion of the Property and discharge from Wetlands A is routed through the Stream 1 channel.

3.9. Post-Development Setting

The Landfill has been closed and capped using an engineered landfill cap and stormwater control facilities. Landfill gas is managed using an impermeable cover and gas ventilation system. The system passively vents methane. However, the system could be convertible to active venting if needed. The undeveloped areas adjacent to the future Landfill limit are being developed with the Bakerview (Alpine Estates) Plat Subdivision.

4.0 PREVIOUS INVESTIGATIONS

Subsurface explorations and environmental sampling on the Property prior to the RI have included test pit explorations and soil sampling, groundwater monitoring well installation and groundwater sampling, seep and surface water sampling, and landfill gas studies. This section summarizes these previous investigation activities.

4.1. Test Pit Explorations and Soil Sampling

This section briefly summarizes test pit exploration and soil sampling activities at the Property that occurred prior to the RI/FS spanning 1981 to 2021. Full descriptions of previous investigations are contained in the IAWP and in the report titled *Results of Pre-Construction Soil Sampling – Go East Corp Landfill Site, Everett, Washington* (Pre-Construction Soil Sampling Memorandum) (GeoEngineers 2020b).

A total of 152 test pits were excavated to depths of 1 to 38 feet bgs on the Property (Figure 2-3) to investigate the types of materials contained in the Landfill, the depth and lateral limits of the Landfill, concentrations of hazardous substances potentially present in the landfill material and in native soil outside the Landfill, and/or geotechnical properties of the landfill material and native soil.

Landfill materials encountered in test pits completed in the Landfill consisted of construction debris including gravel, concrete, wire, woody debris, tires, brick, asphalt, plastic pipe, dimensional lumber, burned wood, metal, broken glass, cement board, roofing materials, and carpet. Landfill materials also included intermixed native soil (loose silty sand and gravel) from the former ridge that existed in the flat area south-adjacent to the Landfill. This native soil was used as cover soil during Landfill operations. Native soil encountered beneath the landfill materials in the test pits generally consisted of gray or tan to brown, fine to medium-grained sand interpreted as Qva deposits.

Soil analytical results of the Landfill material were compared to screening levels in the RI Work Plan (GeoEngineers 2021a) to identify potential chemicals of concern (PCOCs) that may be present at concentrations exceeding screening levels in soil outside of the landfill. Results of the comparison indicate the PCOCs included oil range organics, bis(2-ethylhexyl) phthalate, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), fluoranthene, fluorene, pyrene, polychlorinated biphenyls (PCBs), 4,4'-Dichloro-diphenyldichloroethane, 4,4’-Dichlorodiphenyldichloroethylene, 4,4'-Dichlorodiphenyltrichloroethane, trans-chlordane, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

4.2. Groundwater Monitoring Well Installation and Groundwater Sampling - 2009

AESI installed four groundwater monitoring wells (MW-1 through MW-4) around the perimeter of the Landfill in August 2009 (Figure 2-3) to measure groundwater levels and evaluate groundwater quality. The monitoring well installation and results of the previous groundwater sampling are described in *Revised*

Hydrogeology, Ground Water, and Surface Water Quality Report, Former Go East Landfill, Snohomish County, Washington dated December 15, 2009, revised October 26, 2011, prepared by AESI (Water Quality Report) (AESI 2009a).

Monitoring well boring and well construction logs are included in Appendix B. Native soil encountered from the ground surface to depths ranging from 28 to 73 feet bgs in the borings (depending on location) consisted of gray or tan to brown, fine to medium-grained sand with occasional gravel and silt lenses. AESI interpreted this soil as Qva deposits. Soil encountered below the Qva to depths ranging from 46 to 101 feet bgs consisted of very stiff to hard, bluish gray silt interpreted as pre-Vashon glacial lacustrine silt (AESI 2009a, 2009b). The base of the lacustrine silt deposits has not been identified in subsurface explorations completed on the Property. However, the fine-grained Admiralty clay geologic unit, a member of the Qtb that includes the lacustrine silt deposits, is reportedly hundreds of feet thick beneath Snohomish County's main river troughs such as the Snohomish River Valley (Newcomb 1952).

The wells are constructed of 2-inch diameter polyvinyl chloride (PVC) casing with 10-foot well screens that span the Qva/Qtb contact, with the lower portion of the screen extending approximately 2 feet into the Qtb (lacustrine silt) and the upper portion extending approximately 8 feet into the Qva. Currently, the monitoring wells are completed with aboveground outer steel casings set in concrete and with protective bollards at the surface.

Groundwater samples were collected from monitoring wells MW-1, MW-2, and MW-3 in August 2009. Well MW-4 was not sampled because it was dry. The groundwater samples were analyzed for the following constituents (AESI 2009a):

- Semivolatile organic compounds (SVOCs) by EPA Method 8270C.
- Total arsenic, barium, cadmium, chromium, iron, lead, manganese, mercury, selenium, and silver by EPA Methods 6010B/6020/7470A.
- Dissolved arsenic, chromium, iron, lead, and manganese by EPA Methods 6010B/6020.
- Chloride, sulfate, pH, and specific conductance by EPA Methods 300.0/150.1/120.1.

Analytical results for the groundwater samples collected in August 2009 are presented in the Water Quality Report (AESI 2009a). Constituents detected in one or more of the August 2009 groundwater samples at concentrations exceeding screening levels developed by Ecology at that time included total and dissolved arsenic, total and dissolved manganese, and total chromium, iron, lead, and mercury. SVOCs were not detected above laboratory reporting limits in the analyzed groundwater samples (AESI 2009a).

4.3. Surface Water Sampling 1981 to 2009

Surface water on the Property was sampled on multiple occasions between 1981 and 2009. The surface water samples were collected from Streams 2 and 3, and possibly also at several groundwater seep locations along or near the Qva/Qtb contact on the northern and western walls of the ravine south- and east-adjacent to the Landfill (i.e., the ravine containing Stream 2) although not all surface water sampling locations are known. The scope and results of the historical surface water sampling are described in detail in the Water Quality Report (AESI 2009a). The scope of the surface water sampling is summarized below.

Surface water sampling was conducted by Ecology and/or SCHD between 1981 and 2004[3]; by Robert G. Bober Jr., P.E. in September 1997; by HWA in May 2002; and by AESI in August 2009 (AESI 2009a). The surface water samples were analyzed for various general chemistry parameters (e.g., ammonia, chemical oxygen demand, chloride, iron, manganese, nitrate, pH, phosphate, sulfate, tannins and lignins, total organic carbon). Some samples were also analyzed for gasoline-range organics (GRO); diesel- and heavy oil-range organics (DRO); benzene, toluene, ethylbenzene, and xylenes (BTEX); volatile organic compounds (VOCs); carcinogenic polycyclic aromatic hydrocarbons (cPAHs); semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and/or Resource Conservation and Recovery Act (RCRA) metals or Priority Pollutant metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and/or zinc) (AESI 2009a).

Constituents detected in one or more surface water samples at concentrations exceeding screening levels developed by Ecology at that time included fluoranthene, arsenic, iron, lead, manganese, and zinc. The exceedances were detected in surface water samples known or inferred to be collected from Stream 3 or from the "leachate spring" at the base of the Landfill's northeastern slope. The following constituents were not detected above laboratory reporting limits in surface water: GRO, DRO, VOCs, PCBs, pesticides, antimony, beryllium, cadmium, copper, mercury, selenium, silver, and thallium (AESI 2009a, SCHD 2004).

4.4. Landfill Gas Studies

Landfill gas sampling was conducted at ten temporary landfill gas probe locations in August and October 2009 (AESI 2009b). Nine gas probes (GS-1 through GS-3 and GS-5 through GS-10) were completed within the current Landfill limit and one gas probe (GS-4) was completed outside the Landfill limit (Figure 2-3). Concentrations of oxygen, carbon dioxide, and methane in landfill gas were measured at multiple depths between 5 and 50 feet bgs at each gas probe location using a direct-push drill rig and a GEM 2000 portable landfill gas monitor. Some of the deeper landfill gas measurements near the outer margin of the Landfill likely were obtained from native soil below landfill material. Details of the landfill gas sampling methodology are described in AESI (2009b).

Measured oxygen concentrations in the gas probes ranged from 0.0 to 21.5 percent and measured carbon dioxide concentrations ranged from 0.1 to 22.8 percent. Methane was detected at three of the ten gas probe locations (GS-3, GS-5, and GS-8, all within the current Landfill limit) at depths ranging from 15 to 50 feet bgs. The maximum methane concentrations detected at locations GS-3, GS-5, and GS-8 were 8.4 percent, 2.7 percent, and 0.2 percent, respectively.

Methane migration is regulated under WAC 173-350 and is not regulated under MTCA. Landfill gas is being managed as part of landfill closure activities. Non-methane VOCs in soil gas beyond the landfill boundary may be regulated under MTCA. Non-methane VOCs have not been analyzed for within the landfill gas. However, VOCs have not been detected in landfill material soil samples, groundwater samples, surface water samples or sediment.

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[3] Per the 1987 Site Inspection Report (Ecology & Environment), Snohomish Health District collected surface water samples in 1981, 1983, 1984, and 1986 and the samples were analyzed by Ecology. The surface water sampling attributed to Ecology in the 2009 AESI report appears to have actually been performed by Snohomish Health District based on information contained in the Site Inspection Report.

4.5. Interim Action

The interim action was completed in 2021 as described in the Final Interim Action Completion Report (GeoEngineers 2021b). The outer margin area of the Landfill was excavated and relocated into the main landfill mass. Confirmation soil samples were collected from the excavation area to ensure any potential landfill contaminants were removed from the wedge area. Table 1 and Figure 3 from the IACR are included as Appendix A to this RI/FS. Additional soil confirmation sampling was performed on the northeast landfill slope and following stormwater management in the cul-de-sac area. Interim action addenda reports describe the northeast slope reconnaissance and soil sampling (GeoEngineers 2022a) (provided in Appendix D) and the cul-de-sac soil sampling (GeoEngineers 2022b) (provided in Appendix E).

5.0 REMEDIAL INVESTIGATION FIELDWORK

This section describes the field work performed as part of the Remedial Investigation, including data collected from April 2021 to September 2022. The Landfill Permit requires continued semi-annual groundwater and surface water sampling pending development and approval of the CAP. Activities were performed in accordance with the Ecology-approved Remedial Investigation Work Plan (GeoEngineers 2021a), as amended with concurrence from Ecology and SHCD. Figure 5-1 shows the RI sampling locations. Figure 5-1 is comprised of 5-1A which includes the whole Site, and Figure 5-1B which is a close-up view of the northeastern portion of the Site.

5.1. RI Baseline Groundwater and Surface Water Sampling – 2021

Baseline groundwater and surface water sampling was performed on April 2, 2021. Monitoring wells MW-1 through MW-3 were sampled during this sampling event. MW-4 was dry and therefore not sampled. Surface water samples were collected at SP-1 through SP-3 locations. Sample SP-1 is in Stream 3 and is the same sample location as sample SWS-1 sampled during the RI. The sample SP-1 is therefore depicted in figures and tables in this RI as SP-1 (SWS-1). Locations SP-2 and SP-3 are located in Stream 2.

Results of the baseline groundwater and surface water sampling are included in the RI data set presented in Section 6 below.

5.2. Monitoring Well Installation and Sampling

Six new groundwater monitoring wells (MW-5 through MW-10) were installed at the Site in 2021/2022 (Figure 5-1). Wells MW-5 through MW-8 are screened within the advanced outwash. MW-5 is a background well located upgradient of the landfill. MW-6 through MW-8 are “wedge area” wells installed around the perimeter of the consolidated landfill. MW-9 and MW-10 are shallow downgradient wells that are installed in lacustrine silt deposits present at the toe of the landfill.

Wells MW-5 through MW-8 were installed and constructed by a Washington-licensed well driller in accordance with Washington State well construction standards using a hollow-stem auger drill rig. Borings were advanced to the top of the lacustrine silt deposits. Soil types encountered during drilling were logged and described using the Unified Soil Classification System and field-screened for evidence of potential contamination. Drill cuttings were stored onsite in drums and then disposed at a permitted offsite disposal site.

Wells MW-5 through MW-8 are constructed of 2-inch-diameter PVC casing and are completed with steel well monuments set in a concrete surface seal. The screened interval of wells MW-5 through MW-8 consist of approximately 10 to 15 feet of machine-slotted screen (0.010-inch slot width) installed within the lowermost portion of the Qva sand and gravel deposits.

Wells MW-9 and MW-10 were planned to be installed using a drill rig. However, access was not possible to safely mobilize a drill rig to the base of the steep slope east of the landfill. A tracked excavator was able to access the bottom of the slope. A test pit was excavated using the tracked excavator in the vicinity of the proposed wells for the purpose of logging the soil. The wells were then installed by pushing pre-packed wells into the ground using the excavator bucket. The wells were each installed ten feet from the test pit to ensure the wells were installed in soil not disturbed by the test pit activity. The excavator was operated by a construction crew and a licensed Washington State driller was present to oversee and monitor the installation. Each of these wells consist of 2-inch-diameter PVC casing, with 5-foot screened intervals of machine-slotted screen (0.010-inch slot width). The well screens are surrounded by pre-packed filter media consisting of 12/20 silica sand. The water in MW-9 and MW-10 is observed within about 1 foot of the ground surface and may represent interflow (i.e., potentially with a strong surface water influence) traveling through/along the uppermost portion of lacustrine silt deposits.

Two monitoring wells were extended in 2022 because landfill closure and grading activities necessitated raising the ground surface in the vicinity of the wells. Monitoring well MW-1 was extended by 2.56 feet and MW-3 was extended by 22.83 feet by a licensed driller.

Wells were surveyed by licensed surveyors in 2023. The survey is included as Appendix C.

Monitoring well construction details are summarized in Table 5-1. Boring and monitoring well construction logs are in Appendix B.

Each new monitoring well was developed following well installation. The new monitoring wells were developed by surging the screened interval and purging at least five-well casing volumes of water from each well. Well development water was stored on site in drums and disposed offsite at a permitted disposal site.

The RI Work Plan specified four groundwater sampling events for the wells except MW-5. Eight sampling events were specified for MW-5 because this is a background well used to derive background groundwater concentrations. The sampling goals were met or exceeded during the RI fieldwork.

Groundwater levels in the monitoring wells were gauged prior to sampling groundwater. Groundwater contours for various snapshots are shown in Figures 3-2A through 3-2D. The groundwater contours were created by using the elevation of water in wells MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, and MW-8, the inferred base of the Qva formation along the centerline of the landfill, and the elevation of the ground surface at the weir box since the weir box represents the lowest elevation where groundwater emerges[4].

Groundwater samples were collected using a bladder pump for MW-1 through MW-8 and a peristaltic pump for MW-9 and MW-10. Wells were sampled using low-flow purging and sampling methods. Field water quality parameters including temperature, pH, specific conductance, turbidity, dissolved oxygen (DO), and

[4] The weir box is used rather than MW-9 and MW-10 because MW-9 and MW-10 are not in the outwash aquifer as are MW-1 through MW-8.

oxidation-reduction potential (ORP) were measured during well purging. Groundwater samples were collected following stabilization of field parameters. Both unfiltered and field-filtered samples were collected for total and dissolved metals analysis, respectively. Samples were stored in a cooler containing ice and delivered to the analytical laboratory under chain of custody. Monitoring well purge water was stored onsite in drums and disposed at a permitted offsite disposal facility.

Wells were sampled for a wide variety of contaminants of concern including petroleum hydrocarbons, total and dissolved metals, organochlorine pesticides, chlorinated acid herbicides, polychlorinated biphenyls (PCBs), volatile- and semi-volatile organic compounds (VOCs and SVOCs), and polycyclic aromatic hydrocarbons (PAHs). Some analyses were discontinued following repeated non-detections in consultation with Ecology[5]. Geochemical indicator parameters and leachate indicators were analyzed based on the requirements of WAC 173-350-500 for landfill monitoring. Table 5-2 summarizes the analytical program for groundwater samples.

5.3. Surface Water Sampling

Surface water sampling was conducted in Stream 3 at SWS-1 located within the stream and from the weir box following weir box installation (Figure 5-1). One surface water sample was collected at SWS-1 during each of the groundwater monitoring events described in Section 5.1 and 5.2. The surface water samples were unfiltered during most sampling events while unfiltered and filtered samples were collected during two of the sampling events. Field water quality parameters measured prior to collecting samples for chemical analysis during most sampling events included temperature, pH, specific conductance, turbidity, DO, and ORP.

Groundwater seep sampling was also conducted during the groundwater monitoring events. Seep sampling was performed to confirm that the seeps above Stream 2 are not impacted by the landfill since these seeps are assumed to be on the opposing side of the groundwater divide and south and east of the landfill. Seep sampling locations Seep-1 and Seep-2 are shown in Figure 5-1. The groundwater seep samples were unfiltered during collection. Field water quality parameters measured prior to collecting samples for chemical analysis included temperature, pH, specific conductance, turbidity, DO, and ORP.

A one-time surface water sampling event was performed on the same day as sediment sampling in Stream 3 (described in Section 5.4 below). Sampling was performed at locations designated as SWS-2 and SWS-3 on October 27, 2022. Location SWS-2 was collocated with SED-11 and SWS-3 was collocated with SED-4.

The surface water samples were stored in a cooler containing ice and delivered to the analytical laboratory under chain of custody. Surface water samples were analyzed for a similar suite of contaminants as the groundwater sampling described in Section 5.2 The groundwater seep samples were analyzed for selected conventionals and metals to confirm that landfill-impacted groundwater does not discharge into seeps south and east of the landfill. Table 5-2 summarizes the analytical program for surface water samples.

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[5] Analyses were concluded after two events if no PCOCs were detected, and after four events if no PCOCs were detected above the screening level.

5.4. Sediment Sampling

Three sediment sampling stations were established in Stream 3 for sample collection prior to beginning construction activities on the steep slope northeast of the landfill (Figure 5-1B). Sampling was performed on the Property on July 13, 2021, downstream of the subsequently constructed weir box. SED-1 to SED-3 are located in Stream 3 between the seeps at the base of the landfill and the Property boundary.

Sediment sampling to calculate background concentrations of metals in sediment was performed in Stream 2 and Wetland A on July 13, 2022. The sampling locations included SEDB-1 through SEDB-3 in Wetland A, and SEDB-4 through SEDB-8 in Stream 2 (Figure 5-1A).

A mudflow occurred on the steep slope in the northeast portion of the landfill on September 17 and 18, 2021 when construction contractors were placing fill. The mudflow material involved clean imported fill and did not involve any landfill materials. The mudflow covered locations SED-1 through SED-3 and subsequent excavation activities further disturbed these locations. Additional sampling stations for SED-4 to SED-11 were established on and beyond the Property in Stream 3 between the weir box and Stream 2. Sediment samples were collected from SED-4 through SED-11 on October 27, 2022 (Figure 5-1B). Surface water samples were also collected including SWS-2 and SWS-3 as described in Section 5.3.

Sediment samples were stored in a cooler containing ice and delivered to the analytical laboratory under chain-of-custody protocol. Sediment samples were analyzed for a similar suite of contaminants as the groundwater sampling described in Section 5.2. Table 5-2 summarizes the analytical program for sediment samples.

5.5. Landfill Gas Monitoring

Landfill closure activities included installation of a passive landfill gas collection system that is being monitored for landfill gas. Landfill gases include methane and non-methane VOCs. Methane is being monitored in accordance with applicable landfill gas monitoring plans identified in the annual landfill permits. Methane is not regulated under MTCA and therefore is not discussed in detail in this RI/FS. Non-methane VOCs beyond the landfill boundary are regulated under MTCA when non-methane VOCs are present. Non-methane VOCs have not been detected in numerous samples of landfill material soil, groundwater, surface water, or sediment. Therefore, non-methane VOCs are not discussed in detail in this RI/FS.

5.6. Additional Field Activities

Additional field activities included a survey of the monitoring wells; slope reconnaissance and debris disposal; and additional soil sampling in the cul-de-sac area of the project. The monitoring well survey is provided in Appendix C. The results of the slope reconnaissance and debris disposal are included in Appendix D (GeoEngineers 2022a) and indicate that any potentially contaminated debris were disposed offsite. Additional soil sampling was performed in the cul-de-sac area and confirmed that soil was not impacted by construction stormwater management. The supplemental soil sampling results are included in Appendix E (GeoEngineers 2022b).

6.0 SAMPLING AND ANALYTICAL DATA

This section discusses the sampling and analytical data including groundwater, surface water, and sediment data. The data used in the RI includes all data discussed in Section 5 of this RI report. Historical data from the 1980s to 2009 discussed in Section 4 was reviewed and found to be consistent with more recent data. However, the older data from 1980s to 2009 is considered outdated and superseded by the RI data.

Landfill geochemical indicator parameters and leachate indicators are discussed separately below.

Laboratory reports and data validation reports are in Appendix F. The results of data validation indicate the RI data are usable as qualified and no data were rejected. Selected data were qualified as estimated (J) if, for example, an analyte is detected at a concentration that is above the detection limit but less than the practical quantitation limit.

6.1. Groundwater Data

Groundwater data includes field parameter data and laboratory analytical data.

6.1.1. Groundwater Field Parameters

Field parameters for the groundwater (and surface water) sampling events in 2021 and 2022 are shown in Table 6-1. Review of Table 6-1 indicates the following regarding groundwater field parameters:

- Depth to water ranged between 30 to 60 feet bgs in wells MW-1 through MW-8. This corresponds to an approximate elevation of 225 feet NAVD88 in the western portion of the Property (e.g., MW-5) to 180 feet NAVD88 in the eastern portion of the Property at the top of the steep slope (e.g., MW-8).
- Depth to water was observed within about 1 foot of the ground surface in wells MW-9 and MW-10[6].
- Groundwater temperature ranged from 10 to 20 degrees Celsius depending on the time of year of sampling. The temperature is affected by the ambient air temperature because the temperature is measured via groundwater flow through a cell at the ground surface.
- Dissolved oxygen was low in most wells which is typical for groundwater. Most readings are less than 3 milligrams per liter (mg/L)[7].
- Oxidation-reduction potential is similarly low. Most readings indicate reducing conditions based on low to negative millivolt (mV) readings.
- Specific conductance ranged from approximately 100 to 800 microsiemens per centimeter (µS/cm).
- pH was approximately 6.5 to 8 in Site wells.
- Turbidity ranged from 5 to 50 nephelometric turbidity units (NTU) during most sampling events.

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[6] As discussed in Section 4.2, water in MW-9 and MW-10 may be interflow with a strong surface water component.

[7] Several anomalously high readings are noted and are likely the result of a dissolved oxygen sensor that was out of calibration.

6.1.2. Groundwater Laboratory Analytical Data

Groundwater analytical data are shown in Table 6-2. Data are initially screened against conservative screening levels developed by Ecology in the RI Work Plan (GeoEngineers 2021a). Groundwater analytical data were compared to these screening levels to identify potential chemicals of concern (PCOCs) for the Site. Cleanup levels for the PCOCs are developed in Section 7.

Review of Table 6-2 indicates the following for each contaminant group:

6.1.2.1. Petroleum Hydrocarbons

- Gasoline-range petroleum hydrocarbons were not detected in any of the wells.
- Total petroleum hydrocarbons (sum of diesel-range and lube-oil range hydrocarbons) were only detected above the screening level of 0.5 mg/L one time in upgradient well MW-5 at a concentration of 1.15 mg/L, and not detected in six additional rounds of sampling. Total petroleum hydrocarbons were consistently detected at low concentrations in MW-9 and MW-10, but only exceeded the 0.5 mg/L screening level one time in MW-9 at a concentration of 0.52 mg/L.

6.1.2.2. Metals

- Total arsenic frequently exceeded the screening level of 5 µg/L in wells MW-1 through MW-7, with the highest concentration (12 µg/L) in MW-7. Dissolved arsenic also exceeded screening levels although less frequently than total arsenic. Arsenic is elevated as a regional background condition as discussed elsewhere in this RI/FS report.
- Total iron and manganese detected in the wells frequently exceeded the screening levels of 300 mg/L and 50 mg/L, respectively. Dissolved iron exceeded screening levels infrequently indicating the iron may be attributable to suspended particles in the well samples. Dissolved manganese frequently exceeded screening levels and dissolved manganese concentrations are frequently close to the total concentration indicating the manganese in the groundwater is in the dissolved phase.
- No other metals analyzed exceeded screening levels with several exceptions. Total copper, lead, and nickel exceeded screening levels very infrequently. In every instance of a total metals exceedance of copper, lead, or nickel, the same well was non-detect for the filtered, dissolved metal, indicating the sporadic exceedances are likely due to suspended particles in the samples and not representative of actual groundwater conditions. In accordance with WAC 173-340-720(9)(b), analyses were conducted on unfiltered groundwater samples, and filtered samples were collected as well.

6.1.2.3. Polychlorinated Biphenyls

- PCBs were not detected in any of the wells.

6.1.2.4. Organochlorine Pesticides

- Organochlorine pesticides were not detected above screening levels in the wells except for the pesticide methoxychlor in MW-10 during the first sampling event on April 4, 2022. The methoxychlor concentration in MW-10 was 0.029 µg/L, which is slightly greater than the screening level of 0.02 µg/L. Methoxychlor was not detected in MW-10 during the three subsequent sampling events.
- Methoxychlor was detected at a concentration of 0.011 µg/L in the upgradient background well MW-5 during one sampling event on February 3, 2022, which is below the screening level of 0.02 µg/L. Pesticides may be present in an upgradient and off-site source as discussed elsewhere in this RI/FS report.

6.1.2.5. Chlorinated Acid Herbicides

- Chlorinated acid herbicides were not detected in any of the wells.

6.1.2.6. Volatile Organic Compounds

- Naphthalene was the only VOC detected above a screening level. Naphthalene was detected one time only in background well MW-5, at a concentration of 10 µg/L, on March 7, 2022. This naphthalene concentration is slightly greater than the screening level of 8.9 µg/L. Naphthalene was not detected in six additional rounds of sampling from MW-5.

6.1.2.7. Semi-Volatile Organic Compounds

- Semi-volatile organic compounds were not detected above screening levels in any of the wells.

6.1.2.8. Non-carcinogenic Polycyclic Aromatic Hydrocarbons

- Pyrene was the only non-carcinogenic PAH detected at concentrations greater than the screening level. The exceedance occurred just once in well MW-6 on May 3, 2022. The pyrene concentration of 0.26 µg/L is greater than the screening level of 0.1 µg/L. Pyrene was not detected in MW-6 on other sampling dates nor was pyrene detected in the other wells.

6.1.2.9. Carcinogenic Polycyclic Aromatic Hydrocarbons

- Total cPAH toxic equivalent concentration (TEQ) (using one-half the detection limit for non-detects) exceeded screening levels on various sampling dates in MW-6, MW-7, and MW-10. Total cPAH TEQ concentrations in these wells ranged from non-detect to a maximum of 0.27185 µg/L in MW-6. The screening level is 0.0076 µg/L. cPAH TEQ was also calculated using zero for non-detects due to the large number of samples with non-detected cPAHs site-wide as discussed by Ecology guidance (Ecology 2015). When non-detects are treated as zero, the screening level exceedances in groundwater are reduced to only one occurrence each in MW-6 (on 5/3/2022) and MW-7 (on 6/20/2022).

6.1.2.10. Conventionals

- Total organic carbon ranged from not detected (at a reporting limit of 0.5 mg/L) to 10 mg/L (in MW-9). There is no screening level for total organic carbon.
- Alkalinity (and bicarbonate) ranged from 80 mg/L at MW-1 to 410 mg/L at MW-9. There is no screening level for alkalinity or bicarbonate.
- Ammonia ranged from not detected (at a reporting limit of 0.05 mg/L) to 1.8 mg/L in MW-9. There is no screening level for ammonia.[8]
- Total dissolved solids (TDS) ranged from 100 mg/L to 470 mg/L. There is no screening level for TDS.
- Chloride ranged from 2 mg/L to 11 mg/L. There is no screening level for chloride.
- Nitrate ranged from not detected (0.05 mg/L) to 2.9 mg/L, below the 10 mg/L primary maximum contaminant level.
- Sulfate ranged from not detected (5 mg/L) to 73 mg/L. There is no screening level for sulfate.

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[8] There are potentially applicable screening levels for ammonia ranging from approximately 0.41 mg/L (EPA 2020) to greater than 2 mg/L However, these screening levels are based on protection of fish. Streams downgradient of the landfill are non-fish bearing as discussed in Section 3.8. Ammonia is anticipated to readily nitrify to nitrate in surface water downstream of the landfill.

6.2. Surface Water Data

Surface water data includes field parameter data and laboratory analytical data.

6.2.1. Surface Water Field Parameters

Surface water field parameters in 2021 and 2022 are shown in Table 6-1[9]. Surface water sampling locations included SWS-1 and two seeps (Seep-1 and Seep-2). Seeps, including Seep-1 and Seep-2, were sampled to assess natural conditions as groundwater discharges from the outcrop of the advance outwash formation. Seep-1 was sampled on 5 occasions. Seep-2 was often observed to be dry and was sampled only when flowing water was present, which was during two of the sampling events. Review of Table 6-1 indicates the following:

- Surface water temperatures ranged from 9 to 20 degrees Celsius that are reflective of ambient air conditions during the season of collection.
- Dissolved oxygen ranged from 5 to 8 mg/L in SWS-1. Dissolved oxygen was higher in Seeps-1 and 2, ranging from 7 to 11 mg/L.
- Oxidation reduction potential ranged from slightly negative to positive without a clear pattern.
- Specific conductance ranged from approximately 500 to 800 µS/cm in SWS-1. Specific conductance was lower in Seeps-1 and 2, ranging from 200 to 250 µS/cm.
- pH ranged from approximately 6.6 to 8 in SWS-1. pH was lower in Seeps-1 and 2, ranging from 6.2 to 7.2.
- Turbidity was generally less than 20 NTU.

The surface water field parameters in SWS-1 are dissimilar to parameters measured in Seeps-1 and -2. This indicates that it is unlikely that groundwater impacted by the landfill discharges flow to the Seep-1 and Seep-2 locations. This is consistent with the groundwater contour maps in Figures 3-2A to 3-2D which depict groundwater to discharge through the former ravine that was mined and reclaimed with the landfill, and to seep through the rock buttress and weir box at the toe of the landfill.

Groundwater is generally anaerobic compared with surface water. As groundwater seeps from the hillside, the water is exposed to ambient air, the concentrations of dissolved oxygen increase, and the oxidation-reduction potential increases. The higher oxidation potential causes ferrous iron and divalent manganese species to oxidize to less soluble species and fall from solution. This is evident from orange iron-staining observed near, in, and beyond the weir box.

6.2.2. Surface Water Analytical Data

Surface water analytical data are shown in Table 6-3. Data are initially screened against conservative screening levels developed by Ecology in the RI Work Plan (GeoEngineers 2021b). The surface water

[9] Surface water field parameters were recorded for most sampling events. Not all events were able to have field parameters measured due to equipment and/or access issues.

analytical data are compared to these screening levels to identify PCOCs. Cleanup levels for the PCOCs are developed in Section 7.

Review of Table 6-3 indicates the following for each contaminant group:

6.2.2.1. Petroleum Hydrocarbons

- Gasoline-range petroleum hydrocarbons were not detected in the samples.
- Diesel-range, lube-oil range, and sum of diesel plus lube oil TPH were not detected above screening levels in the samples.

6.2.2.2. Metals

- Total iron and manganese concentrations at SWS-1, Seep-1, and Seep-2 frequently exceeded the surface water screening levels of 1,000 µg/L and 50 µg/L, respectively. The concentrations of iron and manganese in Seep-1 and Seep-2 are generally consistent with the natural background concentrations calculated from upgradient monitoring wells in Appendix G, which indicates that landfill-impacted groundwater does not discharge towards Seep-1 and Seep-2.
- Total lead was detected only once at the SWS-1 location at a concentration of 6.2 µg/L that is above the screening level of 1.1 µg/L, but was not detected in six additional rounds of sampling at SWS-1. Total lead was detected at the Seep-1 location at a concentration of 1.7 µg/L. Dissolved lead was not detected in the Seep-1 sample.
- Two surface water samples were collected concurrent with sediment sampling on October 27, 2022. SWS-3 was collected immediately downstream of SWS-1 near sediment sample SED-4 and SWS-2 was collected further downstream near sediment sample SED-11, just beyond the Olympic pipeline easement (see Figure 5-1B). Sample SWS-2 contained elevated concentrations of total metals including arsenic, copper, iron, lead, manganese, mercury, nickel and zinc. Sample SWS-2 appears to contain high concentrations of suspended solids associated with sediment sampling activities[10] (See photo). The sample is not representative of surface water conditions in Stream 3 based on review of the other surface water samples collected in Stream 3.

Water at SWS-2 was highly turbid (red arrow)

6.2.2.3. Polychlorinated Biphenyls

- PCBs were not detected in the surface water samples.

6.2.2.4. Organochlorine Pesticides

- Organochlorine pesticides were not detected in the surface water samples.

6.2.2.5. Chlorinated Acid Herbicides

- Chlorinated acid herbicides were not detected in the surface water samples.

[10] Total iron was reported as 550,000 µg/L in the sample, which far exceeds the theoretical solubility of iron (about 60,000 µg/L), indicating the sample contained high amounts of suspended solids.

6.2.2.6. Volatile Organic Compounds

- Volatile organic compounds were not detected in the surface water samples.

6.2.2.7. Semi-Volatile Organic Compounds

- Pentachlorophenol was detected at 5.7 µg/L at the SWS-1 location during one sampling event that is slightly above the screening level of 5 µg/L, but not detected in six additional rounds of sampling from SWS-1.
- No other SVOCs were detected in the surface water samples.

6.2.2.8. Non-Carcinogenic Polycyclic Aromatic Hydrocarbons

- Two non-carcinogenic PAHs (fluoranthene and pyrene) were detected above screening levels at SWS-1 during multiple sampling events. Other PAHs were either not detected or were sporadically detected below their respective screening levels at SWS-1. PAHs were also detected at SP-2 and SP-3 located in Stream 2 indicating PAHs may be elevated in the project area in general.

6.2.2.9. Carcinogenic Polycyclic Aromatic Hydrocarbons

- Carcinogenic PAHs (cPAHs) were detected during one sampling event in Stream 3 at location SP1 (SWS-1) at concentrations below screening levels. cPAHs were not detected at SWS-1 during six subsequent sampling events, nor in samples SWS-2 or SWS-3. cPAHs were detected at locations SP2 and SP3 (in Stream 2), including an exceedance of cPAH TEQ, indicating that PAHs and/or cPAHs may be elevated in the project area in general.

6.2.2.10. Conventionals

- Total organic carbon ranged from 1 mg/L to 12 mg/L. There is no screening level for total organic carbon.
- Alkalinity (and bicarbonate) ranged from 90 mg/L to 450 mg/L. There is no screening level for alkalinity or bicarbonate.
- Ammonia ranged from not detected (at a reporting limit of 0.05 mg/L) to 2.5 mg/L. There is no screening level for ammonia.[11]
- Total dissolved solids (TDS) ranged from 120 mg/L to 500 mg/L. There is no screening level for TDS.
- Chloride ranged from 5.2 mg/L to 7.3 mg/L. There is no screening level for chloride.
- Nitrate ranged from not detected (at a reporting limit of 0.05 mg/L) to 0.088 mg/L in the Stream 3 surface water samples downstream of the landfill. Nitrate was detected at concentrations of 14 mg/L and 16 mg/L in Stream 2 south of the landfill, which exceeds the primary maximum contaminant level of 10 mg/L. Stream 2 captures stormwater runoff from the neighborhoods; these samples are not impacted from the landfill.
- Sulfate ranged from not detected (at a reporting limit of 5 mg/L) to 11 mg/L. There is no screening level for sulfate.

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[11] There are potentially applicable screening levels for ammonia ranging from approximately 0.41 mg/L (EPA 2020) to greater than 2 mg/L. However, these screening levels are based on protection of fish. Streams downgradient of the landfill are non-fish bearing, as discussed in Section 7.2.3 below. Ammonia is anticipated to readily nitrify to nitrate in surface water downstream of the landfill.

6.3. Landfill Indicators and Natural Background Concentrations in Groundwater

Landfill leachate and geochemical indicator data were reviewed to group monitoring wells and surface water sampling locations into upgradient, wedge area, and downgradient locations. The leachate and geochemical indicators are identified in WAC 173-350-500(4)(h). Appendix G summarizes the leachate, geochemical, and metals analytical results. Piper-stiff diagrams and spider diagrams were prepared to visually compare the geochemistry in the monitoring wells and weir box, and selected diagrams are shown in Appendix G.

Upgradient wells:

MW-1, MW-2, MW-3, and MW-5 are hydrogeologically upgradient of the landfill. The leachate and geochemical indicator parameters in these upgradient wells are consistent with natural background concentrations. Although the concentrations of arsenic and iron were anomalously high in MW-2 on May 5, 2022, the concentrations in the other three quarters were consistent with the other upgradient wells. When elevated concentrations of total iron were detected in MW-2, dissolved iron was generally not detected (see Appendix G). The high iron and arsenic concentrations in MW-2 are consistent with ferric iron and arsenic adsorption to suspended solids, and not to ferrous iron or arsenic associated with leachate-induced reducing conditions.

The natural background concentrations of arsenic, iron, and manganese were calculated using MW-1, MW-2, MW-3, and MW-5 in accordance with WAC 173-340-709(3). Site-specific background groundwater concentrations are shown in Appendix I. The site-specific natural background concentrations are used to adjust cleanup levels as discussed in Section 7 and include the following.

- 7.3 µg/L of total arsenic.
- 3,010 µg/L of total iron.
- 354 µg/L of total manganese.

Wedge area wells:

MW-6, MW-7, and MW-8 are considered 'wedge area' wells (i.e., installed in the former wedge area), as shown in Figure 2-4. These wells are completed in the advance outwash in areas where the overlying landfill material was removed and backfilled with clean soil. The groundwater beneath the wedge area has been impacted by the infiltration of water through the landfill material. MW-6 and MW-8 have elevated concentrations of total organic carbon and total dissolved solids, which are listed leachate indicators in WAC 173-350-500(4)(h)(iii); however, the leachate indicators were not elevated in MW-7. MW-6 is located on the downgradient side of the former stream channel west of the landfill and MW-8 is located in an area where deep waste was encountered on the southeast corner of the landfill. The landfill material was relatively shallow at MW-7, and relatively clean groundwater recharges MW-7.

Leachate increased the alkalinity and concentrations of calcium, magnesium, sulfate, and sodium in MW-6 and MW-8, along with potassium in MW-8. These geochemical changes were not observed in MW-7. The biodegradation of wood waste within the landfill decreased the dissolved oxygen and increased the reducing conditions in groundwater, which resulted in the mobilization of manganese in MW-6 and MW-8. Elevated concentrations of total iron and total manganese were detected in MW-7 in December 2021 and May 2022; however, the concentrations of dissolved iron and dissolved manganese were significantly less than the total concentrations. As described for MW-2 previously, the elevated concentrations are iron and manganese in MW-7 are consistent with suspended solids, and not due to landfill leachate impacts.

Ammonia was detected in MW-1, MW-2, MW-3, MW-5, and MW-6, at concentrations ranging from the 0.05 mg/L detection limit to 0.21 mg/L in MW-1. The ammonia does not appear indicative of landfill leachate.

Downgradient wells and surface water:

MW-9, MW-10, and SWS-1 are located downgradient of the landfill. As shown in Figures 3-2A to 3-2D, groundwater beneath the landfill discharges through the old stream channel to the northeast toe of the landfill and into Stream 3. As shown in Figure 5-1B and indicated on the Appendix B boring logs, MW-9 and MW-10 are shallow wells, that were driven into the transitional bed deposits, to sample groundwater from approximately 5 to 10 feet below the ground surface. MW-9 is located closer to the weir box, where the SWS-1 surface water samples are collected.

The stiff diagrams in Appendix G distinguish the groundwater and surface water samples based on their geochemistry. The stiff diagram of the monitoring wells in Appendix G provides a visual representation that downgradient wells MW-9 and MW-10 are most impacted by the landfill, followed by wedge area wells MW-6 and MW-8. The stiff diagram that compares MW-9 and MW-10 to surface water sample SWS-1 indicates that groundwater in MW-9 resembles surface water more than MW-10, which is consistent with the proximity of MW-9 to SWS-1.

The impact of the landfill is evident from the Appendix G stiff and spider diagrams for surface water samples SP1, SP2, and SP3. Surface water sample SP1 was collected in Stream 3 near sample location SWS-1 prior to construction of the rock buttress and weir box, whereas surface water samples SP2 and SP3 were collected upstream in Stream 2 (see Figures 5-1A and 5-1B) in an area not impacted by the landfill. The stiff and spider diagrams show that SP1 has much higher alkalinity (note increased milliequivalents of bicarbonate, calcium, and magnesium) than SP2 and SP3.

As shown in Appendix G, the leachate and geochemical parameters in MW-9 and SWS-1 are nearly identical, although the total manganese in SWS-1 is relatively high because of suspended solids. MW-10 is further from the surface water, and exhibits a dampened impact from the leachate indicators, geochemical indicators, and manganese concentrations. The concentrations of ammonia are elevated compared to background in MW-9 and SWS-1, where the concentrations are about an order of magnitude above the apparent natural background concentrations upgradient of the landfill. Ammonia is listed as a leachate indicator in WAC 173-350-500(h)(iii). The elevated ammonia concentrations provide an additional indication of the similarity in water quality between MW-9 and SWS-1. As the surface water mixes with ambient air, ammonia nitrifies to nitrate in surface water.

The biodegradation of wood waste consumes oxygen, leading to reducing conditions in groundwater that mobilize naturally occurring iron and manganese in groundwater. Divalent ferrous iron and divalent manganese are more soluble than their oxidized species. As groundwater discharges to surface water and mixes with ambient air, the water becomes more aerobic, which results in oxidation of iron and manganese. Iron readily oxidizes to ferric iron, which is observed to precipitate from solution as orange-stained (i.e., rust colored) material in Stream 3 sediment. Manganese also oxidizes to a less soluble species. The concentrations of dissolved and total manganese are generally equivalent in all of the monitoring wells; except dissolved iron was not detected in SWS-1 when analyzed in June 2021. This indicates that the manganese exists in suspended form, which deposits in the Stream 3 sediment downstream of the weir box. WAC 173-340-730(7)(c) states that compliance with surface water cleanup standards shall be determined by analysis of unfiltered samples, unless demonstrated that filtered samples are more representative of surface water quality.

6.4. Sediment Data

Sediment sampling data is summarized in Table 6-4. Data include SED-1 through SED-3 and SED-4 through SED-11 in Stream 3 downgradient of the landfill, and background sediment samples located in Wetland A (SEDB-1 through SEDB-3) and Stream 2 (SEDB-4 through SEDB-8). Although SED-1 through SED-3 data are evaluated in the RI, these sample locations were disturbed by a mudflow and subsequent excavation activities as discussed in Section 5.4. Locations SED-4 through SED-11 in Stream 3 were sampled following the mudflow and excavation activities and are representative of current Site sediment conditions.

Sediment data are initially screened against conservative screening levels developed by Ecology in the RI Work Plan (GeoEngineers 2021b). The comparison of the sediment data to these screening levels is to identify PCOCs. Cleanup levels for the PCOCs are developed in Section 7.

Review of Table 6-4 indicates the following for each contaminant group:

6.4.1.1. Petroleum Hydrocarbons

- Diesel-range and lube-oil range TPH were not detected above screening levels in the samples.
- Lube-oil range petroleum hydrocarbons were detected at concentrations less than screening levels in several samples. However, lube-oil range petroleum hydrocarbons were not detected in the same samples treated with acid/silica gel cleanup procedure to remove the interferences from naturally occurring organics. This indicates naturally occurring organics at the Site can influence petroleum hydrocarbon results.

6.4.1.2. Metals

- Iron exceeded the sediment screening level in samples SED-1 and SED-3 collected on July 13, 2021. Manganese exceeded the screening level in SED-3. These locations were disturbed by the mudflow and subsequent excavation activities that occurred on September 17 and 18, 2021, as discussed in Section 5.4.
- No metals were detected above the sediment screening levels in SED-4 to SED-11, which represent current conditions in Stream 3 downstream of the landfill.
- Lead slightly exceeded the screening level in background sediment sample SEDB-1 in Wetland A collected on July 13, 2022.

6.4.1.3. Polychlorinated Biphenyls

- PCBs were not detected in sediment samples SED-1 through SED-3. PCBs were not analyzed in sediment samples collected after July 2021.

6.4.1.4. Organochlorine Pesticides

- Organochlorine pesticides cis-Chlordane and heptachlor were detected above screening levels in sample SED-3 in Stream 3. As noted above, location SED-3 was disturbed by the mudflow and subsequent excavation on September 17 and 18, 2021.
- Heptachlor exceeded screening levels in sample SED-7 in Stream 3 downgradient of the landfill. Heptachlor also exceeded screening levels in background sediment location SEDB-3 in Wetland A.

Heptachlor was detected at a maximum concentration of 0.037 mg/kg in upstream Wetland A, whereas heptachlor was detected at a concentration of 0.011 mg/kg in SED-7 downstream of the landfill. Wetland A receives urban runoff from upstream residential developments, which appear to provide source of pesticide contamination to the Site.

6.4.1.5. Chlorinated Acid Herbicides

- Chlorinated acid herbicides were not detected in the sediment samples.

6.4.1.6. Semi-Volatile Organic Compounds

- 3&4-methylphenol was detected at a concentration of 0.43 mg/kg in SED-4, exceeding its 0.26 mg/kg screening level. No other semivolatile organic compounds were detected in the sediment samples.

6.4.1.7. Non-carcinogenic Polycyclic Aromatic Hydrocarbons

- Two non-carcinogenic PAHs (fluoranthene and pyrene) were detected above screening levels in SED-1, SED-2, and SED-4 downgradient of the landfill. SED-1 and SED-2 were disturbed by the mudflow as discussed in Section 5.4.

6.4.1.8. Carcinogenic Polycyclic Aromatic Hydrocarbons

- The concentrations of cPAHs TEQ were below the screening level.

6.5. Identification of Potential Chemicals of Concern

The groundwater, surface water, and sediment data were reviewed to identify PCOCs for the Site. Refer to Table 6-5, and other tables as noted below, for the following discussion. The maximum detected concentration of each contaminant in groundwater, surface water, and sediment are shown in Table 6-5, along with the RI Work Plan screening levels that were developed by Ecology and are considered environmentally conservative. Contaminants that were not detected at concentrations exceeding the RI Work Plan screening levels in any media were screened out as PCOCs. Contaminants that exceeded a screening level in one or more media were carried forward as PCOCs, with the exceptions discussed below. The exceptions below take into consideration the location of the exceedance (i.e., upgradient or downgradient of the landfill) as well as the magnitude and frequency of the exceedance[12]:

- Total petroleum hydrocarbons (sum of diesel and lube oil range) were detected in groundwater at a maximum concentration of 1.15 mg/L, which is greater than the screening level of 0.5 mg/L (Table 6-5). The detection occurred in upgradient well MW-5 (Table 6-2). TPH was not detected in MW-5 in six other sampling events. The only other TPH screening level exceedance at the Site occurred in MW-9. TPH was detected at a concentration of 0.52 mg/L in MW-9 in one out of four sampling events. TPH was below the screening level in MW-9 in the three other sampling events (Table 6-2). The detection of 0.52 mg/L in MW-9 is less than 2 times the screening level of 0.5 mg/L. TPH did not exceed screening levels in other surface water or sediment samples at the Site. The single TPH exceedance in the well is likely from an upgradient, non-landfill source given the exceedance in upgradient well MW-5. TPH is screened out as a PCOC based on these considerations.

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[12] The magnitude of the exceedance is expressed as the 'exceedance factor,' or the ratio of the detected concentration to the screening level. The frequency is defined as the number of exceedances divided by total number of samples. Exceedances that have a low magnitude (less than 2 times the screening level) and a low frequency of detection (less than 10%) provide justification for a contaminant to be screened out as a PCOC.

- Copper was detected in groundwater at a maximum concentration of 27 µg/L, which is greater than the screening level of 11 µg/L (Table 6-5). The detected concentration was a total copper concentration that occurred in well MW-7 during a single sampling event on May 6, 2022 (Table 6-2). Dissolved copper in the same sample was not detected (Table 6-2). Neither total nor dissolved copper were detected in the other groundwater or surface samples at the Site during the sampling events. Furthermore, copper does not exceed screening levels in Site sediment (Table 6-4). The single total copper exceedance in MW-7 on May 6, 2022 was likely an anomalous event attributable to excessive turbidity in the sample. This is supported by review of the turbidity data for MW-7 during sampling events (Table 6-1). Turbidity was 64 NTU on May 6, 2022, which was the highest turbidity recorded in MW-7. Turbidity ranged from 10 to 26 NTU in the other samples collected from MW-7. For these reasons, copper is screened out as a PCOC.
- Methoxychlor is a pesticide that was detected once in groundwater at a maximum concentration of 0.029 µg/L, which is greater than the screening level of 0.02 µg/L (Table 6-5). The detection occurred in well MW-10 (Table 6-2) during the first sampling event following installation of well MW-10. Methoxychlor was not detected in MW-10 during three subsequent sampling events. Furthermore, the detected concentration of 0.029 µg/L is less than two times the screening level of 0.02 µg/L. Methoxychlor was not detected in the other surface water or sediment samples. For these reasons, Methoxychlor is screened out as a PCOC.
- Naphthalene was detected once in groundwater at a maximum concentration of 10 µg/L, which is greater than the screening level of 8.9 µg/L (Table 6-5). The detection occurred in upgradient well MW-5 (Table 6-2). Naphthalene was not detected in MW-5 during six other sampling events, nor in the other wells. The detected concentration of 10 µg/L is less than two times the screening level of 8.9 µg/L. Naphthalene did not exceed screening levels in the surface water or sediment samples. Naphthalene detected is likely from an upgradient, non-landfill source given the single exceedance in upgradient well MW-5. For these reasons, TPH is screened out as a PCOC.
- 3&4-Methylphenol was detected once in sediment at a maximum concentration of 0.43 mg/kg, which is greater than the screening level of 0.26 mg/kg (Table 6-5). The detection occurred in sample SED-4 located in Stream 3. 3&4-Methylphenol was not detected in the other sediment samples upstream or downstream of SED-4 in Stream 3 (i.e., not detected in SED-1 through SED-3 and SED-5 through SED-11) (Table 6-4). The detected concentration of 0.43 mg/kg is less than two times the screening level of 0.26 mg/kg. 3&4-Methylphenol was not detected in the groundwater or surface water samples. For these reasons, 3&4-Methylphenol is screened out as a PCOC.
- Pentachlorophenol was detected once in surface water at a maximum concentration of 5.7 µg/L, which is greater than the screening level of 5 µg/L (Table 6-5). The detection occurred in SWS-1 (Table 6-3). Pentachlorophenol was not detected at the SWS-1 location during five other sampling events (Table 6-3). The detected concentration of 5.7 µg/L is less than two times the screening level of 5 µg/L. Pentachlorophenol was not detected in the groundwater or sediment samples. For these reasons, pentachlorophenol is screened out as a PCOC.
- Ammonia concentrations in groundwater and surface water ranged from not detected (at 0.05 mg/L reporting limit) to a maximum of 2.5 mg/L at SWS-1 (Stream 3 below the landfill). Ammonia is not considered a COC for the following reasons. The available screening/cleanup levels for ammonia are based on protection of fish, and neither Stream 3 nor its downgradient surface waters are fish-bearing (Section 3.8). In addition, ammonia is anticipated to readily nitrify to nitrate in surface water as it mixes with ambient air downstream of the landfill.

PCOCs for the Site include the following based on the results provided in Table 6-5 and the discussion above.

- Metal compounds: Arsenic, iron, lead, manganese, and nickel as these PCOCs exceeded RI Work Plan screening levels in one or more media.
- Pesticide compounds: cis-Chlordane and heptachlor as these PCOCs exceeded RI Work Plan screening levels in sediment.
- PAH compounds: Fluoranthene, pyrene, and cPAH TEQ as these PCOCs exceeded RI Work Plan screening levels in one or more media.

7.0 CLEANUP STANDARDS AND CONCEPTUAL SITE MODEL

This section presents the Site cleanup standards for the PCOCs and presents the Conceptual Site Model (CSM). The cleanup standards for the Site were developed in accordance with MTCA (WAC 173-340, Part VII) and the Sediment Management Standards (SMS) (WAC 173-204, Part V). The CSM is based on the results of the RI as well as previous Site investigations.

7.1. Cleanup Standards

MTCA-defined cleanup standards (WAC 173-340-700(3)) are composed of three components: cleanup levels, points of compliance, and additional regulatory requirements. Cleanup levels and points of compliance are the components described in Sections 7.1.1 and 7.1.2 below. The additional regulatory requirements that apply to specific cleanup actions are addressed in Section 11.

7.1.1. Cleanup Levels

Cleanup levels (CULs) were developed for PCOCs in groundwater, surface water, and sediment. The RI/FS does not develop soil cleanup levels because potential soil contamination was removed during landfill closure and site development activities, as confirmed in the interim action completion reports, as summarized in Appendix A (GeoEngineers 2021b) and provided in Appendix D (GeoEngineers 2022a) and Appendix E (GeoEngineers 2022b).

Cleanup levels were developed based on a cleanup level calculation tool provided by Ecology[13] (Appendix H), adjusted with Site-specific natural background concentrations of arsenic, iron, and manganese described in Section 6.3. Groundwater and surface water cleanup levels are based on protection of drinking water, protection of freshwater sediment, protection of surface water, and other applicable federal and state criteria. The groundwater and surface water screening levels consider the following:

- Federal Maximum Contaminant Levels (MCLs), Maximum Contaminant Level Goals (MCLGs), and Secondary Maximum Contaminant Levels (SMCLs) (aesthetic criteria for taste, odor, and color) (40 CFR 141).

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[13] Preliminary cleanup levels developed from the January 2023 update to Ecology's Cleanup Levels and Risk Calculation (CLARC) resources, https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC

- Washington State Primary and Secondary Maximum Contaminant Levels (WAC 246-290).
- MTCA Method B standard formula values including for non-carcinogens and carcinogens (Equations 720-1 and 720-2).
- Washington surface water quality criteria (freshwater, chronic; human health consumption of water and organisms) (WAC 173-201A).
- National Recommended Water Quality Criteria - Clean Water Act Section 304 (freshwater, chronic; human health consumption of water and organisms) (EPA 2022).
- Washington Toxics Rule (human health consumption of water and organisms (40 CFR 131.45).
- Protection of sediment based on SMS lower tier cleanup levels for freshwater benthic species and human health criteria ("beach play").
- Site-specific natural background concentrations of metals in groundwater described in Section 6.3.

The groundwater and surface water preliminary criteria are then adjusted if necessary to be no lower than natural or site-specific background and no lower than laboratory PQLs as discussed in WAC 173-340-700. Site-specific background concentrations for arsenic, iron and manganese in groundwater are shown in Appendix G and summarized in Section 6.3.

Sediment cleanup levels are based on protection of freshwater sediment benthic acceptors and human health criteria. Bioaccumulative criteria do not apply because there is no consumption pathway for humans. The cleanup level is preliminarily set as the lowest of the applicable criteria. Sediment cleanup levels are then adjusted if necessary to be no lower than natural or site-specific background and no lower than laboratory PQLs. Site-specific background sediment concentrations are shown in Appendix I.

The cleanup levels for groundwater and surface water are summarized in Table 7-1, and the cleanup levels for sediment are summarized in Table 7-2.

7.1.2. Points of Compliance

The standard point of compliance for groundwater under MTCA is throughout the Site. MTCA allows use of a conditional point of compliance at sites where it can be demonstrated that it is not practicable to meet cleanup levels throughout the site within a reasonable restoration time frame, and that all practicable methods of treatment have been used in the cleanup (WAC 173-340-720(8)(c)). The conditional point of compliance for the Go East landfill is at the perimeter of the landfill. The conditional point of compliance is consistent with WAC 173-350-100, which states "the point of compliance will be located as near to the downgradient edge of the solid waste handling activity as technologically, hydrogeologically, and geographically feasible."

The point of compliance for surface water is where contaminants are released to surface water. MTCA does not allow a mixing zone when contaminated groundwater is the source of contaminant discharge to surface water. The point of compliance for surface water is the weir box.

The MTCA point of compliance for sediment is all sediment within the predominant biologically active aquatic zone or exposed to the water column by reference to the Sediment Management Standards (WAC 173-204). The point of compliance is the upper approximate 1 foot of sediment in Stream 3. This will be protective of the biologically active zone (typically the upper 10 – 15 centimeters), as well as protective for direct contact of sediment by humans (“beach play”) (Ecology 2021).

7.2. Conceptual Site Model

The CSM identifies potential or suspected sources of hazardous substances, types and concentrations of contaminants, potentially contaminated media, and actual or potential exposure pathways and receptors. Figure 7-1 depicts the CSM as discussed below.

7.2.1. Primary Source and Transport Mechanisms

Primary Sources. The Landfill waste are the primary source of hazardous substances present at the Site. Landfill waste generally includes wood waste and construction and demolition waste. In supplemental waste characterization sampling, (GeoEngineers 2020b) states the primary detected contaminants were oil-range hydrocarbons, PAHs, and metals, which is consistent with the presence of charred materials, asphalt-based roofing materials, and asphalt concrete rubble in the landfill. Sporadic detections of individual VOC, SVOC, PCB, pesticide, and herbicide compounds were encountered at low concentrations.

Primary Transport Mechanisms. Two primary transport mechanisms that exist at landfills are precipitation and infiltration of rainwater down into the waste and groundwater flow through the waste located below the water table. As water percolates through the waste more soluble contaminants can be dissolved from the waste into the percolating water forming leachate. In addition, weak acids that are generated during the decomposition of the organic waste materials can dissolve less soluble contaminants into the leachate. The leachate continues to migrate vertically by gravitational forces until it reaches the groundwater beneath the Landfill. The Go East landfill was closed and capped with an engineered low permeability cap in 2022. Therefore, the precipitation and downward infiltration is now limited as compared to pre-2022 conditions.

Contaminants within the waste below the water table in closed landfills can dissolve into groundwater and be transported with the groundwater as it continues to flow in a downgradient direction. Available information for the Go East landfill suggests that groundwater in the Landfill area generally occurs near or below the bottom of the Landfill as discussed in Section 3.6. Groundwater is assumed to flow through the waste. Groundwater flows to the east then northeast where it discharges at the weir box.

7.2.2. Secondary Sources and Transport Mechanisms

Secondary Sources. Contaminated groundwater and leachate are secondary contaminant sources. Elevated concentrations of metals including iron and manganese are due to naturally occurring mineral deposits. This is the result of groundwater geochemistry changes caused by the presence of waste degradation byproducts contained in Landfill groundwater. Oxidation-reduction processes significantly affect the forms and mobility of iron and manganese in groundwater and leachate.

Landfill gas has the potential to impact groundwater because of its elevated concentrations of carbon dioxide and methane. Landfill gas is generated by the anaerobic degradation of organic material in the landfill. Historically, the landfill gas has ventilated through the pervious earthen cover at the landfill, and likely had limited impact on groundwater. The engineered landfill cap inhibits the ventilation of landfill gas, which creates a potential for accumulation and pressure-driven mixing with groundwater, which can mobilize naturally occurring metals in the groundwater. The continued generation of methane is limited since the landfill stopped accepting waste 40 years ago in 1983. Although the engineered cap inhibits the ventilation of any generated gas, the landfill cover includes a landfill gas interceptor trench and ventilation system. Century Communities is implementing a methane monitoring plan under the Landfill permit requirements to evaluate the continued generation and potential accumulation, ventilation, and migration of methane.

Secondary Transport Mechanisms. Secondary transport mechanisms at the Site include groundwater flow which discharges near the weir box as leachate/surface water. Sampling results at and downstream of the weir box (i.e., SWS-1) indicate elevated concentrations of PCOCs. Samples from Seep-1 and Seep-2 did not exceed the respective screening levels with the exception of iron and manganese; however, the concentrations of iron and manganese were consistent with natural background, and not indicative of landfill impacts. The landfill impacts to surface water are confined to discharges near the weir box.

Groundwater flow to drinking water wells can be a concern downgradient of landfills. However, the Vashon advance outwash formation (Qvt) does not exist downgradient of the landfill and the underlying transitional beds (Qtb) are reportedly more than 100 feet thick and are not suitable for groundwater use. There are no drinking water wells within 1,000 feet of the Go East landfill, and existing regulations (i.e., WAC 173-160-171(3)(b)(vi)) prohibit installation of wells within 1,000 feet of the landfill in the future. Wells installed at distances greater than 1,000 feet downgradient of the landfill in the future would be in a deeper aquifer within or below the transitional beds. The transitional beds act as a regional aquitard indicating that future wells would likely not be impacted by contaminated groundwater flow.

7.2.3. Exposure Media, Pathway, and Receptors

This section discusses the exposure media, pathways, and receptors for the Site in terms of the Landfill waste, groundwater, surface water, and sediment.

Landfill Waste. An engineered landfill cap was constructed over most of landfill surface in 2022. As shown in Figure 2-4, native vegetation was preserved on the steep, northeastern slope of the landfill, and a rock buttress was constructed at the toe of the slope. The northeast slope is covered with new growth trees and underbrush, with several fallen trees. As described in Appendix D (GeoEngineers 2022a), crushed drums and potentially-impacted soil were removed during landfill closure, and no other indications of hazardous materials were observed.

The landfill cap and northeast slope will be inspected and maintained in the future. Therefore, there is little to no likelihood for humans and/or terrestrial ecological receptors to be exposed to contaminants present in the waste, with the exception of landfill cap maintenance activities in the future (for repairs, for example). These activities will be carefully planned and executed to minimize risk to worker health and safety. The exposure pathways and receptors for the Landfill waste are summarized as follows:

- Human exposure to waste materials through direct contact or ingestion is considered an incomplete pathway now and in the future.
- Exposure of ecological receptors to the waste materials, including direct contact or ingestion, is considered an incomplete exposure pathway now and in the future.
- There are no off-property exposure routes because waste is confined to the landfill on the Property.

Groundwater. Groundwater use as drinking water will not be allowed now or in the future within 1,000 feet of the landfill. Wells installed greater than 1,000 feet downgradient of the landfill in the future would likely be in a deeper aquifer within or below the transitional beds as discussed in Section 7.2.2. Future wells would therefore not be impacted by contaminated groundwater flow from the landfill. The off-property drinking water pathway is considered a pathway to be environmentally conservative, albeit an unlikely pathway. The exposure pathways and receptors for groundwater are summarized as follows:

- The ingestion of contaminated groundwater on the Property is an incomplete pathway now and in the future because new wells are prohibited within 1,000 feet of permitted or previously permitted landfills.
- Ingestion of contaminated groundwater off the Property is a potentially complete exposure pathway in the future but this is unlikely in the Qtb formation.
- There is no ecological exposure to groundwater.

Surface Water. The beneficial uses of surface water in Stream 3 and downgradient of Stream 3 include domestic, industrial, and agricultural water supply; primary contact recreation; stock watering; and wildlife habitat; commerce and navigation; boating; and aesthetic values. Neither Stream 3 nor its immediate downstream waters are considered fish bearing (Sections 3.2 and 3.8). There are no current domestic, industrial, or agricultural water supply uses of surface water on the Property, and such uses are unlikely on the Property in the future. The stream flow in Stream 3 downstream of the property is insufficient to use as a potable water supply, and any exposures to humans would be incidental. Potential surface water exposure pathways and receptors are summarized as follows:

- Ingestion and direct contact of surface water by humans on and off the Property is a complete but minor exposure pathway now and in the future.
- Ingestion and direct contact of surface water by ecological receptors on and off the Property is a complete exposure pathway now and in the future.
- Human ingestion of aquatic organisms in surface water on and off the Property is an incomplete exposure pathway now and in the future.
- Benthic invertebrates might live in the streams and be ingested by ecological receptors now and in the future, on and off the Property.

Sediment. Exposure to sediment in Stream 3 primarily includes ecological receptors. Additionally, direct contact or ingestion of sediment by human receptors is a potential pathway although this is considered a minor pathway. Potential sediment exposure pathways and receptors are summarized as follows:

- Ingestion and direct contact of sediment by humans on and off the Property is a complete but minor exposure pathway now and in the future.
- Ingestion and direct contact of sediment by ecological receptors on and off the Property is a complete exposure pathway now and in the future.

7.3. Nature and Extent of Contamination Summary

Potentially contaminated soils were removed during landfill closure and site development activities, as confirmed during interim actions and summarized in GeoEngineers 2021b (Appendix A), GeoEngineers 2022a (Appendix D), and GeoEngineers 2022b (Appendix E).

The nature and extent of contamination is based on the locations where PCOCs exceed the cleanup levels after landfill closure, as identified in Section 7.1.1. In the discussion below, the total metals fraction of groundwater and surface water samples are compared to the screening levels. The cleanup level exceedances are shown in Tables 7-3, 7-4, and 7-5 for groundwater, surface water, and sediment, respectively. The locations where exceedances occur are shown in Figures 7-2A/B, 7-3A/B, and 7-4A/B for groundwater, surface water, and sediment, respectively. The exceedances are summarized in the following sections.

7.3.1. Groundwater

Each well exceeded a cleanup level for at least one PCOC during at least one groundwater sampling event. As shown in Figures 7-2A and 7-2B, the exceedances are summarized at each well location with respect to the landfill:

Upgradient of landfill:

- MW-1. Manganese slightly exceeded the CUL twice. Nickel exceeded the CUL once; the natural background of nickel was elevated in soil (GeoEngineers 2021b) and background sediment samples. These concentrations are consistent with background and not an indication of contamination.
- MW-2. Iron and arsenic exceeded their respective CULs on one anomalous sampling event. As discussed in Section 6.3, the elevated concentrations metals are consistent with high suspended solids, and not with the mobilization of metals from leachate.
- MW-3. Iron slightly exceeded the CUL twice. These concentrations are consistent with background and not an indication of contamination.
- MW-5. Arsenic and manganese slightly exceeded the CULs during one sampling event each. These concentrations are consistent with background and not an indication of contamination.

The concentrations of metals are consistent with variability around the natural background concentrations calculated upgradient of the landfill. The concentrations of metals would be anticipated to satisfy statistical compliance criteria in WAC 173-340-720(9) if a sufficient number of samples were collected from each well.

Wedge area (beneath former waste area):

- MW-6. Manganese concentrations ranged from 1,700 to 2,400 µg/L, which exceeded the natural-background adjusted CUL of 354 µg/L and the health-based Method B CUL of 750 µg/L for groundwater ingestion. cPAH TEQ also exceeded the CUL once.
- MW-7. Arsenic exceeded the CUL in each sampling event. Iron, lead, manganese, nickel, and/or cPAH TEQ periodically exceeded the respective CULs; however, the exceedances of iron, lead, manganese, and nickel in December 2021 and May 2022 appear to be associated with suspended solids, and not with the mobilization of naturally occurring metals (see Section 6.3).
- MW-8. Manganese exceeded the CUL on each sampling event. Nickel exceeded the CUL one time.

Downgradient of landfill:

- MW-9. Iron and manganese occasionally exceeded the respective CULs. As noted in Section 6.3, the water quality in MW-9 and SWS-1 is similar.
- MW-10. Iron, lead, and/or manganese occasionally exceeded the respective CULs.
- Lead was detected in MW-10 in April 2022 above the CUL, but not in three subsequent sampling events. The lead appears to be consistent with variation around natural background.

7.3.2. Surface Water

PCOCs periodically exceeded cleanup levels at the surface water sampling locations. As shown in Figures 7-3A and 7-3B, the exceedances are summarized as follows by location with respect to the landfill:

Cross-gradient of landfill:

- Seep-1 and Seep-2. Iron and manganese periodically exceeded the respective CULs. These exceedances are suspected to result from variation around the natural background concentrations.

Upstream and not downgradient of landfill:

- Stream 2 locations SP2 and SP3. cPAH TEQ was detected at SP2 and SP3, slightly exceeding the CUL in SP3 during the sole sampling event. The presence of PAHs is suspected from urban stormwater runoff that discharges to Stream 2.

Downgradient and downstream of landfill:

- SWS-1. Iron and manganese exceeded CULs during the seven sampling events. Lead exceeded the CUL once and was not detected in six additional sampling events. As shown in Table G-1, the total concentrations of iron and manganese significantly exceed the dissolved concentrations, since these metals oxidize as the surface water mixes with ambient air. The oxidized iron and manganese species are relatively insoluble and precipitate into the Stream 3 sediment.
- SWS-2. Although metal PCOCs exceeded the CULs, this sample is considered a one-time anomalous event and not likely representative of surface water conditions in Stream 3 as discussed in Section 6.2.2.2.
- SWS-3. Iron and manganese exceeded the respective CULs. As shown in Figure 7-3B, SWS-3 was collected immediately downstream of SWS-1, and the concentrations of iron and manganese are consistent with SWS-1.

7.3.3. Sediment

PCOCs periodically exceeded cleanup levels at the sediment sampling locations. As shown in Figures 7-4A and 7-4B, the exceedances are summarized as follows by location with respect to the landfill:

Upstream of landfill:

- Wetland A. Heptachlor (a pesticide) was detected below CUL in SEDB-3 indicating possible upgradient sources of contamination to the Site. Wetland A receives urban runoff from upgradient residential development.

Downgradient and downstream of landfill:

- SED-1, SED-2, and SED-3. Iron exceeded the CUL in the three sediment samples collected on the Property prior to construction activities near the toe of the landfill. Additionally, the pesticide heptachlor was detected above the CUL in SED-3. Pesticides are suspected to originate from urban stormwater runoff, which recharges groundwater beneath the landfill. Pesticides are not associated with the landfill material. As discussed in Section 5.4, locations SED-1, SED-2, and SED-3 were disturbed by a mudflow and subsequent excavation activities associated with construction of the rock buttress. Locations SED-4 through SED-11 were sampled following stabilization of the area and SED-4 through SED-11 are representative of current Site sediment conditions.
- SED-4 to SED-11. There were no exceedances at SED-4 through SED-11. As noted previously, ferrous iron and divalent manganese oxidize as groundwater seeps from the weir box, leading to formation of less soluble species that precipitate into the Stream 3 sediment. This is evident by iron-staining observed in the weir box and Stream 3 sediment.

8.0 REGULATORY REQUIREMENTS

The following regulations are potentially applicable to specific technologies or CAAs. Ecology's MTCA regulations were the primary regulations used to guide development of the FS. Specifically, the FS was developed following the procedures outlined in WAC 173-340-350. SMS cleanup levels are also applicable to sediment present in Stream 3.

MTCA's threshold requirements listed in WAC 173-340-360(2) include the requirement to "comply with applicable state and federal laws" which are defined in WAC 173-340-710. MTCA defines applicable state and federal laws to include legally applicable requirements and those requirements that are relevant and appropriate, which are referred to as applicable or relevant and appropriate requirements (ARARs). The following sections identify the ARARs that are potentially applicable to the CAAs developed for cleanup for the Site.

8.1. Potentially Applicable State and Federal Laws and Regulations

The following state and federal laws and regulations are potentially applicable to CAAs for the Site.

Solid Waste Regulations for Limited Purpose Landfills (WAC 173-350-400). SCHD permits the landfill under this regulation. WAC 173-350-400 provides requirements for landfill closure, monitoring, and post-closure, including requirements for a landfill cover system to prevent contact with the waste and minimize infiltration of precipitation into the waste, control of stormwater run-on and run-off, and control landfill gas. The regulations define a "Presumptive Cover System" that must have a geomembrane, minimum of 2 feet of cover soil, and be capable of supporting native grasses. The final cover was completed in 2022. Post closure care must continue for as long as necessary for the landfill to become functionally stable, which means the landfill no longer presents a threat to human health or the environment at the point of exposure for humans or environmental receptors, considering factors including leachate quality and quantity, landfill gas, settlement and cover integrity, and groundwater quality.

Washington Water Well Construction Regulations (WAC 173-160). Establishes state standards for installing, maintaining, and decommissioning wells.

Washington Water Pollution Control Act (RCW 90.48). The Washington Water Pollution Control Act and its implementing regulations address the requirements under Sections 301, 302, and 303 of the Federal Clean Water Act (CWA, Title 33 USC § 1251 et seq.).

Maximum Contaminant Levels (WAC 246-290-310). The primary and secondary MCLs for drinking water established in Washington Department of Health regulations are ARARs under MTCA.

Washington Surface Water Quality Standards (WAC 173-201A). These standards are applicable to surface waters of the state. The Washington State Surface Water Standards are protective of the beneficial uses of surface water and provide criteria that are protective of human health and aquatic life.

Washington Clean Air Act Regulations (WAC 173-400). Provides standards and procedures for managing the discharge of contaminants to the atmosphere. Washington air quality regulation establishes permit programs that implement federal and state air quality regulations. In Snohomish County, oversight of most air quality regulations has been delegated to the Puget Sound Clean Air Agency (PSCAA). PSCAA also has its own regulations. PSCAA regulation I, 6.03(b)(96) exempts landfills such as the Go East Landfill that do not have operating, active landfill gas collection systems (the federal Clean Air Act at 60.751 defines an "active collection system" as one that uses blowers or compressors, which are not present at the site).

Washington State Environmental Policy Act (SEPA; RCW 43.21c). Requires state agencies to analyze the impacts of proposals for legislation and other actions that might significantly affect the quality of the environment. SEPA review was performed prior to landfill closure.

Washington Industrial Safety and Health Act Regulations (WAC 296-62). Contains health and safety training requirements for on-site workers. They also contain permissible exposure limits for conducting work at the Landfill. These regulations will be applicable to certain activities required for landfill maintenance in the future.

8.2. Potentially Applicable Local Statutes and Ordinances

The following are local regulatory requirements that are potentially applicable to the CAAs developed for Site cleanup:

Snohomish Health District Code (Title 2, Division II). Provides the requirements for handling solid wastes in Snohomish County. Specific to the Landfill, these regulations identify the responsibilities of owners of closed or abandoned Landfills.

Snohomish County Code (SCC) 7.53 (Water Pollution Control). Provides the requirements to control discharges of contaminants to public drainage facilities, natural drainage systems, and storm water and receiving waters. SCC 7.53 references the technical guidelines and best management practices (BMPs) included in the Snohomish County Drainage Manual.

SCC 30.62A (Wetlands and Fish & Wildlife Habitat Conservation Areas). Provides critical area regulations pursuant to the Growth Management Act (RCW 36.70A) for designation and protection of wetlands and fish and wildlife habitat conservation areas (streams, lakes, marine waters, and primary association areas for critical species). SCC 30.62A applies to development activity, actions requiring project permits, and clearing occurring within wetlands, fish and wildlife habitat conservation areas and buffers.

SCC 30.63A (Drainage). Implements the storm water management provisions under the Federal Clean Water Act (33 U.S.C. § 1251 et seq.) as administered by Ecology through issuance of the NPDES Phase I Municipal Stormwater Management Permit in accordance with chapter 90.48 RCW. This chapter regulates storm water discharges from all new development and redevelopment with the objective to control adverse impacts of drainage and storm water to, among other things, prevent or minimize degradation of water quality, control sedimentation, preserve fish and wildlife habitat, maintain aquatic habitat, minimize adverse effects caused by degradation of surface water quality and/or changes to hydrologic flow patterns, prevent groundwater degradation from surface water flows, and to preserve and protect wetlands by maintaining hydrologic continuity. Compliance with SCC 30.63A is required for projects which add at least 2,000 square feet of impervious surface, cause more than 7,000 square feet of any land disturbing activity, convert at least 0.75 acres of native vegetation to lawn or landscaped areas, or convert at least 2.5 acres of native vegetation to pasture.

SCC 30.63B (Land Disturbing Activity). Provides the standards and requirements for land disturbing activities. Permits and compliance are required for applicable land disturbing activities including those which occur within two feet from a property line, within the buffers and setbacks from critical areas, obstruct or alter an existing drainage course or pattern, collect or concentrate storm water from more than 5,000 square feet of drainage area, and/or are associated with closure or capping of a solid waste disposal site.

9.0 IDENTIFICATION AND SCREENING OF CLEANUP ACTION TECHNOLOGIES

This section identifies and screens potentially applicable cleanup action technologies for the Site. Cleanup action technologies are technologies that could be implemented to address contamination, whether alone or in combination with other technologies.

9.1. General Response Actions and Technologies

Table 9-1 summarizes the general response actions and technologies considered for groundwater, surface water, and sediment. Table 9-1 screens the technologies for feasibility, implementability, and cost, and notes the technologies retained for inclusion in remedial alternatives (discussed in Section 10).

The remedial technologies identified in Table 9-1 that are potentially applicable for use at the Site for each general response action are screened using the following criteria:

- Technical Feasibility. The ability of the technology to function effectively and achieve meaningful progress toward cleanup based on site-specific characteristics including the nature and extent of site-related contaminants, contaminant source type and locations, hydrogeology, and time required to achieve cleanup levels.

- Implementability. Accounts for constraints or difficulties in implementing the technology, resource availability, and administrative issues related to the technology, including government regulatory approvals, construction schedule, constructability, access, monitoring, operation and maintenance, and community concerns.
- Relative Cost. Overall cost of the technology relative to other technologies that address the same cleanup action objectives with similar effectiveness and implementability.

The following sections describe the general response actions and technologies.

9.2. Groundwater

Potential general response actions and technologies for groundwater include:

- Groundwater containment.
- Treatment.

The following sections describe the potential general response actions and technologies for groundwater included in each of these categories:

9.2.1. Groundwater Containment

Technologies used to physically contain groundwater include sheet pile and slurry walls. These technologies establish physical barriers to groundwater flow and are most suitable for use at sites where groundwater is shallow, the underlying aquitard is also present at a shallow depth and groundwater movement is limited. The depths to groundwater are up to 60 feet bgs with the depths to the aquitard up to 80 feet bgs even though the site has an effective aquitard underlying the shallow aquifer (the transitional beds). Use of sheet pile and/or slurry walls is not feasible at these depths. The soils at the Site are relatively compact which would cause installation of sheet piling to be challenging. Additionally, the rugged terrain and steep slopes along the northwest side of the Landfill (near MW-3) are a barrier to construction access.

Groundwater at the Site flows at an estimated 100 to 200 feet per year[14]. Installation of a physical barrier would locally raise groundwater levels upgradient of the barrier that could cause waste to become saturated in the Landfill and contribute to increased impacts to groundwater. The physical barrier to groundwater flow would likely be required to be at least 600 lineal feet. Construction could not be completed without an easement on the property(ies) to the north and would negatively impact existing properties during construction. The construction cost for such a long and deep barrier would be high, and public opposition could preclude construction.

Implementing groundwater physical containment technologies will not be considered further because of these challenges.

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[14] Section 3.6 describes slug testing results that indicated a flow rate of 146 feet per year, based on one-time testing in 2009. Actual flow could be higher or lower and is estimated here as 100 to 200 feet per year.

9.2.2. Groundwater Treatment

General response actions and technologies for groundwater treatment include the following:

- Groundwater extraction and treatment.
- Monitored natural attenuation.

9.2.2.1. Groundwater Extraction and Treatment

Groundwater extraction and treatment consists of partial to complete hydraulic containment of impacted groundwater via a system of groundwater extraction wells and treatment of the extracted groundwater prior to being discharged. The extracted groundwater is treated to remove the contaminants exceeding the CULs and then either discharged to groundwater, surface water, or discharged with or without treatment to a sanitary sewer. The extracted groundwater would likely need to be treated to remove contaminants including metals. organics, and/or turbidity. The treated groundwater would then be discharged to surface water (likely Stream 3).

Groundwater extraction does not appear to be technically feasible at the Site. Fully intercepting impacted groundwater would require dewatering the full thickness of the aquifer which is not technically feasible. The increased discharge of treated groundwater to Stream 3 could also have adverse effects on downstream surface waters. The cost of groundwater extraction is high due to the need for numerous wells and pumps. Each well head would require power and controls. A pipe network would need to be constructed to connect each well to a central location for treatment. Treatment of the extracted groundwater containing relatively low concentrations of both organics and inorganics would require a series of treatment processes that would have a high cost given the large quantity of water to be treated.

Groundwater extraction and treatment is not carried forward as a potential cleanup action technology for further evaluation due to the complex technical challenges for both groundwater extraction and treatment and the anticipated high cost.

9.2.2.2. Monitored Natural Attenuation

MTCA defines natural attenuation as a variety of physical, chemical, or biological processes that act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of hazardous substances in the environment (WAC 173-340-200). These in-situ processes include natural biodegradation; dispersion; dilution; sorption; volatilization; and chemical or biological stabilization, transformation, or destruction of hazardous substances. Natural attenuation can be considered an active remedial measure if the following are implemented:

- Source control has been conducted to the maximum extent practicable.
- Leaving contaminants onsite during the restoration time frame does not pose an unacceptable threat to human health or the environment.
- There is evidence that natural biodegradation or chemical degradation is occurring and will continue to occur at a reasonable rate at the site.
- Appropriate monitoring requirements are conducted to ensure that the natural attenuation process is occurring and that human health and the environment are protected.

Natural attenuation is often referred to as monitored natural attenuation (MNA) when applied as part of a cleanup action to distinguish it from “no action.”

The Site is appropriate for MNA due to generally low concentrations of contaminants in groundwater and because the Landfill has been closed with a cap providing a substantial source control action that will reduce future impacts to groundwater and surface water. The landfill material was removed from above impacted wells MW-6 to MW-8 in the wedge area; thus, eliminating the source of contamination. Additionally, groundwater recharge beneath the landfill is reduced by construction of an impermeable cover on portions of the landfill where the advance outwash formation exists; by diverting Stream 1 away from the landfill and constructing a shallow groundwater interceptor trench to partially divert groundwater recharge from the west hillside; and the planned construction of the Bakerview (Alpine Estates) development that includes structures, paved surfaces, and a stormwater management system that will further reduce infiltration upgradient of the landfill.

The source control actions performed as part of closure, coupled with natural attenuation processes that are occurring at the Site, are anticipated to be effective to create a functionally stable Site within a reasonable restoration timeframe. The natural attenuation processes occurring in groundwater at the Site include dispersion, dilution, and sorption downgradient of the landfill in addition to chemical and/or biological stabilization. Dispersion and dilution are occurring for all contaminants. Sorption is an additional attenuation process that particularly affects metals. Chemical and/or biological stabilization are likely occurring where biogeochemically favorable conditions are present. For example, reduced iron is removed from groundwater when iron is oxidized at or near where groundwater discharges as surface water. This is evident by the orange-colored sediment in Stream 3.

Monitoring is an element of MNA and post-closure groundwater monitoring will be completed as required by WAC 173-350-400(11) and WAC 173-350-500.

MNA is feasible, implementable, and has a relatively low cost. Therefore, MNA is retained for further consideration.

9.3. Surface Water

General response actions and technologies for surface water include the following:

- Surface water treatment.
- Monitored natural attenuation.

The following sections describe the potential general response actions and technologies for surface water.

9.3.1. Engineered Surface Water Treatment

General types of engineered surface water treatment options include passive treatment systems similar to treatment used for stormwater (such as bioswales, ponds, or treatment wetlands) and active mechanical, chemical, and biological treatment processes.

Using a passive system such as a constructed treatment wetland or other passive treatment system to treat leachate is feasible at the Site but challenging due to several factors. The low concentrations of varied contaminants make achieving removal efficiencies difficult. Furthermore, there is minimal room to construct a passive system at the toe of the slope between the slope and the northern Property line. Furthermore, achieving specific treatment objectives would require ongoing monitoring, maintenance, and potential costly modifications to address problems.

Active mechanical, chemical, and biological treatment would include treating water from the weir box. The treatment technologies would be the same technologies as described for treatment in Section 9.2.2.1. It is technically feasible to treat water from the weir box, however the active treatment system may have some of the same challenges as a passive system including potentially costly ongoing monitoring, maintenance, and modifications to address problems.

The passive and active surface water systems are retained for further consideration.

9.3.2. Monitored Natural Attenuation

The Site surface water is appropriate for MNA due to generally low concentrations of contaminants in surface water and because the Landfill has been closed and capped, which is a substantial source control action that will reduce future impacts to surface water. Surface water quality is anticipated to improve as it flows downstream due to oxygenation, settlement, and precipitation of PCOCs, as well as dilution with other surface water and stormwater. Monitoring of surface water would be performed over the restoration timeframe. Monitored natural attenuation is technically feasible, implementable, and has a low cost and, therefore, is retained for further consideration.

9.4. Sediment

General response actions and technologies for sediment include the following:

- Sediment removal/capping.
- Natural recovery.

The following sections describe the potential general response actions and technologies for sediment.

9.4.1. Sediment Removal/Capping

Sediment removal (also referred to as dredging) is one method for source control and risk reduction in environments where sediment represents a long-term reservoir of contamination. Removal can be accomplished using construction equipment in areas within reach of an excavator or in areas that can effectively be dewatered through use of coffer dams, sheet pile walls, or other temporary structures.

Challenges associated with removal include the resuspension of contaminated sediment, followed by deposition both inside and outside the area of removal. Dredged sediment also typically must be dewatered prior to transport to a transloading or disposal facility. The removed material needs to be transported and disposed, and the removed water during the process may also require containment, treatment, and disposal. The costs associated with waste handling and disposal typically drive the overall cost of sediment removal.

Sediment capping is a common containment technology that involves placement of clean material over contaminated sediment. Caps stabilize the sediment to prevent disturbance, resuspension, and transport of contaminants to other areas and reduce migration of dissolved contaminants to the biologically active zone and the overlying water column, thus preventing exposure to ecological and human receptors. Caps can also be designed to function as a habitat following construction. Cap material can be placed directly by a backhoe or similar equipment. Risks associated with cap placement include disturbance and resuspension of contaminated sediment (albeit much less than dredging), displacement of potentially contaminated porewater into surface water upon sediment consolidation, and smothering of benthic communities and aquatic vegetation. Temporary loss of the benthic community and aquatic vegetation is inevitable where a thick cap is constructed.

As discussed in Section 5.4, sediment capping was inadvertently performed by the release of a mudflow that inundated Stream 3 sediment. The mudflow initiated on the steep slope north of the landfill boundary. Construction contractors placed approximately 500 to 700 cubic yards of clean imported fill on the steep slope, where the contractor had made a significant cut into the transitional bed soils. The fill was mobilized by precipitation and a spring on the slope. On September 17 and 18, 2021, the mudflow was released carrying transitional bed soils and trees down the steep slope. The mudflow covered the wetlands associated with Stream 3, from the toe of the landfill to Stream 2, with more than a foot of mud.

Dredging and capping were not considered further for the Site because the concentrations of iron in the Stream 3 sediments are less than half of the cleanup level and the concentrations of pesticides and PAHs are orders-of-magnitude below their cleanup levels.

9.4.2. Natural Recovery

The natural recovery of sediment refers to processes such as chemical and biological degradation, sedimentation (i.e., burial beneath naturally deposited clean sediment), and bioturbation (e.g., mixing) that result in reduced contaminant concentrations in surface sediment and increased isolation of contaminated sediment over time. Natural recovery can be considered when natural recovery is expected to yield sediment that meets cleanup goals within a reasonable time frame (defined as 10 years in SMS) or when other technologies are determined to be impracticable. The Site sediments are amenable to natural recovery. The concentrations of contaminants in sediments are below the cleanup levels. Contaminant loading to sediments is expected to decrease following placement of the landfill cap resulting in a decreased infiltration of precipitation down through the landfill and decreased reducing conditions in the groundwater that is released to Stream 3 and deposited in the sediment.

10.0 DESCRIPTION OF ALTERNATIVES

This section describes the alternatives considered for the Site.

10.1. Alternative 1 – Landfill Closure

Alternative 1 consists of closing the landfill and an environmental covenant with no other activities. The landfill has already been closed in accordance with the requirements for limited purpose landfills (WAC 173-350-400) and the LFCP beginning in March 2021 and concluding in July 2022 as documented in the CQAR (PACE 2022). Alternative 1 does not include any further actions except for an environmental covenant on properties developed within the site.

10.2. Alternative 2 – Landfill Closure, MNA/Recovery

Alternative 2 consists of the requirements identified under Alternative 1, MNA for groundwater and surface water, and natural recovery for sediment. MNA for groundwater consists of continued monitoring of groundwater wells as required by long-term post-closure care. MNA for surface water consists of continued monitoring of surface water emanating from the weir box.

As described in Sections 5.4 and 9.4.1, a mudflow of clean soil inundated the existing sediment in September 2021. Wetland vegetation was planted on the mudflow downstream from the landfill in March 2023 in accordance with the wetland mitigation plan (Wetland Resources 2022). The mitigation plan includes annual site inspections for five years and periodic maintenance that potentially includes removal of competing grasses, irrigation, fertilization, replacement of plant mortality, and the replacement of mulch. Additionally, Century Communities purchased 0.348 wetland mitigation bank credits from Skykomish Habitat Mitigation Bank for the Bakerview Mudflow Restoration Project on May 5, 2023 (Skykomish Habitat 2023). Natural recovery for sediment includes re-establishing wetland vegetation in and near Stream 3, improving surface water quality, and additional natural sedimentation to overlie historical contamination.

10.3. Alternative 3 – Landfill Closure, MNA, Surface Water Treatment, and Recovery

Alternative 3 consists of the requirements identified under Alternative 1, MNA for groundwater, active or passive treatment for surface water, and natural recovery for sediment.

11.0 FEASIBILITY STUDY EVALUATION CRITERIA

This section evaluates the CAAs developed in Section 10 based on the MTCA criteria for selection of cleanup actions (WAC 173-340-360). The recommended CAA is presented in Section 12.

The following sections provide an evaluation of the CAAs based on the MTCA threshold criteria in WAC 173-340-360(2)(a) and other requirements in WAC 173-340-360(2)(b), and provides a disproportionate cost analysis per WAC 173-340-360(3)(e).

11.1. Protect Human Health and the Environment

All three alternatives are anticipated to be protective of human health and the environment. The landfill has been capped, and risk to human health and the environment are considered low due to the relatively low concentrations of contaminants that are present and are expected to recover naturally within a reasonable restoration timeframe.

11.2. Comply with the Cleanup Standards

The three alternatives comply with the cleanup standards including meeting cleanup levels at the points of compliance within a reasonable restoration timeframe.

11.3. Comply with Applicable State and Federal Laws

The three alternatives would comply with the ARARs identified in Section 8, including but not limited to MTCA, SMS, the solid waste ARARs, and critical areas/wetlands regulations.

11.4. Compliance Monitoring

The three alternatives require compliance monitoring which is already necessary under the landfill post-closure care requirements in WAC 173-350-400(11).

11.5. Permanence

The three alternatives are considered permanent to the maximum extent practicable because the landfill has been closed and will be monitored until functionally stable. Landfill closure, including construction of a cover system and management of stormwater and landfill gas, has successfully stabilized many landfill sites over the term of the post-closure periods (EPA 1997). All alternatives include institutional controls, as well as post-closure compliance monitoring to document the effectiveness of the selected remedy. The specific groundwater cleanup is non-permanent as discussed in Section 11.8.

11.6. Reasonable Restoration Timeframe

The three alternatives are anticipated to achieve cleanup levels within a reasonable restoration timeframe. Groundwater and surface water will continue to be monitored as part of landfill post-closure care. A reasonable restoration timeframe for landfills such as Go East is approximately 20 years for groundwater and surface water, and 10 years for sediment. This timeframe is considered reasonable based on the requirements of WAC 173-340-360(4)(b):

- Potential risks to human health and the environment are low. The cover system prevents access to the waste. There are no current uses of groundwater or surface water within or near the Site and institutional controls will prevent future use of these resources.
- Achieving a shorter restoration time frame is not practical or necessary due to the low concentrations and limited number of contaminants present.
- Institutional controls to prevent access to the Landfill waste and to prohibit use of groundwater and surface water will be effective and reliable.
- Source control actions, surface water treatment, and natural attenuation will effectively and reliably reduce concentrations of contaminants in groundwater, surface water, and sediment over time. Compliance monitoring will document concentrations of contaminants at the Site. Given the age of the Landfill and the documented limited extent and magnitude of impacts, migration of contaminants beyond the points of compliance in a manner that escapes detection so as to adversely impact human health or the environment is very low.
- The toxicity and/or the concentrations of the Site contaminants are generally low.

11.7. Consideration of Public Concerns

Consideration for public concerns is an inherent part of the cleanup process under MTCA (WAC 173-340-600). The owners of the landfill Property have been engaging the public during construction. Currently there are no known site-specific concerns by the public. However, concerns may arise regarding the implementation of the CAAs. Alternative 3 may raise public concerns over significant construction requirements and permanent modification at the toe of the slope, and concerns over chemical treatment if chemical treatment were a part of the treatment trains.

11.8. Permanence of the Groundwater Cleanup Action

Only sites achieving CULs at all locations in groundwater are considered permanent groundwater cleanup actions. The three alternatives are anticipated to achieve the groundwater CULs at the conditional point of compliance by the end of the restoration timeframe and therefore, are not permanent cleanup actions. Continued improvements in groundwater quality due to the landfill closure and capping will likely achieve a permanent groundwater cleanup action, but the timeframe is uncertain.

The three alternatives comply with MTCA as non-permanent groundwater cleanup actions because they contain the waste through landfill capping, implement source control actions per the solid waste ARAR, provide treatment through natural attenuation, and do not rely primarily on institutional controls.

11.9. Institutional Controls

Institutional controls are measures undertaken to limit or prohibit activities that interfere with the integrity of a cleanup action or that may result in exposure to hazardous substances at a site. WAC 173-350-400(8)(e) requires that an environmental covenant be filed following closure of a limited purpose landfill, pursuant to the Uniform Environmental Covenants Act (RCW 64.70). Century Communities intends to file a covenant for the landfill parcel following approval of the Bakerview (Alpine Estates) Plat Map. The following specific prohibitions and requirements are proposed for the landfill parcel:

- **Land use.** The closed landfill shall be used for storm water detention, a publicly-accessible recreation area, an emergency access road, and open area. Associated paved surfaces, foundations and footings, utility trenches, fence posts, vegetation, and any additional features and activities shall not interfere with the integrity of the landfill containment and monitoring system.
- **Containment of waste materials.** The closed landfill is covered with a high-density polyethylene geomembrane, a geocomposite drainage layer, a minimum one-foot sand cover, and a minimum one-foot soil cover. Any activity that may result in the release or exposure to the environment of the waste contained in the landfill, or create a new exposure pathway, is prohibited. Some examples of activities that are prohibited in the capped areas include: disturbing the geomembrane cover and drainage system; drilling; digging more than one-foot deep with mechanical equipment; placement of any objects or use of any equipment which deforms or stresses the surface beyond its load bearing capability; piercing the surface with a rod, spike or similar item; bulldozing or earthwork that lowers the finished grade above the geomembrane cover or raises the finished grade more than two feet; unless such activities are approved in writing by Snohomish County Health Department. The property owner shall notify any contractor of these covenant restrictions prior to performing earthwork. The property owner shall notify Snohomish County Health Department if the geomembrane cover and drainage systems are observed or encountered for any reason.
- **Stormwater facilities.** A stormwater detention pond, with two cells, is constructed on the southern portion of the landfill surface. The stormwater detention pond is underlain by compacted landfill material, a double-lined high density polyethylene liner with an interstitial leak detection layer, and a two-foot soil cover. A leak detection vault is constructed north of the detention pond on the landfill cover. Stormwater conveyance structures are constructed above the landfill cover.

  The property owner is responsible for the maintenance and repair of the stormwater detention pond as required by Section 7.54.080 (Maintenance and Repair of Constructed Stormwater Control Facilities) of the Snohomish County Code. The maintenance activity shall include inspection of the leak detection vault for leakage as warranted. The property owner shall notify Snohomish County Health Department of suspected leakage. The property owner shall be responsible for the identification and repair of the damaged liner as warranted. Snohomish County Health Department is the Beneficiary for a trust/assignment of funds established for this purpose.

- **Vapor/gas controls.** The geomembrane cover, methane trench, ventilation system, and twelve soil gas probes are documented in the Go East Landfill Construction Quality Assurance Report. The soil gas probes shall be maintained for as long as a directed by Snohomish County Health Department, and then decommissioned in accordance with Chapter 173-160, Washington Administrative Code, as warranted.
- **Groundwater use.** No water well shall be installed within 1,000 feet of the Go East Landfill boundary, pursuant to Chapter 173-160, Washington Administrative Code.
- **Monitoring.** Groundwater, surface water, and soil gas shall be monitored in accordance with the landfill post-closure care permit issued by Snohomish County Health Department or, as applicable, a cleanup action plan developed under the Model Toxics Control Act. Groundwater monitoring wells on Tracts 992 (MW-8), 997 (MW-6), 990 (MW-7), 995 (MW-5), and 989 (MW-9 and MW-10) shall be maintained until the Snohomish County Health Department determines that the concentrations of naturally-occurring metals have attenuated to natural background conditions. Groundwater monitoring wells shall be decommissioned in accordance with Chapter 173-160, Washington Administrative Code, when approved by Snohomish County Health Department.
- **Other.** Any activity performed within the closed landfill boundary that may interfere with the integrity of the landfill containment system and the continued protection of human health and the environment is prohibited.

11.10. Prevent Release and Migration

The alternatives prevent the release and migration of contaminants through landfill capping and subsequent reduction of leachate generation; collection and control of surface water at the weir box; institutional controls; and treatment or monitored natural attenuation and natural recovery of affected media. Alternative 3 presents short term risks for release and migration of contaminants in sediment during construction of treatment facilities.

11.11. Disproportionate Cost Analysis

MTCA (WAC 173-340-360(3)(e)) provides for comparative evaluation of benefits achieved by each alternative to cost, or disproportionate cost analysis (DCA). The DCA may be quantitative, but will often be qualitative using best professional judgement. The three alternatives were compared on a qualitative basis, as summarized in Table 11-1. Alternative 1 is essentially complete and is considered a baseline alternative to compare Alternatives 2 and 3 against.

The three alternatives are:

- Protective of human health and the environment;
- Permanent to the maximum extent practicable (non-permanent for the groundwater action), and
- Effective in the long term.

The alternatives differ in the following ways:

- Alternatives 1 and 2 have a relatively low cost, while Alternative 3 would present a high cost due to the construction of the water treatment system at the toe of the slope.
- Short-term risks are low for Alternatives 1 and 2. However, Alternative 3 presents relatively higher risk due to the potential release and migration of sediment contaminants disturbed by construction of the water treatment system under Alternative 3.
- Alternatives 1 and 2 are technically and administratively implementable (Alternative 1 is completed). However, Alternative 3 may require additional permitting for the discharge of the treated water.
- Alternatives 1 and 2 likely present a lower level of public concern due to minimal disturbance of the Site, while Alternative 3 may present public concerns due to construction of facilities at the toe of the slope and potential use of chemical treatment if chemical treatment were required.

The results of the DCA indicate that Alternative 2 best achieves the CAAs with a disproportionately low cost, low short-term risks, technical and administrative achievability, and being an alternative that considers public concerns.

12.0 RECOMMENDED CLEANUP ACTION

Alternative 2 is recommended as the cleanup action following landfill closure. Alternative 2 consists of MNA for groundwater and surface water and natural recovery for sediment. MNA for groundwater consists of monitoring as required by long-term post-closure care. MNA for surface water consists of monitoring of surface water emanating from the weir box. Natural recovery for sediment includes allowing vegetation to establish in Stream 3 and natural sedimentation to occur.

Century Communities maintains a landfill permit with SCHD that requires post-closure care monitoring consistent with MNA for groundwater and surface water; Ecology's Solid Waste Management Program provides technical assistance to SCHD. Century Communities is voluntarily implementing the wetlands mitigation plan under the oversight of Ecology's Shorelands and Environmental Assistance Program.

13.0 REFERENCES

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14.0 LIMITATIONS

We have prepared this report for the exclusive use of the Century Communities for the Former Go East Landfill Site in Everett, Washington. Century Communities 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.

Table 5-1

Monitoring Well Construction Details

Go East Corp Landfill Site

Everett, Washington

Monitoring Well ID	Year Installed or Extended[1]	2023 Survey ID	Northing	Easting	Top of PVC Casing Elevation (ft NAVD88)	Ground Elevation (ft NAVD88)	Depth of Base of Well (ft bgs)[2]	Elevation of Base of Well (ft NAVD88)[2]	Screened Interval Depth (ft bgs)[2]	Screened Interval Elevation (ft NAVD88)[2]
MW 1	Installed 2009	26324	330767.9	1311648.1	261.43	NR	75	187	65-75	189-199
	Extended 2022	26324	330767.9	1311648.1	263.99	264.15	77.5	186.65	67.5-77.5	189-199
MW 2	Installed 2009	26315	330333.6	1312278.8	234.51	NR	60	170	50-60	170-180
MW 3	Installed 2009	26328	330915.2	1312001.6	241.1	NR	60	181	50-60	181-191
	Extended 2022	26328	330915.2	1312001.6	263.93	263.8	83	180.8	73-83	181-191
MW 5	Installed 2021	26331	330976.4	1311526.4	292.89	293.71	80	213.71	70-80	214-224
MW 6	Installed 2021	26321	330581.3	1311798	259.92	257.11	55	202.11	45-55	202-212
MW 7	Installed 2021	26318	330440.3	1311946.4	242.99	241.93	60	181.93	45-60	182-197
MW 8	Installed 2021	26311	330604.2	1312465.6	230.78	228.14	55.5	172.64	45.5-55.5	173-183
MW9	Installed 2021	26334	330994.9	1312493	98.74	95.31	10	85.31	5-10	85-90
MW 10	Installed 2021	26337	331009	1312491	98.94	94.97	10	84.97	5-10	85-90

Notes:

[1] The upper portions of MW-1 and MW-3 were extended by a licensed driller in 2022 because the surrounding ground surface was raised as part of landfill grading and capping.

[2] Depths and elevations rounded to the nearest foot.

ft = feet

bgs = below ground surface

NAVD88 = North American Vertical Datum of 1988

NR = Not recorded

Survey ID = Survey ID number from Mead Gilman survey pdf provided to GeoEngineers February 8, 2023

Northing / Easting = Washington State Plane Coordinate System, North Zone - US Foot

Table 5-2

Remedial Investigation Analytical Program

Go East Corp Landfill Site

Everett, Washington

	Organics							Total Metals											Dissolved Metals											Geochemical Parameters								Leachate Indicators		
	Gx	Dx	VOCs	SVOCs	PCBs	Pest	Herb	As	Cd	Cr	Cu	Fe	Pb	Mn	Hg	Ni	Se	Zn	As	Cd	Cr	Cu	Fe	Pb	Mn	Hg	Ni	Se	Zn	Cl	NO_3	SO_4	Alk	Mg	Ca	K	Na	NH_3	TDS	TOC
Groundwater Samples																																								
MW-1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-2	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-3	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-5	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-6	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-7	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-8	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-9	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
MW-10	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Surface Water Samples																																								
SWS-1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x																				x	x	x
Seep-1								x				x		x																								x	x	x
Seep-2								x				x		x																								x	x	x
Sediment Samples (and Collocated Surface Water Samples)																																								
SED-1		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-2		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-3		x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-4/SWS-3		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-5		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-6		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-7		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-8		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-9		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-10		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SED-11/SWS-2		x		x		x	x	x	x	x	x	x	x	x	x	x	x	x																						
SEDB-1		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-2		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-3		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-4		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-5		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-6		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-7		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						
SEDB-8		x		x		x		x	x	x	x	x	x	x	x	x	x	x																						

Notes:

Gx = Gasoline-range petroleum hydrocarbons
Dx = Diesel-range petroleum hydrocarbons
VOCs = Volatile organic compounds
SVOCs = Semi-volatile organic compounds
(PAHs only for SEDB samples)
PCBs = Polychlorinated biphenyls
Pest = Organochlorine pesticides
Herb = Herbicides
As = Arsenic
Cd = Cadmium
Cr = Chromium
Cu = Copper
Fe = Iron
Pb = Lead
Mn = Manganese
Hg = Mercury
Ni = Nickel
Se = Selenium
Zn = Zinc
Cl = Chloride
NO_3 = Nitrate
SO_4 = Sulfate
Alk = Alkalinity plus bicarbonate
Mg = Magnesium (Total and dissolved)
Ca = Dissolved calcium
K = Dissolved potassium
Na = Dissolved sodium
NH_3 = Ammonia
TDS = Total dissolved solids
TOC = Total organic carbon

Table 6-1

Groundwater and Surface Water Field Parameters

Go East Corp Landfill Site
Everett, Washington

Location Identification	Sample Identification	Sample Date	Depth to Water (ft bTOC)	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductance (uS/cm)	pH	Oxidation-Reduction Potential (mV)	Turbidity (NTU)
MW1	MW1-210406	4/6/2021	52.85	9.92	2.66	121	7.70	-184.9	5.39
	MW1-220330	3/30/2022	52.95	9.6	7.14	137.5	7.97	-106.9	35.9
	MW-1-220504	5/4/2022	52.80	10.1	0.51	152	7.86	-152.7	34.9
	220628-MW-1	6/28/2022	52.90	13.3	0.18	178	7.72	-506.5	24.4
	MW-1-20220922	9/22/2022	53.20	17.11	0.37	165	8.07	-166.4	7.08
MW2	MW2-210406	4/6/2021	50.41	10.02	0.88	158	6.65	-139.8	16.1
	MW2-211208	12/8/2021	50.42	9.8	0.32	273.6	8.18	-280.2	9.95
	MW2-20220318	3/18/2022	50.75	49.2	4.60	190.2	8.26	18.5	32.0
	MW-2-220505	5/5/2022	50.75	9.4	10.44	183	8.18	128	21
	MW-2-20220628	6/28/2022	51.19	12.5	3.45	243.3	8.06	-296	38.2
	MW-2-20220922	9/22/2022	51.58	12.57	1.7	218	8.29	-122.5	7.96
MW3	MW3-210406	4/6/2021	39.34*	10.22	3.72	174	6.81	-113.0	41.9
	MW3-211206	12/6/2021	60.95	10.0	0.08	264.4	8.24	-309.0	2.97
	MW-3-30922	3/9/2022	59.79	10.5	4.15	191.0	8.32	-173.0	88.7
	MW-3-20220427	4/27/2022	59.99	11.55	6.78	219.6	8.12	52.9	87.4
	MW-3-20220621	6/21/2022	60.10	11.6	6.78	219.6	8.12	52.7	87.4
	MW-3-20220920	9/20/2022	58.58	15.73	0.69	241	8.22	132.8	11.1
MW5	MW5-211207	12/7/2021	68.15	10.5	10.03	294.3	8.02	-119.3	6.66
	MW5-220203	2/3/2022	69.00	8.0	0.76	292.9	7.43	124.1	13.6
	MW-5-20220307	3/7/2022	68.95	9.9	0.39	208.0	7.74	-111.8	7.13
	MW5-20220407	4/7/2022	68.02	10.7	10.66	491.9	8.64	189.6	27.9
	MW-5-220518	5/18/2022	68.10	11.9	7.86	253.3	7.73	157.0	29
	MW-5-20220610	6/10/2022	68.10	14.67	0	303	7.87	-11	33.7
	MW-5-20220624	6/24/2022	68.80	12	0.32	275.5	7.85	-467.7	64.6
	MW-5-20220803	8/3/2022	68.14	17.49	1.39	251	7.67	136.2	14.81
	MW-5-20220923	9/22/2022	68.31	13.38	0.75	267	7.83	-50.1	8.59
MW6	MW6-211209	12/9/2021	47.57	14.3	1.52	451.0	6.69	-177.7	9.82
	MW-6-31122	3/11/2022	47.61	13.4	0.74	362.6	6.69	15.8	6.28
	MW-6-220503	5/3/2022	47.60	14.2	5.10	461.5	6.56	138.4	27.7
	MW-6-20220620	6/20/2022	47.34	15.8	2.01	405.5	6.61	-104.9	0.77
	MW-6-20220921	9/21/2022	47.32	16.82	0.12	387	6.78	-64.1	2.6
MW7	MW7-211209	12/9/2021	48.15	10.5	4.22	237.8	7.99	-136.5	9.81
	MW7-20220314	3/14/2022	48.30	9.4	10.25	162.3	8.07	253.4	26.1
	MW-7-20220506	5/6/2022	48.56	9.8	11.54	192.8	8.10	201.8	64.0
	MW-7-20220620	6/20/2022	49.70	12.2	2.38	209	7.73	-102.7	20
	MW-7-20220921	9/21/2022	48.46	14.68	1.25	213	7.98	-69.4	13.2
MW8	MW8-211213	12/13/2021	49.88	12.0	0.47	592.8	6.67	-191.6	9.63
	MW8-20220322	3/22/2022	50.21	13.2	4.70	469.5	6.78	171.2	137
	MW8-05022022	5/2/2022	50.30	11.50	7.32	347.1	6.75	159.1	43.1
	MW-8-20220622	6/22/2022	51.20	14.1	0.35	465.8	6.63	-176.2	9.59
	MW-8-20220920	9/20/2022	51.51	19.84	2.08	447	6.6	29.9	8.9
MW9	MW-9-20220404	4/4/2022	4.40	10.7	4.30	575	6.76	130.7	140
	MW-9-20220519	5/19/2022	4.20	11.7	3.38	586	6.77	9.0	9.91
	MW-9-20220623	6/23/2022	4.10	14.5	0.26	782	6.54	-425.8	8.31
	MW-9-220921	9/21/2022	4.20	10.9	0.9	502	6.52	110.2	8
MW10	MW-10-20220404	4/4/2022	4.63	9.3	6.51	310.1	7.14	148.9	177
	MW-10-20220519	5/19/2022	NR	10.3	0.78	424.1	6.84	-82.2	10.3
	MW-10-20220623	6/23/2022	4.69	15.5	0.29	323.3	6.73	-400.2	32
	MW-10-220921	9/21/2022	5.25	12.25	0.28	520	6.42	53.5	3.6
SEEP-1	SEEP-1-211208	12/8/2021	--	NR	NR	NR	NR	NR	NR
	SEEP 1-220317	3/17/2022	--	NR	NR	NR	NR	NR	NR
	SEEP-1-20220519	5/19/2022	--	13.7	9.49	232	7.99	10.0	21.7
	SEEP-1-20220621	6/21/2022	--	20.7	7.03	237.6	7.58	-73.6	14.6
	SEEP-1-220920	9/20/2022	--	13.26	10.85	211	6.62	183.5	21.6
SEEP-2	SEEP 2-220317	3/17/2022	--	NR	NR	NR	NR	NR	NR
	SEEP-2-22020519	5/19/2022	--	12.4	9.59	186.2	7.95	62.0	8.68
SP2	SP2-210402	4/2/2021	--	8.96	15.29	167	8.34	59.4	3.63
SP3	SP3-210402	4/2/2021	--	9.31	12.77	163	7.99	70.3	1.52
SP1 (SWS-1)	SP1-210402	4/2/2021	--	11.96	8.05	602	6.79	-49.3	6.68
SWS-1	SWS-1-20211101	11/1/2021	--	NR	NR	NR	NR	NR	NR
	SWS-1-211208	12/8/2021	--	12.9	8.40	824	6.89	-103.7	NR
	SWS-1-20220321	3/21/2022	--	NR	NR	NR	NR	NR	NR
	SWS-1-220503	5/3/2022	--	13.4	5.44	773	6.61	38.8	NR
	SWS-1-20220621	6/21/2022	--	17.9	5.83	809	7.18	-44.9	20.3
	SWS-1-220920	9/20/2022	--	11.9	6.2	531	6.24	157.2	9.66

Notes:

ft bTOC = feet below top of casing
mg/L = milligram per liter
uS/cm = microsiemen per centimeter
mV = millivolt
NTU = nephelometric turbidity unit
°C = degree Celsius
NR = not recorded
* This measurement made prior to well being extended by 22.83 feet in 2022.

Table 6-2

Remedial Investigation Groundwater Data

Former Go East Landfill

Everett, Washington

	Location ID	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
	Sample ID	MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922
	Sample Date	4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]														
Petroleum Hydrocarbons (mg/L)															
Gasoline-range hydrocarbons	0.8	--	0.1 U	0.1 U	0.1 U	--	--	0.1 U	0.1 U	0.1 U	--	--	--	0.1 U	0.1 U
Diesel-range hydrocarbons	NE	--	0.20 U	0.20 U	0.10 U	--	--	0.20 U	0.21 U	0.21 U	--	--	--	0.20 U	0.23 U
Lube oil-range hydrocarbons	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.21 U	0.21 U	--	--	--	0.20 U	0.23 U
Total TPH	0.5	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.21 U	0.21 U	--	--	--	0.20 U	0.23 U
Total Metals (µg/L)															
Arsenic	5.0	5.1	5.8	5.3	5.7	5.3	4.7	4.8	5.3	11	5.3	4.5	4.4	3.6	5.0
Barium	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	4.4	--	4.4 U	4.4 U	4.4 U	--	--	4.4 U	4.4 U	4.4 U	--	--	--	4.4 U	4.4 U
Calcium	NE	17000	--	--	--	--	21000	--	--	--	--	--	23000	--	--
Chromium	50	1.5	11 U	11 U	11 U	--	2.7	11 U	11 U	11 U	11 U	--	8.9	11 U	11 U
Copper	11	--	11 U	11 U	11 U	--	--	11 U	11 U	11 U	--	--	--	11 U	11 U
Iron	300	860	1900	2200	580	960	1200	370	1600	6200	690	1100	4100	110	2500
Lead	1.1	--	1.1 U	1.1 U	1.1 U	--	--	1.1 U	1.1 U	2.0	--	--	--	1.1 U	1.2
Magnesium	NE	8900	10000	9900	8600	8300	14000	18000	17000	15000	16000	14000	14000	15000	14000
Manganese	50	270	390	360	290	260	230	300	310	350	250	230	260	190	240
Mercury	0.025	--	0.025 U	0.025 U	0.025 U	--	--	0.025 U	0.025 U	0.025 U	--	--	--	0.025 U	0.025 U
Nickel	26	--	86	22 U	22 U	--	--	22 U	22 U	22 U	22 U	--	--	22 U	22 U
Potassium	NE	2900	--	--	--	--	3200	--	--	--	--	--	3300	--	--
Selenium	5.6	--	5.6 U	5.6 U	5.6 U	--	--	5.6 U	5.6 U	5.6 U	--	--	--	5.6 U	5.6 U
Silver	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	NE	5000	--	--	--	--	6300	--	--	--	--	--	7300	--	--
Zinc	100	2.3	28 U	28 U	--	--	4.2	28 U	28 U	28 U	--	--	27	28 U	28 U
Dissolved Metals (µg/L)															
Arsenic	5.0	4.9	5.0	4.9	5.4	3.9	4.5	4.2	4.6	13	4.3	4.2	3.2	3.4	3.4
Cadmium	4.4	--	4.0 U	4.0 U	4.0 U	--	--	4.0 U	4.0 U	4.0 U	--	--	--	4.0 U	4.0 U
Calcium	NE	16000	18000	17000	21000	17000	20000	22000	23000	22000	24000	21000	22000	23000	24000
Chromium	50	0.29 U	10 U	10 U	10 U	--	0.29 U	10 U	10 U	10 U	10 U	--	0.29 U	10 U	10 U
Copper	11	--	10 U	10 U	10 U	--	--	10 U	10 U	10 U	--	--	--	10 U	10 U
Iron	300	74	330	440	220	160	48	56 U	56 U	56 U	56 U	56 U	32	56 U	56 U
Lead	1.1	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	1.0 U
Magnesium	NE	8500	9200	8800	9900	9200	13000	16000	15000	13000	15000	15000	12000	14000	13000
Manganese	50	240	350	310	330	240	210	270	250	200	220	210	140	170	180
Mercury	0.025	--	0.025 U	0.025 U	0.025 U	--	--	0.025 U	0.025 U	0.025 U	--	--	--	0.025 U	0.025 U
Nickel	26	--	20 U	20 U	20 U	--	--	20 U	20 U	20 U	20 U	--	--	20 U	20 U
Potassium	NE	2700	2500	2100	2800	2100	3000	2000	2700	2700	2500	2300	2800	1900	1900
Selenium	5.6	--	5.0 U	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	--	--	--	5.0 U	5.0 U
Sodium	NE	4900	5700	5400	6100	5100	6000	7000	6600	6400	6800	6300	7200	8200	7000
Zinc	100	2.2 U	25 U	25 U	--	--	2.2 U	25 U	25 U	25 U	--	--	2.2 U	25 U	25 U

	Location ID	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
	Sample ID	MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922
	Sample Date	4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]														
PCB Aroclors (µg/L)															
PCB-Aroclor 1016	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
PCB-Aroclor 1221	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
PCB-Aroclor 1232	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
PCB-Aroclor 1242	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
PCB-Aroclor 1248	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
PCB-Aroclor 1254	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
PCB-Aroclor 1260	NE	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
Total PCB Aroclors	0.05	--	0.049 U	0.049 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
Organochlorine Pesticides (µg/L)															
4,4'-DDD	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
4,4'-DDE	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
4,4'-DDT	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Aldrin	0.005	--	0.0020 U	0.0019 U	0.0019 U	--	--	0.0019 U	0.0019 U	0.0019 U	--	--	--	0.0019 U	0.0020 U
Alpha-BHC	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Beta-BHC	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Chlordane, technical	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-Chlordane	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Delta-BHC	NE	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Dieldrin	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Endosulfan I	0.056	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Endosulfan II	0.056	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Endosulfan Sulfate	9	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Endrin	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Endrin Aldehyde	0.034	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Endrin Ketone	NE	--	0.020 U	0.019 U	0.019 U	--	--	0.019 U	0.019 U	0.019 U	--	--	--	0.019 U	0.020 U
Gamma-BHC	0.06	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Heptachlor	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Heptachlor Epoxide	0.005	--	0.0029 U	0.0029 U	0.0029 U	--	--	0.0028 U	0.0029 U	0.0029 U	--	--	--	0.0028 U	0.0030 U
Methoxychlor	0.02	--	0.0098 U	0.0095 U	0.0095 U	--	--	0.0095 U	0.0096 U	0.0097 U	--	--	--	0.0095 U	0.010 U
Toxaphene	0.05	--	0.049 U	0.048 U	0.048 U	--	--	0.047 U	0.048 U	0.049 U	--	--	--	0.047 U	0.050 U
trans-Chlordane	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U
Chlorinated Acid Herbicides (µg/L)															
2,4,5-T	160	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
2,4,5-TP	10	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
2,4-D	70	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
2,4-DB	480	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
3,5-Dichlorobenzoic Acid	NE	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
4-Nitrophenol	NE	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
Acifluorfen	NE	--	4.96 U	--	5 U	--	--	4.92 U	4.99 U	--	--	--	--	4.99 U	4.94 U
Bentazon	NE	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
Chloramben	NE	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
Chlorthal-dimethyl (DACTHAL)	NE	--	1.98 U	--	2 U	--	--	1.97 U	1.99 U	--	--	--	--	1.99 U	1.97 U
Dalapon	200	--	1.98 U	--	2 U	--	--	1.97 U	1.99 U	--	--	--	--	1.99 U	1.97 U
Dicamba	480	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
Dichlorprop	NE	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
Dinoseb	7	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U

Location ID		MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
Sample ID		MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922
Sample Date		4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	**Groundwater Screening Level[1]**														
MCPA	23	--	4.96 U	--	5 U	--	--	4.92 U	4.99 U	--	--	--	--	4.99 U	4.94 U
MCPP	16	--	4.96 U	--	5 U	--	--	4.92 U	4.99 U	--	--	--	--	4.99 U	4.94 U
Pentachlorophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Picloram	NE	--	0.991 U	--	1 U	--	--	0.983 U	0.997 U	--	--	--	--	0.997 U	0.987 U
Volatile Organic Compounds (µg/L)															
1,1,1,2-Tetrachloroethane	1.7	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,1,1-Trichloroethane	200	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,1,2,2-Tetrachloroethane	0.2	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,1,2-Trichloroethane	0.35	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,1-Dichloroethane	1	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,1-Dichloroethylene	7	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,1-Dichloropropene	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2,3-Trichlorobenzene	NE	--	0.20 U	0.20 U	1.0 U	--	--	0.27 U	0.20 U	0.20 U	--	--	--	0.25 U	20 U
1,2,3-Trichloropropane	0.2	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2,4-Trichlorobenzene	NE	--	0.20 U	0.20 U	1.0 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2,4-Trimethylbenzene	80	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2-Dibromo-3-Chloropropane	1	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
1,2-Dibromoethane	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2-Dichlorobenzene	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2-Dichloroethane	0.5	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,2-Dichloropropane	0.6	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,3,5-Trimethylbenzene	80	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,3-Dichlorobenzene	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,3-Dichloropropane	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
1,4-Dichlorobenzene	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
2,2-Dichloropropane	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
2-Chlorotoluene	160	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
2-Hexanone	40	--	2.0 U	2.0 U	2.0 U	--	--	2.0 U	2.0 U	2.0 U	--	--	--	2.0 U	200 U
4-Chlorotoluene	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
4-Isopropyltoluene	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Acetone	7200	--	5.0 U	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	--	--	--	86	3900
Benzene	0.44	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Bromobenzene	64	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Bromochloromethane	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Bromoform	4.6	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
Bromomethane	11	--	1.0 U	2.3 U	1.0 U	--	--	0.33 U	0.20 U	2.3 U	--	--	--	0.27 U	100 U
Carbon Disulfide	400	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Carbon Tetrachloride	0.2	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Chlorobenzene	20	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Chloroethane	19000	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
Chloroform	1.2	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Chloromethane	150	--	1.0 U	1.0 U	1.0 U	--	--	1.3 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
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	20 U
cis-1,3-Dichloropropene	0.22	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Dibromochloromethane	0.6	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Dibromomethane	80	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Dichlorobromomethane	0.3	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U

	Location ID	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
	Sample ID	MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922
	Sample Date	4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]														
Dichlorodifluoromethane	5.6	--	0.20 U	0.20 U	0.20 U	--	--	0.31 U	0.20 U	0.20 U	--	--	--	0.26 U	100 U
Ethylbenzene	29	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Hexachlorobutadiene	NE	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
Isopropylbenzene	800	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Methyl ethyl ketone (MEK)	4800	--	5.0 U	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	--	--	--	12	540
Methyl Iodide	NE	--	5.0 U	34 U	5.0 U	--	--	1.4 U	1.6 U	34 U	--	--	--	1.3 U	500 U
Methyl isobutyl ketone	640	--	2.0 U	2.0 U	2.0 U	--	--	2.0 U	2.0 U	2.0 U	--	--	--	2.0 U	200 U
Methyl tert-butyl ether	24	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Methylene Chloride	5	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
Naphthalene	8.9	--	1.0 U	1.0 U	1.0 U	--	--	1.3 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
n-Butylbenzene	400	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
n-Propylbenzene	800	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Sec-Butylbenzene	800	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Styrene	100	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Tert-Butylbenzene	800	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Tetrachloroethylene	0.8	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Toluene	57	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
trans-1,2-Dichloroethylene	100	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
trans-1,3-Dichloropropene	0.22	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Trichloroethylene	0.3	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Trichlorofluoromethane	120	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Vinyl Acetate	7800	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	--	1.0 U	100 U
Vinyl Chloride	0.2	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Xylene, m-,p-	NE	--	0.40 U	0.40 U	0.40 U	--	--	0.40 U	0.40 U	0.40 U	--	--	--	0.40 U	40 U
Xylene, o-	NE	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	--	0.20 U	20 U
Total xylenes	330	--	0.40 U	0.40 U	0.40 U	--	--	0.40 U	0.40 U	0.40 U	--	--	--	0.40 U	40 U
Semi-Volatile Organic Compounds (µg/L)															
1,2,4-Trichlorobenzene	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,2-Dichlorobenzene	600	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,2-Dinitrobenzene	1.6	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,2-Diphenylhydrazine	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,3-Dichlorobenzene	2	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,3-Dinitrobenzene	1.6	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,4-Dichlorobenzene	4.9	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
1,4-Dinitrobenzene	1.6	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	--	0.95 U	--	--	--	--	--	0.95 U	--
2,3,4,6-Tetrachlorophenol	480	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,3,5,6-Tetrachlorophenol	NE	--	0.97 U	1.0 U	0.95 U	--	--	1.1 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,3-Dichloroaniline	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,4,5-Trichlorophenol	300	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,4,6-Trichlorophenol	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,4-Dichlorophenol	10	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,4-Dimethylphenol	85	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,4-Dinitrophenol	10	--	4.9 U	5.1 U	6.3 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	7.7 U
2,4-Dinitrotoluene	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2,6-Dinitrotoluene	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2-Chloronaphthalene	100	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U

Location ID		MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
Sample ID		MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922
Sample Date		4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]														
2-Chlorophenol	15	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2-methylphenol	400	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2-Nitroaniline	160	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
2-Nitrophenol	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
3&4-Methylphenol	400	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
3,3'-Dichlorobenzidine	1	--	0.97 U	1.0 U	4.8 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
3-Nitroaniline	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
4,6-Dinitro-2-Methylphenol	5	--	4.9 U	5.1 U	6.5 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	4.9 U
4-Bromophenyl phenyl ether	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
4-Chloro-3-Methylphenol	36	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
4-Chloroaniline	1	--	1.3 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
4-Chlorophenyl phenyl ether	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
4-Nitroaniline	64	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
4-Nitrophenol	NE	--	4.9 U	5.1 U	4.8 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	4.9 U
Acenaphthene	30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aniline	7.7	--	4.9 U	6.5 U	4.8 U	--	--	4.7 U	4.8 U	6.3 U	--	--	--	4.7 U	4.9 U
Anthracene	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzidine	NE	--	--	--	--	--	--	--	--	--	--	--	--	4.7 U	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	800	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Bis(2-Chloroethoxy)Methane	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Bis(2-Chloroethyl)Ether	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Bis(2-chloroisopropyl) ether	NE	--	0.97 U	1.0 U	0.95 U	--	--	--	0.95 U	0.99 U	--	--	--	--	0.97 U
Bis(2-Ethylhexyl) Phthalate	1	--	4.9 U	5.1 U	4.8 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	4.9 U
Butyl benzyl Phthalate	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Carbazole	5	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Di(2-ethylhexyl)adipate	NE	--	4.9 U	5.1 U	4.8 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	4.9 U
Dibenzofuran	NE	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Dibutyl Phthalate	8	--	4.9 U	5.1 U	4.8 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	4.9 U
Diethyl Phthalate	200	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Dimethyl Phthalate	600	--	4.9 U	5.1 U	4.8 U	--	--	4.7 U	4.8 U	5.0 U	--	--	--	4.7 U	4.9 U
Di-N-Octyl Phthalate	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Hexachlorobenzene	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Hexachlorobutadiene	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Hexachlorocyclopentadiene	1	--	0.97 U	1.0 U	1.5 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Hexachloroethane	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Isophorone	27	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Nitrobenzene	10	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
N-Nitrosodimethylamine	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
N-Nitrosodi-n-propylamine	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U

	Location ID	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3
	Sample ID	MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922
	Sample Date	4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]														
N-Nitrosodiphenylamine	1	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Pentachlorophenol	5	--	4.9 U	6.3 U	6.7 U	--	--	4.7 U	4.8 U	6.2 U	--	--	--	4.7 U	4.9 U
Phenol	160	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Pyridine	8	--	0.97 U	1.0 U	0.95 U	--	--	0.95 U	0.95 U	0.99 U	--	--	--	0.95 U	0.97 U
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)															
1-Methylnaphthalene	1.5	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
2-Methylnaphthalene	32	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Acenaphthene	30	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Acenaphthylene	NE	--	0.097 U	0.10 U	0.095 U	--	--	0.21 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Anthracene	100	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Benzo(g,h,i)perylene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Fluoranthene	0.1	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Fluorene	10	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Naphthalene	8.9	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Phenanthrene	NE	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Pyrene	0.1	--	0.097 U	0.10 U	0.095 U	--	--	0.095 U	0.095 U	0.099 U	--	--	--	0.095 U	0.097 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)															
Benzo(a)pyrene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Benzo(a)anthracene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Benzo(b)fluoranthene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Benzo(j,k)fluoranthene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Chrysene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Dibenzo(a,h)anthracene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Indeno(1,2,3-c,d)pyrene	NE	--	0.0097 U	0.010 U	0.0095 U	--	--	0.0095 U	0.0095 U	0.0099 U	--	--	--	0.0095 U	0.0097 U
Total cPAH TEQ (ND=0.5RL)	0.0076	--	0.00732 U	0.00755 U	0.00717 U	--	--	0.00717 U	0.00717 U	0.00747 U	--	--	--	0.00717 U	0.00732 U
Total cPAH TEQ (ND=0)	0.0076	--	0 U	0 U	0 U	--	--	0 U	0 U	0 U	--	--	--	0 U	0 U
Conventionals (mg/L)															
Total Organic Carbon	NE	0.77	--	--	1.0 U	1.0 U	0.56	--	--	--	1.0 U	1.0 U	0.50 U	--	--
ALKALINITY as CaCO3	NE	87	86	86	92	80	110	120	120	110	110	110	110	110	110
Bicarbonate Ion (HCO3)	NE	87	86	86	92	80	110	120	120	110	110	110	110	110	110
Ammonia (Total as N)	NE	--	0.21	0.13	0.18	0.16	--	0.097	0.11	0.14	0.094	0.10	--	0.059	0.061
Total Dissolved Solids	NE	120	100	120	130	130	160	150	160	170	150	160	170	140 J	170
Chloride	NE	3.6	3.9	2.3	3.0	2.3	4.6	5.7	5.1	3.4	4.0	3.0	6.5	6.3	6.6
Nitrate	NE	0.15 U	0.050 U	0.050 U	0.050 U	0.050 U	0.15 U	0.050 U	0.079 J	0.050 U	0.050 U	0.050 U	0.25	0.050 UJ	0.090
Nitrite	NE	0.14 U	--	--	--	--	0.14 U	--	--	--	--	--	0.14 U	--	--
Sulfate	NE	1.2	5.0 U	5.0 U	5.0 U	5.2	8.1	12	10	7.7	12	8.8	14	14	9.7

	Location ID	MW3	MW3	MW3	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW6
	Sample ID	MW-3-20220621	MW-3-20220427	MW-3-20220920	MW5-211207	MW5-220203	MW-5-20220307	MW5-20220407	MW-5-220518	MW-5-20220610	MW-5-20220624	MW-5-20220803	MW-5-20220923	MW6-211209
	Sample Date	6/21/2022	4/27/2022	9/20/2022	12/7/2021	2/3/2022	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	12/9/2021
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]													
Petroleum Hydrocarbons (mg/L)														
Gasoline-range hydrocarbons	0.8	--	0.1 U	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	--	--	--	0.1 U
Diesel-range hydrocarbons	NE	--	0.22 U	--	0.15 U	0.41	0.21 U	0.10 U	0.20 U	0.20 U	0.13 U	--	--	0.21 U
Lube oil-range hydrocarbons	NE	--	0.22 U	--	0.20 U	0.74	0.21 U	0.20 U	0.20 U	0.20 U	0.21 U	--	--	0.21 U
Total TPH	0.5	--	0.22 U	--	0.20 U	1.15	0.21 U	0.20 U	0.20 U	0.20 U	0.21 U	--	--	0.21 U
Total Metals (µg/L)														
Arsenic	5.0	4.6	3.6	3.3 U	5.1	5.8	6.6	6.6	7.8	5.7	6.5	6.0	4.8	3.5
Barium	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	4.4	--	4.4 U	--	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	--	4.4 U
Calcium	NE	--	--	--	--	--	--	--	--	--	--	26000	--	--
Chromium	50	11 U	11 U	--	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	--	11 U
Copper	11	--	11 U	--	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	--	11 U
Iron	300	1400	3800	610	360	1000	130 J	200	600	470	220	240	380	420
Lead	1.1	1.1 U	1.1	--	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	--	1.1 U
Magnesium	NE	14000	14000	13000	17000	15000	13000	15000	14000	15000	140000	13000	15000	23000
Manganese	50	190	220	160	390	290	270	230	290	260	290	150	170	1800
Mercury	0.025	--	0.025 U	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	--	0.025 U
Nickel	26	22 U	22 U	--	22 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U	--	22 U
Potassium	NE	--	--	--	--	--	--	--	--	--	--	2600	--	--
Selenium	5.6	--	5.6 U	--	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	--	5.6 U
Silver	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	NE	--	--	--	--	--	--	--	--	--	--	6700	--	--
Zinc	100	--	28 U	--	28 U	28 U	28 U	28 U	28 U	28 U	--	28 U	--	28 U
Dissolved Metals (µg/L)														
Arsenic	5.0	4.1	3.1	3.4	4.2	4.7	5.7	4.9	5.7	5.7	6.0	5.2	5.4	3.0
Cadmium	4.4	--	4.0 U	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	--	4.0 U
Calcium	NE	24000	23000	23000	27000	26000	28000	24000	27000	28000	29000	27000	27000	41000
Chromium	50	10 U	10 U	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Copper	11	--	10 U	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Iron	300	56 U	56 U	56 U	56 U	56 U	65	56 U	56 U	56 U	56 U	56 U	56 U	62
Lead	1.1	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	1.0 U
Magnesium	NE	13000	13000	14000	15000	14000	14000	12000	16000	14000	14000	14000	16000	22000
Manganese	50	140	150	140	330	260	280	190	300	250	260	110	120	1800
Mercury	0.025	--	0.025 U	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	--	0.025 U
Nickel	26	20 U	20 U	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	20 U
Potassium	NE	2300	2400	2200	2000	3600	2000	2400	2500	2700	2300	2500	2500	2400
Selenium	5.6	--	5.0 U	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	5.0 U
Sodium	NE	8000	7000	7400	7400	6600	6500	6700	7200	7200	7700	6700	7000	18000
Zinc	100	--	25 U	--	25 U	25 U	25 U	25 U	25 U	25 U	--	25 U	--	25 U

Location ID		MW3	MW3	MW3	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW6
Sample ID		MW-3-20220621	MW-3-20220427	MW-3-20220920	MW5-211207	MW5-220203	MW-5-20220307	MW5-20220407	MW-5-220518	MW-5-20220610	MW-5-20220624	MW-5-20220803	MW-5-20220923	MW6-211209
Sample Date		6/21/2022	4/27/2022	9/20/2022	12/7/2021	2/3/2022	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	12/9/2021
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]													
PCB Aroclors (µg/L)														
PCB-Aroclor 1016	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
PCB-Aroclor 1221	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
PCB-Aroclor 1232	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
PCB-Aroclor 1242	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
PCB-Aroclor 1248	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
PCB-Aroclor 1254	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
PCB-Aroclor 1260	NE	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
Total PCB Aroclors	0.05	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
Organochlorine Pesticides (µg/L)														
4,4'-DDD	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
4,4'-DDE	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
4,4'-DDT	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.096 U	--	--	--	0.0048 U
Aldrin	0.005	--	0.0020 U	--	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	0.0019 U	--	--	--	0.0019 U
Alpha-BHC	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Beta-BHC	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.096 U	--	--	--	0.0048 U
Chlordane, technical	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-Chlordane	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Delta-BHC	NE	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Dieldrin	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Endosulfan I	0.056	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Endosulfan II	0.056	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Endosulfan Sulfate	9	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Endrin	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Endrin Aldehyde	0.034	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Endrin Ketone	NE	--	0.020 U	--	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	0.019 U	--	--	--	0.019 U
Gamma-BHC	0.06	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Heptachlor	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Heptachlor Epoxide	0.005	--	0.0030 U	--	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	0.0029 U	--	--	--	0.0029 U
Methoxychlor	0.02	--	0.010 U	--	0.0095 U	0.011	0.0095 U	0.0097 U	0.0097 U	0.0095 U	--	--	--	0.0095 U
Toxaphene	0.05	--	0.050 U	--	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	0.048 U	--	--	--	0.048 U
trans-Chlordane	0.005	--	0.0050 U	--	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U
Chlorinated Acid Herbicides (µg/L)														
2,4,5-T	160	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
2,4,5-TP	10	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
2,4-D	70	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
2,4-DB	480	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
3,5-Dichlorobenzoic Acid	NE	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
4-Nitrophenol	NE	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
Acifluorfen	NE	--	--	--	4.93 U	4.95 U	4.98 U	--	--	--	--	--	--	4.99 U
Bentazon	NE	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
Chloramben	NE	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
Chlorthal-dimethyl (DACTHAL)	NE	--	--	--	1.97 U	1.98 U	1.99 U	--	--	--	--	--	--	1.99 U
Dalapon	200	--	--	--	1.97 U	1.98 U	1.99 U	--	--	--	--	--	--	1.99 U
Dicamba	480	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
Dichlorprop	NE	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
Dinoseb	7	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U

Location ID / Sample ID / Sample Date / Matrix		MW3 MW-3-20220621 6/21/2022 GW	MW3 MW-3-20220427 4/27/2022 GW	MW3 MW-3-20220920 9/20/2022 GW	MW5 MW5-211207 12/7/2021 GW	MW5 MW5-220203 2/3/2022 GW	MW5 MW-5-20220307 3/7/2022 GW	MW5 MW5-20220407 4/7/2022 GW	MW5 MW-5-220518 5/18/2022 GW	MW5 MW-5-20220610 6/10/2022 GW	MW5 MW-5-20220624 6/24/2022 GW	MW5 MW-5-20220803 8/3/2022 GW	MW5 MW-5-20220923 9/22/2022 GW	MW6 MW6-211209 12/9/2021 GW
Analyte	Groundwater Screening Level[1]													
MCPA	23	--	--	--	4.93 U	4.95 U	4.98 U	--	--	--	--	--	--	4.99 U
MCPP	16	--	--	--	4.93 U	4.95 U	4.98 U	--	--	--	--	--	--	4.99 U
Pentachlorophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Picloram	NE	--	--	--	0.986 U	0.991 U	0.996 U	--	--	--	--	--	--	0.997 U
Volatile Organic Compounds (µg/L)														
1,1,1,2-Tetrachloroethane	1.7	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,1,1-Trichloroethane	200	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,1,2,2-Tetrachloroethane	0.2	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,1,2-Trichloroethane	0.35	0.20 U	0.20 U	--	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-Dichloroethane	1	0.20 U	0.20 U	--	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-Dichloroethylene	7	0.20 U	0.20 U	--	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	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2,3-Trichlorobenzene	NE	1.0 U	0.20 U	--	0.25 U	0.20 U	0.20 U	0.25 U	0.20 U	0.20 U	1.0 U	--	--	0.27 U
1,2,3-Trichloropropane	0.2	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2,4-Trichlorobenzene	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2,4-Trimethylbenzene	80	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2-Dibromo-3-Chloropropane	1	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
1,2-Dibromoethane	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2-Dichlorobenzene	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2-Dichloroethane	0.5	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,2-Dichloropropane	0.6	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,3,5-Trimethylbenzene	80	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,3-Dichlorobenzene	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,3-Dichloropropane	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
1,4-Dichlorobenzene	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
2,2-Dichloropropane	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
2-Chlorotoluene	160	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
2-Hexanone	40	2.0 U	2.0 U	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	2.0 U
4-Chlorotoluene	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
4-Isopropyltoluene	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Acetone	7200	10 U	5.0 U	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	10 U	--	--	5.0 U
Benzene	0.44	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Bromobenzene	64	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Bromochloromethane	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Bromoform	4.6	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
Bromomethane	11	2.3 U	2.8 U	--	0.20 U	1.0 U	2.8 U	1.0 U	0.30 U	1.0 U	2.3 U	--	--	0.33 U
Carbon Disulfide	400	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.27 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Carbon Tetrachloride	0.2	0.20 U	0.20 U	--	0.20 U	0.20 U	0.28 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Chlorobenzene	20	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Chloroethane	19000	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
Chloroform	1.2	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Chloromethane	150	1.6 U	1.3 U	--	1.3 U	1.0 U	1.6 U	1.0 U	1.0 U	1.0 U	1.4 U	--	--	1.3 U
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	0.20 U	--	--	0.20 U
cis-1,3-Dichloropropene	0.22	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Dibromochloromethane	0.6	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Dibromomethane	80	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Dichlorobromomethane	0.3	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U

Location ID		MW3	MW3	MW3	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW6
Sample ID		MW-3-20220621	MW-3-20220427	MW-3-20220920	MW5-211207	MW5-220203	MW-5-20220307	MW5-20220407	MW-5-220518	MW-5-20220610	MW-5-20220624	MW-5-20220803	MW-5-20220923	MW6-211209
Sample Date		6/21/2022	4/27/2022	9/20/2022	12/7/2021	2/3/2022	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	12/9/2021
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]													
Dichlorodifluoromethane	5.6	0.20 U	0.39 U	--	0.30 U	0.20 U	0.28 U	0.26 U	0.20 U	0.20 U	0.20 U	--	--	0.31 U
Ethylbenzene	29	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Hexachlorobutadiene	NE	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
Isopropylbenzene	800	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Methyl ethyl ketone (MEK)	4800	5.0 U	5.0 U	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	--	--	5.0 U
Methyl Iodide	NE	9.6 U	14 U	--	1.5 U	5.0 U	8.5 U	5.0 U	3.8 U	5.0 U	7.7 U	--	--	1.4 U
Methyl isobutyl ketone	640	2.0 U	2.0 U	--	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	--	--	2.0 U
Methyl tert-butyl ether	24	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Methylene Chloride	5	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
Naphthalene	8.9	1.0 U	1.0 U	--	1.0 U	1.0 U	10	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.3 U
n-Butylbenzene	400	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
n-Propylbenzene	800	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Sec-Butylbenzene	800	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Styrene	100	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Tert-Butylbenzene	800	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Tetrachloroethylene	0.8	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Toluene	57	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
trans-1,2-Dichloroethylene	100	0.20 U	0.20 U	--	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	0.22	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Trichloroethylene	0.3	0.20 U	0.20 U	--	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	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Vinyl Acetate	7800	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	--	--	1.0 U
Vinyl Chloride	0.2	0.20 U	0.20 U	--	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	0.40 U	0.40 U	--	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	--	--	0.40 U
Xylene, o-	NE	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--	0.20 U
Total xylenes	330	0.40 U	0.40 U	--	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	--	--	0.40 U
Semi-Volatile Organic Compounds (μg/L)														
1,2,4-Trichlorobenzene	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,2-Dichlorobenzene	600	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,2-Dinitrobenzene	1.6	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,2-Diphenylhydrazine	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,3-Dichlorobenzene	2	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,3-Dinitrobenzene	1.6	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,4-Dichlorobenzene	4.9	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
1,4-Dinitrobenzene	1.6	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	0.95 U	0.99 U	--	--	--	--	--	--	--	0.98 U
2,3,4,6-Tetrachlorophenol	480	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,3,5,6-Tetrachlorophenol	NE	--	1.0 U	--	1.1 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	1.2 U
2,3-Dichloroaniline	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,4,5-Trichlorophenol	300	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,4,6-Trichlorophenol	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,4-Dichlorophenol	10	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,4-Dimethylphenol	85	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,4-Dinitrophenol	10	--	5.2 U	--	4.7 U	5.0 U	7.9 U	4.8 U	11 U	6.9 U	--	--	--	4.9 U
2,4-Dinitrotoluene	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2,6-Dinitrotoluene	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2-Chloronaphthalene	100	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U

	Location ID	MW3	MW3	MW3	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW6
	Sample ID	MW-3-20220621	MW-3-20220427	MW-3-20220920	MW5-211207	MW5-220203	MW-5-20220307	MW5-20220407	MW-5-220518	MW-5-20220610	MW-5-20220624	MW-5-20220803	MW-5-20220923	MW6-211209
	Sample Date	6/21/2022	4/27/2022	9/20/2022	12/7/2021	2/3/2022	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	12/9/2021
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]													
2-Chlorophenol	15	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2-methylphenol	400	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2-Nitroaniline	160	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
2-Nitrophenol	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
3&4-Methylphenol	400	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
3,3'-Dichlorobenzidine	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	4.8 U	--	--	--	0.98 U
3-Nitroaniline	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
4,6-Dinitro-2-Methylphenol	5	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	7.6 U	6.4 U	--	--	--	4.9 U
4-Bromophenyl phenyl ether	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
4-Chloro-3-Methylphenol	36	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
4-Chloroaniline	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
4-Chlorophenyl phenyl ether	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
4-Nitroaniline	64	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
4-Nitrophenol	NE	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	4.8 U	4.8 U	--	--	--	4.9 U
Acenaphthene	30	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aniline	7.7	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	4.8 U	4.8 U	--	--	--	4.9 U
Anthracene	100	--	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzidine	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	800	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Bis(2-Chloroethoxy)Methane	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Bis(2-Chloroethyl)Ether	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Bis(2-chloroisopropyl) ether	NE	--	1.0 U	--	--	--	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	--
Bis(2-Ethylhexyl) Phthalate	1	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	9.6 U	4.8 U	--	--	--	4.9 U
Butyl benzyl Phthalate	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Carbazole	5	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Di(2-ethylhexyl)adipate	NE	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	4.8 U	4.8 U	--	--	--	4.9 U
Dibenzofuran	NE	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Dibutyl Phthalate	8	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	4.8 U	4.8 U	--	--	--	4.9 U
Diethyl Phthalate	200	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Dimethyl Phthalate	600	--	5.2 U	--	4.7 U	5.0 U	5.0 U	4.8 U	4.8 U	4.8 U	--	--	--	4.9 U
Di-N-Octyl Phthalate	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Hexachlorobenzene	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Hexachlorobutadiene	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Hexachlorocyclopentadiene	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Hexachloroethane	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Isophorone	27	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Nitrobenzene	10	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
N-Nitrosodimethylamine	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
N-Nitrosodi-n-propylamine	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U

Location ID		MW3	MW3	MW3	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW6
Sample ID		MW-3-20220621	MW-3-20220427	MW-3-20220920	MW5-211207	MW5-220203	MW-5-20220307	MW5-20220407	MW-5-220518	MW-5-20220610	MW-5-20220624	MW-5-20220803	MW-5-20220923	MW6-211209
Sample Date		6/21/2022	4/27/2022	9/20/2022	12/7/2021	2/3/2022	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	12/9/2021
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]													
N-Nitrosodiphenylamine	1	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Pentachlorophenol	5	--	2.1 U	--	4.7 U	5.0 U	5.0 U	4.8 U	6.3 U	4.8 U	--	--	--	4.9 U
Phenol	160	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Pyridine	8	--	1.0 U	--	0.95 U	0.99 U	1.0 U	0.96 U	0.96 U	0.95 U	--	--	--	0.98 U
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)														
1-Methylnaphthalene	1.5	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
2-Methylnaphthalene	32	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Acenaphthene	30	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Acenaphthylene	NE	--	0.10 U	--	0.21 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.22 U
Anthracene	100	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Benzo(g,h,i)perylene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.0095 U	--	--	--	0.0098 U
Fluoranthene	0.1	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Fluorene	10	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Naphthalene	8.9	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Phenanthrene	NE	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Pyrene	0.1	--	0.10 U	--	0.095 U	0.099 U	0.10 U	0.096 U	0.096 U	0.095 U	--	--	--	0.098 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)														
Benzo(a)pyrene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.0095 U	--	--	--	0.0098 U
Benzo(a)anthracene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.0095 U	--	--	--	0.0098 U
Benzo(b)fluoranthene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.019 U	--	--	--	0.0098 U
Benzo(j,k)fluoranthene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.033 U	--	--	--	0.018
Chrysene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.0095 U	--	--	--	0.0098 U
Dibenzo(a,h)anthracene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.0095 U	--	--	--	0.0098 U
Indeno(1,2,3-c,d)pyrene	NE	--	0.010 U	--	0.0095 U	0.0099 U	0.010 U	0.0096 U	0.0096 U	0.0095 U	--	--	--	0.0098 U
Total cPAH TEQ (ND=0.5RL)	0.0076	--	0.00755 U	--	0.00717 U	0.00747 U	0.00755 U	0.00725 U	0.00725 U	0.00882 U	--	--	--	0.00871
Total cPAH TEQ (ND=0)	0.0076	--	0 U	--	0 U	0 U	0 U	0 U	0 U	0 U	--	--	--	0.00180
Conventionals (mg/L)														
Total Organic Carbon	NE	1.0 U	--	1.0 U	--	--	--	--	--	--	1.0 U	1.0 U	1.0 U	--
ALKALINITY as CaCO3	NE	110	100	110	--	--	120	120	120	120	120	120	120	190
Bicarbonate Ion (HCO3)	NE	110	100	110	--	--	120	120	120	120	120	120	120	190
Ammonia (Total as N)	NE	0.050 U	0.060	0.050	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.061	0.10
Total Dissolved Solids	NE	170	170	160	160	160	150	160	200	170	170	190	170	250
Chloride	NE	11	6.4	6.0	7.3	7.1	6.2	6.7	6.9	7.1	6.4	2.0 U	5.9	5.3
Nitrate	NE	0.050 U	0.050 U	0.050 U	0.21 J	0.063	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.62
Nitrite	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	NE	15	13	13	14	15	14	14	14	19	14	14	13	26

Analyte	Location ID Sample ID Sample Date Matrix	MW6 MW-6-31122 3/11/2022 GW	MW6 MW-6-220503 5/3/2022 GW	MW6 MW-6-20220620 6/20/2022 GW	MW6 MW-6-20220921 9/21/2022 GW	MW7 MW7-211209 12/9/2021 GW	MW7 MW7-20220314 3/14/2022 GW	MW7 MW-7-20220506 5/6/2022 GW	MW7 MW-7-20220620 6/20/2022 GW	MW7 MW-7-20220921 9/21/2022 GW	MW8 MW8-211213 12/13/2021 GW	MW8 DUP-211213 12/13/2021 FD	MW8 MW8-20220322 3/22/2022 GW	MW8 MW8-05022022 5/2/2022 GW
	Groundwater Screening Level[1]													
Petroleum Hydrocarbons (mg/L)														
Gasoline-range hydrocarbons	0.8	0.1 U	0.1 U	--	--	0.1 U	0.1 U	0.1 U	--	--	0.1 U	0.1 U	0.1 U	0.1 U
Diesel-range hydrocarbons	NE	0.22 U	0.20 U	--	--	0.20 U	0.20 U	0.22 U	--	--	0.21 U	0.20 U	0.21 U	0.21 U
Lube oil-range hydrocarbons	NE	0.22 U	0.20 U	--	--	0.20 U	0.20 U	0.22 U	--	--	0.21 U	0.20 U	0.21 U	0.21 U
Total TPH	0.5	0.22 U	0.20 U	--	--	0.20 U	0.20 U	0.22 U	--	--	0.21 U	0.20 U	0.21 U	0.21 U
Total Metals (µg/L)														
Arsenic	5.0	4.2	5.8	5.2	5.7	11	10	12	11	8.8	3.3 U	3.3 U	3.3 U	3.3 U
Barium	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	4.4	4.4 U	4.4 U	--	--	4.4 U	4.4 U	4.4 U	--	--	4.4 U	4.4 U	4.4 U	4.4 U
Calcium	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	50	11 U	11 U	11 U	--	11 U	11 U	13	11 U	--	11 U	11 U	11 U	11 U
Copper	11	11 U	11 U	--	--	11 U	11 U	27	--	--	11 U	11 U	11 U	11 U
Iron	300	1100	2000	1200	510	6900	2100	24000	550	3000	1300	1400	2800	2100
Lead	1.1	1.1 U	1.1 U	--	--	3.2	1.2	8.8	--	--	1.1 U	1.1 U	1.1 U	1.1 U
Magnesium	NE	24000	24000	24000	21000	18000	13000	24000	11000	14000	50000	50000	47000	33000
Manganese	50	2100	2100	2400	1700	680	180	1300	40	190	2100	2200	2400	1600
Mercury	0.025	0.025 U	0.025 U	--	--	0.025 U	0.025 U	0.025 U	--	--	0.025 U	0.025 U	0.025 U	0.025 U
Nickel	26	22 U	22 U	22 U	--	42	22 U	36	22 U	--	39	22 U	22 U	22 U
Potassium	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	5.6	5.6 U	5.6 U	--	--	5.6 U	5.6 U	5.6 U	--	--	5.6 U	5.6 U	5.6 U	5.6 U
Silver	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Sodium	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	100	28 U	28 U	--	--	28 U	28 U	42	--	--	28 U	28 U	28 U	28 U
Dissolved Metals (µg/L)														
Arsenic	5.0	3.9	4.2	4.4	5.6	8.5	8.8	9.1	9.1	9.1	3.0 U	3.0 U	3.0 U	3.0 U
Cadmium	4.4	4.0 U	4.0 U	--	--	4.0 U	4.0 U	4.0 U	--	--	4.0 U	4.0 U	4.0 U	4.0 U
Calcium	NE	44000	44000	49000	37000	20000	18000	20000	20000	20000	37000	38000	40000	33000
Chromium	50	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U	--	10 U	10 U	10 U	10 U
Copper	11	10 U	10 U	--	--	10 U	10 U	10 U	--	--	10 U	10 U	10 U	10 U
Iron	300	74	67	310	330	56 U	56 U	56 U	56 U	56 U	120	110	99	65
Lead	1.1	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	1.0 U
Magnesium	NE	21000	23000	24000	23000	14000	12000	13000	12000	14000	41000	42000	40000	36000
Manganese	50	2000	2000	2400	1700	250	62	32	37	74	1900	1900	2200	1700
Mercury	0.025	0.025 U	0.025 U	--	--	0.025 U	0.025 U	0.025 U	--	--	0.025 U	0.025 U	0.025 U	0.025 U
Nickel	26	20 U	20 U	20 U	--	20 U	20 U	20 U	20 U	--	20 U	20 U	20 U	20 U
Potassium	NE	2500	2500	3100	2600	1900	2200	2100	2300	2200	4100	4500	4500	3700
Selenium	5.6	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	NE	19000	16000	17000	13000	7600	6000	6600	6300	6200	11000	11000	9800	9200
Zinc	100	25 U	25 U	--	--	25 U	25 U	25 U	--	--	25 U	25 U	25 U	25 U

	Location ID	MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW8	MW8	MW8	MW8
	Sample ID	MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW8-211213	DUP-211213	MW8-20220322	MW8-05022022
	Sample Date	3/11/2022	5/3/2022	6/20/2022	9/21/2022	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	12/13/2021	12/13/2021	3/22/2022	5/2/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	FD	GW	GW
Analyte	Groundwater Screening Level[1]													
PCB Aroclors (µg/L)														
PCB-Aroclor 1016	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
PCB-Aroclor 1221	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
PCB-Aroclor 1232	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
PCB-Aroclor 1242	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
PCB-Aroclor 1248	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
PCB-Aroclor 1254	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
PCB-Aroclor 1260	NE	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
Total PCB Aroclors	0.05	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
Organochlorine Pesticides (µg/L)														
4,4'-DDD	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
4,4'-DDE	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
4,4'-DDT	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Aldrin	0.005	0.0020 U	0.0020 U	--	--	0.0019 U	0.0021 U	0.0023 U	--	--	0.0019 U	0.0019 U	0.0021 U	0.0019 U
Alpha-BHC	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Beta-BHC	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Chlordane, technical	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
cis-Chlordane	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Delta-BHC	NE	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Dieldrin	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Endosulfan I	0.056	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Endosulfan II	0.056	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Endosulfan Sulfate	9	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Endrin	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Endrin Aldehyde	0.034	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Endrin Ketone	NE	0.020 U	0.020 U	--	--	0.019 U	0.021 U	0.023 U	--	--	0.019 U	0.019 U	0.021 U	0.019 U
Gamma-BHC	0.06	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Heptachlor	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Heptachlor Epoxide	0.005	0.0030 U	0.0030 U	--	--	0.0028 U	0.0032 U	0.0035 U	--	--	0.0029 U	0.0029 U	0.0031 U	0.0029 U
Methoxychlor	0.02	0.010 U	0.010 U	--	--	0.0095 U	0.011 U	0.012 U	--	--	0.0097 U	0.0097 U	0.010 U	0.0097 U
Toxaphene	0.05	0.051 U	0.050 U	--	--	0.047 U	0.053 U	0.058 U	--	--	0.049 U	0.049 U	0.052 U	0.049 U
trans-Chlordane	0.005	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U	0.0052 U	0.0049 U
Chlorinated Acid Herbicides (µg/L)														
2,4,5-T	160	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
2,4,5-TP	10	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
2,4-D	70	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
2,4-DB	480	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
3,5-Dichlorobenzoic Acid	NE	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
4-Nitrophenol	NE	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
Acifluorfen	NE	4.95 U	--	--	--	4.94 U	4.92 U	--	--	--	4.97 U	5 U	4.99 U	--
Bentazon	NE	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
Chloramben	NE	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
Chlorthal-dimethyl (DACTHAL)	NE	1.98 U	--	--	--	1.98 U	1.97 U	--	--	--	1.99 U	2 U	2 U	--
Dalapon	200	1.98 U	--	--	--	1.98 U	1.97 U	--	--	--	1.99 U	2 U	2 U	--
Dicamba	480	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
Dichlorprop	NE	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
Dinoseb	7	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--

	Location ID	MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW8	MW8	MW8	MW8
	Sample ID	MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW8-211213	DUP-211213	MW8-20220322	MW8-05022022
	Sample Date	3/11/2022	5/3/2022	6/20/2022	9/21/2022	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	12/13/2021	12/13/2021	3/22/2022	5/2/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	FD	GW	GW
Analyte	Groundwater Screening Level[1]													
MCPA	23	4.95 U	--	--	--	4.94 U	4.92 U	--	--	--	4.97 U	5 U	4.99 U	--
MCPP	16	4.95 U	--	--	--	4.94 U	4.92 U	--	--	--	4.97 U	5 U	4.99 U	--
Pentachlorophenol	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Picloram	NE	0.989 U	--	--	--	0.988 U	0.984 U	--	--	--	0.994 U	1 U	0.998 U	--
Volatile Organic Compounds (µg/L)														
1,1,1,2-Tetrachloroethane	1.7	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,1,1-Trichloroethane	200	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,1,2,2-Tetrachloroethane	0.2	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,1,2-Trichloroethane	0.35	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,1-Dichloroethane	1	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,1-Dichloroethylene	7	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,1-Dichloropropene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2,3-Trichlorobenzene	NE	0.20 U	0.20 U	--	--	0.27 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2,3-Trichloropropane	0.2	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2,4-Trichlorobenzene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2,4-Trimethylbenzene	80	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2-Dibromo-3-Chloropropane	1	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
1,2-Dibromoethane	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2-Dichlorobenzene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2-Dichloroethane	0.5	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,2-Dichloropropane	0.6	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,3,5-Trimethylbenzene	80	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,3-Dichlorobenzene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,3-Dichloropropane	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
1,4-Dichlorobenzene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
2,2-Dichloropropane	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
2-Chlorotoluene	160	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
2-Hexanone	40	2.0 U	2.0 U	--	--	2.0 U	2.0 U	2.0 U	--	--	2.0 U	2.0 U	2 U	2.0 U
4-Chlorotoluene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
4-Isopropyltoluene	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Acetone	7200	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	--	--	6.6 U	6.6 U	5 U	5.0 U
Benzene	0.44	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Bromobenzene	64	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Bromochloromethane	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Bromoform	4.6	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
Bromomethane	11	0.20 U	3.1 U	--	--	0.33 U	0.20 U	1.8 U	--	--	0.20 U	0.20 U	3.3 U	3.1 U
Carbon Disulfide	400	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.28 U	--	--	0.26 U	0.26 U	0.2 U	0.20 U
Carbon Tetrachloride	0.2	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Chlorobenzene	20	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Chloroethane	19000	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
Chloroform	1.2	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Chloromethane	150	1.0 U	1.0 U	--	--	1.3 U	1.3 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
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	0.2 U	0.20 U
cis-1,3-Dichloropropene	0.22	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Dibromochloromethane	0.6	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Dibromomethane	80	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Dichlorobromomethane	0.3	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U

Location ID		MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW8	MW8	MW8	MW8
Sample ID		MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW8-211213	DUP-211213	MW8-20220322	MW8-05022022
Sample Date		3/11/2022	5/3/2022	6/20/2022	9/21/2022	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	12/13/2021	12/13/2021	3/22/2022	5/2/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	FD	GW	GW
Analyte	Groundwater Screening Level[1]													
Dichlorodifluoromethane	5.6	0.29 U	0.20 U	--	--	0.31 U	0.31 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Ethylbenzene	29	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Hexachlorobutadiene	NE	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
Isopropylbenzene	800	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Methyl ethyl ketone (MEK)	4800	5.0 U	5.0 U	--	--	5.0 U	5.0 U	5.0 U	--	--	6.3 U	6.3 U	5 U	5.0 U
Methyl Iodide	NE	1.0 U	19 U	--	--	1.4 U	1.0 U	28 U	--	--	5.0 U	5.0 U	8.6 U	19 U
Methyl isobutyl ketone	640	2.0 U	2.0 U	--	--	2.0 U	2.0 U	2.0 U	--	--	2.0 U	2.0 U	2 U	2.0 U
Methyl tert-butyl ether	24	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Methylene Chloride	5	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
Naphthalene	8.9	1.0 U	1.0 U	--	--	1.3 U	1.0 U	1.0 U	--	--	1.3 U	1.3 U	1 U	1.0 U
n-Butylbenzene	400	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
n-Propylbenzene	800	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Sec-Butylbenzene	800	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Styrene	100	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Tert-Butylbenzene	800	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Tetrachloroethylene	0.8	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Toluene	57	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
trans-1,2-Dichloroethylene	100	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
trans-1,3-Dichloropropene	0.22	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Trichloroethylene	0.3	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Trichlorofluoromethane	120	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Vinyl Acetate	7800	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1.0 U	--	--	1.0 U	1.0 U	1 U	1.0 U
Vinyl Chloride	0.2	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Xylene, m-,p-	NE	0.40 U	0.40 U	--	--	0.40 U	0.40 U	0.40 U	--	--	0.40 U	0.40 U	0.4 U	0.40 U
Xylene, o-	NE	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.20 U	--	--	0.20 U	0.20 U	0.2 U	0.20 U
Total xylenes	330	0.40 U	0.40 U	--	--	0.40 U	0.40 U	0.40 U	--	--	0.40 U	0.40 U	0.4 U	0.40 U
Semi-Volatile Organic Compounds (µg/L)														
1,2,4-Trichlorobenzene	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,2-Dichlorobenzene	600	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,2-Dinitrobenzene	1.6	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,2-Diphenylhydrazine	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,3-Dichlorobenzene	2	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,3-Dinitrobenzene	1.6	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,4-Dichlorobenzene	4.9	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
1,4-Dinitrobenzene	1.6	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	1.0 U	--	--	--	--	0.99 U	1.0 U	--	--
2,3,4,6-Tetrachlorophenol	480	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,3,5,6-Tetrachlorophenol	NE	1.0 U	0.98 U	0.95 U	--	1.2 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,3-Dichloroaniline	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,4,5-Trichlorophenol	300	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,4,6-Trichlorophenol	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,4-Dichlorophenol	10	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,4-Dimethylphenol	85	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,4-Dinitrophenol	10	8.7 U	6.2 U	4.8 U	--	5.1 U	6.6 U	7.5 U	4.8 U	--	4.9 U	5.0 U	5.4 U	6.4 U
2,4-Dinitrotoluene	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2,6-Dinitrotoluene	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2-Chloronaphthalene	100	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U

Location ID		MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW8	MW8	MW8	MW8
Sample ID		MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW8-211213	DUP-211213	MW8-20220322	MW8-05022022
Sample Date		3/11/2022	5/3/2022	6/20/2022	9/21/2022	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	12/13/2021	12/13/2021	3/22/2022	5/2/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	FD	GW	GW
Analyte	Groundwater Screening Level[1]													
2-Chlorophenol	15	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2-methylphenol	400	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2-Nitroaniline	160	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
2-Nitrophenol	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
3&4-Methylphenol	400	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
3,3'-Dichlorobenzidine	1	1.0 U	0.98 U	4.8 U	--	1.0 U	0.95 U	1.1 U	4.8 U	--	0.99 U	1.0 U	1.1 U	1.0 U
3-Nitroaniline	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
4,6-Dinitro-2-Methylphenol	5	6.5 U	4.9 U	4.8 U	--	5.1 U	4.8 U	5.3 U	4.8 U	--	4.9 U	5.0 U	5.4 U	5.0 U
4-Bromophenyl phenyl ether	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
4-Chloro-3-Methylphenol	36	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
4-Chloroaniline	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
4-Chlorophenyl phenyl ether	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
4-Nitroaniline	64	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
4-Nitrophenol	NE	5.1 U	4.9 U	4.8 U	--	5.1 U	4.8 U	5.3 U	4.8 U	--	4.9 U	5.0 U	5.4 U	5.0 U
Acenaphthene	30	--	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Aniline	7.7	5.1 U	4.9 U	4.8 U	--	5.1 U	4.8 U	5.3 U	4.8 U	--	4.9 U	5.0 U	5.4 U	5.0 U
Anthracene	100	--	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzidine	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	800	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Bis(2-Chloroethoxy)Methane	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Bis(2-Chloroethyl)Ether	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Bis(2-chloroisopropyl) ether	NE	1.0 U	0.98 U	0.95 U	--	--	0.95 U	1.1 U	0.95 U	--	--	--	1.1 U	1.0 U
Bis(2-Ethylhexyl) Phthalate	1	5.1 U	4.9 U	1.9 U	--	5.1 U	4.8 U	5.3 U	1.9 U	--	4.9 U	5.0 U	5.4 U	5.0 U
Butyl benzyl Phthalate	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Carbazole	5	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Di(2-ethylhexyl)adipate	NE	5.1 U	4.9 U	4.8 U	--	5.1 U	4.8 U	5.3 U	4.8 U	--	4.9 U	5.0 U	5.4 U	5.0 U
Dibenzofuran	NE	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Dibutyl Phthalate	8	5.1 U	4.9 U	4.8 U	--	5.1 U	4.8 U	5.3 U	4.8 U	--	4.9 U	5.0 U	5.4 U	5.0 U
Diethyl Phthalate	200	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	4.7 J	1.0 UJ	1.1 U	1.0 U
Dimethyl Phthalate	600	5.1 U	4.9 U	4.8 U	--	5.1 U	4.8 U	5.3 U	4.8 U	--	4.9 U	5.0 U	5.4 U	5.0 U
Di-N-Octyl Phthalate	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Hexachlorobenzene	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Hexachlorobutadiene	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Hexachlorocyclopentadiene	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Hexachloroethane	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Isophorone	27	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Nitrobenzene	10	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
N-Nitrosodimethylamine	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
N-Nitrosodi-n-propylamine	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U

	Location ID	MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW8	MW8	MW8	MW8
	Sample ID	MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW8-211213	DUP-211213	MW8-20220322	MW8-05022022
	Sample Date	3/11/2022	5/3/2022	6/20/2022	9/21/2022	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	12/13/2021	12/13/2021	3/22/2022	5/2/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	FD	GW	GW
Analyte	Groundwater Screening Level[1]													
N-Nitrosodiphenylamine	1	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Pentachlorophenol	5	6.5 U	7.5 U	4.8 U	--	5.1 U	6.0 U	9.5 U	4.8 U	--	4.9 U	5.0 U	5.4 U	7.7 U
Phenol	160	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Pyridine	8	1.0 U	0.98 U	0.95 U	--	1.0 U	0.95 U	1.1 U	0.95 U	--	0.99 U	1.0 U	1.1 U	1.0 U
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)														
1-Methylnaphthalene	1.5	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
2-Methylnaphthalene	32	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Acenaphthene	30	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Acenaphthylene	NE	0.10 U	0.098 U	0.095 U	0.095 U	0.22 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Anthracene	100	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Benzo(g,h,i)perylene	NE	0.010 U	0.19	0.0095 U	0.0095 U	0.010 U	0.0095 U	0.011 U	0.011	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Fluoranthene	0.1	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Fluorene	10	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Naphthalene	8.9	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Phenanthrene	NE	0.10 U	0.098 U	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Pyrene	0.1	0.10 U	0.26	0.095 U	0.095 U	0.10 U	0.095 U	0.11 U	0.095 U	0.095 U	0.099 U	0.10 U	0.11 U	0.10 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)														
Benzo(a)pyrene	NE	0.010 U	0.17	0.0095 U	0.0095 U	0.010 U	0.0095 U	0.011 U	0.015	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Benzo(a)anthracene	NE	0.010 U	0.27	0.0095 U	0.0095 U	0.010 U	0.0095 U	0.011 U	0.011	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Benzo(b)fluoranthene	NE	0.010 U	0.12	0.028 U	0.0095 U	0.010 U	0.0095 U	0.011 U	0.028 U	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Benzo(j,k)fluoranthene	NE	0.010 U	0.36	0.0095 U	0.0095 U	0.016	0.0095 U	0.011 U	0.0095 U	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Chrysene	NE	0.010 U	0.085	0.010	0.0095 U	0.010 U	0.0095 U	0.011 U	0.013	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Dibenzo(a,h)anthracene	NE	0.010 U	0.14	0.0095 U	0.0095 U	0.010 U	0.0095 U	0.011 U	0.0095 U	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Indeno(1,2,3-c,d)pyrene	NE	0.010 U	0.12	0.0095 U	0.0095 U	0.010 U	0.0095 U	0.011 U	0.012	0.0095 U	0.0099 U	0.010 U	0.011 U	0.010 U
Total cPAH TEQ (ND=0.5RL)	0.0076	0.00755 U	0.27185	0.00815	0.00717 U	0.00865	0.00717 U	0.0083 U	0.01978	0.00717 U	0.00747 U	0.00755 U	0.0083 U	0.00755 U
Total cPAH TEQ (ND=0)	0.0076	0 U	0.27185	0.00010	0 U	0.00160	0 U	0 U	0.01743	0 U	0 U	0 U	0 U	0 U
Conventionals (mg/L)														
Total Organic Carbon	NE	--	--	4.6	3.7	--	--	--	1.0 U	1.0 U	--	--	--	--
ALKALINITY as CaCO3	NE	200	230	220	190	100	94	110	96	100	230	220	220	200
Bicarbonate Ion (HCO3)	NE	200	230	220	190	100	94	110	96	100	230	220	220	200
Ammonia (Total as N)	NE	0.096	0.10	0.068	0.10	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U
Total Dissolved Solids	NE	270	290	300	230	120	140	150	140	140	320	320	320	280
Chloride	NE	5.7	3.9	5.5	5.3	9.0	5.3	2.5	5.6	5.2	4.5	4.5	4.6	2.5
Nitrate	NE	0.12 J	0.12	0.050 U	0.074	0.22	0.12 J	0.050 U	0.050 U	0.50	0.10 J	0.65 J	2.9	0.050 U
Nitrite	NE	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfate	NE	25	26	28	18	8.5	5.9	5.0 U	5.7	6.9	73	71	69	49

Location ID		MW8	MW8	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10
Sample ID		MW-8-20220622	MW-8-20220920	MW-9-20220404	MW-9-20220519	MW-9-20220623	MW-9-220921	MW-10-20220404	MW-10-20220519	MW-10-20220623	MW-10-220921
Sample Date		6/22/2022	9/20/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]										
Petroleum Hydrocarbons (mg/L)											
Gasoline-range hydrocarbons	0.8	--	--	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Diesel-range hydrocarbons	NE	--	--	0.20	0.12	0.21	0.13 U	0.16 U	0.10 U	0.13 U	0.16
Lube oil-range hydrocarbons	NE	--	--	0.25	0.21 U	0.31	0.26	0.22	0.20 U	0.22	0.32
Total TPH	0.5	--	--	0.45	0.12	0.52	0.26	0.22	0.20 U	0.22	0.48
Total Metals (µg/L)											
Arsenic	5.0	3.3 U	3.3 U	3.3 U	3.3 U	3.9	3.3 U	4.3	3.3 U	3.3 U	3.3 U
Barium	NE	--	--	--	--	--	--	--	--	--	--
Cadmium	4.4	--	--	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Calcium	NE	--	--	--	--	--	--	--	--	--	--
Chromium	50	11 U	--	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Copper	11	--	--	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U
Iron	300	1400	1100	5100	2300	8600	2400	6800	1400	1300	6400
Lead	1.1	--	--	2.5	1.1 U	1.1 U	1.1 U	4.5	1.1 U	1.1 U	1.1 U
Magnesium	NE	35000	34000	30000	24000	27000	27000	23000	21000	21000	26000
Manganese	50	1900	1400	1500	1100	1800	1400	320	460	450	1600
Mercury	0.025	--	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Nickel	26	22 U	--	22 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U
Potassium	NE	--	--	--	--	--	--	--	--	--	--
Selenium	5.6	--	--	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U	5.6 U
Silver	NE	--	--	--	--	--	--	--	--	--	--
Sodium	NE	--	--	--	--	--	--	--	--	--	--
Zinc	100	--	--	28 U	28 U	--	28 U	28 U	28 U	--	28 U
Dissolved Metals (µg/L)											
Arsenic	5.0	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Cadmium	4.4	--	--	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Calcium	NE	34000	32000	110000	93000	110000	94000	48000	65000	78000	91000
Chromium	50	10 U	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Copper	11	--	--	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Iron	300	190	56 U	56 U	1900	3100	1900	100	1000	930	6000
Lead	1.1	--	--	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Magnesium	NE	35000	39000	26000	26000	26000	28000	18000	23000	22000	28000
Manganese	50	1800	1300	1300	1200	1700	1300	200	440	450	1600
Mercury	0.025	--	--	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Nickel	26	20 U	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Potassium	NE	4100	3800	6900	5300	5900	5800	4300	3400	3300	5700
Selenium	5.6	--	--	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	NE	9200	8700	14000	13000	14000	13000	8200	9400	9900	12000
Zinc	100	--	--	25 U	25 U	--	25 U	25 U	25 U	--	25 U

	Location ID	MW8	MW8	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10
	Sample ID	MW-8-20220622	MW-8-20220920	MW-9-20220404	MW-9-20220519	MW-9-20220623	MW-9-220921	MW-10-20220404	MW-10-20220519	MW-10-20220623	MW-10-220921
	Sample Date	6/22/2022	9/20/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	**Groundwater Screening Level[1]**										
PCB Aroclors (µg/L)											
PCB-Aroclor 1016	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
PCB-Aroclor 1221	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
PCB-Aroclor 1232	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
PCB-Aroclor 1242	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
PCB-Aroclor 1248	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
PCB-Aroclor 1254	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
PCB-Aroclor 1260	NE	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
Total PCB Aroclors	0.05	--	--	0.055 U	0.048 U	0.048 U	--	0.054 U	0.048 U	0.049 U	--
Organochlorine Pesticides (µg/L)											
4,4'-DDD	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
4,4'-DDE	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
4,4'-DDT	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Aldrin	0.005	--	--	0.0022 U	0.0019 U	0.0019 U	0.0019 U	0.0022 U	0.0019 U	0.0019 U	0.0019 U
Alpha-BHC	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Beta-BHC	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Chlordane, technical	NE	--	--	--	--	--	0.048 U	--	--	--	0.048 U
cis-Chlordane	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Delta-BHC	NE	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Dieldrin	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Endosulfan I	0.056	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Endosulfan II	0.056	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Endosulfan Sulfate	9	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Endrin	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Endrin Aldehyde	0.034	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Endrin Ketone	NE	--	--	0.022 U	0.019 U	0.019 U	0.019 U	0.022 U	0.019 U	0.019 U	0.019 U
Gamma-BHC	0.06	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Heptachlor	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Heptachlor Epoxide	0.005	--	--	0.0033 U	0.0029 U	0.0029 U	0.0029 U	0.0033 U	0.0029 U	0.0029 U	0.0029 U
Methoxychlor	0.02	--	--	0.011 U	0.0097 U	0.0095 U	0.0095 U	0.029	0.0095 U	0.0097 U	0.0096 U
Toxaphene	0.05	--	--	0.055 U	0.048 U	0.048 U	0.048 U	0.054 U	0.048 U	0.049 U	0.048 U
trans-Chlordane	0.005	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Chlorinated Acid Herbicides (µg/L)											
2,4,5-T	160	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
2,4,5-TP	10	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
2,4-D	70	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
2,4-DB	480	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
3,5-Dichlorobenzoic Acid	NE	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
4-Nitrophenol	NE	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
Acifluorfen	NE	--	--	4.93 U	--	5.01 U	--	4.96 U	--	4.99 U	--
Bentazon	NE	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
Chloramben	NE	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
Chlorthal-dimethyl (DACTHAL)	NE	--	--	1.97 U	--	2 U	--	1.98 U	--	2 U	--
Dalapon	200	--	--	1.97 U	--	2 U	--	1.98 U	--	2 U	--
Dicamba	480	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
Dichlorprop	NE	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
Dinoseb	7	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--

Location ID Sample ID Sample Date Matrix		MW8 MW-8-20220622 6/22/2022 GW	MW8 MW-8-20220920 9/20/2022 GW	MW9 MW-9-20220404 4/4/2022 GW	MW9 MW-9-20220519 5/19/2022 GW	MW9 MW-9-20220623 6/23/2022 GW	MW9 MW-9-220921 9/21/2022 GW	MW10 MW-10-20220404 4/4/2022 GW	MW10 MW-10-20220519 5/19/2022 GW	MW10 MW-10-20220623 6/23/2022 GW	MW10 MW-10-220921 9/21/2022 GW
Analyte	Groundwater Screening Level[1]										
MCPA	23	--	--	4.93 U	--	5.01 U	--	4.96 U	--	4.99 U	--
MCPP	16	--	--	4.93 U	--	5.01 U	--	4.96 U	--	4.99 U	--
Pentachlorophenol	NE	--	--	--	--	--	--	--	--	--	--
Picloram	NE	--	--	0.987 U	--	1 U	--	0.991 U	--	0.998 U	--
Volatile Organic Compounds (µg/L)											
1,1,1,2-Tetrachloroethane	1.7	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,1,1-Trichloroethane	200	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2,2-Tetrachloroethane	0.2	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,1,2-Trichloroethane	0.35	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethane	1	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,1-Dichloroethylene	7	--	--	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	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2,3-Trichlorobenzene	NE	--	--	0.20 U	0.20 U	1.0 U	--	0.20 U	0.20 U	1.0 U	0.20 U
1,2,3-Trichloropropane	0.2	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2,4-Trichlorobenzene	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2,4-Trimethylbenzene	80	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dibromo-3-Chloropropane	1	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichlorobenzene	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloroethane	0.5	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloropropane	0.6	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,3,5-Trimethylbenzene	80	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,3-Dichlorobenzene	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,3-Dichloropropane	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
1,4-Dichlorobenzene	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
2,2-Dichloropropane	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
2-Chlorotoluene	160	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
2-Hexanone	40	--	--	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
4-Isopropyltoluene	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.37	0.27	0.20 U	0.20 U
Acetone	7200	--	--	5.0 U	5.0 U	10 U	--	5.0 U	5.0 U	10 U	5.0 U
Benzene	0.44	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Bromobenzene	64	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Bromochloromethane	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Bromoform	4.6	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	11	--	--	1.0 U	0.30 U	2.3 U	--	1.0 U	0.30 U	2.3 U	1.3 U
Carbon Disulfide	400	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Carbon Tetrachloride	0.2	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Chlorobenzene	20	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Chloroethane	19000	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	1.2	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Chloromethane	150	--	--	1.0 U	1.0 U	1.4 U	--	1.0 U	1.0 U	1.4 U	1.0 U
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
cis-1,3-Dichloropropene	0.22	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Dibromochloromethane	0.6	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Dibromomethane	80	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Dichlorobromomethane	0.3	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U

Location ID Sample ID Sample Date Matrix		MW8 MW-8-20220622 6/22/2022 GW	MW8 MW-8-20220920 9/20/2022 GW	MW9 MW-9-20220404 4/4/2022 GW	MW9 MW-9-20220519 5/19/2022 GW	MW9 MW-9-20220623 6/23/2022 GW	MW9 MW-9-220921 9/21/2022 GW	MW10 MW-10-20220404 4/4/2022 GW	MW10 MW-10-20220519 5/19/2022 GW	MW10 MW-10-20220623 6/23/2022 GW	MW10 MW-10-220921 9/21/2022 GW
Analyte	Groundwater Screening Level[1]										
Dichlorodifluoromethane	5.6	--	--	0.29 U	0.20 U	0.20 U	--	0.29 U	0.20 U	0.20 U	0.30 U
Ethylbenzene	29	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.21	0.20 U
Hexachlorobutadiene	NE	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene	800	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Methyl ethyl ketone (MEK)	4800	--	--	5.0 U	5.0 U	5.0 U	--	5.0 U	5.0 U	5.0 U	5.0 U
Methyl Iodide	NE	--	--	2.0 U	3.8 U	7.7 U	--	2.0 U	3.8 U	7.7 U	5.0 U
Methyl isobutyl ketone	640	--	--	2.0 U	2.0 U	2.0 U	--	2.0 U	2.0 U	2.0 U	2.0 U
Methyl tert-butyl ether	24	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Methylene Chloride	5	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene	8.9	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
n-Butylbenzene	400	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
n-Propylbenzene	800	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Sec-Butylbenzene	800	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Styrene	100	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Tert-Butylbenzene	800	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Tetrachloroethylene	0.8	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Toluene	57	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethylene	100	--	--	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	0.22	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Trichloroethylene	0.3	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Trichlorofluoromethane	120	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Vinyl Acetate	7800	--	--	1.0 U	1.0 U	1.0 U	--	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl Chloride	0.2	--	--	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	--	--	0.40 U	0.40 U	0.40 U	--	0.40 U	0.40 U	0.40 U	0.40 U
Xylene, o-	NE	--	--	0.20 U	0.20 U	0.20 U	--	0.20 U	0.20 U	0.20 U	0.20 U
Total xylenes	330	--	--	0.40 U	0.40 U	0.40 U	--	0.40 U	0.40 U	0.40 U	0.40 U
Semi-Volatile Organic Compounds (µg/L)											
1,2,4-Trichlorobenzene	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,2-Dichlorobenzene	600	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,2-Dinitrobenzene	1.6	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,2-Diphenylhydrazine	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,3-Dichlorobenzene	2	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,3-Dinitrobenzene	1.6	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,4-Dichlorobenzene	4.9	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
1,4-Dinitrobenzene	1.6	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,2'-Oxybis[1-chloropropane]	NE	--	--	--	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	480	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,3,5,6-Tetrachlorophenol	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,3-Dichloroaniline	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,4,5-Trichlorophenol	300	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,4,6-Trichlorophenol	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,4-Dichlorophenol	10	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,4-Dimethylphenol	85	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,4-Dinitrophenol	10	--	--	5.2 U	11 U	6.9 U	--	5.1 U	11 U	7.1 U	--
2,4-Dinitrotoluene	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2,6-Dinitrotoluene	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2-Chloronaphthalene	100	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--

Location ID		MW8	MW8	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10
Sample ID		MW-8-20220622	MW-8-20220920	MW-9-20220404	MW-9-20220519	MW-9-20220623	MW-9-220921	MW-10-20220404	MW-10-20220519	MW-10-20220623	MW-10-220921
Sample Date		6/22/2022	9/20/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Screening Level[1]										
2-Chlorophenol	15	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2-methylphenol	400	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2-Nitroaniline	160	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
2-Nitrophenol	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
3&4-Methylphenol	400	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
3,3'-Dichlorobenzidine	1	--	--	1.0 U	0.98 U	4.9 U	--	1.0 U	0.95 U	5.0 U	--
3-Nitroaniline	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
4,6-Dinitro-2-Methylphenol	5	--	--	5.2 U	7.8 U	6.9 U	--	5.1 U	7.5 U	7.0 U	--
4-Bromophenyl phenyl ether	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
4-Chloro-3-Methylphenol	36	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
4-Chloroaniline	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
4-Chlorophenyl phenyl ether	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
4-Nitroaniline	64	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
4-Nitrophenol	NE	--	--	5.2 U	4.9 U	4.9 U	--	5.1 U	4.7 U	5.0 U	--
Acenaphthene	30	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	NE	--	--	--	--	--	--	--	--	--	--
Aniline	7.7	--	--	5.2 U	4.9 U	4.9 U	--	5.1 U	4.7 U	5.0 U	--
Anthracene	100	--	--	--	--	--	--	--	--	--	--
Azobenzene	NE	--	--	--	--	--	--	--	--	--	--
Benzidine	NE	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	NE	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	NE	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	NE	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	NE	--	--	--	--	--	--	--	--	--	--
Benzoic Acid	NE	--	--	--	--	--	--	--	--	--	--
Benzyl Alcohol	800	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Bis(2-Chloroethoxy)Methane	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Bis(2-Chloroethyl)Ether	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Bis(2-chloroisopropyl) ether	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Bis(2-Ethylhexyl) Phthalate	1	--	--	5.2 U	9.8 U	4.9 U	--	5.1 U	9.5 U	5.0 U	--
Butyl benzyl Phthalate	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Carbazole	5	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Di(2-ethylhexyl)adipate	NE	--	--	5.2 U	4.9 U	4.9 U	--	5.1 U	4.7 U	5.0 U	--
Dibenzofuran	NE	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Dibutyl Phthalate	8	--	--	5.2 U	4.9 U	4.9 U	--	5.1 U	4.7 U	5.0 U	--
Diethyl Phthalate	200	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Dimethyl Phthalate	600	--	--	5.2 U	4.9 U	4.9 U	--	5.1 U	4.7 U	5.0 U	--
Di-N-Octyl Phthalate	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Hexachlorobenzene	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Hexachlorobutadiene	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Hexachlorocyclopentadiene	1	--	--	1.0 U	0.98 U	1.4 U	--	1.0 U	0.95 U	1.4 U	--
Hexachloroethane	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Isophorone	27	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Nitrobenzene	10	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
N-Nitrosodimethylamine	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
N-Nitrosodi-n-propylamine	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--

Location ID		MW8	MW8	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10
Sample ID		MW-8-20220622	MW-8-20220920	MW-9-20220404	MW-9-20220519	MW-9-20220623	MW-9-220921	MW-10-20220404	MW-10-20220519	MW-10-20220623	MW-10-220921
Sample Date		6/22/2022	9/20/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022
Matrix		GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	**Groundwater Screening Level[1]**										
N-Nitrosodiphenylamine	1	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Pentachlorophenol	5	--	--	5.2 U	6.4 U	6.9 U	--	5.1 U	6.2 U	7.0 U	--
Phenol	160	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Pyridine	8	--	--	1.0 U	0.98 U	0.98 U	--	1.0 U	0.95 U	1.0 U	--
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)											
1-Methylnaphthalene	1.5	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
2-Methylnaphthalene	32	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Acenaphthene	30	--	0.095 U	0.46	0.18	0.36	0.25	0.10 U	0.095 U	0.10 U	0.29
Acenaphthylene	NE	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Anthracene	100	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Benzo(g,h,i)perylene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Fluoranthene	0.1	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Fluorene	10	--	0.095 U	0.12	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Naphthalene	8.9	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Phenanthrene	NE	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Pyrene	0.1	--	0.095 U	0.10 U	0.098 U	0.098 U	0.095 U	0.10 U	0.095 U	0.10 U	0.094 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)											
Benzo(a)pyrene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Benzo(a)anthracene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Benzo(b)fluoranthene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Benzo(j,k)fluoranthene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.011	0.016	0.0094 U
Chrysene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Dibenzo(a,h)anthracene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Indeno(1,2,3-c,d)pyrene	NE	--	0.0095 U	0.010 U	0.0098 U	0.0098 U	0.0095 U	0.010 U	0.0095 U	0.010 U	0.0094 U
Total cPAH TEQ (ND=0.5RL)	0.0076	--	0.00717 U	0.00755 U	0.0074 U	0.0074 U	0.00717 U	0.00755 U	0.0078	0.00865	0.0071 U
Total cPAH TEQ (ND=0)	0.0076	--	0 U	0 U	0 U	0 U	0 U	0 U	0.00011	0.00016	0 U
Conventionals (mg/L)											
Total Organic Carbon	NE	1.6	1.6	--	--	10	7.4	--	--	7.4	8.4
ALKALINITY as CaCO3	NE	210	180	390	340	410	370	170	230	250	360
Bicarbonate Ion (HCO3)	NE	210	180	390	340	410	370	170	230	250	360
Ammonia (Total as N)	NE	0.050 U	0.050 U	1.8	1.1	1.4	1.1	0.050 U	0.22	0.088	1.0
Total Dissolved Solids	NE	290	270	460	400	470	430	270	300	330	390
Chloride	NE	3.0	4.1	6.7	6.2	5.7	6.2	6.1	4.5	3.7	6.2
Nitrate	NE	0.050 U	0.050 U	0.066	0.050	0.050 U	0.10	0.18	0.11	0.074	0.050 U
Nitrite	NE	--	--	--	--	--	--	--	--	--	--
Sulfate	NE	57	60	25	21	20	5.7	48	33	35	7.4

Notes:

[1] Screening levels from Go East Remedial Investigation Work Plan dated June 30, 2021.

* Sample SWS-1-211208 was reanalyzed using acid/silica gel cleanup and the results for diesel- and lube oil-range hydrocarbons were both non-detect at 0.22 mg/L.

GW = Groundwater

FD = Field Duplicate

NE = Not established

NR = Not recorded

-- Analysis not performed

mg/L = milligram per liter

µg/L = microgram per liter

PCB = Polychlorinated biphenyl

Total cPAH TEQ (ND=0.5RL) = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the repor

Total cPAH TEQ (ND=0) = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using zero.

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit.

Gray shading indicates the analyte is detected greater than the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 6-3

Remedial Investigation Surface Water Data

Former Go East Landfill

Everett, Washington

		Stream 3									Seeps							Stream 2	
	Location ID	**SP1 (SWS-1)**	**SWS-1**	**SWS-1**	**SWS-1**	**SWS-1**	**SWS-1**	**SWS-1**	**SWS-2**	**SWS-3**	**SEEP-1**	**SEEP-1**	**SEEP-1**	**SEEP-1**	**SEEP-1**	**SEEP-2**	**SEEP-2**	**SP2**	**SP3**
	Sample ID	**SP1-210402**	**SWS-1-20211101**	**SWS-1-211208**	**SWS-1-20220321**	**SWS-1-220503**	**SWS-1-20220621**	**SWS-1-220920**	**SWS-2-20221027**	**SWS-3-20221027**	**SEEP-1-211208**	**SEEP 1-220317**	**SEEP-1-20220519**	**SEEP-1-20220621**	**SEEP-1-220920**	**SEEP 2-220317**	**SEEP-2-20220519**	**SP2-210402**	**SP3-210402**
	Sample Date	**4/2/2021**	**11/1/2021**	**12/8/2021**	**3/21/2022**	**5/3/2022**	**6/21/2022**	**9/20/2022**	**10/27/2022**	**10/27/2022**	**12/8/2021**	**3/17/2022**	**5/19/2022**	**6/21/2022**	**9/20/2022**	**3/17/2022**	**5/19/2022**	**4/2/2021**	**4/2/2021**
Analyte	**Surface Water Screening Level[1]**																		
Petroleum Hydrocarbons (mg/L)																			
Gasoline-range hydrocarbons	1.0	–	0.1 U	0.1 U	0.1 U	0.1 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Diesel-range hydrocarbons	NE	–	0.32	0.34	0.22 U	0.26	–	0.19	0.18	0.21	–	–	–	–	–	–	–	–	–
Lube oil-range hydrocarbons	NE	–	0.31	0.30	0.22 U	0.28	–	0.23	0.43	0.46	–	–	–	–	–	–	–	–	–
Total TPH	3	–	0.63	0.64	0.22 U	0.54	–	0.42	0.61	0.67	–	–	–	–	–	–	–	–	–
Diesel-range hydrocarbons SGC	NE	–	–	0.22 U	–	–	–	–	0.14 U	0.13 U	–	–	–	–	–	–	–	–	–
Diesel-range hydrocarbons SGC	NE	–	–	0.22 U	–	–	–	–	0.22 U	0.21 U	–	–	–	–	–	–	–	–	–
Total TPH SGC	3	–	–	0.22 U	–	–	–	–	0.22 U	0.21 U	–	–	–	–	–	–	–	–	–
Total Metals (µg/L)																			
Arsenic	5.0	0.45 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	230	7.5 U	3.3 U	3.8	3.3 U	4.4	3.3 U	3.3 U	3.3 U	1.4	1.1
Cadmium	4.4	0.36 U	4.4 U	4.4 U	4.4 U	4.4 U	–	–	4.0 U	4.0 U	–	–	–	–	–	–	–	0.36 U	0.36 U
Chromium	NE	1.0 U	11 U	11 U	12	11 U	11 U	–	140	10 U	–	–	–	–	–	–	–	2.2	2.1
Copper	11	–	11 U	11 U	11 U	11 U	–	–	94	10 U	–	–	–	–	–	–	–	–	–
Iron	1000	8900	11000	8000	12000	6400	5000	7300	550,000	6,700	990	11000	970	460	2500	4300	1100	430	210
Lead	1.1	0.28 U	1.1 U	1.1 U	6.2	1.1 U	1.1 U	–	58	1.0 U	–	–	–	1.7	1.1 U	–	–	0.28 U	0.28 U
Manganese	50	1500	1500	1800	2000	1600	1500	1600	40,000	1,600	15	150	26	16	29	380	120	18	9.2
Mercury	0.025	0.11 U	0.025 U	0.025 U	0.025 U	0.025 U	–	–	0.29	0.025 U	–	–	–	–	–	–	–	0.11 U	0.11 U
Nickel	26	–	22 U	22 U	22 U	22 U	22 U	–	180	20 U	–	–	–	–	–	–	–	–	–
Selenium	5.6	3.4 U	5.6 U	5.6 U	5.6 U	5.6 U	–	–	5.0 U	5.0 U	–	–	–	–	–	–	–	3.4 U	3.4 U
Zinc	100	2.2 U	28 U	28 U	28 U	28 U	–	–	280	25 U	–	–	–	–	–	–	–	2.8	2.4
Dissolved Metals (µg/L)																			
Arsenic	5.0	–	3 U	–	–	–	3.0 U	–	–	–	–	–	–	3.0 U	–	–	–	–	–
Cadmium	4.4	–	4 U	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Chromium	NE	–	10 U	–	–	–	10 U	–	–	–	–	–	–	–	–	–	–	–	–
Copper	11	–	10 U	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Iron	1000	–	2400	–	–	–	56 U	–	–	–	–	–	–	84	–	–	–	–	–
Lead	1.1	–	1 U	–	–	–	1.0 U	–	–	–	–	–	–	1.0 U	–	–	–	–	–
Manganese	50	–	1300	–	–	–	1600	–	–	–	–	–	–	11 U	–	–	–	–	–
Mercury	0.025	–	0.025 U	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Nickel	26	–	20 U	–	–	–	20 U	–	–	–	–	–	–	–	–	–	–	–	–
Selenium	5.6	–	5 U	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Zinc	100	–	25 U	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Organochlorine Pesticides (µg/L)																			
4,4'-DDD	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
4,4'-DDE	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–

Location ID		SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
Sample ID		SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-22020519	SP2-210402	SP3-210402
Sample Date		4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	**Surface Water Screening Level[1]**																		
4,4'-DDT	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Aldrin	0.005	–	0.0021 U	0.0021 U	0.0021 U	0.0020 U	–	–	0.0024 U	0.0020 U	–	–	–	–	–	–	–	–	–
Alpha-BHC	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Beta-BHC	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
cis-Chlordane	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Delta-BHC	NE	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Dieldrin	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Endosulfan I	0.056	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Endosulfan II	0.056	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Endosulfan Sulfate	9	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Endrin	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Endrin Aldehyde	0.034	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Endrin Ketone	NE	–	0.021 U	0.021 U	0.021 U	0.020 U	–	–	0.012 U	0.020 U	–	–	–	–	–	–	–	–	–
Gamma-BHC	0.08	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Heptachlor	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
Heptachlor Epoxide	0.005	–	0.0031 U	0.0031 U	0.0031 U	0.0029 U	–	–	0.0036 U	0.0029 U	–	–	–	–	–	–	–	–	–
Methoxychlor	0.02	–	0.01 U	0.010 U	0.010 U	0.0098 U	–	–	0.0061 U	0.0098 U	–	–	–	–	–	–	–	–	–
Toxaphene	0.05	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	0.024 U	0.049 U	–	–	–	–	–	–	–	–	–
trans-Chlordane	0.005	–	0.0051 U	0.0052 U	0.0052 U	0.0049 U	–	–	0.0024 U	0.0049 U	–	–	–	–	–	–	–	–	–
PCB Aroclors (µg/L)																			
PCB-Aroclor 1016	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB-Aroclor 1221	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB-Aroclor 1232	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB-Aroclor 1242	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB-Aroclor 1248	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB-Aroclor 1254	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
PCB-Aroclor 1260	NE	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Total PCB Aroclors	0.05	–	0.051 U	0.052 U	0.052 U	0.049 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Chlorinated Acid Herbicides (µg/L)																			
2,4,5-T	100	–	0.068 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
2,4,5-TP	1300	–	0.045 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
2,4-D	NE	–	0.089 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
2,4-DB	NE	–	0.068 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
3,5-Dichlorobenzoic Acid	NE	–	–	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
4-Nitrophenol	NE	–	–	0.987 U	0.998 U	–	–	–	4.99 U	4.96 U	–	–	–	–	–	–	–	–	–
Acifluorfen	NE	–	–	4.93 U	4.99 U	–	–	–	4.99 U	4.96 U	–	–	–	–	–	–	–	–	–
Bentazon	NE	–	–	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
Chloramben	NE	–	–	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
Chlorthal-dimethyl (DACTHAL)	NE	–	–	1.97 U	2 U	–	–	–	4.99 U	4.96 U	–	–	–	–	–	–	–	–	–
Dalapon	NE	–	0.44 U	1.97 U	2 U	–	–	–	3.99 U	3.97 U	–	–	–	–	–	–	–	–	–

Location ID		SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
Sample ID		SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-22020519	SP2-210402	SP3-210402
Sample Date		4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	Surface Water Screening Level[1]																		
Dicamba	NE	–	0.045 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
Dichlorprop	NE	–	0.045 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
Dinoseb	NE	–	0.045 U	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
MCPA	NE	–	22 U	4.93 U	4.99 U	–	–	–	4.99 U	4.96 U	–	–	–	–	–	–	–	–	–
MCPP	NE	–	8.9 U	4.93 U	4.99 U	–	–	–	4.99 U	4.96 U	–	–	–	–	–	–	–	–	–
Picloram	NE	–	–	0.987 U	0.998 U	–	–	–	0.997 U	0.992 U	–	–	–	–	–	–	–	–	–
Volatile Organic Compounds (µg/L)																			
1,1,1,2-Tetrachloroethane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1,1-Trichloroethane	10000	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1,2,2-Tetrachloroethane	0.2	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1,2-Trichloroethane	0.35	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1-Dichloroethane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1-Dichloroethylene	300	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,1-Dichloropropene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2,3-Trichlorobenzene	NE	–	0.2 U	0.25 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2,3-Trichloropropane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2,4-Trichlorobenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2,4-Trimethylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dibromo-3-Chloropropane	NE	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dibromoethane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichlorobenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichloroethane	8.9	–	0.35 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,2-Dichloropropane	0.71	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3,5-Trimethylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3-Dichlorobenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,3-Dichloropropane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
1,4-Dichlorobenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
2,2-Dichloropropane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
2-Chlorotoluene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
2-Hexanone	NE	–	2 U	2.0 U	2.0 U	2.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
4-Chlorotoluene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
4-Isopropyltoluene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Acetone	NE	–	5 U	5.0 U	5.0 U	5.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Benzene	0.44	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Bromobenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Bromochloromethane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Bromoform	4.6	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Bromomethane	100	–	3.1 U	0.20 U	0.20 U	3.1 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Carbon Disulfide	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Carbon Tetrachloride	0.2	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–

Location ID		SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
Sample ID		SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-22020519	SP2-210402	SP3-210402
Sample Date		4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	Surface Water Screening Level[1]																		
Chlorobenzene	20	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Chloroethane	NE	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Chloroform	60	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Chloromethane	NE	–	1 U	1.3 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
cis-1,2-Dichloroethylene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
cis-1,3-Dichloropropene	0.22	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Dibromochloromethane	0.6	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Dibromomethane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Dichlorobromomethane	0.73	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Dichlorodifluoromethane	NE	–	0.2 U	0.30 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Ethylbenzene	29	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Hexachlorobutadiene	NE	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Isopropylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl ethyl ketone (MEK)	NE	–	5 U	5.0 U	5.0 U	5.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl Iodide	NE	–	3 U	1.5 U	1.6 U	19 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl isobutyl ketone	NE	–	2 U	2.0 U	2.0 U	2.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Methyl tert-butyl ether	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Methylene Chloride	10	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Naphthalene	NE	–	1.3 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
n-Butylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
n-Propylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Sec-Butylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Styrene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Tert-Butylbenzene	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Tetrachloroethylene	2.4	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Toluene	57	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
trans-1,2-Dichloroethylene	100	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
trans-1,3-Dichloropropene	0.22	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Trichloroethylene	0.3	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Trichlorofluoromethane	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Vinyl Acetate	NE	–	1 U	1.0 U	1.0 U	1.0 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Vinyl Chloride	0.2	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Xylene, m-,p-	NE	–	0.4 U	0.40 U	0.40 U	0.40 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Xylene, o-	NE	–	0.2 U	0.20 U	0.20 U	0.20 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Total xylenes	NE	–	0.4 U	0.40 U	0.40 U	0.40 U	–	–	–	–	–	–	–	–	–	–	–	–	–
Semi-Volatile Organic Compounds (µg/L)																			
1,2,4-Trichlorobenzene	1	1.1 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.0 U	1.0 U
1,2-Dichlorobenzene	700	1.4 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.3 U	1.3 U
1,2-Dinitrobenzene	NE	–	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	–	–
1,2-Diphenylhydrazine	1	–	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	–	–

Location ID		SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
Sample ID		SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-22020519	SP2-210402	SP3-210402
Sample Date		4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	Surface Water Screening Level[1]																		
1,3-Dichlorobenzene	2	1.3 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.3 U	1.3 U
1,3-Dinitrobenzene	NE	–	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	–	–
1,4-Dichlorobenzene	60	0.97 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.96 U	0.96 U
1,4-Dinitrobenzene	NE	–	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	–	–
2,3,4,6-Tetrachlorophenol	NE	1.0 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.98 U	0.98 U
2,3,5,6-Tetrachlorophenol	NE	–	1 U	1.2 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	–	–
2,3-Dichloroaniline	NE	–	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	–	–
2,4,5-Trichlorophenol	300	1.4 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.4 U	1.4 U
2,4,6-Trichlorophenol	1	0.85 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.83 U	0.83 U
2,4-Dichlorophenol	10	0.74 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.73 U	0.73 U
2,4-Dimethylphenol	85	0.82 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.81 U	0.81 U
2,4-Dinitrophenol	10	2.8 U	5.2 U	5.1 U	5.2 U	6.2 U	6.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	2.7 U	2.7 U
2,4-Dinitrotoluene	1	0.73 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.72 U	0.72 U
2,6-Dinitrotoluene	600	1.7 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.7 U	1.7 U
2-Chloronaphthalene	100	0.85 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.84 U	0.84 U
2-Chlorophenol	15	0.80 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.79 U	0.79 U
2-methylphenol	8000000	1.2 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.2 U	1.2 U
2-Nitroaniline	NE	0.72 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.71 U	0.71 U
2-Nitrophenol	NE	1.1 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.1 U	1.1 U
3&4-Methylphenol	NE	0.76 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.75 U	0.75 U
3,3'-Dichlorobenzidine	1	1.9 U	1 U	1.0 U	1.0 U	0.97 U	4.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	1.9 U	1.9 U
3-Nitroaniline	NE	1.3 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.3 U	1.3 U
4,6-Dinitro-2-Methylphenol	5	1.9 U	5.2 U	5.1 U	5.2 U	4.8 U	6.8 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	1.9 U	1.9 U
4-Bromophenyl phenyl ether	NE	0.74 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.73 U	0.73 U
4-Chloro-3-Methylphenol	36	1.1 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.1 U	1.1 U
4-Chloroaniline	4600	1.8 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.8 U	1.8 U
4-Chlorophenyl phenyl ether	NE	0.69 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.68 U	0.68 U
4-Nitroaniline	NE	1.9 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.9 U	1.9 U
4-Nitrophenol	NE	1.9 U	5.2 U	5.1 U	5.2 U	4.8 U	4.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	1.9 U	1.9 U
Aniline	NE	1.9 U	5.2 U	5.1 U	5.2 U	4.8 U	4.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	1.9 U	1.9 U
Benzyl Alcohol	NE	0.97 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.96 U	0.96 U
Bis(2-Chloroethoxy)Methane	NE	0.99 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.98 U	0.98 U
Bis(2-Chloroethyl)Ether	1	0.89 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.87 U	0.87 U
Bis(2-chloroisopropyl) ether	NE	0.59 U	–	–	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.58 U	0.58 U
Bis(2-Ethylhexyl) Phthalate	1	0.76 U	5.2 U	5.1 U	5.2 U	4.8 U	4.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	0.75 U	0.75 U
Butyl benzyl Phthalate	1	0.63 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.62 U	0.62 U
Carbazole	51	1.6 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	1.5 U	1.5 U
Di(2-ethylhexyl)adipate	NE	–	5.2 U	5.1 U	5.2 U	4.8 U	4.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	–	–
Dibenzofuran	NE	0.48 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	–	1.2 U	0.99 U	–	–	–	–	–	–	–	0.47 U	0.47 U
Dibutyl Phthalate	8	0.78 U	5.2 U	5.1 U	5.2 U	4.8 U	4.9 U	–	5.8 U	5.0 U	–	–	–	–	–	–	–	0.77 U	0.77 U

Location ID		SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
Sample ID		SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-20220519	SP2-210402	SP3-210402
Sample Date		4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	Surface Water Screening Level[1]																		
Diethyl Phthalate	200	0.75 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	0.74 U	0.74 U
Dimethyl Phthalate	600	0.65 U	5.2 U	5.1 U	5.2 U	4.8 U	4.9 U	--	5.8 U	5.0 U	--	--	--	--	--	--	--	0.64 U	0.64 U
Di-N-Octyl Phthalate	1	0.82 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	0.81 U	0.81 U
Hexachlorobenzene	1	0.60 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	0.59 U	0.59 U
Hexachlorobutadiene	1	1.9 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.8 U	1.8 U
Hexachlorocyclopentadiene	1	1.9 U	1 U	1.0 U	1.0 U	0.97 U	1.4 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.9 U	1.9 U
Hexachloroethane	1	1.9 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.9 U	1.9 U
Isophorone	27	1.1 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.1 U	1.1 U
Nitrobenzene	10	1.1 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.1 U	1.1 U
N-Nitrosodimethylamine	1	1.4 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.4 U	1.4 U
N-Nitrosodi-n-propylamine	1	1.9 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.9 U	1.9 U
N-Nitrosodiphenylamine	1	0.87 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	0.86 U	0.86 U
Pentachlorophenol	5	3.5 U	0.009 U*	5.7	5.2 U	7.5 U	6.8 U	--	5.8 U	5.0 U	--	--	--	--	--	--	--	3.4 U	3.4 U
Phenol	160	0.99 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	0.98 U	0.98 U
Pyridine	NE	1.9 U	1 U	1.0 U	1.0 U	0.97 U	0.97 U	--	1.2 U	0.99 U	--	--	--	--	--	--	--	1.9 U	1.9 U
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)																			
1-Methylnaphthalene	NE	0.059	0.1 U	0.10 U	0.10 U	0.097 U	0.097 U	0.098 U	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0034	0.0045
2-Methylnaphthalene	NE	0.019	0.1 U	0.10 U	0.10 U	0.097 U	0.097 U	0.098 U	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0050 U	0.0049 U
Acenaphthene	30	1.4	1.3	1.3	0.77	1.0	0.99	0.86	0.12 U	0.49	--	--	--	--	--	--	--	0.01 U	0.01 U
Acenaphthylene	NE	0.021	0.1 U	0.22 U	0.10 U	0.097 U	0.097 U	0.098 U	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0070 U	0.0070 U
Anthracene	100	0.13	0.11	0.13	0.10 U	0.097 U	0.097 U	0.098 U	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0078 U	0.0077 U
Benzo(g,h,i)perylene	NE	0.0055 U	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.0099	0.012
Fluoranthene	0.1	0.39	0.21	0.22	0.10 U	0.12	0.16	0.16	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0019	0.0081
Fluorene	10	0.77	0.53	0.46	0.21	0.27	0.30	0.35	0.12 U	0.17	--	--	--	--	--	--	--	0.0032	0.0056
Naphthalene	1400	0.027	0.1 U	0.10 U	0.10 U	0.097 U	0.097 U	0.098 U	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0050	0.0048
Phenanthrene	NE	0.056	0.1 U	0.10 U	0.10 U	0.097 U	0.097 U	0.098 U	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0060 U	0.0073
Pyrene	0.1	0.20	0.15	0.15	0.10 U	0.097 U	0.10	0.12	0.12 U	0.099 U	--	--	--	--	--	--	--	0.0056	0.0069
Carcinogenic Polycyclic Aromatic Hydrocarbons (µg/L)																			
Benzo(a)pyrene	NE	0.0064 U	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.0065 U	0.0097
Benzo(a)anthracene	NE	0.019	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.0066	0.017
Benzo(b)fluoranthene	NE	0.0085 U	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.0087 U	0.012
Benzo(j,k)fluoranthene	NE	--	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	--	--
Chrysene	NE	0.0092	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.0059 U	0.011
Dibenzo(a,h)anthracene	NE	0.0099 U	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.01 U	0.01 U
Indeno(1,2,3-c,d)pyrene	NE	0.0052 U	0.01 U	0.010 U	0.010 U	0.0097 U	0.0097 U	0.0098 U	0.012 U	0.0099 U	--	--	--	--	--	--	--	0.0053 U	0.016
Total cPAH TEQ (ND=0.5RL)	0.0076	0.00637	0.00755 U	0.00755 U	0.00755 U	0.00732 U	0.00732 U	0.0074 U	0.00906 U	0.00747 U	--	--	--	--	--	--	--	0.00514	0.01481
Total cPAH TEQ (ND=0)	0.0076	0.00199	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	--	--	--	--	--	--	--	0.00066	0.01431
Conventionals (mg/L)																			
Total Organic Carbon	NE	12	11	11	13	11	10	8.7			6.8	4.3	4.1	3.9	2.9	9.4	11	1.6	1.0
ALKALINITY as CaCO3	NE	450	--	--	--	--	430	390			--	--	--	--	--	--	--	93	90

	Location ID	SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
	Sample ID	SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-22020519	SP2-210402	SP3-210402
	Sample Date	4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	**Surface Water Screening Level[1]**																		
Bicarbonate Ion (HCO3)	NE	450	--	--	--	--	430	390			--	--	--	--	--	--	--	92	90
Ammonia (Total as N)	NE	--	--	2.5	2.3	2.0	2.3	1.7			0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--
Total Dissolved Solids	NE	490	--	490	530	470	500	430			160	180	180	140	180	130	120	150	140
Chloride	NE	7.3	--	--	--	--	6.3	6.6			--	--	--	--	--	--	--	5.2	5.4
Nitrate	NE	0.15 U	--	--	--	--	0.088	0.050 U			--	--	--	--	--	--	--	14	16
Sulfate	NE	4.0	--	--	--	--	6.3	5.0 U			--	--	--	--	--	--	--	11	11

Notes:

[1] Screening levels from Go East Remedial Investigation Work Plan dated June 30, 2021.

* Sample SWS-1-211208 was reanalyzed using acid/silica gel cleanup and the results for diesel- and lube oil-range hydrocarbons were both non-detect at 0.22 mg/L.

SWF = Surface Water

NE = Not established

NR = Not recorded

-- Analysis not performed

mg/L = milligram per liter

µg/L = microgram per liter

PCB = Polychlorinated biphenyl

Total cPAH TEQ (ND=0.5RL) = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the reporting limit.

Total cPAH TEQ (ND=0) = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using zero.

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit.

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

*PCP analyzed as an herbicide in this sample.

Table 6-4

Remedial Investigation Sediment Data

Former Go East Landfill
Everett, Washington

		Stream 3 Sediment Locations											Background Sediment Samples - Wetland A			Background Sediment Samples - Stream 2				
	Location ID	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8	SED-9	SED-10	SED-11	SEDB-1	SEDB-2	SEDB-3	SEDB-4	SEDB-5	SEDB-6	SEDB-7	SEDB-8
	Sample ID	SED-1-210713	SED-2-210713	SED-3-210713	SED-4-221027	SED-5-221027	SED-6-221027	SED-7-221027	SED-8-221027	SED-9-221027	SED-10-221027	SED-11-221027	SEDB-1-20220713	SEDB-2-20220713	SEDB-3-20220713	SEDB-4-20220713	SEDB-5-20220713	SEDB-6-20220713	SEDB-7-20220713	SEDB-8-20220713
	Sample Date	7/13/2021	7/13/2021	7/13/2021	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022
Analyte	Sediment Screening Level[1]																			
Petroleum Hydrocarbons (mg/Kg)																				
Diesel-range hydrocarbons	340	56 U	43 U	130 U	32 U	30 U	30 U	33 U	40 U	34 U	36 U	41 U	51 U	59 U	34 U	33 U	30 U	31 U	31 U	31 U
Lube oil-range hydrocarbons	3,600	970	130	260 U	65 U	60 U	60 U	66 U	150	68 U	73 U	81 U	100 U	120 U	68 U	65 U	61 U	62 U	61 U	63 U
Diesel-range hydrocarbons SGC	340	56 U	--	--	32 U	30 U	30 U	33 U	40 U	34 U	36 U	41 U	--	--	--	--	--	--	--	--
Lube oil-range hydrocarbons SGC	3,600	110 U	--	--	65 U	60 U	60 U	66 U	81 U	68 U	73 U	81 U	--	--	--	--	--	--	--	--
Metals (mg/Kg)																				
Arsenic	11	5.6 U	8.5 U	13 U	13 U	12 U	12 U	13 U	16 U	14 U	15 U	16 U	10 U	12 U	14 U	13 U	12 U	12 U	12 U	13 U
Cadmium	0.80	0.56 U	0.85 U	1.3 U	0.64 U	0.60 U	0.60 U	0.65 U	0.81 U	0.68 U	0.73 U	0.81 U	1.0 U	1.2 U	0.68 U	0.65 U	0.61 U	0.62 U	0.61 U	0.63 U
Chromium	62	27	28	27	29	24	28	33	29	32	34	37	39	25	34	29	25	27	26	25
Copper	45	4.4	8.4	5.3 U	15	9.3	7.8	14	13	10	11	12	10	9.6	11	11	9.5	8.8	9.2	9.6
Iron	56,000	110,000	51,000	270,000	27,000	17,000	18,000	24,000	26,000	23,000	21,000	22,000	16,000	11,000	17,000	16,000	16,000	20,000	15,000	15,000
Lead	21	11 U	8.5 U	26 U	6.4 U	6.0 U	6.0 U	7.5	8.1 U	6.8 U	7.3 U	9.3	22	12 U	6.8 U	6.5 U	6.1 U	6.2 U	6.1 U	6.3 U
Manganese	3,700	510	340	20,000	350	220	240	300	490	400	490	530	210	140	200	250	250	210	230	230
Mercury	0.20	0.025	0.02	0.025 U	0.036	0.018 U	0.018 U	0.037	0.024 U	0.027	0.022 U	0.039	0.51 U	0.59 U	0.34 U	0.33 U	0.30 U	0.31 U	0.31 U	0.31 U
Nickel	50	24	36	16 U	34	38	39	39	43	45	47	37	43	35	48	43	39	44	42	40
Selenium	0.10	0.28 U	0.21 U	0.66 U	0.32 U	0.30 U	0.30 U	0.33 U	0.40 U	0.34 U	0.36 U	0.40 U	10 U	12 U	14 U	13 U	12 U	12 U	12 U	13 U
Zinc	93	38	37	40	53	32	29	43	43	38	41	42	35	28	32	41	38	35	37	40
PCBs (mg/Kg)																				
PCB-Aroclor 1016	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1221	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1232	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1242	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1248	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1254	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PCB-Aroclor 1260	NE	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCB Aroclors	0.050	0.11 U	0.085 U	0.26 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pesticides (mg/Kg)																				
4,4'-DDD	3.6	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
4,4'-DDE	2.5	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
4,4'-DDT	0.010	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.016 U	0.014 U	0.015 U	0.016 U	0.084 U	0.092 U	0.056 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Aldrin	0.005	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
Alpha-BHC	0.135	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
Beta-BHC	0.0072	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
cis-Chlordane	0.010	0.022 U	0.017 U	0.065	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Delta-BHC	NE	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
Dieldrin	0.010	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Endosulfan I	NA	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
Endosulfan II	NE	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Endosulfan Sulfate	1,000	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Endrin	NE	0.011 U	0.0085 U	0.026 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Endrin Aldehyde	NE	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Endrin Ketone	0.010	0.022 U	0.017 U	0.053 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Gamma-BHC	0.775	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
Heptachlor	0.005	0.011 U	0.0085 U	1.8	0.0018	0.0015 U	0.0015 U	0.011	0.0032	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.037	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
Heptachlor Epoxide	NE	0.011 U	0.0085 U	0.026 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.002 U	0.017 U	0.0018 U	0.002 U	0.01 U	0.012 U	0.0068 U	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U

	Stream 3 Sediment Locations												Background Sediment Samples - Wetland A			Background Sediment Samples - Stream 2				
	Location ID	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8	SED-9	SED-10	SED-11	SEDB-1	SEDB-2	SEDB-3	SEDB-4	SEDB-5	SEDB-6	SEDB-7	SEDB-8
	Sample ID	SED-1-210713	SED-2-210713	SED-3-210713	SED-4-221027	SED-5-221027	SED-6-221027	SED-7-221027	SED-8-221027	SED-9-221027	SED-10-221027	SED-11-221027	SEDB-1-20220713	SEDB-2-20220713	SEDB-3-20220713	SEDB-4-20220713	SEDB-5-20220713	SEDB-6-20220713	SEDB-7-20220713	SEDB-8-20220713
	Sample Date	7/13/2021	7/13/2021	7/13/2021	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022
Analyte	Sediment Screening Level[1]																			
Methoxychlor	840	0.022 U	0.017 U	0.053 U	0.013 U	0.012 U	0.012 U	0.0013 U	0.016 U	0.014 U	0.015 U	0.016 U	0.084 U	0.092 U	0.056 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Toxaphene	NE	0.110 U	0.0085 U	0.26 U	0.0016 U	0.0015 U	0.0015 U	0.0016 U	0.020 U	0.017 U	0.0018 U	0.02 U	0.01 U	0.012 U	0.068 U	0.065 U	0.061 U	0.062 U	0.061 U	0.063 U
trans-Chlordane	0.005	0.011 U	0.0085 U	0.026 U	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Chlorinated Acid Herbicides (mg/Kg)																				
2,4,5-T	1,700	0.021 U	0.016 U	50 U	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
2,4,5-TP	1,400	0.021 U	0.016 U	50 U	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
2,4-D	1,700	0.021 U	0.016 U	50 U	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
2,4-DB	5,100	0.021 U	0.016 U	50 U	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
3,5-Dichlorobenzoic Acid	NE	--	--	--	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
4-Nitrophenol	NE	--	--	--	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
Acifluorfen	NE	--	--	--	0.0512 U	0.0503 U	0.050 U	0.0498 U	0.0498 U	0.0495 U	0.0498 U	0.0491 U	--	--	--	--	--	--	--	--
Bentazon	NE	--	--	--	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
Chloramben	NE	--	--	--	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
Chlorthal-dimethyl (DACTHAL)	NE	--	--	--	0.0512 U	0.0503 U	0.050 U	0.0498 U	0.0498 U	0.0495 U	0.0498 U	0.0491 U	--	--	--	--	--	--	--	--
Dalapon	5,100	0.410 U	0.310 U	970 U	0.205 U	0.201 U	0.200 U	0.199 U	0.199 U	0.198 U	0.199 U	0.197 U	--	--	--	--	--	--	--	--
Dicamba	5,100	0.021 U	0.016 U	50 U	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
Dichlorprop	NE	0.160 U	0.120 U	370 U	0.0307 U	0.0302 U	0.030 U	0.0299 U	0.0299 U	0.0297 U	0.0299 U	0.0295 U	--	--	--	--	--	--	--	--
Dinoseb	1,700	0.021 U	0.016 U	0.050 U	0.0512 U	0.0503 U	0.050 U	0.0498 U	0.0498 U	0.0495 U	0.0498 U	0.0491 U	--	--	--	--	--	--	--	--
MCPA	84	5.300 U	4.000 U	12,000 U	0.0512 U	0.0503 U	0.050 U	0.0498 U	0.0498 U	0.0495 U	0.0498 U	0.0491 U	--	--	--	--	--	--	--	--
MCPP	1,700	5.300 U	4.000 U	12,000 U	0.0512 U	0.0503 U	0.050 U	0.0498 U	0.0498 U	0.0495 U	0.0498 U	0.0491 U	--	--	--	--	--	--	--	--
Picloram	NE	--	--	--	0.0512 U	0.0503 U	0.050 U	0.0498 U	0.0498 U	0.0495 U	0.0498 U	0.0491 U	--	--	--	--	--	--	--	--
SVOCs (mg/Kg)																				
1,2,4-Trichlorobenzene	29	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	15,000	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,2-Dinitrobenzene	17	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,2-Diphenylhydrazine	1.1	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,3-Dinitrobenzene	17	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	160	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
1,4-Dinitrobenzene	17	0.045 U	0.034 U	0.11 U	0.026 U	0.032 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.044 U	--	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	5,100	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,3,5,6-Tetrachlorophenol	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,3-Dichloroaniline	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	17,000	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	78	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	510	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	3,400	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	340	0.22 U	0.17 U	0.53 U	0.17 U	0.74 U	0.16 U	0.17 U	0.21 U	0.18 U	0.19 U	0.99 U	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	2.8	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	0.57	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2-Chloronaphthalene	14,000	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2-Chlorophenol	840	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2-methylphenol	8,400	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2-Nitroaniline	1,700	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
2-Nitrophenol	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.032 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.042 U	--	--	--	--	--	--	--	--
3&4-Methylphenol	0.26	0.045 U	0.034 U	0.11 U	0.43	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	1.9	0.22 U	0.17 U	0.53 U	0.17 U	0.12 U	0.16 U	0.18 U	0.22 U	0.18 U	0.20 U	0.16 U	--	--	--	--	--	--	--	--
3-Nitroaniline	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--
4,6-Dinitro-2-Methylphenol	NE	0.22 U	0.17 U	0.53 U	0.13 U	0.74 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.99 U	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	--	--	--	--	--	--	--	--

	Location ID	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8	SED-9	SED-10	SED-11	SEDB-1	SEDB-2	SEDB-3	SEDB-4	SEDB-5	SEDB-6	SEDB-7	SEDB-8
		Stream 3 Sediment Locations											Background Sediment Samples - Wetland A			Background Sediment Samples - Stream 2				
	Sample ID	SED-1-210713	SED-2-210713	SED-3-210713	SED-4-221027	SED-5-221027	SED-6-221027	SED-7-221027	SED-8-221027	SED-9-221027	SED-10-221027	SED-11-221027	SEDB-1-20220713	SEDB-2-20220713	SEDB-3-20220713	SEDB-4-20220713	SEDB-5-20220713	SEDB-6-20220713	SEDB-7-20220713	SEDB-8-20220713
	Sample Date	7/13/2021	7/13/2021	7/13/2021	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022
Analyte	Sediment Screening Level[1]																			
4-Chloro-3-Methylphenol	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
4-Chloroaniline	4.3	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
4-Chlorophenyl phenyl ether	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
4-Nitroaniline	680	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
4-Nitrophenol	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Aniline	150	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Benzyl Alcohol	17,000	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Bis(2-Chloroethoxy)Methane	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Bis(2-Chloroethyl)Ether	0.78	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Bis(2-chloroisopropyl) ether	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Bis(2-Ethylhexyl) Phthalate	0.50	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Butyl benzyl Phthalate	450	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Carbazole	0.90	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Di(2-ethylhexyl)adipate	NE	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Dibenzofuran	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Dibutyl Phthalate	0.38	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Diethyl Phthalate	140,000	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Dimethyl Phthalate	NE	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Di-N-Octyl Phthalate	0.039	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Hexachlorobenzene	0.0010	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Hexachlorobutadiene	0.00030	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Hexachlorocyclopentadiene	1,000	0.045 U	0.034 U	0.11 U	0.026 U	0.14 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.18 U	–	–	–	–	–	–	–	–
Hexachloroethane	21	0.045 U	0.034 U	0.11 U	0.026 U	0.031 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.042 U	–	–	–	–	–	–	–	–
Isophorone	900	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Nitrobenzene	340	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
N-Nitrosodimethylamine	0.017	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
N-Nitrosodi-n-propylamine	0.12	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
N-Nitrosodiphenylamine	170	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Pentachlorophenol	0.36	0.22 U	0.17 U	0.53 U	0.13 U	0.12 U	0.12 U	0.13 U	0.16 U	0.14 U	0.15 U	0.16 U	–	–	–	–	–	–	–	–
Phenol	0.12	0.045 U	0.034 U	0.11 U	0.026 U	0.024 U	0.024 U	0.026 U	0.032 U	0.027 U	0.029 U	0.032 U	–	–	–	–	–	–	–	–
Pyridine	170	0.45 U	0.34 U	1.1 U	0.26 U	0.24 U	0.24 U	0.26 U	0.32 U	0.27 U	0.29 U	0.32 U	–	–	–	–	–	–	–	–
Non-carcinogenic Polycyclic Aromatic Hydrocarbons (mg/Kg)																				
1-Methylnaphthalene	29	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
2-Methylnaphthalene	680	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Acenaphthene	10,000	0.009 U	0.0068 U	0.021 U	0.0066	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Acenaphthylene	NE	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Anthracene	51,000	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Benzo(g,h,i)perylene	0.0067	0.009 U	0.0068 U	0.021 U	0.0060	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Fluoranthene	0.0067	0.024	0.031	0.021 U	0.015	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Fluorene	6,800	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Naphthalene	3,400	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U

		Stream 3 Sediment Locations											Background Sediment Samples - Wetland A			Background Sediment Samples - Stream 2				
	Location ID	**SED-1**	**SED-2**	**SED-3**	**SED-4**	**SED-5**	**SED-6**	**SED-7**	**SED-8**	**SED-9**	**SED-10**	**SED-11**	**SEDB-1**	**SEDB-2**	**SEDB-3**	**SEDB-4**	**SEDB-5**	**SEDB-6**	**SEDB-7**	**SEDB-8**
	Sample ID	**SED-1-210713**	**SED-2-210713**	**SED-3-210713**	**SED-4-221027**	**SED-5-221027**	**SED-6-221027**	**SED-7-221027**	**SED-8-221027**	**SED-9-221027**	**SED-10-221027**	**SED-11-221027**	**SEDB-1-20220713**	**SEDB-2-20220713**	**SEDB-3-20220713**	**SEDB-4-20220713**	**SEDB-5-20220713**	**SEDB-6-20220713**	**SEDB-7-20220713**	**SEDB-8-20220713**
	Sample Date	**7/13/2021**	**7/13/2021**	**7/13/2021**	**10/27/2022**	**10/27/2022**	**10/27/2022**	**10/27/2022**	**10/27/2022**	**10/27/2022**	**10/27/2022**	**10/27/2022**	**7/13/2022**	**7/13/2022**	**7/13/2022**	**7/13/2022**	**7/13/2022**	**7/13/2022**	**7/13/2022**	**7/13/2022**
Analyte	**Sediment Screening Level[1]**																			
Phenanthrene	NE	0.009 U	0.0068 U	0.021 U	**0.0093**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Pyrene	0.0067	**0.022**	**0.023**	0.021 U	**0.015**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Carcinogenic Polycyclic Aromatic Hydrocarbons (mg/Kg)																				
Benzo(a)pyrene	NE	0.009 U	0.0068 U	0.021 U	**0.0073**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Benzo(a)anthracene	NE	0.009 U	0.0068 U	0.021 U	**0.0057**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Benzo(b)fluoranthene	NE	**0.011**	**0.0084**	0.021 U	**0.0086**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Benzo(j,k)fluoranthene	NE	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Chrysene	NE	0.009 U	**0.0081**	0.021 U	**0.0067**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Dibenzo(a,h)anthracene	NE	0.009 U	0.0068 U	0.021 U	0.0052 U	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Indeno(1,2,3-c,d)pyrene	NE	0.009 U	0.0068 U	0.021 U	**0.0052**	0.0048 U	0.0048 U	0.0052 U	0.0065 U	0.0054 U	0.0058 U	0.0065 U	0.0082 U	0.0094 U	0.0054 U	0.0052 U	0.0049 U	0.0049 U	0.0049 U	0.0050 U
Total cPAH TEQ (ND=0.5RL)	0.021	**0.00744**	**0.00568**	0.01586 U	**0.00984**	0.00362 U	0.00362 U	0.00393 U	0.00491 U	0.00408 U	0.00438 U	0.00491 U	0.00619 U	0.0071 U	0.00408 U	0.00393 U	0.0037 U	0.0037 U	0.0037 U	0.00378 U
Total cPAH TEQ (ND=0)	0.021	**0.0011**	**0.00092**	0 U	**0.00932**	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U

Notes:

[1] Screening levels from Go East Remedial Investigation Work Plan dated June 30, 2021.

NE = Not established

NR = Not recorded

-- Analysis not performed

mg/kg = milligram per kilogram

PCB = Polychlorinated biphenyl

Bold font indicates detected.

Total cPAH TEQ (ND=0.5RL) = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the reporting limit.

Total cPAH TEQ (ND=0) = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using zero.

U = The analyte was not detected at the indicated reporting limit

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 6-5

Identification of Potential Contaminants of Concern

Former Go East Landfill

Everett, Washington

Analyte	Groundwater		Surface Water		Sediment		PCOC	Comments
	Maximum Groundwater Detection	Groundwater Screening Level[1]	Maximum Surface Water Detection	Surface Water Screening Level[1]	Max Sediment Detection	Sediment Screening Level[1]		
Petroleum Hydrocarbons	mg/L	mg/L	mg/L	mg/L	mg/kg	mg/kg		
Gasoline-range hydrocarbons	ND	0.8	ND	1.0	NA	NE	No	No screening level exceedances in any media
Diesel-range hydrocarbons	0.41	NE	0.34	3	ND	340	No	No screening level exceedances in any media
Lube oil-range hydrocarbons	0.74	NE	0.31	3	970	3,600	No	No screening level exceedances in any media
Total TPH	1.15	0.5	0.64	3	970	NE	No	Maximum GW concentration was in upgradient well MW-5, indicating a non-landfill-related source. See Section 6.5.
Total Metals[2]	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
Arsenic	12	5.0	ND	5.0	ND	11	Yes	Exceeds SL in groundwater
Cadmium	ND	4.4	ND	4.4	ND	0.80	No	No screening level exceedances in any media
Chromium	13	50	12	NE	37	62	No	No screening level exceedances in any media
Copper	27	11	ND	11	15	45	No	Only 1 detected in one GW sample; no detections in surface water. Dissolved copper in GW non-detect. See Section 6.5.
Iron	24,000	300	12,000	1000	270,000	56,000	Yes	Exceeds SL in groundwater, surface water, and sediment
Lead	8.8	1.1	6.2	1.1	9.3	21	Yes	Exceeds SL in groundwater and surface water
Manganese	2,400	50	2,000	50	20,000	3,700	Yes	Exceeds SL in groundwater, surface water, and sediment
Mercury	ND	0.03	ND	ND	0.039	0.20	No	No screening level exceedances in any media
Nickel	86	26	ND	26	47	50	Yes	Exceeds SL in groundwater
Selenium	ND	5.6	ND	5.6	ND	0.10	No	No screening level exceedances in any media
Zinc	42	100	ND	100	53	93	No	No screening level exceedances in any media
Organochlorine Pesticides	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
4,4'-DDD	ND	0.01	ND	0.01	ND	3.6	No	No screening level exceedances in any media
4,4'-DDE	ND	0.01	ND	0.01	ND	2.5	No	No screening level exceedances in any media
4,4'-DDT	ND	0.01	ND	0.01	ND	0.010	No	No screening level exceedances in any media
Aldrin	ND	0.01	ND	0.01	ND	0.005	No	No screening level exceedances in any media
Alpha-BHC	ND	0.01	ND	0.01	ND	0.135	No	No screening level exceedances in any media
Beta-BHC	ND	0.01	ND	0.01	ND	0.0072	No	No screening level exceedances in any media
cis-Chlordane	ND	0.01	ND	0.01	0.065	0.010	Yes	Exceeds screening level in sediment
Delta-BHC	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Dieldrin	ND	0.01	ND	0.01	ND	0.010	No	No screening level exceedances in any media
Endosulfan I	ND	0.06	ND	0.06	ND	NA	No	No screening level exceedances in any media
Endosulfan II	ND	0.06	ND	0.06	ND	NE	No	No screening level exceedances in any media
Endosulfan Sulfate	ND	9	ND	9.00	ND	1,000	No	No screening level exceedances in any media
Endrin	ND	0.01	ND	0.01	ND	NE	No	No screening level exceedances in any media
Endrin Aldehyde	ND	0.03	ND	0.03	ND	NE	No	No screening level exceedances in any media
Endrin Ketone	ND	NE	ND	NE	ND	0.010	No	No screening level exceedances in any media
Gamma-BHC	ND	0.06	ND	0.08	ND	0.775	No	No screening level exceedances in any media
Heptachlor	ND	0.01	ND	0.01	1.8	0.005	Yes	Exceeds screening level in sediment
Heptachlor Epoxide	ND	0.01	ND	0.01	ND	NE	No	No screening level exceedances in any media
Methoxychlor	0.029	0.02	ND	0.02	ND	840	No	Only detected in 1 out of 33 GW samples and at a concentration less than 2x SL. See Section 6.5.
Toxaphene	ND	0.05	ND	0.05	ND	NE	No	No screening level exceedances in any media
trans-Chlordane	ND	0.01	ND	0.01	ND	0.005	No	No screening level exceedances in any media

Analyte	Groundwater		Surface Water		Sediment		PCOC	Comments
	Maximum Groundwater Detection	Groundwater Screening Level[1]	Maximum Surface Water Detection	Surface Water Screening Level[1]	Max Sediment Detection	Sediment Screening Level[1]		
PCB Aroclors	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
PCB-Aroclor 1016	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
PCB-Aroclor 1221	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
PCB-Aroclor 1232	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
PCB-Aroclor 1242	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
PCB-Aroclor 1248	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
PCB-Aroclor 1254	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
PCB-Aroclor 1260	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Total PCB Aroclors	ND	0.05	ND	0.05	ND	0.050	No	No screening level exceedances in any media
Herbicides	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
2,4,5-T	ND	160	ND	100	ND	1,700	No	No screening level exceedances in any media
2,4,5-TP	ND	10	ND	1300	ND	1,400	No	No screening level exceedances in any media
2,4-D	ND	70	ND	NE	ND	1,700	No	No screening level exceedances in any media
2,4-DB	ND	480	ND	NE	ND	5,100	No	No screening level exceedances in any media
3,5-Dichlorobenzoic Acid	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
4-Nitrophenol	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Acifluorfen	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Bentazon	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Chloramben	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Chlorthal-dimethyl (DACTHAL)	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Dalapon	ND	200	ND	NE	ND	5,100	No	No screening level exceedances in any media
Dicamba	ND	480	ND	NE	ND	5,100	No	No screening level exceedances in any media
Dichlorprop	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Dinoseb	ND	7	ND	NE	ND	1,700	No	No screening level exceedances in any media
MCPA	ND	23	ND	NE	ND	84	No	No screening level exceedances in any media
MCPP	ND	16	ND	NE	ND	1,700	No	No screening level exceedances in any media
Picloram	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Volatile Organic Compounds	µg/L	µg/L	µg/L	µg/L	NA	NA		
1,1,1,2-Tetrachloroethane	ND	1.7	ND	NE	NA	NE	No	No screening level exceedances in any media
1,1,1-Trichloroethane	ND	200	ND	10000	NA	NE	No	No screening level exceedances in any media
1,1,2,2-Tetrachloroethane	ND	0.20	ND	0.20	NA	NE	No	No screening level exceedances in any media
1,1,2-Trichloroethane	ND	0.35	ND	0.35	NA	NE	No	No screening level exceedances in any media
1,1-Dichloroethane	ND	1	ND	NE	NA	NE	No	No screening level exceedances in any media
1,1-Dichloroethylene	ND	7	ND	300	NA	NE	No	No screening level exceedances in any media
1,1-Dichloropropene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2,3-Trichlorobenzene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2,3-Trichloropropane	ND	0.20	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2,4-Trichlorobenzene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2,4-Trimethylbenzene	ND	80	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2-Dibromo-3-Chloropropane	ND	1	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2-Dibromoethane	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2-Dichlorobenzene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,2-Dichloroethane	ND	0.50	ND	8.90	NA	NE	No	No screening level exceedances in any media
1,2-Dichloropropane	ND	0.60	ND	0.71	NA	NE	No	No screening level exceedances in any media

Analyte	Groundwater		Surface Water		Sediment		PCOC	Comments
	Maximum Groundwater Detection	Groundwater Screening Level[1]	Maximum Surface Water Detection	Surface Water Screening Level[1]	Max Sediment Detection	Sediment Screening Level[1]		
1,3,5-Trimethylbenzene	ND	80	ND	NE	NA	NE	No	No screening level exceedances in any media
1,3-Dichlorobenzene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,3-Dichloropropane	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
1,4-Dichlorobenzene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
2,2-Dichloropropane	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
2-Chlorotoluene	ND	160	ND	NE	NA	NE	No	No screening level exceedances in any media
2-Hexanone	ND	40	ND	NE	NA	NE	No	No screening level exceedances in any media
4-Chlorotoluene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
4-Isopropyltoluene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
Acetone	ND	7200	ND	NE	NA	NE	No	No screening level exceedances in any media
Benzene	ND	0.44	ND	0.44	NA	NE	No	No screening level exceedances in any media
Bromobenzene	ND	64	ND	NE	NA	NE	No	No screening level exceedances in any media
Bromochloromethane	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
Bromoform	ND	4.60	ND	4.60	NA	NE	No	No screening level exceedances in any media
Bromomethane	ND	11	ND	100	NA	NE	No	No screening level exceedances in any media
Carbon Disulfide	ND	400	ND	NE	NA	NE	No	No screening level exceedances in any media
Carbon Tetrachloride	ND	0.20	ND	0.20	NA	NE	No	No screening level exceedances in any media
Chlorobenzene	ND	20	ND	20	NA	NE	No	No screening level exceedances in any media
Chloroethane	ND	19000	ND	NE	NA	NE	No	No screening level exceedances in any media
Chloroform	ND	1.2	ND	60	NA	NE	No	No screening level exceedances in any media
Chloromethane	ND	150	ND	NE	NA	NE	No	No screening level exceedances in any media
cis-1,2-Dichloroethylene	ND	16	ND	NE	NA	NE	No	No screening level exceedances in any media
cis-1,3-Dichloropropene	ND	0.22	ND	0.22	NA	NE	No	No screening level exceedances in any media
Dibromochloromethane	ND	0.60	ND	0.60	NA	NE	No	No screening level exceedances in any media
Dibromomethane	ND	80	ND	NE	NA	NE	No	No screening level exceedances in any media
Dichlorobromomethane	ND	0.30	ND	0.73	NA	NE	No	No screening level exceedances in any media
Dichlorodifluoromethane	ND	5.6	ND	NE	NA	NE	No	No screening level exceedances in any media
Ethylbenzene	ND	29	ND	29	NA	NE	No	No screening level exceedances in any media
Hexachlorobutadiene	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
Isopropylbenzene	ND	800	ND	NE	NA	NE	No	No screening level exceedances in any media
Methyl ethyl ketone (MEK)	ND	4800	ND	NE	NA	NE	No	No screening level exceedances in any media
Methyl Iodide	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
Methyl isobutyl ketone	ND	640	ND	NE	NA	NE	No	No screening level exceedances in any media
Methyl tert-butyl ether	ND	24	ND	NE	NA	NE	No	No screening level exceedances in any media
Methylene Chloride	ND	5	ND	10	NA	NE	No	No screening level exceedances in any media
Naphthalene	10	8.9	ND	NE	NA	NE	No	Only detected in GW once in upgradient well MW-5, indicating a non-landfill-related source. See Section 6.5.
n-Butylbenzene	ND	400	ND	NE	NA	NE	No	No screening level exceedances in any media
n-Propylbenzene	ND	800	ND	NE	NA	NE	No	No screening level exceedances in any media
Sec-Butylbenzene	ND	800	ND	NE	NA	NE	No	No screening level exceedances in any media
Styrene	ND	100	ND	NE	NA	NE	No	No screening level exceedances in any media
Tert-Butylbenzene	ND	800	ND	NE	NA	NE	No	No screening level exceedances in any media
Tetrachloroethylene	ND	0.80	ND	2.4	NA	NE	No	No screening level exceedances in any media
Toluene	ND	57	ND	57	NA	NE	No	No screening level exceedances in any media
trans-1,2-Dichloroethylene	ND	100	ND	100	NA	NE	No	No screening level exceedances in any media

Analyte	Groundwater		Surface Water		Sediment		PCOC	Comments
	Maximum Groundwater Detection	Groundwater Screening Level[1]	Maximum Surface Water Detection	Surface Water Screening Level[1]	Max Sediment Detection	Sediment Screening Level[1]		
trans-1,3-Dichloropropene	ND	0.22	ND	0.22	NA	NE	No	No screening level exceedances in any media
Trichloroethylene	ND	0.30	ND	0.30	NA	NE	No	No screening level exceedances in any media
Trichlorofluoromethane	ND	120	ND	NE	NA	NE	No	No screening level exceedances in any media
Vinyl Acetate	ND	7800	ND	NE	NA	NE	No	No screening level exceedances in any media
Vinyl Chloride	ND	0.20	ND	0.20	NA	NE	No	No screening level exceedances in any media
Xylene, m-,p-	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
Xylene, o-	ND	NE	ND	NE	NA	NE	No	No screening level exceedances in any media
Total xylenes	ND	330.0	ND	NE	NA	NE	No	No screening level exceedances in any media
Semi-Volatile Organic Compounds	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
1,2,4-Trichlorobenzene	ND	1.0	ND	1	ND	29	No	No screening level exceedances in any media
1,2-Dichlorobenzene	ND	600.0	ND	700	ND	15,000	No	No screening level exceedances in any media
1,2-Dinitrobenzene	ND	1.6	ND	NE	ND	17	No	No screening level exceedances in any media
1,2-Diphenylhydrazine	ND	1	ND	1	ND	1.1	No	No screening level exceedances in any media
1,3-Dichlorobenzene	ND	2	ND	2	ND	NE	No	No screening level exceedances in any media
1,3-Dinitrobenzene	ND	1.6	ND	NE	ND	17	No	No screening level exceedances in any media
1,4-Dichlorobenzene	ND	4.9	ND	60	ND	160	No	No screening level exceedances in any media
1,4-Dinitrobenzene	ND	1.6	ND	NE	ND	17	No	No screening level exceedances in any media
2,2'-Oxybis[1-chloropropane]	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
2,3,4,6-Tetrachlorophenol	ND	480	ND	NE	ND	5,100	No	No screening level exceedances in any media
2,3,5,6-Tetrachlorophenol	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
2,3-Dichloroaniline	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
2,4,5-Trichlorophenol	ND	300	ND	300	ND	17,000	No	No screening level exceedances in any media
2,4,6-Trichlorophenol	ND	1	ND	1	ND	78	No	No screening level exceedances in any media
2,4-Dichlorophenol	ND	10	ND	10	ND	510	No	No screening level exceedances in any media
2,4-Dimethylphenol	ND	85	ND	85	ND	3,400	No	No screening level exceedances in any media
2,4-Dinitrophenol	ND	10	ND	10	ND	340	No	No screening level exceedances in any media
2,4-Dinitrotoluene	ND	1	ND	1	ND	2.8	No	No screening level exceedances in any media
2,6-Dinitrotoluene	ND	1	ND	600	ND	0.57	No	No screening level exceedances in any media
2-Chloronaphthalene	ND	100	ND	100	ND	14,000	No	No screening level exceedances in any media
2-Chlorophenol	ND	15	ND	15	ND	840	No	No screening level exceedances in any media
2-methylphenol	ND	400	ND	8000000	ND	8,400	No	No screening level exceedances in any media
2-Nitroaniline	ND	160	ND	NE	ND	1,700	No	No screening level exceedances in any media
2-Nitrophenol	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
3&4-Methylphenol	ND	400	ND	NE	0.43	0.26	No	Only detected in sediment in 1 out of 11 samples, and at a concentration less than 2x the SL. See Section 6.5
3,3'-Dichlorobenzidine	ND	1	ND	1	ND	1.9	No	No screening level exceedances in any media
3-Nitroaniline	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
4,6-Dinitro-2-Methylphenol	ND	5	ND	5	ND	NE	No	No screening level exceedances in any media
4-Bromophenyl phenyl ether	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
4-Chloro-3-Methylphenol	ND	36	ND	36	ND	NE	No	No screening level exceedances in any media
4-Chloroaniline	ND	1	ND	4600	ND	4.3	No	No screening level exceedances in any media
4-Chlorophenyl phenyl ether	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
4-Nitroaniline	ND	64	ND	NE	ND	680	No	No screening level exceedances in any media
4-Nitrophenol	ND	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Aniline	ND	7.7	ND	NE	ND	150	No	No screening level exceedances in any media

Analyte	Groundwater		Surface Water		Sediment		PCOC	Comments
	Maximum Groundwater Detection	Groundwater Screening Level[1]	Maximum Surface Water Detection	Surface Water Screening Level[1]	Max Sediment Detection	Sediment Screening Level[1]		
Benzyl Alcohol	ND	800	ND	NE	ND	17,000	No	No screening level exceedances in any media
Bis(2-Chloroethoxy)Methane	ND	NE	ND	NE	ND	NA	No	No screening level exceedances in any media
Bis(2-Chloroethyl)Ether	ND	1	ND	1	ND	0.78	No	No screening level exceedances in any media
Bis(2-chloroisopropyl) ether	ND	NE	ND	NE	ND	NA	No	No screening level exceedances in any media
Bis(2-Ethylhexyl) Phthalate	ND	1	ND	1	ND	0.50	No	No screening level exceedances in any media
Butyl benzyl Phthalate	ND	1	ND	1	ND	450	No	No screening level exceedances in any media
Carbazole	ND	5	ND	51	ND	0.90	No	No screening level exceedances in any media
Di(2-ethylhexyl)adipate	ND	NE	ND	NE	ND	NA	No	No screening level exceedances in any media
Dibenzofuran	ND	NE	ND	NE	ND	NA	No	No screening level exceedances in any media
Dibutyl Phthalate	ND	8	ND	8	ND	0.38	No	No screening level exceedances in any media
Diethyl Phthalate	ND	200	ND	200	ND	140,000	No	No screening level exceedances in any media
Dimethyl Phthalate	ND	600	ND	600	ND	NA	No	No screening level exceedances in any media
Di-N-Octyl Phthalate	ND	1	ND	1	ND	0.039	No	No screening level exceedances in any media
Hexachlorobenzene	ND	1	ND	1	ND	0.0010	No	No screening level exceedances in any media
Hexachlorobutadiene	ND	1	ND	1	ND	0.00030	No	No screening level exceedances in any media
Hexachlorocyclopentadiene	ND	1	ND	1	ND	1,000	No	No screening level exceedances in any media
Hexachloroethane	ND	1	ND	1	ND	21	No	No screening level exceedances in any media
Isophorone	ND	27	ND	27	ND	900	No	No screening level exceedances in any media
Nitrobenzene	ND	10	ND	10	ND	340	No	No screening level exceedances in any media
N-Nitrosodimethylamine	ND	1	ND	1	ND	0.017	No	No screening level exceedances in any media
N-Nitrosodi-n-propylamine	ND	1	ND	1	ND	0.12	No	No screening level exceedances in any media
N-Nitrosodiphenylamine	ND	1	ND	1	ND	170	No	No screening level exceedances in any media
Pentachlorophenol	ND	5	5.7	5	ND	0.36	No	Only detected in surface water in 1 out of 8 samples, and at a concentration less than 2x the SL. See Section 6.5.
Phenol	ND	160	ND	160	ND	0.12	No	No screening level exceedances in any media
Pyridine	ND	8	ND	NE	ND	170	No	No screening level exceedances in any media
Non-carcinogenic Polycyclic Aromatic Hydrocarbons	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
1-Methylnaphthalene	ND	1.5	0.06	NE	ND	29	No	No screening level exceedances in any media
2-Methylnaphthalene	ND	32	0.02	NE	ND	680	No	No screening level exceedances in any media
Acenaphthene	0.46	30	1.40	30	0.0066	10,000	No	No screening level exceedances in any media
Acenaphthylene	ND	NE	0.02	NE	ND	NE	No	No screening level exceedances in any media
Anthracene	ND	100	0.13	100	ND	51,000	No	No screening level exceedances in any media
Benzo(g,h,i)perylene	0.19	NE	ND	NE	0.0060	0.0067	No	No screening level exceedances in any media
Fluoranthene	ND	0.10	0.39	0.10	0.031	0.0067	Yes	Exceeds SL in surface water and sediment
Fluorene	0.12	10	0.77	10	ND	6,800	No	No screening level exceedances in any media
Naphthalene	ND	8.9	0.03	1400	ND	3,400	No	No screening level exceedances in any media
Phenanthrene	ND	NE	0.06	NE	0.0093	NE	No	No screening level exceedances in any media
Pyrene	0.26	0.10	0.20	0.10	0.023	0.0067	Yes	Exceeds SL in groundwater, surface water, and sediment

Analyte	Groundwater: Maximum Groundwater Detection	Groundwater: Groundwater Screening Level[1]	Surface Water: Maximum Surface Water Detection	Surface Water: Surface Water Screening Level[1]	Sediment: Max Sediment Detection	Sediment: Sediment Screening Level[1]	PCOC	Comments
Carcinogenic Polycyclic Aromatic Hydrocarbons	µg/L	µg/L	µg/L	µg/L	mg/kg	mg/kg		
Benzo(a)pyrene	0.17	NE	ND	NE	0.0073	NE	No	No screening level exceedances in any media
Benzo(a)anthracene	0.27	NE	0.02	NE	0.0057	NE	No	No screening level exceedances in any media
Benzo(b)fluoranthene	0.12	NE	ND	NE	0.011	NE	No	No screening level exceedances in any media
Benzo(j,k)fluoranthene	0.36	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Chrysene	0.09	NE	0.01	NE	0.0081	NE	No	No screening level exceedances in any media
Dibenzo(a,h)anthracene	0.14	NE	ND	NE	ND	NE	No	No screening level exceedances in any media
Indeno(1,2,3-c,d)pyrene	0.12	NE	ND	NE	0.0052	NE	No	No screening level exceedances in any media
Total cPAH TEQ (ND=0.5RL)	0.27185	0.01	0.00199*	0.01	0.00984	0.021	Yes	Exceeds SL in groundwater

Notes:

[1] Screening levels from Go East Remedial Investigation Work Plan dated June 30, 2021.

[2] Surface water sample SWS-2 collected on October 27, 2022 during sediment sampling activities is not representative of site surface water as discussed in Section 6.2.2.2 and is not included in the review of maximum surface water detections of metals.

NA = Not analyzed

NE = Not established

ND = Not detected

GW = Groundwater

Gray shading indicates maximum detected concentration exceeds the RI Work Plan screening level.

Bold font indicates analyte is retained as a PCOC

* cPAH TEQ was higher (0.01481 ug/L) at SP3, however SP3 is not impacted by the landfill.

Table 7-1

Groundwater and Surface Water Cleanup Levels for PCOCs

Former Go East Landfill
Everett, Washington

Chemical of Concern	Protection of Drinking Water[1]	Protection of Surface Water[1]	Protection of Sediment[1]	Preliminary Cleanup Level[2]	Site-Specific Background[3]	Laboratory PQL[4]	Cleanup Level After Adjustment[5]
Total Metals (µg/L)							
Arsenic	0.58	0.018	350	0.018	7.3	3.3	**7.3**
Iron	300	1000	NE	300	3,010	20	**3,010**
Lead	15	2.5	15	2.5	NC	1.1	**2.5**
Manganese[6]	50	50	NE	50	354	11	**354**
Nickel	100	52	26.3	26.3	NC	22	**26.3**
Pesticides (µg/L)							
cis-Chlordane	0.13	0.00036	2.1	0.00036	NC	0.005	**0.005**
Heptachlor	0.097	0.00000034	0.00055	0.00000034	NC	0.005	**0.005**
PAHs (µg/L)							
cPAH TEQ	0.023	0.0097	0.0095	0.0095	NC	0.0076	**0.0095**

Notes:

[1] Ecology-provided cleanup level following January 2023 update to CLARC tables (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC. See Appendix H. The protection of drinking screening levels for iron and manganese are based on the secondary Maximum Contaminant Levels (MCLs) for aesthetic criteria.

[2] Preliminary cleanup level is the lowest of protection of drinking water, surface water, and sediment shown to the left in this table.

[3] Site Specific background metals concentrations; see Appendix G.

[4] Practical Quantitation Limits (PQLs) from the RI analytical laboratory OnSite Environmental, Inc.

[5] Cleanup level adjusted upward if necessary per WAC 173-340-700.

[6] The 50 µg/L cleanup level is based on secondary MCL for aesthetic criteria. The health-based screening level for manganese is 750 µg/L.

NC = Not calculated

NE = Not established

µg/L = microgram per liter

Gray shaded cells provide the basis for the preliminary cleanup level

Blue shaded cells provide the basis for the cleanup level

Table 7-2

Sediment Cleanup Levels for PCOCs

Former Go East Landfill

Everett, Washington

Potential Chemicals of Concern (PCOC)	Protection of Sediment w/ Bioaccumulation (for reference only)[1]	Protection of Sediment w/o Bioaccumulation[2]	Site-Specific Background[3]	Laboratory PQL[4]	Cleanup Level After Adjustment[5]
Metals (mg/kg)					
Arsenic	11	11	NA	10	11
Iron	46,700	46,700	21,282	25	46,700
Lead	21	360	NA	5.0	360
Manganese	31,200	31,200	294	0.50	31,200
Nickel	50	50	51.2	2.5	51.2
Pesticides (mg/kg)					
cis-Chlordane	0.0001	2.03	NA	0.010	2.03
Heptachlor	0.0001	0.289	NA	0.0050	0.289
PAHs (mg/kg)					
cPAH TEQ	0.021	0.174	NA	0.0051	0.174

Notes:

All values in milligrams per kilogram (mg/kg).

[1] For reference only: Ecology-provided sediment cleanup level after January 2023 CLARC update (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC). See Appendix H.

[2] Ecology-provided sediment cleanup level (without bioaccumulation) after January 2023 CLARC update (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC). See Appendix H.

[3] Site-specific metal background concentrations calculated from sediment samples SEDB-1 to SEDB-8 pursuant to WAC 173-340-709(3). See Appendix I.

[4] Practical Quantitation Limits (PQLs) from the RI analytical laboratory OnSite Environmental, Inc.

[5] Cleanup level adjusted upward if necessary per WAC 173-340-700

Gray shaded cells provide the basis for the cleanup level.

Note: Heptachlor was detected at 0.037 mg/kg in background sediment sample SEDB-3, indicating off-site sources of pesticides.

Table 7-3

Groundwater Cleanup Level Exceedances

Former Go East Landfill

Everett, Washington

	Location ID	MW1	MW1	MW1	MW1	MW1	MW2	MW2	MW2	MW2	MW2	MW2	MW3	MW3	MW3	MW3	MW3	MW3	MW5	MW5
	Sample ID	MW1-210406	MW1-220330	MW-1-220504	MW-1-220628	MW-1-20220922	MW2-210406	MW2-211208	MW2-20220318	MW-2-220505	MW-2-20220628	MW-2-20220922	MW3-210406	MW3-211206	MW-3-30922	MW-3-20220621	MW-3-20220427	MW-3-20220920	MW5-211207	MW5-220203
	Sample Date	4/6/2021	3/30/2022	5/4/2022	6/28/2022	9/22/2022	4/6/2021	12/8/2021	3/18/2022	5/5/2022	6/28/2022	9/22/2022	4/6/2021	12/6/2021	3/9/2022	6/21/2022	4/27/2022	9/20/2022	12/7/2021	2/3/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Cleanup Level[1]																			
Total Metals (µg/L)																				
Arsenic	7.3	5.1	5.8	5.3	5.7	5.3	4.7	4.8	5.3	11	5.3	4.5	4.4	3.6	5.0	4.6	3.6	3.3 U	5.1	5.8
Iron	3,010	860	1,900	2,200	580	960	1,200	370	1,600	6,200	690	1,100	4,100	110	2,500	1,400	3,800	610	360	1,000
Lead	2.5	--	1.1 U	1.1 U	1.1 U	--	--	1.1 U	1.1 U	2.0	--	--	--	1.1 U	1.2	1.1 U	1.1	--	1.1 U	1.1 U
Manganese	354	270	390	360	290	260	230	300	310	350	250	230	260	190	240	190	220	160	390	290
Nickel	26.3	--	86	22 U	22 U	--	--	22 U	22 U	22 U	22 U	--	--	22 U	22 U	22 U	22 U	--	22 U	22 U
Organochlorine Pesticides (µg/L)																				
cis-Chlordane	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U	--	0.0050 U	--	0.0048 U	0.0048 U
Heptachlor	0.005	--	0.0049 U	0.0048 U	0.0048 U	--	--	0.0047 U	0.0048 U	0.0049 U	--	--	--	0.0047 U	0.0050 U	--	0.0050 U	--	0.0048 U	0.0048 U
Polycyclic Aromatic Hydrocarbons (µg/L)																				
Total cPAH TEQ (ND=0.5RL)	0.0095	--	0.00732 U	0.00755 U	0.00717 U	--	--	0.00717 U	0.00717 U	0.00747 U	--	--	--	0.00717 U	0.00732 U	--	0.00755 U	--	0.00717 U	0.00747 U

Notes:

[1] Cleanup levels from Table 7-1.

GW = Groundwater

-- Analysis not performed

mg/L = milligram per liter

µg/L = microgram per liter

cPAH TEQ = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the reporting limit.

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit.

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 7-3

Groundwater Cleanup Level Exceedances

Former Go East Landfill

Everett, Washington

	Location ID	MW5	MW5	MW5	MW5	MW5	MW5	MW5	MW6	MW6	MW6	MW6	MW6	MW7	MW7	MW7	MW7	MW7	MW8	MW8
	Sample ID	MW-5-20220307	MW5-20220407	MW-5-220518	MW-5-20220610	MW-5-20220624	MW-5-20220803	MW-5-20220923	MW6-211209	MW-6-31122	MW-6-220503	MW-6-20220620	MW-6-20220921	MW7-211209	MW7-20220314	MW-7-20220506	MW-7-20220620	MW-7-20220921	MW8-211213	DUP-211213
	Sample Date	3/7/2022	4/7/2022	5/18/2022	6/10/2022	6/24/2022	8/3/2022	9/22/2022	12/9/2021	3/11/2022	5/3/2022	6/20/2022	9/21/2022	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022	12/13/2021	12/13/2021
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Cleanup Level[1]																			
Total Metals (µg/L)																				
Arsenic	7.3	6.6	6.6	7.8	5.7	6.5	6.0	4.8	3.5	4.2	5.8	5.2	5.7	11	10	12	11	8.8	3.3 U	3.3 U
Iron	3,010	130 J	200	600	470	220	240	380	420	1,100	2,000	1,200	510	6,900	2100	24,000	550	3,000	1,300	1,400
Lead	2.5	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	--	1.1 U	1.1 U	1.1 U	--	--	3.2	1.2	8.8	--	--	1.1 U	1.1 U
Manganese	354	270	230	290	260	290	150	170	1,800	2,100	2,100	2,400	1,700	680	180	1,300	40	190	2,100	2,200
Nickel	26.3	22 U	22 U	22 U	22 U	22 U	22 U	--	22 U	22 U	22 U	22 U	--	42	22 U	36	22 U	--	39	22 U
Organochlorine Pesticides (µg/L)																				
cis-Chlordane	0.005	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U
Heptachlor	0.005	0.0048 U	0.0048 U	0.0048 U	0.0048 U	--	--	--	0.0048 U	0.0051 U	0.0050 U	--	--	0.0047 U	0.0053 U	0.0058 U	--	--	0.0049 U	0.0049 U
Polycyclic Aromatic Hydrocarbons (µg/L)																				
Total cPAH TEQ (ND=0.5RL)	0.0095	0.00755 U	0.00725 U	0.00725 U	0.00882 U	--	--	--	**0.00871**	0.00755 U	**0.27185**	**0.00815**	0.00717 U	**0.00865**	0.00717 U	0.0083 U	**0.01978**	0.00717 U	0.00747 U	0.00755 U

Notes:

[1] Cleanup levels from Table 7-1.

GW = Groundwater

-- Analysis not performed

mg/L = milligram per liter

µg/L = microgram per liter

cPAH TEQ = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the reporting limit.

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit.

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 7-3

Groundwater Cleanup Level Exceedances

Former Go East Landfill

Everett, Washington

	Location ID	MW8	MW8	MW8	MW8	MW9	MW9	MW9	MW9	MW10	MW10	MW10	MW10
	Sample ID	MW8-20220322	MW8-05022022	MW-8-20220622	MW-8-20220920	MW-9-20220404	MW-9-20220519	MW-9-20220623	MW-9-220921	MW-10-20220404	MW-10-20220519	MW-10-20220623	MW-10-220921
	Sample Date	3/22/2022	5/2/2022	6/22/2022	9/20/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022	4/4/2022	5/19/2022	6/23/2022	9/21/2022
	Matrix	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW	GW
Analyte	Groundwater Cleanup Level[1]												
Total Metals (µg/L)													
Arsenic	7.3	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.9	3.3 U	4.3	3.3 U	3.3 U	3.3 U
Iron	3,010	2,800	2,100	1,400	1,100	5,100	2,300	8,600	2,400	6,800	1,400	1,300	6,400
Lead	2.5	1.1 U	1.1 U	--	--	2.5	1.1 U	1.1 U	1.1 U	4.5	1.1 U	1.1 U	1.1 U
Manganese	354	2,400	1,600	1,900	1,400	1,500	1,100	1,800	1,400	320	460	450	1,600
Nickel	26.3	22 U	22 U	22 U	--	22 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U
Organochlorine Pesticides (µg/L)													
cis-Chlordane	0.005	0.0052 U	0.0049 U	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Heptachlor	0.005	0.0052 U	0.0049 U	--	--	0.0055 U	0.0048 U	0.0048 U	0.0048 U	0.0054 U	0.0048 U	0.0049 U	0.0048 U
Polycyclic Aromatic Hydrocarbons (µg/L)													
Total cPAH TEQ (ND=0.5RL)	0.0095	0.0083 U	0.00755 U	--	0.00717 U	0.00755 U	0.0074 U	0.0074	0.00717 U	0.00755 U	0.0078	0.00865	0.0071 U

Notes:

[1] Cleanup levels from Table 7-1.

GW = Groundwater

-- Analysis not performed

mg/L = milligram per liter

µg/L = microgram per liter

cPAH TEQ = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the reporting limit.

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit.

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 7-4

Surface Water Cleanup Level Exceedances

Former Go East Landfill
Everett, Washington

		Stream 3									Seeps							Stream 2	
	Location ID	SP1 (SWS-1)	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-1	SWS-2	SWS-3	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-1	SEEP-2	SEEP-2	SP2	SP3
	Sample ID	SP1-210402	SWS-1-20211101	SWS-1-211208	SWS-1-20220321	SWS-1-220503	SWS-1-20220621	SWS-1-220920	SWS-2-20221027	SWS-3-20221027	SEEP-1-211208	SEEP 1-220317	SEEP-1-20220519	SEEP-1-20220621	SEEP-1-220920	SEEP 2-220317	SEEP-2-22020519	SP2-210402	SP3-210402
	Sample Date	4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022	10/27/2022	10/27/2022	12/8/2021	3/17/2022	5/19/2022	6/21/2022	9/20/2022	3/17/2022	5/19/2022	4/2/2021	4/2/2021
Analyte	Surface Water Cleanup Level[1]																		
Total Metals (µg/L)																			
Arsenic	7.3	0.45 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	230	7.5 U	3.3 U	3.8	3.3 U	4.4	3.3 U	3.3 U	3.3 U	1.4	1.1
Iron	3,010	8,900	11,000	8,000	12,000	6,400	5,000	7,300	550,000	6,700	990	11,000	970	460	2,500	4,300	1,100	430	210
Lead	2.5	0.28 U	1.1 U	1.1 U	6.2	1.1 U	1.1 U	--	58	1.0 U	--	--	--	1.7	1.1 U	--	--	0.28 U	0.28 U
Manganese	354	1,500	1,500	1,800	2,000	1,600	1,500	1600	40,000	1,600	15	150	26	16	29	380	120	18	9.2
Nickel	26.3	--	22 U	22 U	22 U	22 U	22 U	--	180	20 U	--	--	--	--	--	--	--	--	--
Organochlorine Pesticides (µg/L)																			
cis-Chlordane	0.005	--	0.0051 U	0.0052 U	0.0052 U	0.0049 U	--	--	0.0024 U	0.0049 U	--	--	--	--	--	--	--	--	--
Heptachlor	0.005	--	0.0051 U	0.0052 U	0.0052 U	0.0049 U	--	--	0.0024 U	0.0049 U	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons (µg/L)																			
Total cPAH TEQ (ND=0.5RL)	0.0095	0.00637	0.00755 U	0.00755 U	0.00755 U	0.00732 U	0.00732 U	0.0074 U	0.00906 U	0.00747 U	--	--	--	--	--	--	--	0.00514	0.01481

Notes:

[1] Cleanup levels from Table 7-1.

* Sample SWS-1-211208 was reanalyzed using acid/silica gel cleanup and the results for diesel-and lube oil-range hydrocarbons were both non-detect at 0.22 mg/L.

SWF = Surface Water

NE = Not established

NR = Not recorded

-- Analysis not performed

mg/L = milligram per liter

µg/L = microgram per liter

PCB = Polychlorinated biphenyl

cPAH TEQ = The total toxic equivalent concentration of cPAHs per WAC 173-340-708(8)(e)(iii)(A); non-detected analytes calculated using one half the reporting limit.

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 7-5

Sediment Cleanup Level Exceedances

Former Go East Landfill

Everett, Washington

		Stream 3 Sediment Locations - Downgradient of Landfill											Background Sed Samples - Wetland A			Background Sed Samples - Stream 2				
	Location ID	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8	SED-9	SED-10	SED-11	SEDB-1	SEDB-2	SEDB-3	SEDB-4	SEDB-5	SEDB-6	SEDB-7	SEDB-8
	Sample ID	SED-1-210713	SED-2-210713	SED-3-210713	SED-4-221027	SED-5-221027	SED-6-221027	SED-7-221027	SED-8-221027	SED-9-221027	SED-10-221027	SED-11-221027	SEDB-1-20220713	SEDB-2-20220713	SEDB-3-20220713	SEDB-4-20220713	SEDB-5-20220713	SEDB-6-20220713	SEDB-7-20220713	SEDB-8-20220713
	Sample Date	7/13/2021	7/13/2021	7/13/2021	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022	7/13/2022
Analyte	Sediment Cleanup Level[1]																			
Metals (mg/Kg)																				
Arsenic	11	5.6 U	8.5 U	13 U	13 U	12 U	12 U	13 U	16 U	14 U	15 U	16 U	10 U	12 U	14 U	13 U	12 U	12 U	12 U	13 U
Iron	46,700	**110,000**	**51,000**	**270,000**	**27,000**	**17,000**	**18,000**	**24,000**	**26,000**	**23,000**	**21,000**	**22,000**	**16,000**	**11,000**	**17,000**	**16,000**	**16,000**	**20,000**	**15,000**	**15,000**
Lead	360	11 U	8.5 U	26 U	6.4 U	6.0 U	6.0 U	**7.5**	8.1 U	6.8 U	7.3 U	**9.3**	**22**	12 U	6.8 U	6.5 U	6.1 U	6.2 U	6.1 U	6.3 U
Manganese	31,200	**510**	**340**	**20,000**	**350**	**220**	**240**	**300**	**490**	**400**	**490**	**530**	**210**	**140**	**200**	**250**	**250**	**210**	**230**	**230**
Nickel	51.2	**24**	**36**	16 U	**34**	**38**	**39**	**39**	**43**	**45**	**47**	**37**	**43**	**35**	**48**	**43**	**39**	**44**	**42**	**40**
Pesticides (mg/Kg)																				
cis-Chlordane	2.03	0.022 U	0.017 U	**0.065**	0.0032 U	0.003 U	0.003 U	0.0033 U	0.004 U	0.0034 U	0.0036 U	0.004 U	0.021 U	0.023 U	0.014 U	0.013 U	0.012 U	0.012 U	0.012 U	0.013 U
Heptachlor	0.289	0.011 U	0.0085 U	**1.8**	**0.0018**	0.0015 U	0.0015 U	**0.011**	**0.0032**	0.0017 U	0.0018 U	0.002 U	0.010 U	0.012 U	**0.037**	0.0065 U	0.0061 U	0.0062 U	0.0061 U	0.0063 U
PAHs (mg/Kg)																				
Total cPAH TEQ (ND=0.5RL)	0.174	**0.00744**	**0.00568**	0.01586 U	**0.00984**	0.00362 U	0.00362 U	0.00393 U	0.00491 U	0.00408 U	0.00438 U	0.00491 U	0.00619 U	0.0071 U	0.00408 U	0.00393 U	0.0037 U	0.0037 U	0.0037 U	0.00378 U

Notes:

[1] Cleanup levels from Table 7-2.

mg/kg = milligram per kilogram

Bold font indicates detected.

U = The analyte was not detected at the indicated reporting limit

Gray shading indicates the analyte is detected above the screening level.

Blue shading indicates the analyte is not detected, at a reporting limit greater than the screening level.

Table 9-1

Screening of Cleanup Technologies

Former Go East Landfill

Snohomish County

Media	General Response Action	Potentially Applicable Technologies	Technology Screening			Technology Retained?
			Technical Feasibility	Implementability	Cost	
Groundwater	Groundwater Containment	Sheet Pile Wall	Not feasible. Depth to transitional beds around landfill exceeds practical sheet pile depth. Soil density too high for practical use.	Not implementable (see feasibility).	High	No
		Slurry Wall	Not feasible. Depth to transitional beds around landfill exceeds practical slurry wall depth. Soil density too high for practical use.	Not implementable (see feasibility).	High	No
	Groundwater Extraction and Treatment	Groundwater extraction wells, pumps and water treatment.	Limited feasibility. Extraction is limited in feasibility for capturing all contaminated groundwater due to groundwater depth and velocity. Treatment methods are not fully proven for all site COPCs.	Not implementable (see feasibility).	High	No
	Monitored Natural Attenuation (MNA)	Sampling and analysis methodologies	Feasible.	Implementable. Monitoring will be completed as required for landfill post-closure. The site is appropriate for MNA due to generally low contaminant concentrations in groundwater and because Landfill closure is a source control action expected to be effective in achieving a functionally stable site and reducing future impacts to groundwater, allowing groundwater to cleanup within a reasonable time frame.	Low	Yes
Surface Water	Surface Water Treatment (Collect and treat leachate from the weir box)	Treatment wetland/passive stormwater type treatment system	Feasible but challenging. Treatment methods are not fully proven for treating multiple low concentration and varied site contaminants. Limited space for wetland.	Difficult to implement: Construction of treatment systems would be difficult due to challenging access issues to the toe of the slope and limited space given the proximity of the weir box and Stream 3 to the northern property line.	Moderate	Yes
		Engineered mechanical/chemical processes	Feasible but challenging. Treatment methods are not fully proven for treating multiple low concentration and varied site contaminants.	Implementable, however would require NPDES permit, challenging maintenance issues, and potentially chemical treatment.	High	Yes
	Monitored Natural Attenuation (MNA)	Sampling and analysis methodologies	Feasible.	Implementable. Monitoring will be completed as required by for landfill post-closure. The site is appropriate for MNA due to generally low contaminant concentrations in surface water and because Landfill capping is a source control action expected to reduce contaminant concentrations in surface water discharged at the weir box thereby reducing future impacts to surface water, allowing surface water to cleanup within a reasonable time frame.	Low	Yes
Sediment	Removal/Capping	Mechanical dredging/excavation and placement of engineered sediment cover	Potentially feasible but not recommended. See Implementability.	Not recommended to be implemented. Disturbing the sediments during dredging/capping activities would likely mobilize more contamination than the technology would aim to reduce. Natural recovery (see below) will be better overall for human health and the environment.	Moderate	No
	Natural Recovery	None	Feasible.	Implementable. Site sediments are appropriate for natural recovery due to generally low contaminant concentrations in sediment and because Landfill capping is expected to reduce contaminant loading to sediments via surface water, allowing sediment to cleanup within a reasonable time frame.	Low	Yes

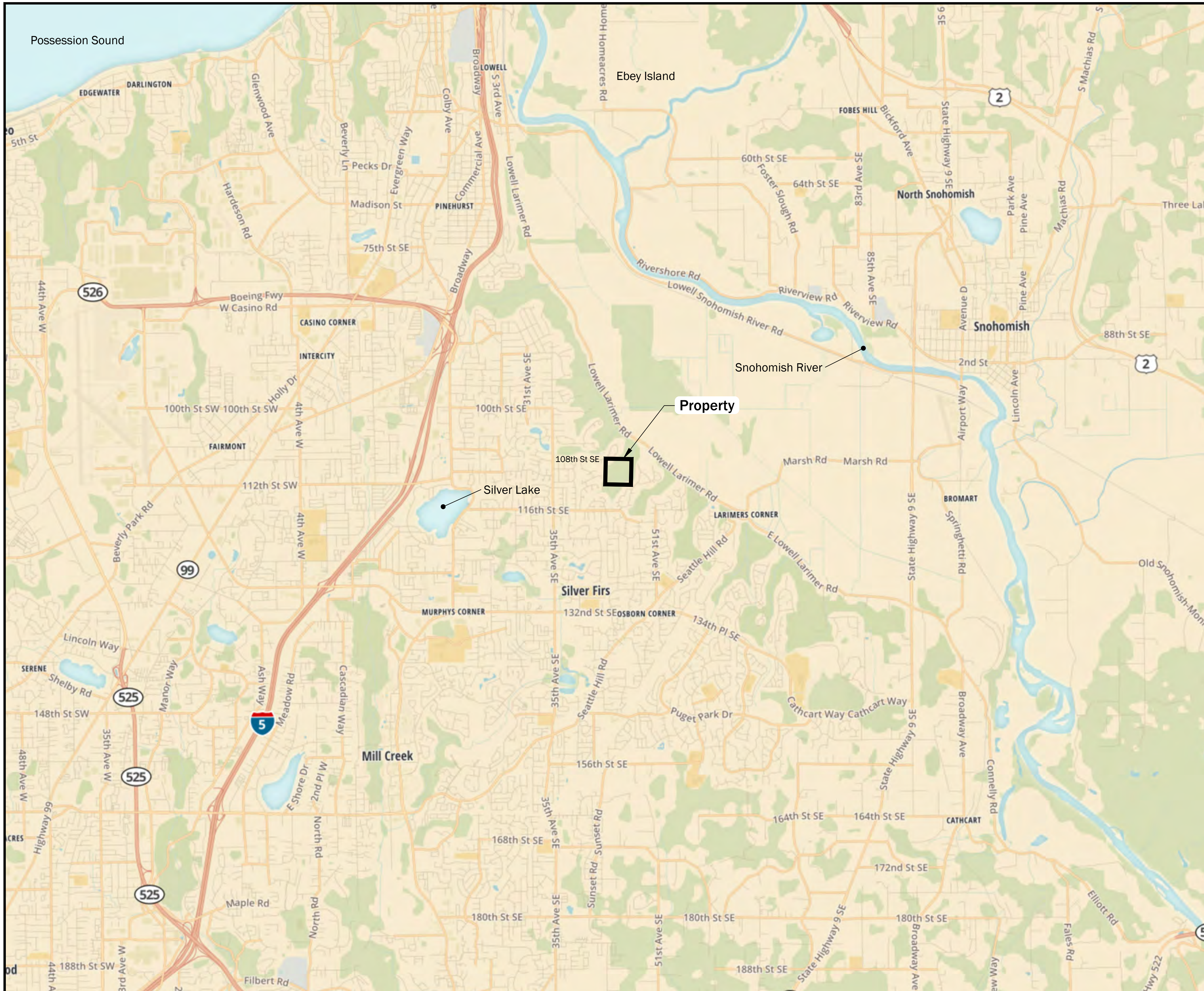
Table 11-1

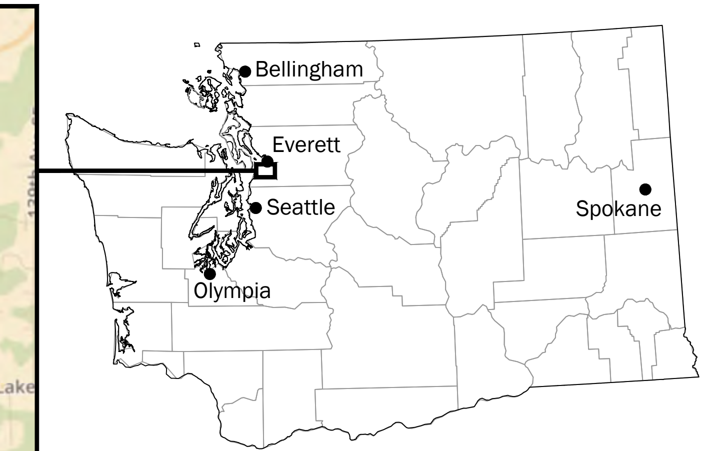
Disproportionate Cost Analysis

Former Go East Landfill

Everett, Washington

Alternative	Description	Protectiveness	Permanence	Long-term Effectiveness	Cost	Management of Short-term Risks	Technical and Administrative Implementability	Consideration of Public Concerns
1	Landfill Closure (Baseline Alternative)	Protects Human Health and the Environment	Permanent for surface water and sediment; non-permanent for groundwater	Effective in the long term	Low	Low risk.	Technically and administratively complete.	Community concerns addressed by capping and proper closure of the landfill. Community concerns over long-term monitoring and recovery not as well addressed as in Alternative 2.
2	Landfill Closure, MNA/Recovery	Protects Human Health and the Environment	Permanent for surface water and sediment; non-permanent for groundwater	Effective in the long term	Low	Low risk.	Technically and administratively implementable.	Community concerns addressed by capping and proper closure of the landfill as well as assurance of long-term monitoring and recovery.
3	Landfill Closure, MNA, Surface Water Treatment, and Recovery	Protects Human Health and the Environment	Permanent for surface water and sediment; non-permanent for groundwater	Effective in the long term	High	Comparatively higher short term risks to the environment due to disturbing sediments to construct treatment systems.	Challenging technical and administrative implementability.	Potential public concerns over construction of facilities at the toe of the slope and potential use of chemical treatment if chemical treatment required.





Not To Scale

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: Mapbox Open Street Map, 2016.

Projection: NAD 1983 UTM Zone 10N

N W E S

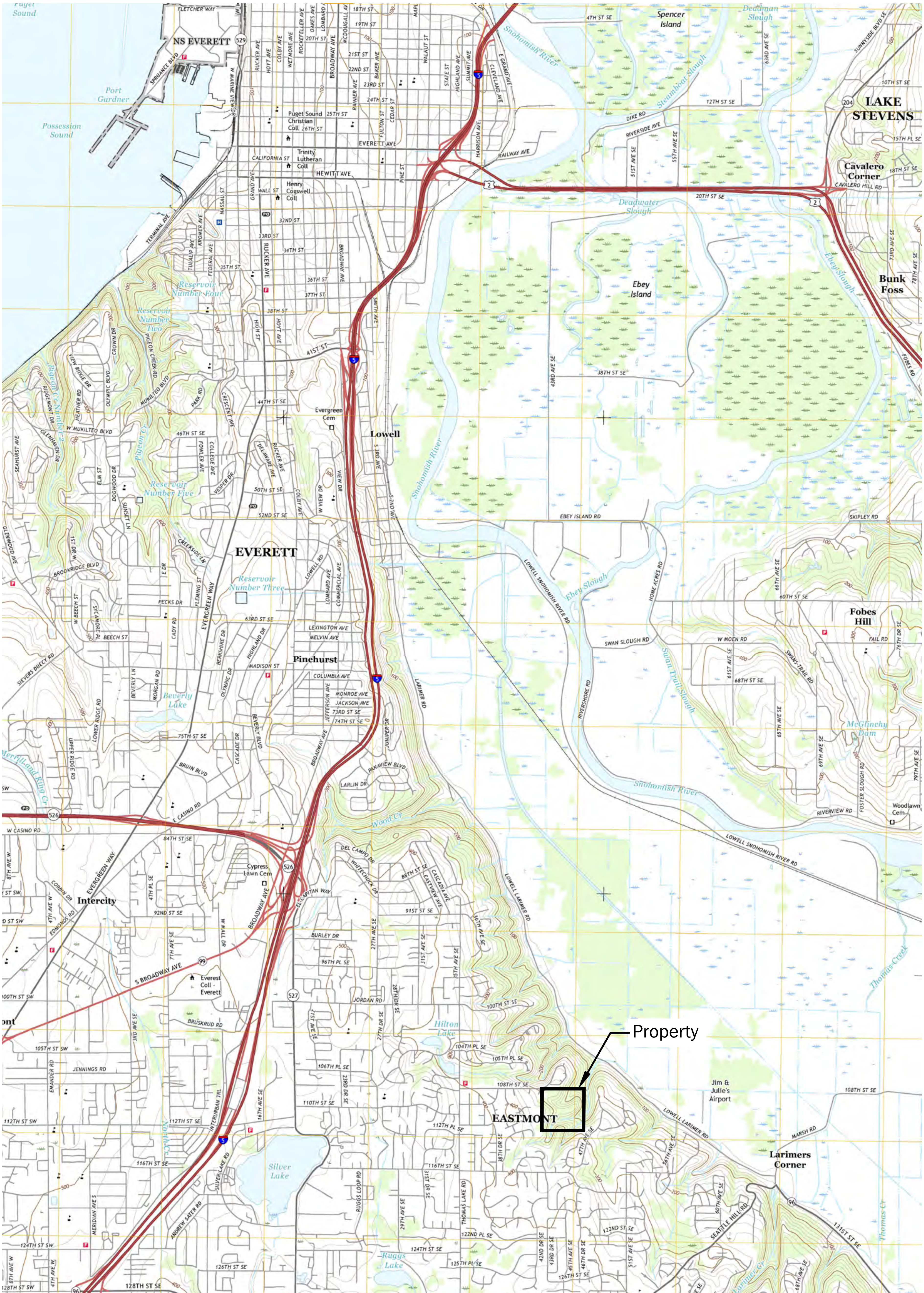
1 0 1
Mile

Vicinity Map

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 1-1



N
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3,000 0 3,000
Feet

Notes:
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Data Source: Map from USGS dated 2017.

Property Location in Relation to Physiographic Features

Go East Corp Landfill Site
Everett, Washington

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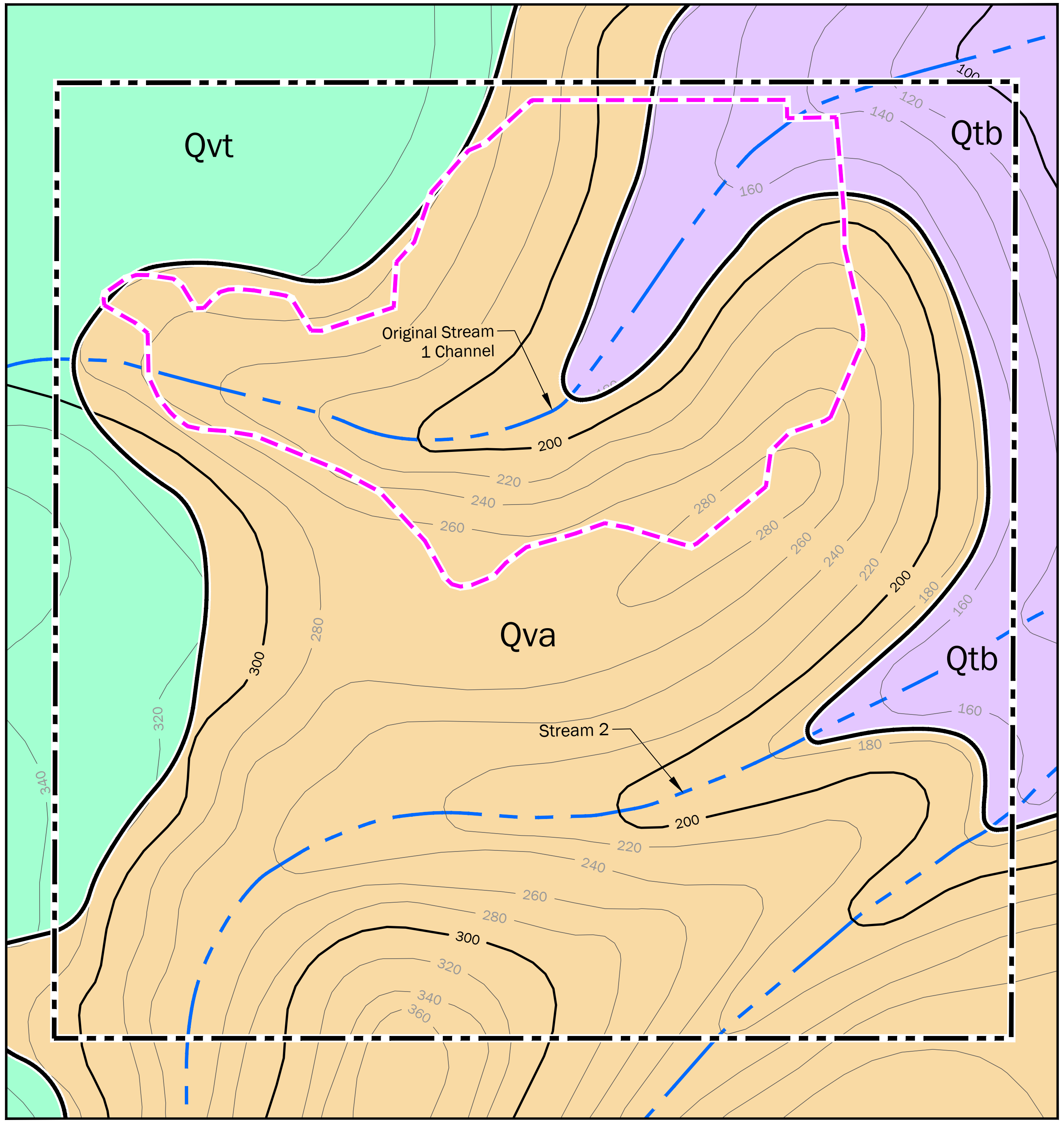
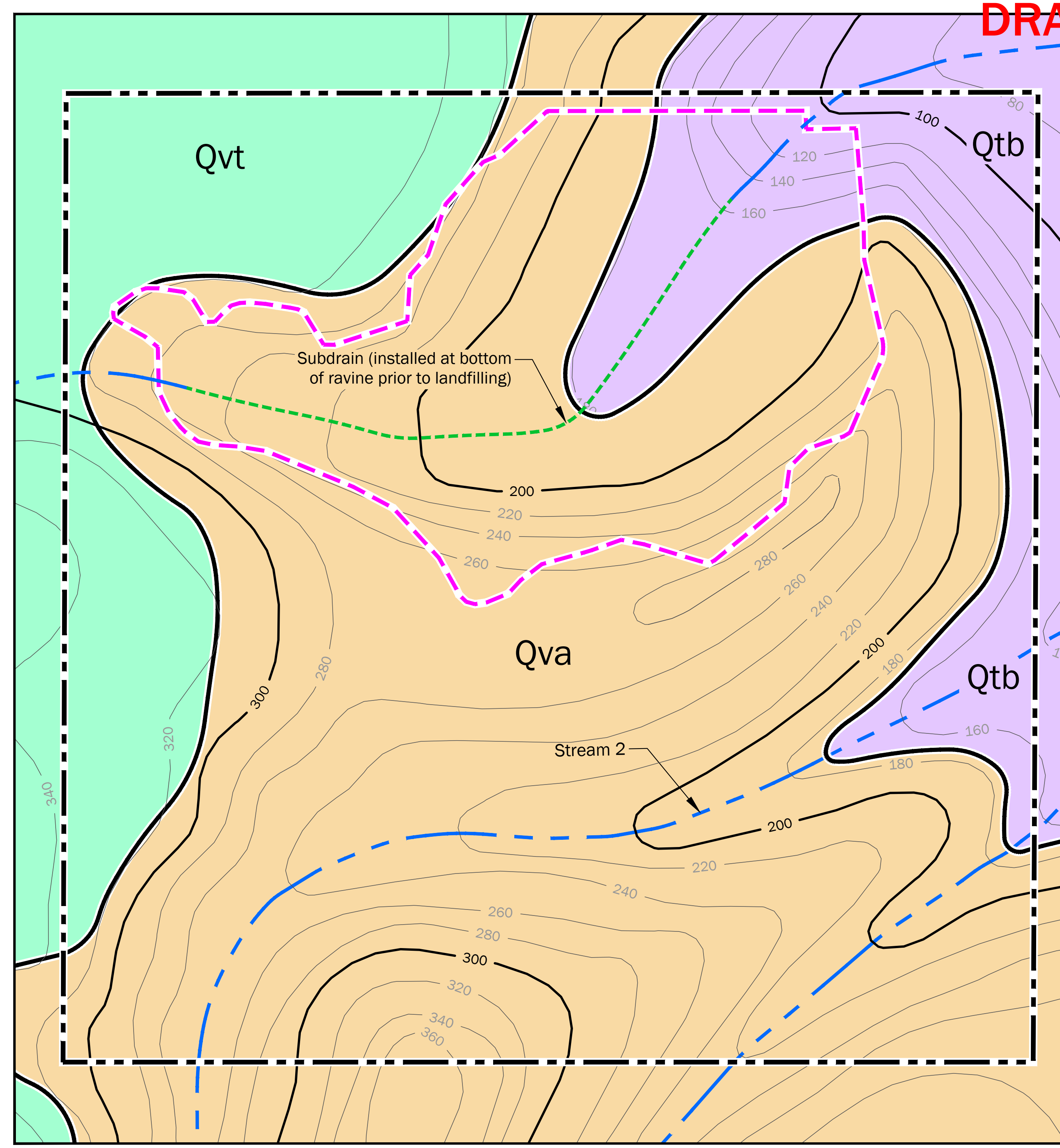
Figure 2-1

\\geoengineers.com\WAN\Projects\26\26410001\CAD\01\Client Review RI FS Report\2641000101_F02-1_Property_Location.dwg TAB:F02-1 Date Exported: 04/25/23 - 12:51 by mwoods



Approximate Pre-Sand Mining Condition



Approximate Post-Sand Mining Condition (prior to landfilling)

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 for pre-sand mining contours and map unit descriptions: USGS 1985.
Data sources for geologic contacts: AESI 2009b; USGS 1985; Smith 1976; Geolabs - Washington, Inc. 1970; Newcomb 1952.

Projection: HPGN (HARN) Washington State Planes, North Zone, US Foot

Datum: NAVD88

Legend

— · · —	Property Boundary
- - - (magenta)	Approximate Pre-Interim Action Landfill Limit
——	Geologic Contact (Location Approximate)

Map Unit Descriptions

Qvt	Vashion Glacial Till - These deposits mantle hills, ridges, and slopes and consist of a nonsorted mixture of mud, sand, pebbles, cobbles and boulders resembling concrete mix.
Qva	Vashion Glacial Advance Outwash - These deposits underlie the till and consist of clean, mostly gray, well stratified, unconsolidated sand with pebbles and some cobbles. The sand is locally silty and oxidized to shades of brown.
Qtb	Transitional Beds (includes pre-Vashon glacial lacustrine silt) - These deposits underlie the advance outwash and consist of clay, silt, and very fine to fine sand. The sediments were mostly deposited in still to slowly moving water (e.g., lakes and slowly flowing rivers/streams).

N
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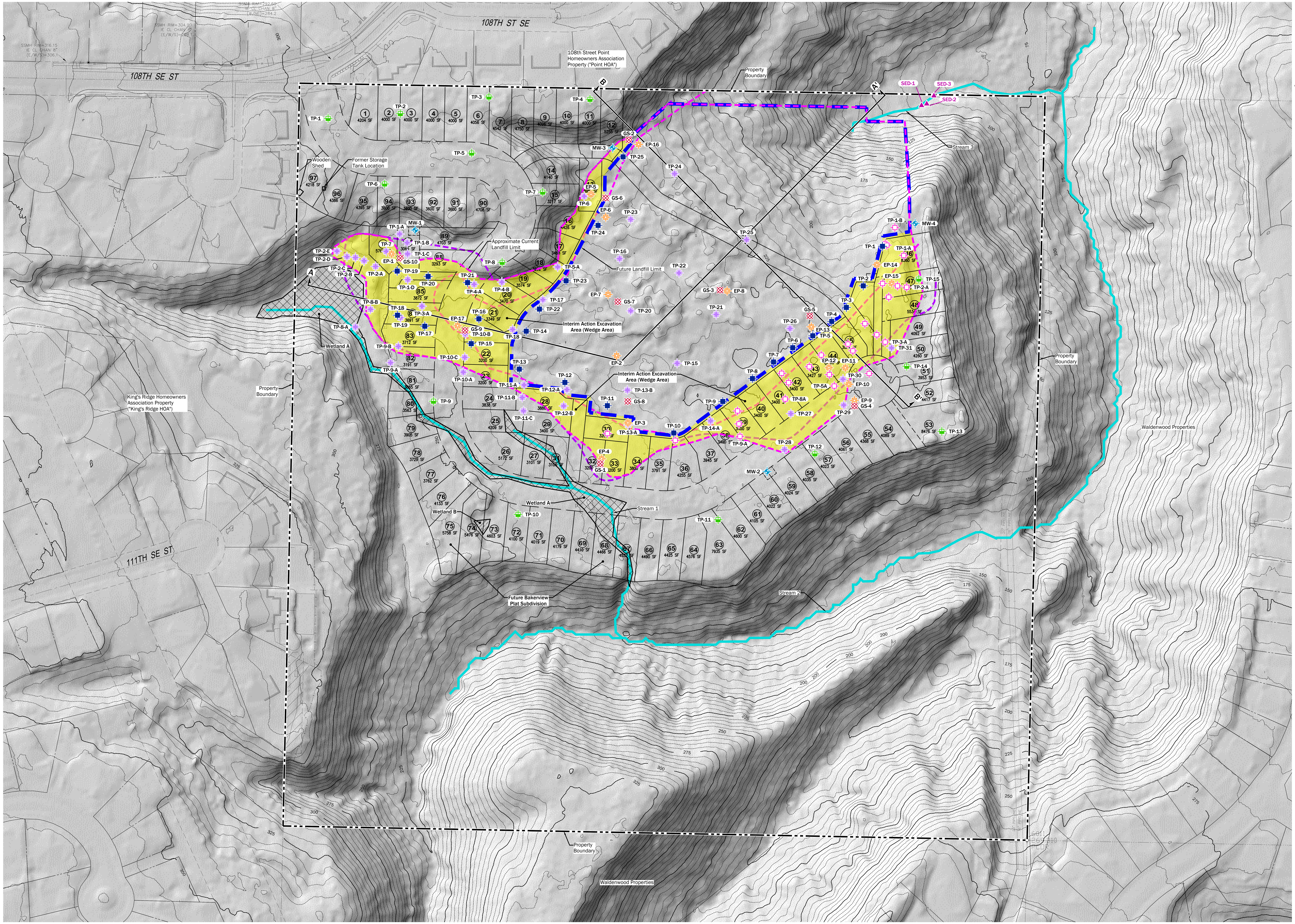
200 0 200
Feet

Historical Topography and Surface Geology

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 2-2



Legend

- Property Boundary
- Interim Action Excavation Area (Wedge Area)
- Approximate 2019 Landfill Limit
- Pre-Interim Action Proposed Landfill Limit
- Wetland A
- Wetland B
- A A' Cross Section Location
- Test Pit - Landfill Material Sampling Location (Terra Associates, June 2019)
- Reconnaissance Test Pit (Hos Brothers, July 2019)
- Test Pit (Terra Associates, January 2019)
- Test Pit (AESI, 2009)
- Test Pit (Hong West Associates, 2002)
- MW-1 Through MW-4 (AESI, 2009)
- Landfill Gas Probe (AESI, 2009)

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: Property boundary survey from PACE Engineers, dated 1/27/2020. Lidar image and elevation contours from Puget Sound Lidar Consortium dated 2013.

Projection: HPGN (HARN) Washington State Planes, North Zone, US Foot

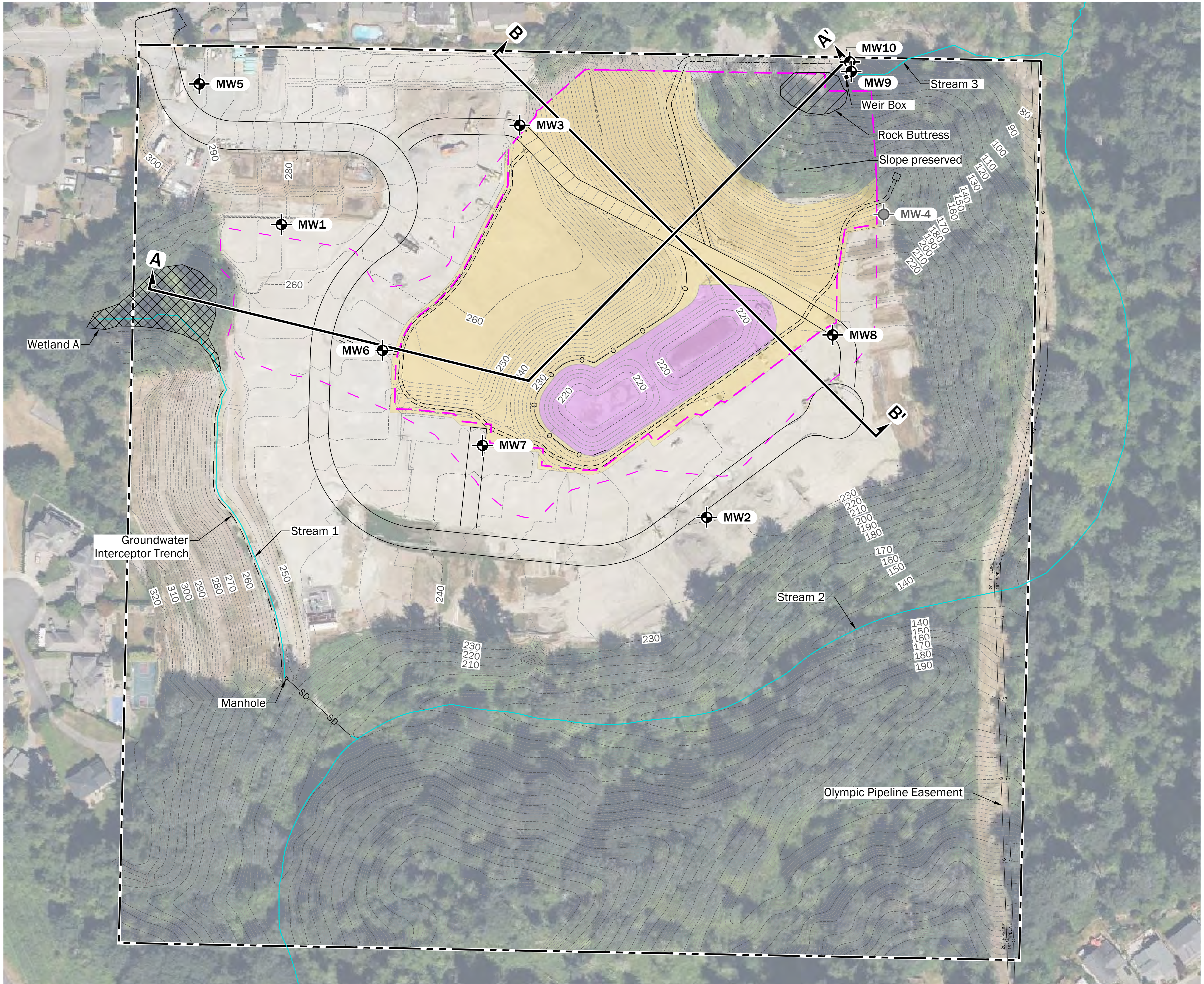
80 0 80
Feet

2019 Topography and site Conditions Locations

Go East Corp Landfill Site
Everett, Washington

GEOENGINEERS

Figure 2-3



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- Engineered Cap
- Double-lined stormwater pond
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- MW-4 Decommissioned Groundwater Monitoring Well
- A A' Cross Section Location
- SD SD Storm Drain

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N
W E
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150 0 150
Feet

2023 Topography and Site Conditions

Go East Corp Landfill Site
Everett, Washington

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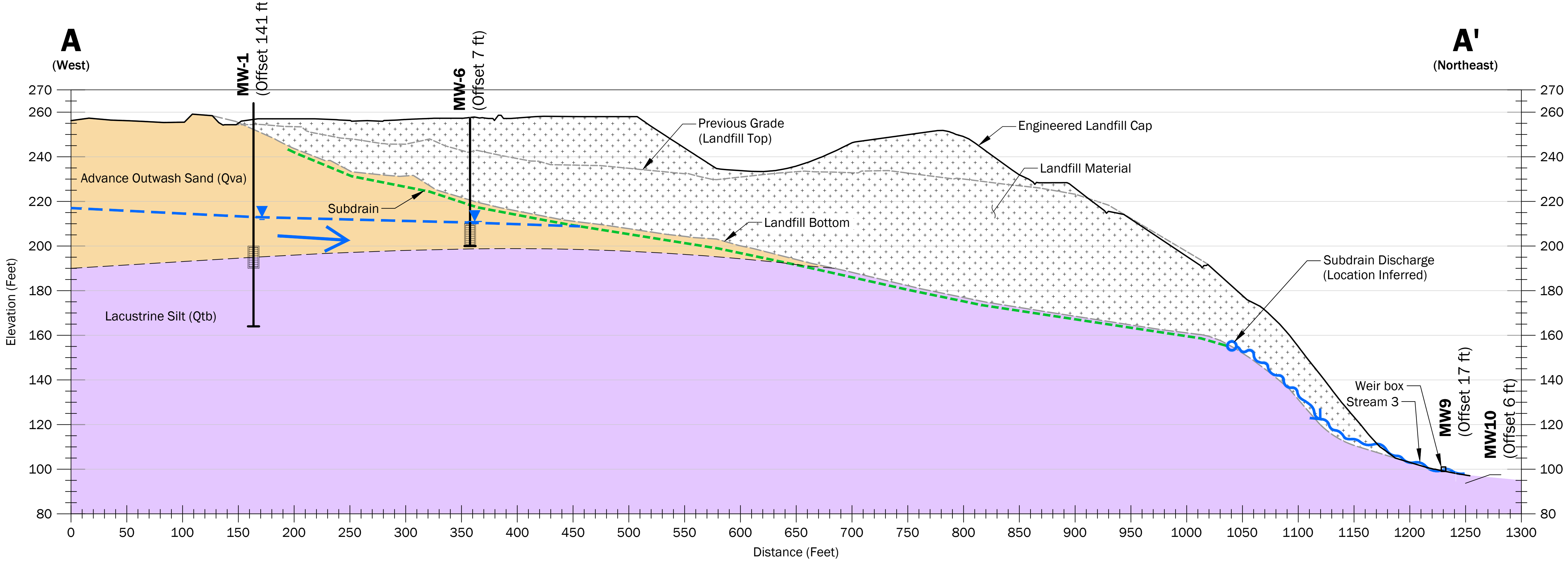
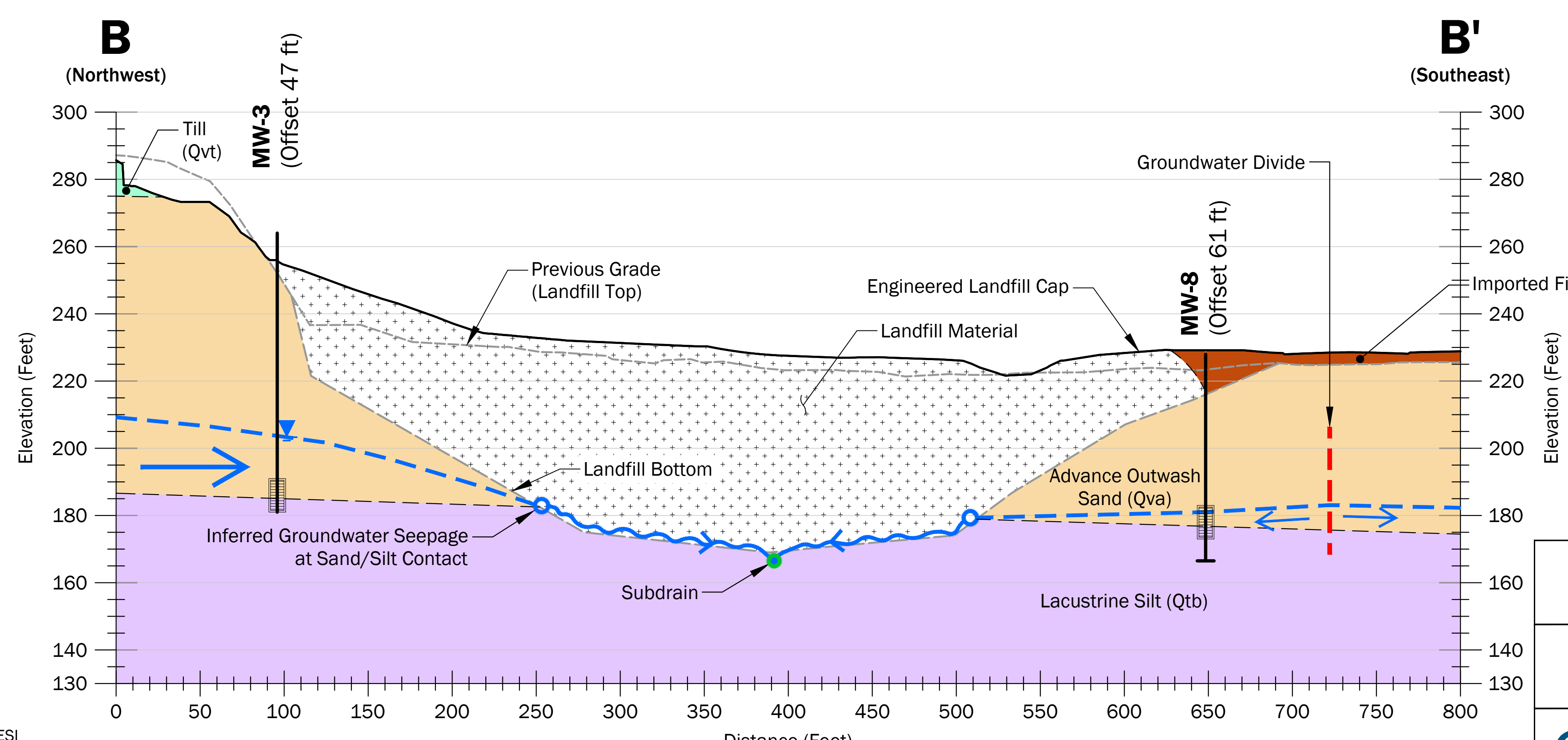
Figure 2-4

P:\26\26410001\CAD\01\Client Review RI FS Report\2641000101_F02-4_Topography Map.dwg F2-4 Date Exported:11/3/2023 6:53 PM - by Michael R. Woods





Legend

- MW-1 (Offset) — Monitoring Well
- Inferred Geologic Contact
- Well Screen
- Inferred Groundwater Table (Triangle Indicates Measured Groundwater Level in Well)
- Inferred Groundwater Flow Direction
- Imported Fill
- Glacial Till (Qvt)
- Advance Outwash Sand (Qva)
- Lacustrine Silt (Qtb)

100 0 100
Horizontal Scale in Feet
50 0 50
Vertical Scale in Feet
Vertical Exaggeration: 2X

Notes:

1. The subsurface conditions shown are inferred from the data sources cited below, 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.

Data source for existing grade and landfill bottom: PACE Engineers
Data source for landfill bottom: PACE Engineers.
Data source for existing grade: Mead Gilman Land Surveyors
Historical Data sources for geologic contacts and groundwater table: AESI 2009b; USGS 1985; Smith 1976; Geolabs - Washington, Inc. 1970; Newcomb 1952.
Datum: NAVD88

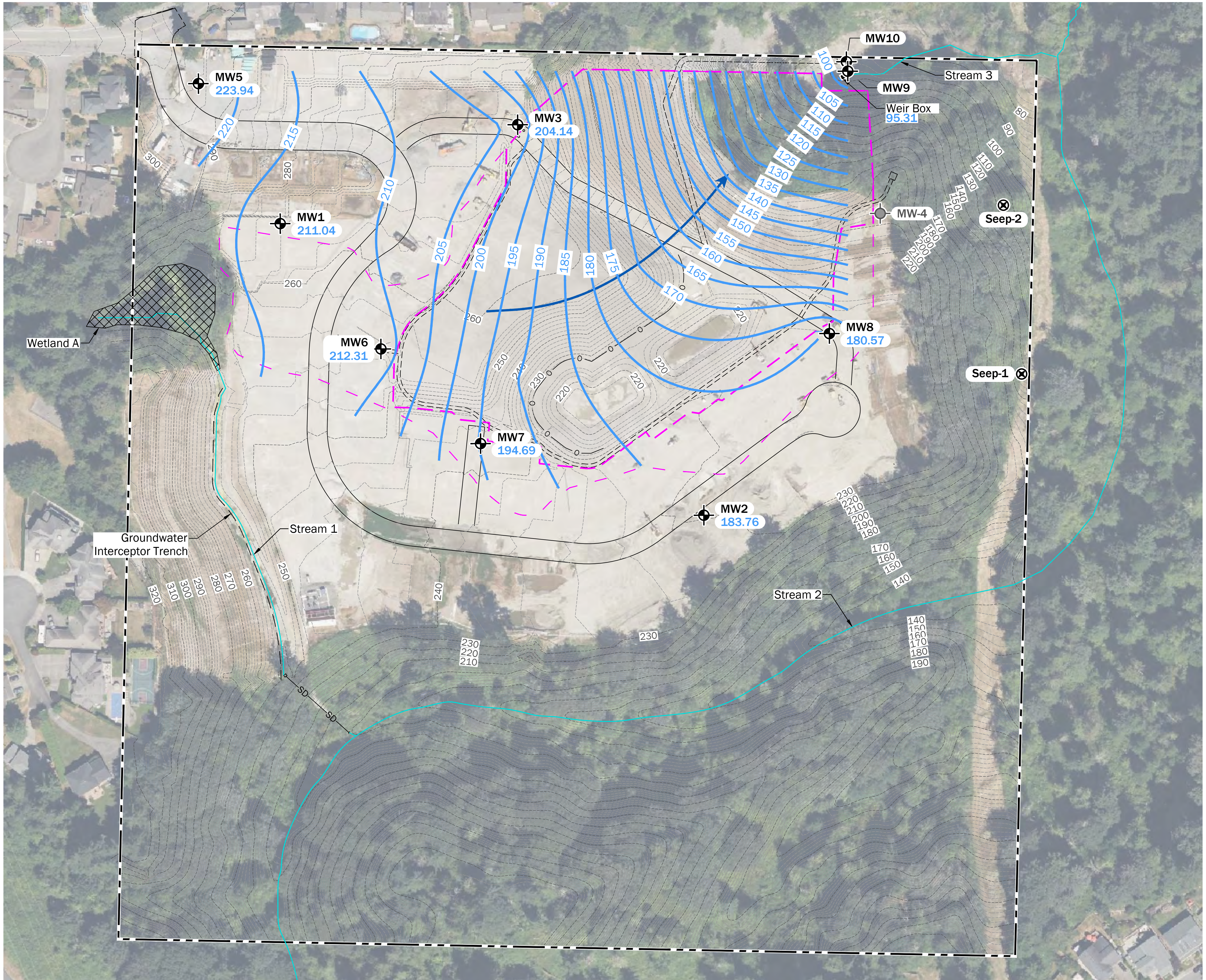
Cross Sections Through Landfill

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 3-1

\\geoengineers.com\wan\Projects\26\26410001\CAD\01\Client Review RI FS Report\2641000101_F03-1_Schematic Cross Sections Through Landfill.dwg TAB:F03-1 Date Exported: 07/13/23 - 19:20 by mwoods



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- 200 Groundwater Contour (NAVD88)
- MW1 211.04 Groundwater Monitoring Well and Groundwater Elevation (NAVD88)
- MW-4 Decommissioned Groundwater Monitoring Well
- Seep-1 Seep Location
- Inferred Groundwater Flow Direction

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023. Aerial from Microsoft Bing Images.

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

N W E S

150 0 150
Feet

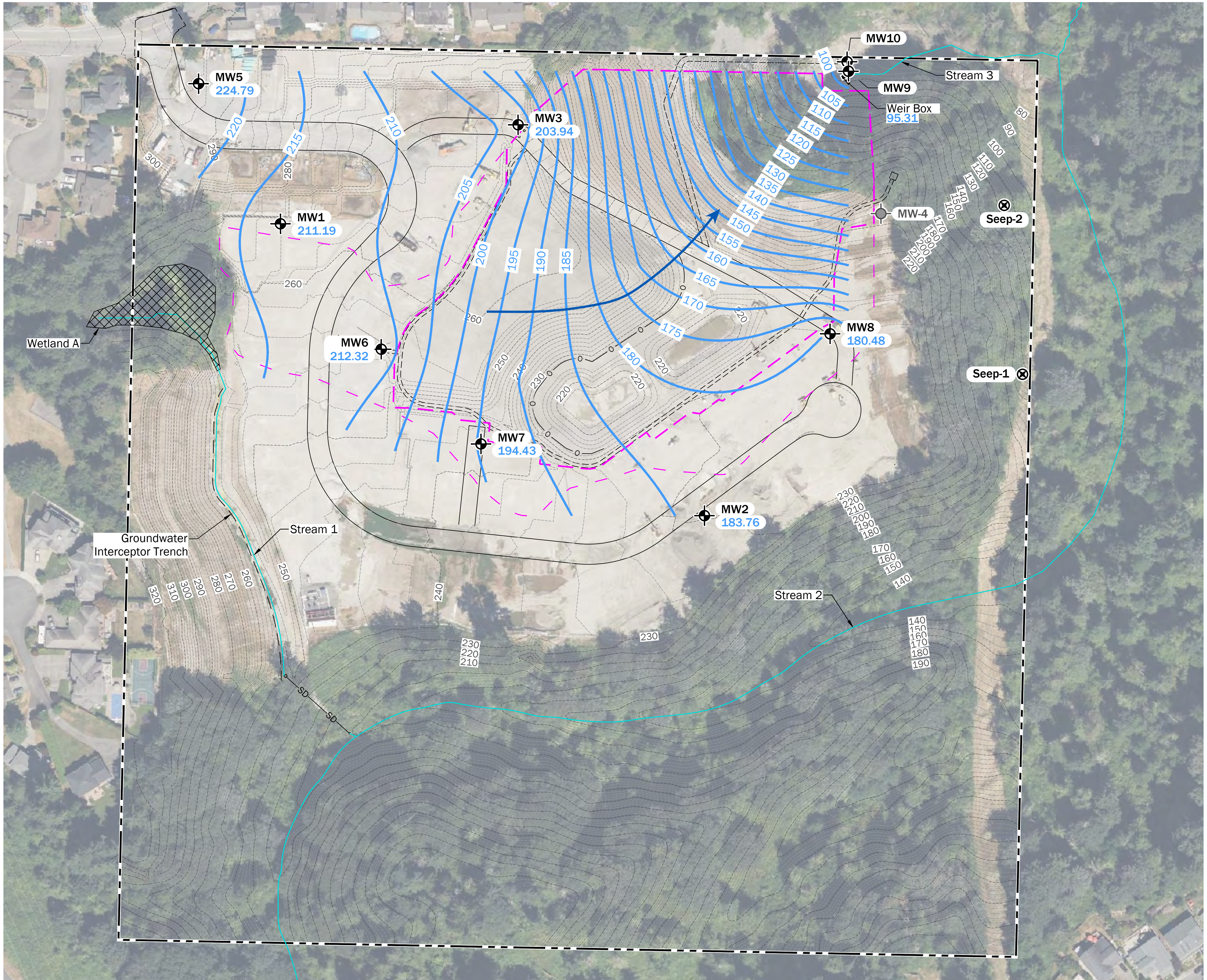
March 2022 Groundwater Contours

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 3-2A

\\geoengineers.com\WAN\Projects\26\2641000101\CAD\01\Client Review RI FS Report\2641000101_F03-2A March 2022 Groundwater Contours.dwg F03-2A Date Exported:7/18/2023 2:08 PM - by Michael R. Woods



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- 200 Groundwater Contour (NAVD88)
- MW1 211.19 Groundwater Monitoring Well and Groundwater Elevation (NAVD88)
- MW-4 Decommissioned Groundwater Monitoring Well
- Seep-1 Seep Location
- Inferred Groundwater Flow Direction

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023. Aerial from Microsoft Bing Images.

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

N W E S

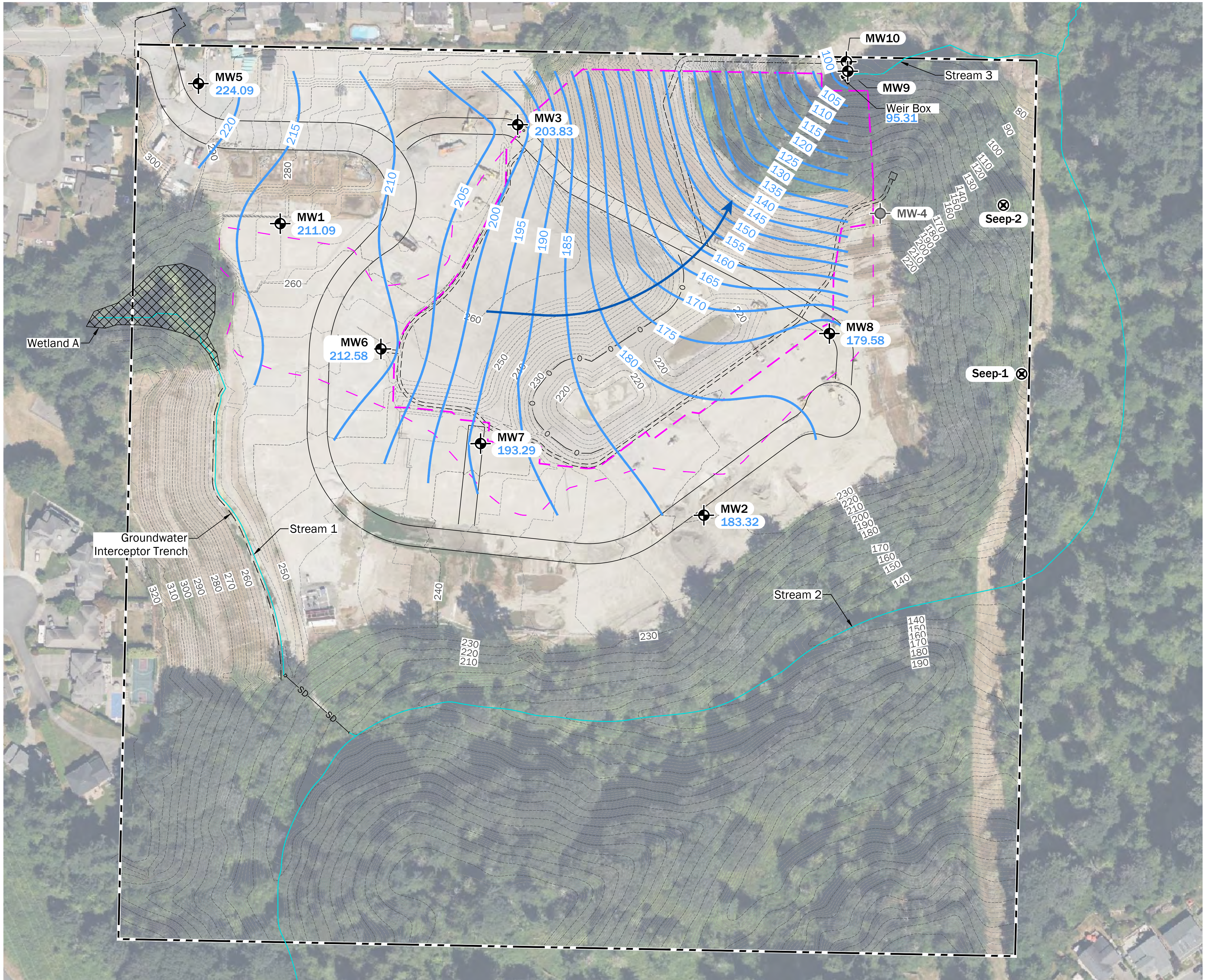
150 0 150

Feet

May 2022 Groundwater Contours

Go East Corp Landfill Site
Everett, Washington

GeoEngineers **Figure 3-2B**



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- 200 Groundwater Contour (NAVD88)
- MW1 211.09 Groundwater Monitoring Well and Groundwater Elevation (NAVD88)
- MW-4 Decommissioned Groundwater Monitoring Well
- Seep-1 Seep Location
- Inferred Groundwater Flow Direction

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023. Aerial from Microsoft Bing Images.

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

N W E S

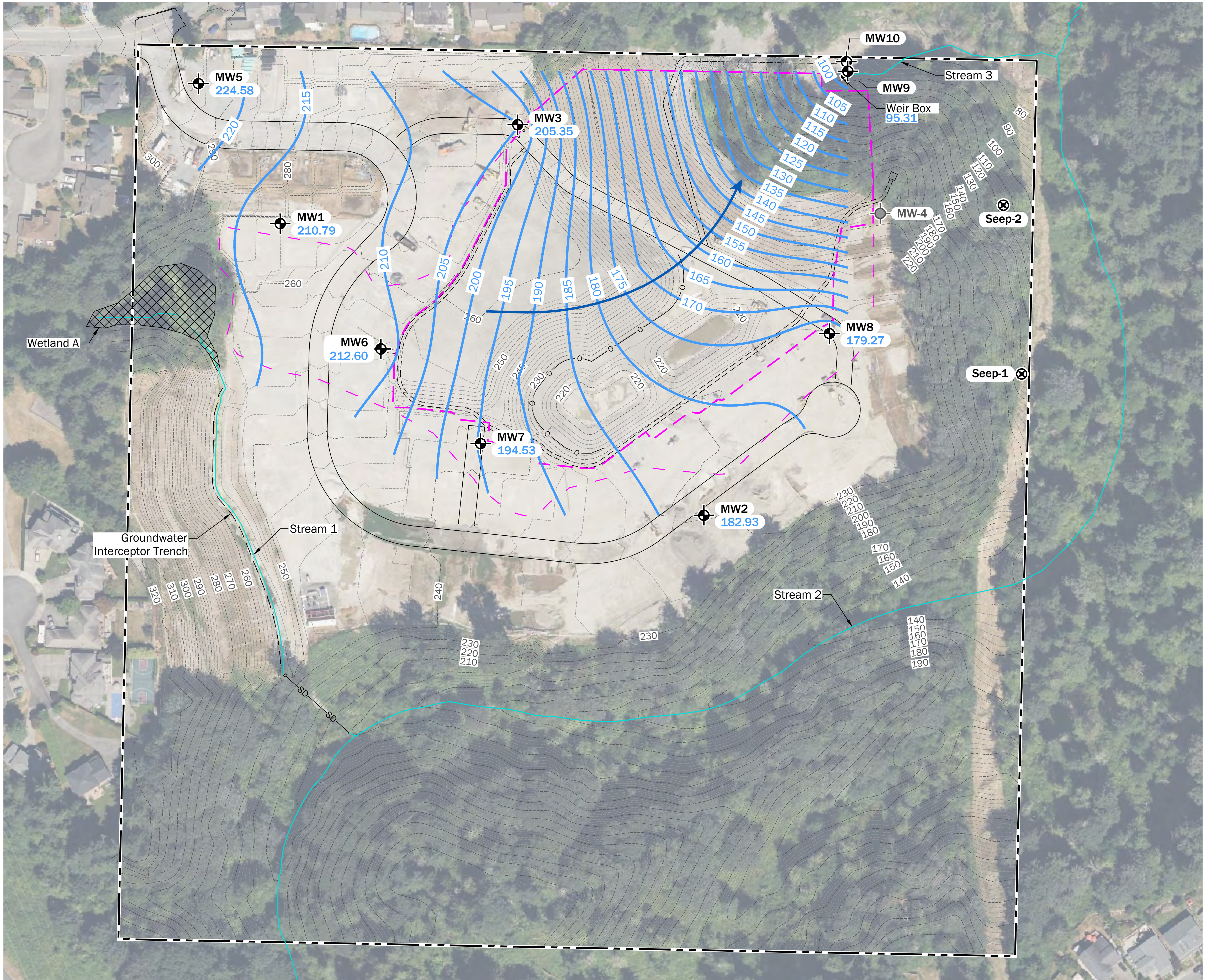
150 0 150
Feet

June 2022 Groundwater Contours

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 3-2C



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- 200 Groundwater Contour (NAVD88)
- MW1 210.79 Groundwater Monitoring Well and Groundwater Elevation (NAVD88)
- MW-4 Decommissioned Groundwater Monitoring Well
- Seep-1 Seep Location
- Inferred Groundwater Flow Direction

Notes:

1. Groundwater elevations measured on September 20-22, 2022.
2. The locations of all features shown are approximate.
3. 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: Background CAD files from MG Land Surveyors downloaded 2/17/2023. Aerial from Microsoft Bing Images.

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

N W E S

150 0 150
Feet

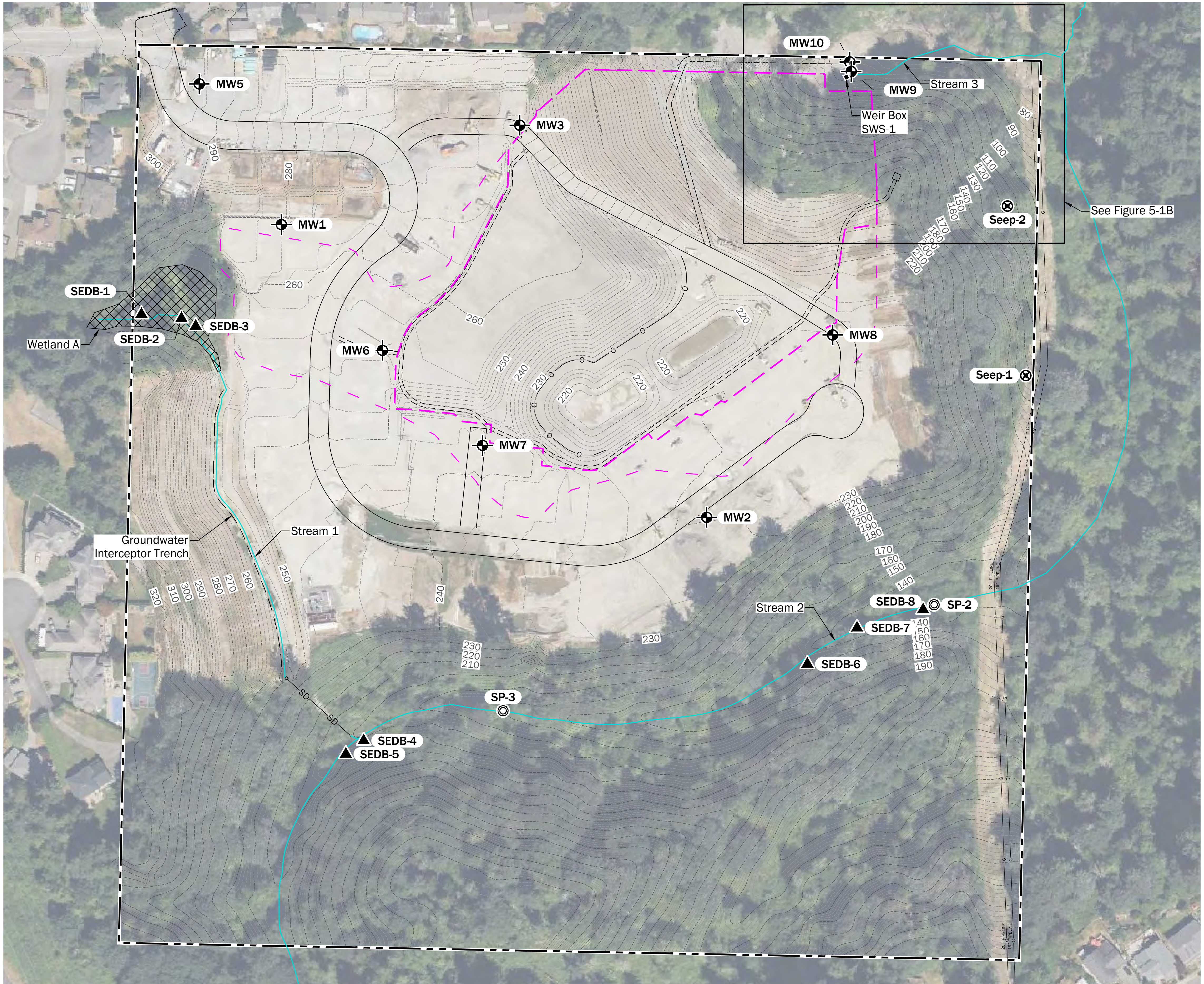
September 2022 Groundwater Contours

Go East Corp Landfill Site
Everett, Washington

GEOENGINEERS

Figure 3-2D

\\geoengineers.com\WAN\Projects\26\2641000101\CAD\01\Client Review RI FS Report\264100010101_F03-2D September 2022 Groundwater Contours.dwg F03-2D Date Exported:7/18/2023 2:05 PM - by Michael R. Woods



Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SEDB-1 Sediment Sample Location
- Seep-1 Seep Location
- SP-2 Surface Water Location

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N
W E
S

150 0 150
Feet

RI Sampling Locations

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 5-1A

\\geoengineers.com\WAN\Projects\26\26410001\CAD\01\Client Review RI FS Report\2641000101_F05-1A_RI Sampling Locations.dwg F5-1A Date Exported:5/16/2023 1:39 PM - by Michael R. Woods

Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SED-4 ▲ Sediment Sampling Location
- SED-1 △ Sediment Sampling Location (Disturbed by mudslide)

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N W E S

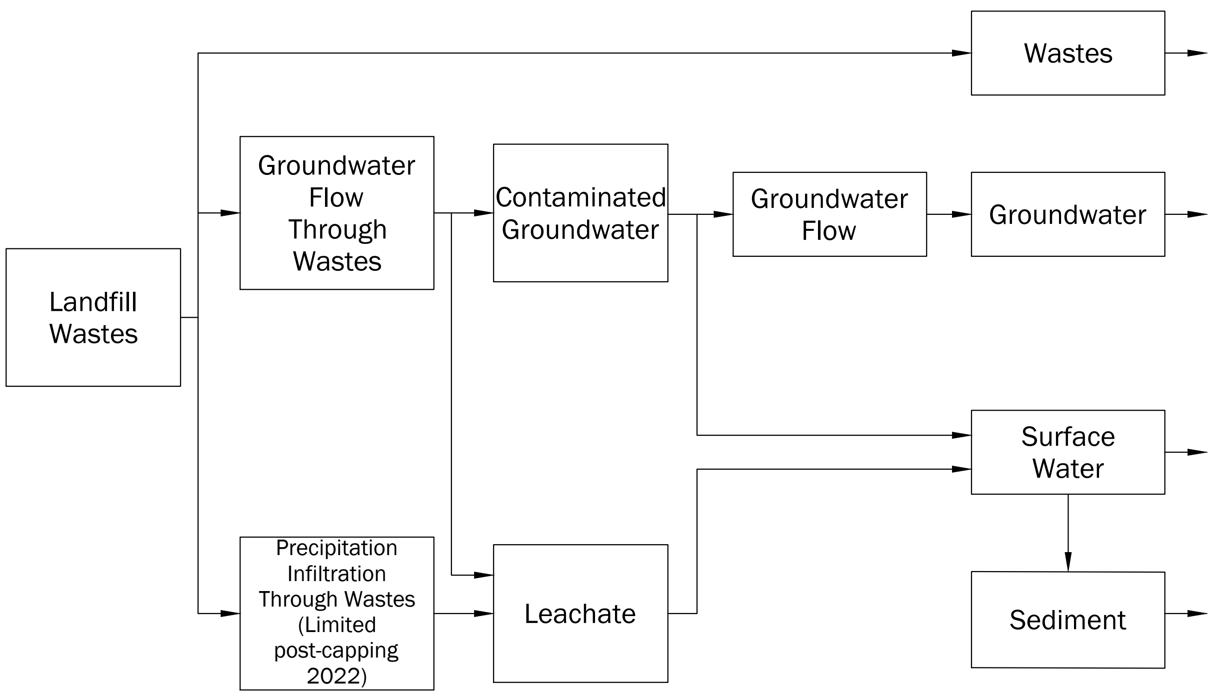
40 0 40
Feet

RI Sampling Locations

Go East Corp Landfill Site
Everett, Washington

GeoEngineers | **Figure 5-1B**

\\geoengineers.com\WAN\Projects\26\2641000\101\CAD\01\Client Review RI FS Report\264100001_F05-1B_RI Sampling Locations.dwg F5-1B Date Exported:7/18/2023 6:09 PM - by Michael R. Woods



Exposure Medium	Exposure Pathway	Human – On Property – Current	Human – On Property – Future	Human – Off Property – Current	Human – Off Property – Future	Ecological – Terrestrial – Current	Ecological – Terrestrial – Future	Ecological – Aquatic – Current	Ecological – Aquatic – Future
Wastes	Ingestion	○	○	NA	NA	○	○	NA	NA
Wastes	Direct Contact	○	○	NA	NA	○	○	NA	NA
Groundwater	Ingestion	○	○	□	□	NA	NA	NA	NA
Surface Water	Ingestion	□	□	□	□	●	●	●	●
Surface Water	Direct Contact	□	□	□	□	●	●	●	●
Sediment	Ingestion	□	□	□	□	●	●	●	●
Sediment	Direct Contact	□	□	□	□	●	●	●	●

Legend

- NA Not Applicable
- ● Complete Exposure Pathway
- ○ Incomplete Exposure Pathway
- □ Complete but Minor/Unlikely Exposure Pathway

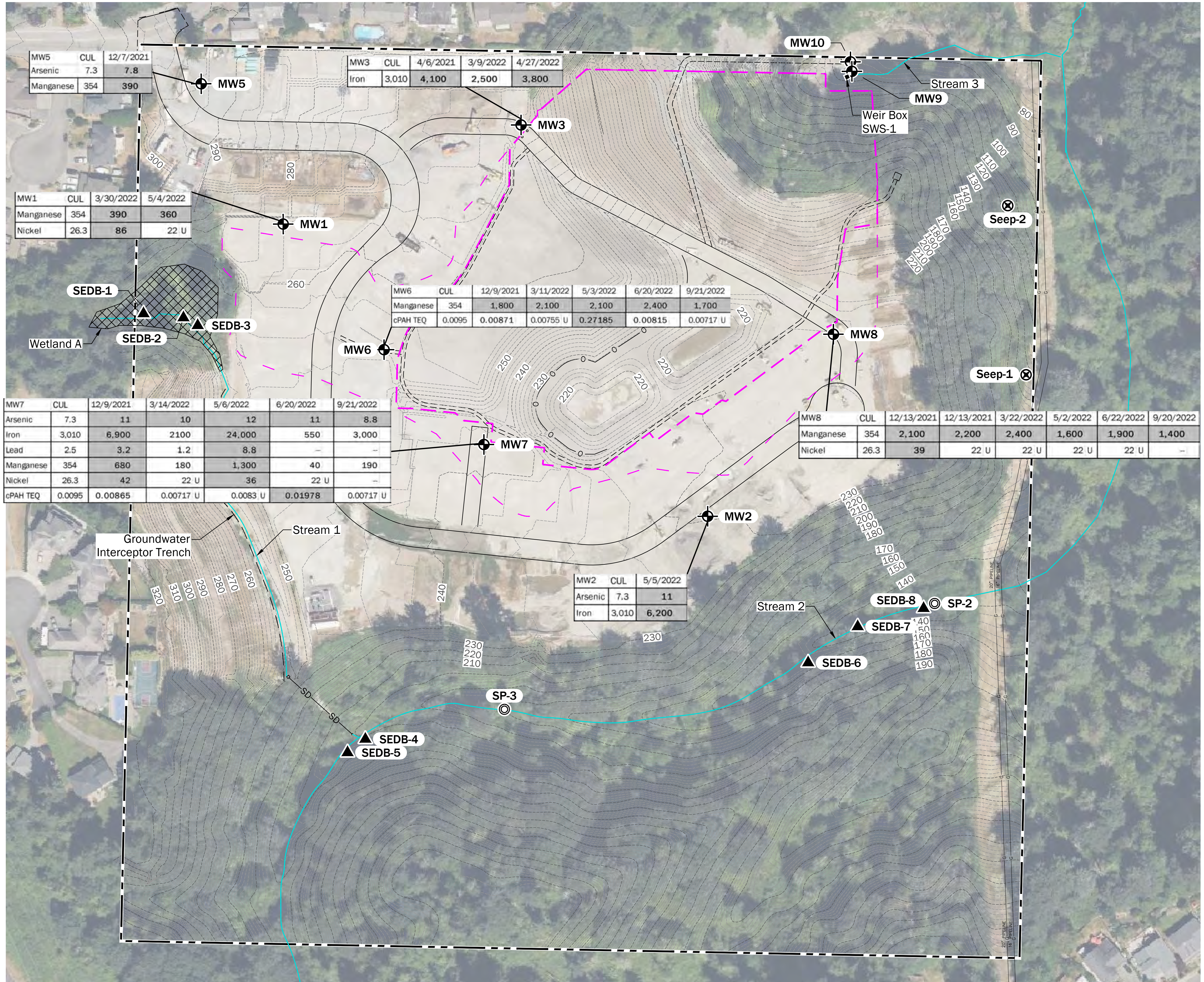
Note:
This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this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

Conceptual Site Model

Go East Landfill
Snohomish County, Washington

GeoEngineers

Figure 7-1



MW5	CUL	12/7/2021
Arsenic	7.3	7.8
Manganese	354	390

MW3	CUL	4/6/2021	3/9/2022	4/27/2022
Iron	3,010	4,100	2,500	3,800

MW1	CUL	3/30/2022	5/4/2022
Manganese	354	390	360
Nickel	26.3	86	22 U

MW6	CUL	12/9/2021	3/11/2022	5/3/2022	6/20/2022	9/21/2022
Manganese	354	1,800	2,100	2,100	2,400	1,700
cPAH TEQ	0.0095	0.00871	0.00755 U	0.27185	0.00815	0.00717 U

MW7	CUL	12/9/2021	3/14/2022	5/6/2022	6/20/2022	9/21/2022
Arsenic	7.3	11	10	12	11	8.8
Iron	3,010	6,900	2100	24,000	550	3,000
Lead	2.5	3.2	1.2	8.8	–	–
Manganese	354	680	180	1,300	40	190
Nickel	26.3	42	22 U	36	22 U	–
cPAH TEQ	0.0095	0.00865	0.00717 U	0.0083 U	0.01978	0.00717 U

MW8	CUL	12/13/2021	12/13/2021	3/22/2022	5/2/2022	6/22/2022	9/20/2022
Manganese	354	2,100	2,200	2,400	1,600	1,900	1,400
Nickel	26.3	39	22 U	22 U	22 U	22 U	–

MW2	CUL	5/5/2022
Arsenic	7.3	11
Iron	3,010	6,200

Legend

Property Boundary

Final Landfill Limit

Former Extent of Wedge Area

280 Topographic Contour (NAVD88)

MW1 Groundwater Monitoring Well

SEDB-1 Sediment Sample Location

Seep-1 Seep Location

SP-2 Surface Water Location

MW1	CUL	3/30/2022	5/4/2022
Manganese	354	390	360
Nickel	26.3	86	22 U

All concentrations in ug/L
CUL = Cleanup Level
Bold font indicates a detection
Gray shading indicates a CUL exceedance
U = Not detected
– = Not analyzed

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N W E S

150 0 150
Feet

Groundwater Exceedances

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 7-2A

P:\26\26410001\CAD\02\Client Review RI FS Report\2641000102_F07-2A-F07-4A_.dwg F7-2A Date Exported:5/10/2024 3:22 PM - by Michael R. Woods

MW10	CUL	4/4/2022	5/19/2022	6/23/2022	9/21/2022
Iron	3,010	**6,800**	**1,400**	**1,300**	**6,400**
Lead	2.5	**4.5**	1.1 U	1.1 U	1.1 U
Manganese	354	**320**	**460**	**450**	**1,600**

MW9	CUL	4/4/2022	5/19/2022	6/23/2022	9/21/2022
Iron	3,010	**5,100**	**2,300**	**8,600**	**2,400**
Manganese	354	**1,500**	**1,100**	**1,800**	**1,400**

Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SED-4 Sediment Sampling Location
- SED-1 Sediment Sampling Location (Disturbed by mudslide)
- Seep-1 Seep Location

MW1	CUL	3/30/2022	5/4/2022
Manganese	354	**390**	**360**
Nickel	26.3	**86**	22 U

All concentrations in ug/L
CUL = Cleanup Level
Bold font indicates a detection
Gray shading indicates a CUL exceedance
U = Not detected
-- = Not analyzed

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.

Data Source: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N W E S

40 0 40
Feet

Groundwater Exceedances

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 7-2B

SEEP2	CUL	3/17/2022
Iron	3,010	4,300
Manganese	354	380

SEEP-1	CUL	3/17/2022
Iron	3,010	11,000

SP3	CUL	4/2/2021
cPAH TEQ	0.0095	0.01481

Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SEDB-1 Sediment Sample Location
- Seep-1 Seep Location
- SP-2 Surface Water Location

SWS1	CUL	4/2/2021	11/1/2021
Iron	3,010	8,900	11,000
Lead	2.5	0.28 U	1.1 U

All concentrations in ug/L
CUL = Cleanup Level
Bold font indicates a detection
Gray shading indicates a CUL exceedance
U = Not detected
-- = Not analyzed

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N
W E
S

150 0 150
Feet

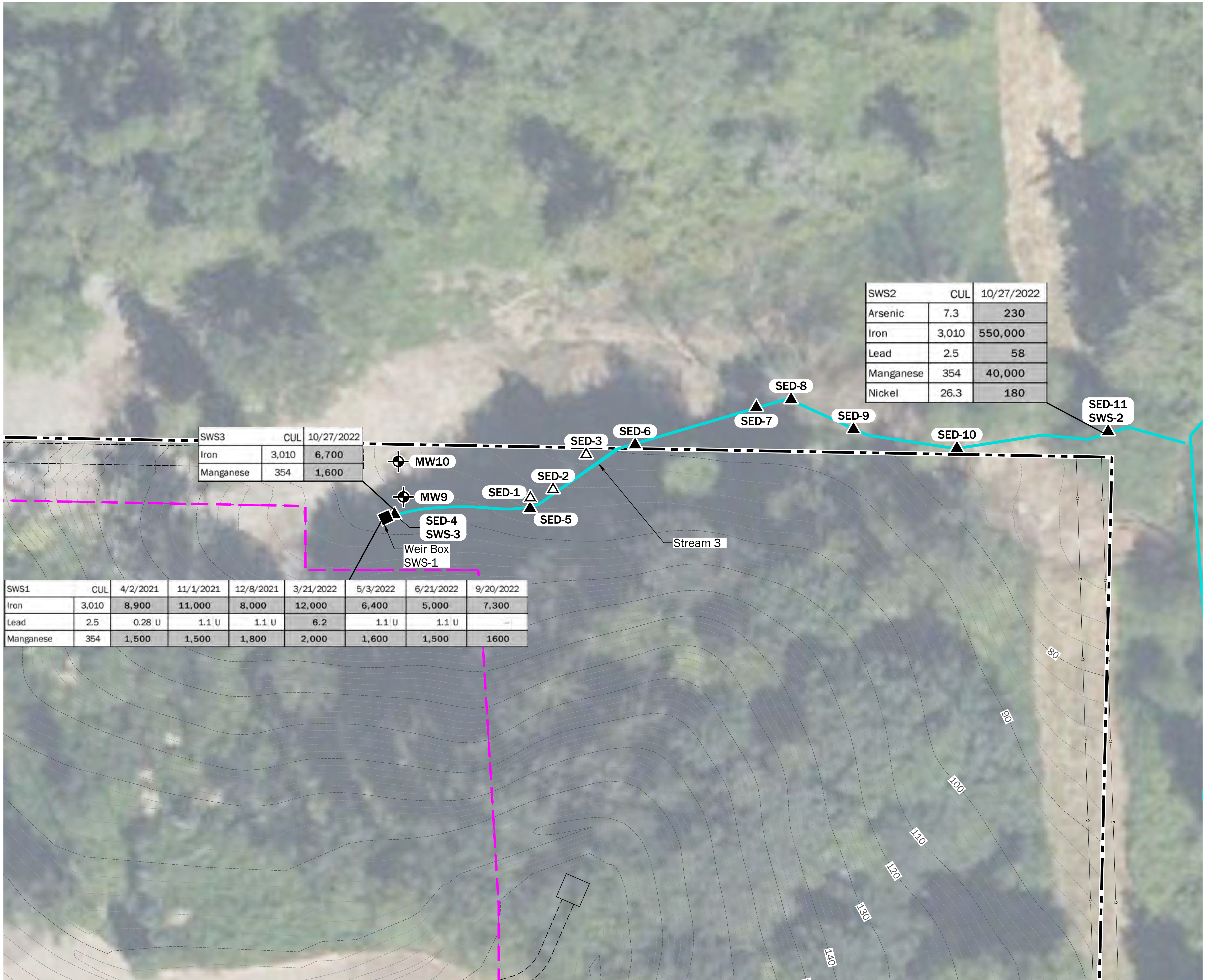
Surface Water Exceedance

Go East Corp Landfill Site
Everett, Washington

GEOENGINEERS

Figure 7-3A

\\geoengineers.com\WAN\Projects\26\26410001\CAD\01\Client Review RI FS Report\2641000101_F07-1A-F07-3A_.dwg F7-3A Date Exported:8/22/2023 12:00 PM - by Michael R. Woods



SWS3	CUL	10/27/2022
Iron	3,010	**6,700**
Manganese	354	**1,600**

SWS2	CUL	10/27/2022
Arsenic	7.3	**230**
Iron	3,010	**550,000**
Lead	2.5	**58**
Manganese	354	**40,000**
Nickel	26.3	**180**

SWS1	CUL	4/2/2021	11/1/2021	12/8/2021	3/21/2022	5/3/2022	6/21/2022	9/20/2022
Iron	3,010	**8,900**	**11,000**	**8,000**	**12,000**	**6,400**	**5,000**	**7,300**
Lead	2.5	0.28 U	1.1 U	1.1 U	**6.2**	1.1 U	1.1 U	--
Manganese	354	**1,500**	**1,500**	**1,800**	**2,000**	**1,600**	**1,500**	**1600**

Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SED-4 Sediment Sampling Location
- SED-1 Sediment Sampling Location (Disturbed by mudslide)
- Seep-1 Seep Location

SWS1	CUL	4/2/2021	11/1/2021
Iron	3,010	**8,900**	**11,000**
Lead	2.5	0.28 U	1.1 U

All concentrations in ug/L
CUL = Cleanup Level
Bold font indicates a detection
Gray shading indicates a CUL exceedance
U = Not detected
-- = Not analyzed

Notes:

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Data Source: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N W E S

40 0 40
Feet

Surface Water Exceedances

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 7-3B

\\geoengineers.com\WAN\Projects\26\2641000l\CAD\01\Client Review RI FS Report\264100010l_F07-1B-F07-3B.dwg F07-3B Date Exported:8/22/2023 12:03 PM - by Michael R. Woods

Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SEDB-1 Sediment Sample Location
- Seep-1 Seep Location
- SP-2 Surface Water Location

SED-3	CUL	7/13/2021
Iron	46,700	**270,000**
Heptachlor	0.289	**1.8**

All concentrations in mg/kg
CUL = Cleanup Level
Bold font indicates a detection
Gray shading indicates a CUL exceedance

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: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N W E S

150 0 150
Feet

Sediment Exceedances

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 7-4A

SED-3	CUL	7/13/2021
Iron	46,700	**270,000**
Heptachlor	0.289	**1.8**

SED-2	CUL	7/13/2021
Iron	46,700	**51,000**

SED-1	CUL	7/13/2021
Iron	46,700	**110,000**

Legend

- Property Boundary
- Final Landfill Limit
- Former Extent of Wedge Area
- 280 Topographic Contour (NAVD88)
- MW1 Groundwater Monitoring Well
- SED-4 Sediment Sampling Location
- SED-1 Sediment Sampling Location (Disturbed by mudslide)
- Seep-1 Seep Location

SED-3	CUL	7/13/2021
Iron	46,700	**270,000**
Heptachlor	0.289	**1.8**

All concentrations in mg/kg
CUL = Cleanup Level
Bold font indicates a detection
Gray shading indicates a CUL exceedance

Notes:

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Data Source: Background CAD files from MG Land Surveyors downloaded 2/17/2023.
Aerial from Microsoft Bing Images.

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

N W E S

40 0 40
Feet

Sediment Exceedances

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 7-4B

\\geoengineers.com\WAN\Projects\26\26410001\CAD\01\Client Review RI FS Report\2641000101_F07-1B-F07-3B.dwg F07-4B Date Exported:8/22/2023 12:03 PM - by Michael R. Woods

APPENDIX A
Final Interim Action Completion Report Pages

Full Report available at https://apps.ecology.wa.gov/cleanupsearch/document/107534

Table 1

Interim Action Excavation Confirmation Soil Sample Results

Go East Corp Landfill Site

Everett, Washington

Parameter	Soil Interim Action Level	IAEX-1-6	IAEX-14-8	IAEX-2-25	IAEX-3-25	IAEX-4-6	IAEX-22-8	IAEX-5-6	IAEX-6-30	IAEX-7-9	IAEX-20-11	IAEX-8-28	IAEX-9-30	IAEX-10-4
Sample Date		04/27/21	4/30/2021	04/27/21	04/27/21	04/28/21	05/05/21	04/28/21	04/28/21	04/28/21	05/05/21	04/28/21	04/29/21	04/29/21
Sheen		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS	NS
PID (ppm)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Petroleum Hydrocarbons (mg/kg)														
Gasoline-range hydrocarbons	100	6.7 U	--	5.6 U	5.7 U	5.9 U	--	6.1 U	6.2 U	7.3 U	--	6.8 U	6.7 U	5.9 U
Diesel-range hydrocarbons	NE	29 U	--	27 U	28 U	31 U	30 U	28 U	28 U	29 U	--	28 U	29 U	28 U
Lube oil-range hydrocarbons	NE	59	--	54 U	56 U	380	59 U	55 U	56 U	59 U	--	56 U	71	61
Total (sum of) diesel & oil range hydrocarbons	260	59	--	54 U	56 U	380	59 U	55 U	56 U	59 U	--	56 U	71	61
Volatile Organic Compounds (mg/kg)														
1,1,1,2-Tetrachloroethane	38	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,1,1-Trichloroethane	1.5	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,1,2,2-Tetrachloroethane	0.001	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,1,2-Trichloroethane	0.0019	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,1-Dichloroethane	0.041	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,1-Dichloroethylene	0.044	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,1-Dichloropropene	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2,3-Trichlorobenzene	20	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2,3-Trichloropropane	0.033	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2,4-Trichlorobenzene	0.033	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2,4-Trimethylbenzene	800	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2-Dibromo-3-Chloropropane	1.3	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
1,2-Dibromoethane	0.001	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2-Dichlorobenzene	7	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2-Dichloroethane	0.023	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,2-Dichloropropane	0.0036	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,3,5-Trimethylbenzene	800	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,3-Dichlorobenzene	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,3-Dichloropropane	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
1,4-Dichlorobenzene	0.98	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
2,2-Dichloropropane	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
2-Chloroethyl vinyl ether	NE	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
2-Chlorotoluene	1600	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
2-Hexanone	400	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
4-Chlorotoluene	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
4-Isopropyltoluene	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Acetone	29	0.014 U	--	0.015 U	0.014 U	0.013 U	--	0.014 U	0.022	0.015 U	--	0.013	0.034	0.015 U
Benzene	0.0024	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Bromobenzene	0.56	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Bromochloromethane	NE	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Bromoform	0.03	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Bromomethane	0.05	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Carbon Disulfide	5	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U

Parameter	Sample ID	IAEX-1-6	IAEX-14-8	IAEX-2-25	IAEX-3-25	IAEX-4-6	IAEX-22-8	IAEX-5-6	IAEX-6-30	IAEX-7-9	IAEX-20-11	IAEX-8-28	IAEX-9-30	IAEX-10-4
	Sample Date	04/27/21	4/30/2021	04/27/21	04/27/21	04/28/21	05/05/21	04/28/21	04/28/21	04/28/21	05/05/21	04/28/21	04/29/21	04/29/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Carbon Tetrachloride	0.0017	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Chlorobenzene	0.17	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Chloroethane	NE	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Chloroform	0.074	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Chloromethane	NE	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
cis-1,2-Dichloroethylene	0.078	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
cis-1,3-Dichloropropene	0.0011	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Dibromochloromethane	0.0032	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Dibromomethane	800	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Dichlorobromomethane	0.0038	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Dichlorodifluoromethane	16000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Ethylbenzene	0.24	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Hexachlorobutadiene	0.033	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Isopropylbenzene	8000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Methyl ethyl ketone (MEK)	48000	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0061	0.0058 U	--	0.0047 U	0.0088	0.0056 U
Methyl Iodide	NE	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Methyl isobutyl ketone	6400	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Methyl tert-butyl ether	0.1	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Methylene Chloride	0.021	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Naphthalene	4.5	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
n-Butylbenzene	4000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
n-Propylbenzene	8000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Sec-Butylbenzene	8000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Styrene	2.2	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Tert-Butylbenzene	8000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Tetrachloroethylene	0.024	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Toluene	0.4	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Total Xylenes	14	0.0022 U	--	0.0022 U	0.0022 U	0.0020 U	--	0.0022 U	0.0024 U	0.0023 U	--	0.0019 U	0.0025 U	0.0022 U
trans-1,2-Dichloroethylene	0.52	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
trans-1,3-Dichloropropene	0.0011	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Trichloroethylene	0.0019	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Trichlorofluoromethane	24000	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Vinyl Acetate	33	0.0056 U	--	0.0056 U	0.0055 U	0.0050 U	--	0.0055 U	0.0060 U	0.0058 U	--	0.0047 U	0.0063 U	0.0056 U
Vinyl Chloride	0.001	0.0011 U	--	0.0011 U	0.0011 U	0.00099 U	--	0.0011 U	0.0012 U	0.0012 U	--	0.00094 U	0.0013 U	0.0011 U
Semi-Volatile Organic Compounds (mg/kg)														
1,2-Dinitrobenzene	8	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
1,2-Diphenylhydrazine	1.3	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
1,3-Dinitrobenzene	8	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
1,4-Dinitrobenzene	8	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,3,4,6-Tetrachlorophenol	2400	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,3,5,6-Tetrachlorophenol	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,3-Dichloroaniline	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,4,5-Trichlorophenol	4	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,4,6-Trichlorophenol	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,4-Dichlorophenol	0.069	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,4-Dimethylphenol	0.7	0.048 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U

Parameter	Sample ID	IAEX-1-6	IAEX-14-8	IAEX-2-25	IAEX-3-25	IAEX-4-6	IAEX-22-8	IAEX-5-6	IAEX-6-30	IAEX-7-9	IAEX-20-11	IAEX-8-28	IAEX-9-30	IAEX-10-4
	Sample Date	04/27/21	4/30/2021	04/27/21	04/27/21	04/28/21	05/05/21	04/28/21	04/28/21	04/28/21	05/05/21	04/28/21	04/29/21	04/29/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-Dinitrophenol	0.17	0.52 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
2,4-Dinitrotoluene	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2,6-Dinitrotoluene	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2-Chloronaphthalene	6400	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2-Chlorophenol	0.18	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2-methylphenol	2.3	0.051 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2-Nitroaniline	800	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
2-Nitrophenol	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
3,3'-Dichlorobenzidine	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
3+4-Methylphenol	4000	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
3-Nitroaniline	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
4,6-Dinitro-2-Methylphenol	NE	0.39 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
4-Bromophenyl phenyl ether	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
4-Chloro-3-Methylphenol	NE	0.045 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
4-Chloroaniline	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
4-Chlorophenyl phenyl ether	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
4-Nitroaniline	320	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
4-Nitrophenol	7	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Aniline	180	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Benzyl Alcohol	8000	0.082 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Bis(2-Chloroethoxy)Methane	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Bis(2-Chloroethyl)Ether	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Bis(2-chloroisopropyl) ether	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Bis(2-Ethylhexyl) Phthalate	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Butyl benzyl Phthalate	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Carbazole	3.7	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Di(2-ethylhexyl)adipate	NE	0.24 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Dibenzofuran	NE	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Dibutyl Phthalate	0.28	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Diethyl Phthalate	1.1	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Dimethyl Phthalate	200	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Di-N-Octyl Phthalate	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Hexachlorobenzene	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Hexachlorocyclopentadiene	4	0.087 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Hexachloroethane	0.033	0.053 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Isophorone	0.13	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Nitrobenzene	0.064	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
N-Nitrosodimethylamine	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
N-Nitrosodi-n-propylamine	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
N-Nitrosodiphenylamine	0.033	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Pentachlorophenol	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.18 U	0.19 U	0.19 U	--	0.19 U	0.19 U	0.19 U
Phenol	0.74	0.038 U	--	0.036 U	0.037 U	0.042 U	--	0.037 U	0.037 U	0.039 U	--	0.037 U	0.039 U	0.037 U
Pyridine	80	0.38 U	--	0.36 U	0.37 U	0.42 U	--	0.37 U	0.37 U	0.39 U	--	0.37 U	0.39 U	0.37 U
Polycyclic Aromatic Hydrocarbons (mg/kg)														
1-Methylnaphthalene	34	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
2-Methylnaphthalene	320	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U

Parameter	Sample ID	IAEX-1-6	IAEX-14-8	IAEX-2-25	IAEX-3-25	IAEX-4-6	IAEX-22-8	IAEX-5-6	IAEX-6-30	IAEX-7-9	IAEX-20-11	IAEX-8-28	IAEX-9-30	IAEX-10-4
	Sample Date	04/27/21	4/30/2021	04/27/21	04/27/21	04/28/21	05/05/21	04/28/21	04/28/21	04/28/21	05/05/21	04/28/21	04/29/21	04/29/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Acenaphthene	3.1	0.014	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Acenaphthylene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Anthracene	47	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Benzo(a)anthracene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Benzo(a)pyrene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Benzo(b)fluoranthene	NE	0.0081	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Benzo(g,h,i)perylene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Benzo(j,k)fluoranthene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Chrysene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Dibenzo(a,h)anthracene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Fluoranthene	NE	0.015	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Fluorene	1.6	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Indeno(1,2,3-c,d)pyrene	NE	0.0076 U	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Naphthalene	4.5	0.0082	--	0.0072 U	0.0083	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.011	0.0074 U
Phenanthrene	NE	0.016	--	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Pyrene	0.02	0.026	0.0073 U	0.0072 U	0.0074 U	0.0084 U	--	0.0074 U	0.0075 U	0.0078 U	--	0.0075 U	0.0078 U	0.0074 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.0062	--	0.0054 U	0.0056 U	0.0063 U	--	0.0056 U	0.0057 U	0.0059 U	--	0.0057 U	0.0059 U	0.0056 U
Polychlorinated Biphenyls (mg/kg)														
Total PCB Aroclors	0.05	0.057 U	--	0.054 U	0.056 U	0.063 U	--	0.055 U	0.056 U	0.058 U	--	0.056 U	0.058 U	0.056 U
Organochlorine Pesticides (mg/kg)														
4,4'-DDD	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
4,4'-DDE	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
4,4'-DDT	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Aldrin	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Alpha-BHC	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Beta-BHC	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
cis-Chlordane	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
trans-Chlordane	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0084	0.0060 U	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Chlordane (Total)	NE	0.011 U	--	0.011 U	0.011 U	0.0084	0.0060 U	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Delta-BHC	6	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Dieldrin	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Endosulfan I	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Endosulfan II	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Endosulfan Sulfate	480	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Endrin	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Endrin Aldehyde	NE	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Endrin Ketone	NE	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Gamma-BHC	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Heptachlor	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Heptachlor Epoxide	0.005	0.0057 U	--	0.0054 U	0.0056 U	0.0063 U	--	0.0055 U	0.0056 U	0.0058 U	--	0.0056 U	0.0058 U	0.0056 U
Methoxychlor	0.032	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.011 U	0.011 U	0.012 U	--	0.011 U	0.012 U	0.011 U
Toxaphene	0.05	0.057 U	--	0.054 U	0.056 U	0.063 U	--	0.055 U	0.056 U	0.058 U	--	0.056 U	0.058 U	0.056 U
Chlorinated Acid Hericides (mg/kg)														
2,4,5-T	800	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.01 U	0.011 U	0.011 U	--	0.011 U	0.011 U	0.011 U
2,4,5-TP	640	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.011 U	0.011 U	0.011 U	--	0.011 U	0.011 U	0.011 U

Parameter	Sample ID / Sample Date / Sheen / PID (ppm) / Soil Interim Action Level	IAEX-1-6	IAEX-14-8	IAEX-2-25	IAEX-3-25	IAEX-4-6	IAEX-22-8	IAEX-5-6	IAEX-6-30	IAEX-7-9	IAEX-20-11	IAEX-8-28	IAEX-9-30	IAEX-10-4
	Sample Date	**04/27/21**	**4/30/2021**	**04/27/21**	**04/27/21**	**04/28/21**	**05/05/21**	**04/28/21**	**04/28/21**	**04/28/21**	**05/05/21**	**04/28/21**	**04/29/21**	**04/29/21**
	Sheen	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**SS**	**NS**	**NS**
	PID (ppm)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Parameter	**Soil Interim Action Level**													
2,4-D	800	0.011 U	--	0.01 U	0.01 U	0.012 U	--	0.01 U	0.011 U	0.011 U	--	0.011 U	0.011 U	0.01 U
2,4-DB	2400	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.01 U	0.011 U	0.011 U	--	0.011 U	0.011 U	0.011 U
Dalapon	2400	0.21 U	--	0.2 U	0.2 U	0.23 U	--	0.2 U	0.21 U	0.21 U	--	0.21 U	0.21 U	0.2 U
Dicamba	2400	0.011 U	--	0.01 U	0.01 U	0.012 U	--	0.01 U	0.011 U	0.011 U	--	0.011 U	0.011 U	0.01 U
Dichlorprop	NE	0.081 U	--	0.076 U	0.079 U	0.089 U	--	0.078 U	0.079 U	0.083 U	--	0.079 U	0.083 U	0.079 U
Dinoseb	80	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.01 U	0.011 U	0.011 U	--	0.011 U	0.011 U	0.011 U
MCPA	40	2.7 U	--	2.5 U	2.6 U	2.9 U	--	2.6 U	2.6 U	2.7 U	--	2.6 U	2.7 U	2.6 U
MCPP	80	1.1 U	--	1 U	1 U	1.2 U	--	1 U	1 U	1.1 U	--	1 U	1.1 U	1 U
Metals (mg/kg)														
Arsenic	20	11 U	--	11 U	11 U	13 U	--	11 U	11 U	12 U	--	11 U	12 U	11 U
Cadmium	0.8	0.57 U	--	0.54 U	0.56 U	0.63 U	--	0.55 U	0.56 U	0.58 U	--	0.56 U	0.58 U	0.56 U
Chromium	48	26	--	27	26	33	--	24	27	27	--	30	26	29
Copper	36	12	--	11	9.9	13	--	6.6	10	5.6	--	10	16	12
Lead	50	15	--	5.4 U	5.6 U	6.3 U	--	5.5 U	5.6 U	5.8 U	--	5.6 U	10	8.4
Mercury	0.07	0.037	--	0.025	0.026	0.026	--	0.051	0.024	0.03	--	0.020 U	0.031	0.024
Nickel	48	45	--	44	43	50	See note 4	37	44	48	--	46	45	52
Selenium	0.8	0.57 U	--	0.54 U	0.56 U	0.63 U	--	0.55 U	0.56 U	0.58 U	--	0.56 U	0.58 U	0.56 U
Zinc	86	32	--	24	26	28	--	28	31	330	42	35	39	36

Parameter	Sample ID	IAEX-11-4	IAEX-12-2	IAEX-13-3	IAEX-15-2	IAEX-16-15	IAEX-17-35	IAEX-18-35	IAEX-19-1	IAEX-38-3	IAEX-21-6	IAEX-23-3	IAEX-24-35	IAEX-25-5
	Sample Date	04/29/21	4/30/2021	4/30/2021	4/30/2021	05/04/21	05/04/21	05/04/21	05/04/21	05/11/21	05/05/21	05/05/21	05/05/21	05/06/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Total Petroleum Hydrocarbons (mg/kg)														
Gasoline-range hydrocarbons	100	6.9 U	5.7 U	6.4 U	6.1 U	6.1 U	5.7 U	5.6 U	5.9 U	--	5.9 U	5.7 U	6.2 U	6.7 U
Diesel-range hydrocarbons	NE	28 U	27 U	27 U	28 U	28 U	28 U	28 U	27 U	--	27 U	30 U	27 U	32 U
Lube oil-range hydrocarbons	NE	57 U	54 U	54 U	55 U	57 U	55 U	55 U	54 U	--	55 U	60 U	54 U	63 U
Total (sum of) diesel & oil range hydrocarbons	260	57 U	54 U	54 U	55 U	57 U	55 U	55 U	54 U	--	55 U	60 U	54 U	63 U
Volatile Organic Compounds (mg/kg)														
1,1,1,2-Tetrachloroethane	38	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,1,1-Trichloroethane	1.5	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,1,2,2-Tetrachloroethane	0.001	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,1,2-Trichloroethane	0.0019	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,1-Dichloroethane	0.041	0.0012 U	0.0014 U	0.0015 U	0.0016 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,1-Dichloroethylene	0.044	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,1-Dichloropropene	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2,3-Trichlorobenzene	20	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2,3-Trichloropropane	0.033	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2,4-Trichlorobenzene	0.033	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2,4-Trimethylbenzene	800	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2-Dibromo-3-Chloropropane	1.3	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
1,2-Dibromoethane	0.001	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2-Dichlorobenzene	7	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2-Dichloroethane	0.023	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,2-Dichloropropane	0.0036	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,3,5-Trimethylbenzene	800	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,3-Dichlorobenzene	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,3-Dichloropropane	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
1,4-Dichlorobenzene	0.98	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
2,2-Dichloropropane	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
2-Chloroethyl vinyl ether	NE	0.006 U	0.0067 U	0.0075 U	0.0075 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
2-Chlorotoluene	1600	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
2-Hexanone	400	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
4-Chlorotoluene	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
4-Isopropyltoluene	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0095	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Acetone	29	0.016 U	0.016 U	0.018 U	0.018 U	0.017 U	0.036	0.023	0.016 U	--	0.011 U	0.010 U	0.014	0.015 U
Benzene	0.0024	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Bromobenzene	0.56	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Bromochloromethane	NE	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Bromoform	0.03	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Bromomethane	0.05	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Carbon Disulfide	5	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0021	0.0011 U

Parameter	Sample ID	IAEX-11-4	IAEX-12-2	IAEX-13-3	IAEX-15-2	IAEX-16-15	IAEX-17-35	IAEX-18-35	IAEX-19-1	IAEX-38-3	IAEX-21-6	IAEX-23-3	IAEX-24-35	IAEX-25-5
	Sample Date	04/29/21	4/30/2021	4/30/2021	4/30/2021	05/04/21	05/04/21	05/04/21	05/04/21	05/11/21	05/05/21	05/05/21	05/05/21	05/06/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Carbon Tetrachloride	0.0017	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Chlorobenzene	0.17	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Chloroethane	NE	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Chloroform	0.074	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Chloromethane	NE	0.006 U	0.0069 U	0.0077 U	0.0078 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
cis-1,2-Dichloroethylene	0.078	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
cis-1,3-Dichloropropene	0.0011	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Dibromochloromethane	0.0032	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Dibromomethane	800	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Dichlorobromomethane	0.0038	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Dichlorodifluoromethane	16000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0014 U	0.0013 U	0.0014 U	0.0011 U
Ethylbenzene	0.24	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Hexachlorobutadiene	0.033	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Isopropylbenzene	8000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Methyl ethyl ketone (MEK)	48000	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Methyl Iodide	NE	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Methyl isobutyl ketone	6400	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Methyl tert-butyl ether	0.1	0.0012 U	0.0014 U	0.0015 U	0.0016 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Methylene Chloride	0.021	0.006 U	0.0069 U	0.0077 U	0.0078 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Naphthalene	4.5	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
n-Butylbenzene	4000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
n-Propylbenzene	8000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Sec-Butylbenzene	8000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Styrene	2.2	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Tert-Butylbenzene	8000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Tetrachloroethylene	0.024	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Toluene	0.4	0.006 U	0.0053 U	0.006 U	0.006 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Total Xylenes	14	0.0024 U	0.0021 U	0.0024 U	0.0024 U	0.0024 U	0.0025 U	0.0029 U	0.0023 U	--	0.0021 U	0.0020 U	0.0022 U	0.0022 U
trans-1,2-Dichloroethylene	0.52	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
trans-1,3-Dichloropropene	0.0011	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Trichloroethylene	0.0019	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Trichlorofluoromethane	24000	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Vinyl Acetate	33	0.006 U	0.0068 U	0.0076 U	0.0076 U	0.006 U	0.0061 U	0.0072 U	0.0057 U	--	0.0053 U	0.0051 U	0.0056 U	0.0055 U
Vinyl Chloride	0.001	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0014 U	0.0011 U	--	0.0011 U	0.0010 U	0.0011 U	0.0011 U
Semi-Volatile Organic Compounds (mg/kg)														
1,2-Dinitrobenzene	8	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
1,2-Diphenylhydrazine	1.3	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
1,3-Dinitrobenzene	8	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
1,4-Dinitrobenzene	8	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,3,4,6-Tetrachlorophenol	2400	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,3,5,6-Tetrachlorophenol	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,3-Dichloroaniline	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,4,5-Trichlorophenol	4	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,4,6-Trichlorophenol	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,4-Dichlorophenol	0.069	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,4-Dimethylphenol	0.7	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U

Parameter	Sample ID	IAEX-11-4	IAEX-12-2	IAEX-13-3	IAEX-15-2	IAEX-16-15	IAEX-17-35	IAEX-18-35	IAEX-19-1	IAEX-38-3	IAEX-21-6	IAEX-23-3	IAEX-24-35	IAEX-25-5
	Sample Date	04/29/21	4/30/2021	4/30/2021	4/30/2021	05/04/21	05/04/21	05/04/21	05/04/21	05/11/21	05/05/21	05/05/21	05/05/21	05/06/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-Dinitrophenol	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.44 U	0.43 U	0.43 U	0.42 U	--	0.42 U	0.46 U	0.42 U	0.21 U
2,4-Dinitrotoluene	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2,6-Dinitrotoluene	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2-Chloronaphthalene	6400	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2-Chlorophenol	0.18	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2-methylphenol	2.3	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2-Nitroaniline	800	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
2-Nitrophenol	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
3,3'-Dichlorobenzidine	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
3+4-Methylphenol	4000	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
3-Nitroaniline	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
4,6-Dinitro-2-Methylphenol	NE	0.19 U	0.18 U	0.18 U	0.18 U	0.3 U	0.29 U	0.29 U	0.29 U	--	0.29 U	0.32 U	0.29 U	0.21 U
4-Bromophenyl phenyl ether	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
4-Chloro-3-Methylphenol	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
4-Chloroaniline	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
4-Chlorophenyl phenyl ether	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
4-Nitroaniline	320	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
4-Nitrophenol	7	0.038 U	0.049	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.084 U
Aniline	180	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Benzyl Alcohol	8000	0.038 U	0.046	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.042	--	0.037 U	0.040 U	0.036 U	0.042 U
Bis(2-Chloroethoxy)Methane	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Bis(2-Chloroethyl)Ether	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Bis(2-chloroisopropyl) ether	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Bis(2-Ethylhexyl) Phthalate	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Butyl benzyl Phthalate	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Carbazole	3.7	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Di(2-ethylhexyl)adipate	NE	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Dibenzofuran	NE	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Dibutyl Phthalate	0.28	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Diethyl Phthalate	1.1	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Dimethyl Phthalate	200	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Di-N-Octyl Phthalate	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Hexachlorobenzene	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Hexachlorocyclopentadiene	4	0.038 U	0.036 U	0.036 U	0.037 U	0.057 U	0.055 U	0.055 U	0.054 U	--	0.055 U	0.060 U	0.054 U	0.042 U
Hexachloroethane	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Isophorone	0.13	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Nitrobenzene	0.064	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
N-Nitrosodimethylamine	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
N-Nitrosodi-n-propylamine	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
N-Nitrosodiphenylamine	0.033	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Pentachlorophenol	0.17	0.19 U	0.18 U	0.18 U	0.18 U	0.19 U	0.18 U	0.18 U	0.18 U	--	0.18 U	0.20 U	0.18 U	0.21 U
Phenol	0.74	0.038 U	0.036 U	0.036 U	0.037 U	0.038 U	0.037 U	0.037 U	0.036 U	--	0.037 U	0.040 U	0.036 U	0.042 U
Pyridine	80	0.38 U	0.36 U	0.36 U	0.37 U	0.38 U	0.37 U	0.37 U	0.36 U	--	0.37 U	0.40 U	0.36 U	0.42 U
Polycyclic Aromatic Hydrocarbons (mg/kg)														
1-Methylnaphthalene	34	0.0076 U	0.0072 U	0.054	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
2-Methylnaphthalene	320	0.0076 U	0.0072 U	0.13	0.0074 U	0.0075 U	0.0073 U	0.0095	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U

Parameter	Sample ID	IAEX-11-4	IAEX-12-2	IAEX-13-3	IAEX-15-2	IAEX-16-15	IAEX-17-35	IAEX-18-35	IAEX-19-1	IAEX-38-3	IAEX-21-6	IAEX-23-3	IAEX-24-35	IAEX-25-5
	Sample Date	04/29/21	4/30/2021	4/30/2021	4/30/2021	05/04/21	05/04/21	05/04/21	05/04/21	05/11/21	05/05/21	05/05/21	05/05/21	05/06/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Acenaphthene	3.1	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0076	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Acenaphthylene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Anthracene	47	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.015	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Benzo(a)anthracene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.03	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Benzo(a)pyrene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.044	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Benzo(b)fluoranthene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.083	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Benzo(g,h,i)perylene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.027	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Benzo(j,k)fluoranthene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.023	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Chrysene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.034	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Dibenzo(a,h)anthracene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.0077	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Fluoranthene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0096	0.017	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Fluorene	1.6	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Indeno(1,2,3-c,d)pyrene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.0074 U	0.032	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Naphthalene	4.5	0.0076 U	0.0072 U	0.18	0.0074 U	0.0075 U	0.0073 U	0.028	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Phenanthrene	NE	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.017	0.0072 U	--	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Pyrene	0.02	0.0076 U	0.0072 U	0.0072 U	0.0074 U	0.0075 U	0.0073 U	0.011	0.023	0.0072 U	0.0073 U	0.0080 U	0.0072 U	0.0084 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.0057 U	0.0054 U	0.0054 U	0.0056 U	0.0057 U	0.0055 U	0.0056 U	0.062	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Total PCB Aroclors	0.05	0.057 U	0.054 U	0.054 U	0.055 U	0.057 U	0.055 U	0.055 U	0.054 U	--	0.055 U	0.060 U	0.054 U	0.063 U
Organochlorine Pesticides (mg/kg)														
4,4'-DDD	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
4,4'-DDE	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
4,4'-DDT	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Aldrin	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Alpha-BHC	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Beta-BHC	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
cis-Chlordane	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
trans-Chlordane	0.005	0.0057 U	0.011 U	0.011 U	0.011 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Chlordane (Total)	NE	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Delta-BHC	6	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Dieldrin	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Endosulfan I	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Endosulfan II	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Endosulfan Sulfate	480	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Endrin	0.005	0.0057 U	0.011 U	0.011 U	0.011 U	0.011 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Endrin Aldehyde	NE	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Endrin Ketone	NE	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Gamma-BHC	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Heptachlor	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Heptachlor Epoxide	0.005	0.0057 U	0.0054 U	0.0054 U	0.0055 U	0.0057 U	0.0055 U	0.0055 U	0.0054 U	--	0.0055 U	0.0060 U	0.0054 U	0.0063 U
Methoxychlor	0.032	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	--	0.011 U	0.012 U	0.011 U	0.013 U
Toxaphene	0.05	0.057 U	0.054 U	0.054 U	0.055 U	0.057 U	0.055 U	0.055 U	0.054 U	--	0.055 U	0.06 U	0.054 U	0.063 U
Chlorinated Acid Hericides (mg/kg)														
2,4,5-T	800	0.011 U	0.021 U	0.021 U	0.021 U	0.011 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.011 U	0.01 U	0.012 U
2,4,5-TP	640	0.011 U	0.01 U	0.01 U	0.011 U	0.011 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.011 U	0.01 U	0.012 U

Parameter	Sample ID	IAEX-11-4	IAEX-12-2	IAEX-13-3	IAEX-15-2	IAEX-16-15	IAEX-17-35	IAEX-18-35	IAEX-19-1	IAEX-38-3	IAEX-21-6	IAEX-23-3	IAEX-24-35	IAEX-25-5
	Sample Date	04/29/21	4/30/2021	4/30/2021	4/30/2021	05/04/21	05/04/21	05/04/21	05/04/21	05/11/21	05/05/21	05/05/21	05/05/21	05/06/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-D	800	0.011 U	0.02 U	0.02 U	0.021 U	0.011 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.011 U	0.01 U	0.012 U
2,4-DB	2400	0.011 U	0.021 U	0.021 U	0.021 U	0.011 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.011 U	0.01 U	0.012 U
Dalapon	2400	0.21 U	0.2 U	0.2 U	0.2 U	0.1 U	0.1 U	0.1 U	0.1 U	--	0.1 U	0.11 U	0.099 U	0.23 U
Dicamba	2400	0.011 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.011 U	0.01 U	0.012 U
Dichlorprop	NE	0.08 U	0.077 U	0.077 U	0.078 U	0.08 U	0.078 U	0.078 U	0.077 U	--	0.078 U	0.085 U	0.077 U	0.089 U
Dinoseb	80	0.011 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	--	0.01 U	0.011 U	0.01 U	0.012 U
MCPA	40	2.7 U	2.5 U	2.5 U	2.6 U	2.6 U	2.6 U	2.6 U	2.5 U	--	2.6 U	2.8 U	2.5 U	3 U
MCPP	80	1.1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	--	1 U	1.1 U	1 U	1.2 U
Metals (mg/kg)														
Arsenic	20	11 U	11 U	11 U	11 U	11 U	11 U	11 U	11 U	--	11 U	12 U	11 U	13 U
Cadmium	0.8	0.57 U	0.54 U	0.54 U	0.55 U	0.57 U	0.55 U	0.55 U	0.54 U	--	0.55 U	0.60 U	0.54 U	0.63 U
Chromium	48	25	22	25	22	24	27	26	20	--	28	25	22	30
Copper	36	14	9.3	11	11	10	15	12	8.7	--	9.8	7.8	9.8	6.9
Lead	50	5.7 U	5.4 U	5.4 U	5.5 U	5.7 U	5.5 U	11	5.4 U	--	5.5 U	6.0 U	5.4 U	6.3 U
Mercury	0.07	0.022	0.017	0.021	0.026	0.023 U	0.047	0.032	0.022 U	--	0.04	0.024 U	0.022	0.022 U
Nickel	48	55	47	50	42	45	60	48	38	--	42	42	45	34
Selenium	0.8	0.57 U	0.54 U	0.54 U	0.55 U	0.57 U	0.55 U	0.55 U	0.54 U	--	0.55 U	0.60 U	0.54 U	0.63 U
Zinc	86	31	25	29	26	26	30	33	25	--	24	21	31	21

Parameter	Sample ID / Sample Date / Sheen / PID (ppm) / Soil Interim Action Level	IAEX-26-3	IAEX-27-25	IAEX-28-28	IAEX-29-25	IAEX-30-30	IAEX-31-3	IAEX-32-5	IAEX-33-2	IAEX-34-2	DUP-210511	IAEX-35-2	IAEX-36-2	IAEX-37-2
	Sample Date	05/06/21	05/07/21	05/07/21	05/07/21	05/07/21	05/10/21	05/10/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Total Petroleum Hydrocarbons (mg/kg)														
Gasoline-range hydrocarbons	100	6.9 U	6.8 U	6.6 U	5.4 U	5.7 U	5.9 U	5.2 U	6.9 U	5.8 U	6 U	6 U	7.2 U	6.2 U
Diesel-range hydrocarbons	NE	30 U	27 U	28 U	27 U	28 U	27 U	27 U	30 U	27 U	27 U	29 U	31 U	28 U
Lube oil-range hydrocarbons	NE	60 U	55 U	56 U	53 U	56 U	54 U	53 U	59 U	53 U	54 U	59 U	62 U	56 U
Total (sum of) diesel & oil range hydrocarbons	260	60 U	55 U	56 U	53 U	56 U	54 U	53 U	59 U	53 U	54 U	59 U	62 U	56 U
Volatile Organic Compounds (mg/kg)														
1,1,1,2-Tetrachloroethane	38	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,1,1-Trichloroethane	1.5	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,1,2,2-Tetrachloroethane	0.001	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,1,2-Trichloroethane	0.0019	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,1-Dichloroethane	0.041	0.0011 U	0.0015 U	0.0017 U	0.0022 U	0.0018 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,1-Dichloroethylene	0.044	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,1-Dichloropropene	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2,3-Trichlorobenzene	20	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2,3-Trichloropropane	0.033	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2,4-Trichlorobenzene	0.033	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2,4-Trimethylbenzene	800	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dibromo-3-Chloropropane	1.3	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
1,2-Dibromoethane	0.001	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dichlorobenzene	7	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dichloroethane	0.023	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,2-Dichloropropane	0.0036	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,3,5-Trimethylbenzene	800	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,3-Dichlorobenzene	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,3-Dichloropropane	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
1,4-Dichlorobenzene	0.98	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
2,2-Dichloropropane	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
2-Chloroethyl vinyl ether	NE	0.0053 U	0.0074 U	0.0083 U	0.011 U	0.0092 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
2-Chlorotoluene	1600	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
2-Hexanone	400	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
4-Chlorotoluene	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
4-Isopropyltoluene	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Acetone	29	0.015 U	0.017 U	0.019 U	0.025 U	0.021 U	0.011 U	0.012 U	0.01 U	0.012 U	0.011 U	0.011 U	0.06	0.012 U
Benzene	0.0024	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Bromobenzene	0.56	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Bromochloromethane	NE	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Bromoform	0.03	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Bromomethane	0.05	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Carbon Disulfide	5	0.0011 U	0.0015 U	0.0017 U	0.0022 U	0.0018 U	0.0016 U	0.0018 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U

Parameter	Sample ID	IAEX-26-3	IAEX-27-25	IAEX-28-28	IAEX-29-25	IAEX-30-30	IAEX-31-3	IAEX-32-5	IAEX-33-2	IAEX-34-2	DUP-210511	IAEX-35-2	IAEX-36-2	IAEX-37-2
	Sample Date	05/06/21	05/07/21	05/07/21	05/07/21	05/07/21	05/10/21	05/10/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Carbon Tetrachloride	0.0017	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Chlorobenzene	0.17	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Chloroethane	NE	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Chloroform	0.074	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Chloromethane	NE	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
cis-1,2-Dichloroethylene	0.078	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
cis-1,3-Dichloropropene	0.0011	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Dibromochloromethane	0.0032	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Dibromomethane	800	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Dichlorobromomethane	0.0038	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Dichlorodifluoromethane	16000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Ethylbenzene	0.24	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Hexachlorobutadiene	0.033	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Isopropylbenzene	8000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Methyl ethyl ketone (MEK)	48000	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0092	0.0058 U
Methyl Iodide	NE	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0097 U	0.011 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Methyl isobutyl ketone	6400	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Methyl tert-butyl ether	0.1	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Methylene Chloride	0.021	0.0053 U	0.0075 U	0.0085 U	0.011 U	0.0094 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Naphthalene	4.5	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
n-Butylbenzene	4000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
n-Propylbenzene	8000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Sec-Butylbenzene	8000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Styrene	2.2	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Tert-Butylbenzene	8000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Tetrachloroethylene	0.024	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Toluene	0.4	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Total Xylenes	14	0.0021 U	0.0023 U	0.0026 U	0.0033 U	0.0028 U	0.0022 U	0.0023 U	0.0021 U	0.0023 U	0.0023 U	0.0022 U	0.0023 U	0.0023 U
trans-1,2-Dichloroethylene	0.52	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
trans-1,3-Dichloropropene	0.0011	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Trichloroethylene	0.0019	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Trichlorofluoromethane	24000	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Vinyl Acetate	33	0.0053 U	0.0057 U	0.0064 U	0.0084 U	0.0071 U	0.0054 U	0.0058 U	0.0052 U	0.0058 U	0.0057 U	0.0054 U	0.0058 U	0.0058 U
Vinyl Chloride	0.001	0.0011 U	0.0011 U	0.0013 U	0.0017 U	0.0014 U	0.0011 U	0.0012 U	0.001 U	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U
Semi-Volatile Organic Compounds (mg/kg)														
1,2-Dinitrobenzene	8	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
1,2-Diphenylhydrazine	1.3	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
1,3-Dinitrobenzene	8	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
1,4-Dinitrobenzene	8	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,3,4,6-Tetrachlorophenol	2400	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,3,5,6-Tetrachlorophenol	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,3-Dichloroaniline	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,4,5-Trichlorophenol	4	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,4,6-Trichlorophenol	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,4-Dichlorophenol	0.069	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,4-Dimethylphenol	0.7	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U

Parameter	Sample ID	IAEX-26-3	IAEX-27-25	IAEX-28-28	IAEX-29-25	IAEX-30-30	IAEX-31-3	IAEX-32-5	IAEX-33-2	IAEX-34-2	DUP-210511	IAEX-35-2	IAEX-36-2	IAEX-37-2
	Sample Date	05/06/21	05/07/21	05/07/21	05/07/21	05/07/21	05/10/21	05/10/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-Dinitrophenol	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.28 U	0.28 U	0.31 U	0.28 U	0.28 U	0.31 U	0.32 U	0.29 U
2,4-Dinitrotoluene	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2,6-Dinitrotoluene	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2-Chloronaphthalene	6400	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2-Chlorophenol	0.18	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2-methylphenol	2.3	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2-Nitroaniline	800	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
2-Nitrophenol	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
3,3'-Dichlorobenzidine	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
3+4-Methylphenol	4000	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
3-Nitroaniline	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
4,6-Dinitro-2-Methylphenol	NE	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.24 U	0.24 U	0.27 U	0.24 U	0.24 U	0.27 U	0.28 U	0.25 U
4-Bromophenyl phenyl ether	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
4-Chloro-3-Methylphenol	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
4-Chloroaniline	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
4-Chlorophenyl phenyl ether	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
4-Nitroaniline	320	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
4-Nitrophenol	7	0.080 U	0.073 U	0.075 U	0.071 U	0.074 U	0.048 U	0.047 U	0.052 U	0.047 U	0.047 U	0.052 U	0.055 U	0.049 U
Aniline	180	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Benzyl Alcohol	8000	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.046	0.037 U
Bis(2-Chloroethoxy)Methane	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Bis(2-Chloroethyl)Ether	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Bis(2-chloroisopropyl) ether	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Bis(2-Ethylhexyl) Phthalate	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Butyl benzyl Phthalate	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Carbazole	3.7	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Di(2-ethylhexyl)adipate	NE	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Dibenzofuran	NE	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Dibutyl Phthalate	0.28	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Diethyl Phthalate	1.1	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Dimethyl Phthalate	200	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Di-N-Octyl Phthalate	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Hexachlorobenzene	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Hexachlorocyclopentadiene	4	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.051 U	0.05 U	0.056 U	0.051 U	0.051 U	0.055 U	0.059 U	0.053 U
Hexachloroethane	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Isophorone	0.13	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Nitrobenzene	0.064	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
N-Nitrosodimethylamine	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
N-Nitrosodi-n-propylamine	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
N-Nitrosodiphenylamine	0.033	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Pentachlorophenol	0.17	0.20 U	0.18 U	0.19 U	0.18 U	0.19 U	0.18 U	0.18 U	0.2 U	0.18 U	0.18 U	0.2 U	0.21 U	0.19 U
Phenol	0.74	0.040 U	0.037 U	0.037 U	0.036 U	0.037 U	0.036 U	0.035 U	0.04 U	0.036 U	0.036 U	0.039 U	0.041 U	0.037 U
Pyridine	80	0.40 U	0.37 U	0.37 U	0.36 U	0.37 U	0.36 U	0.35 U	0.4 U	0.36 U	0.36 U	0.39 U	0.41 U	0.37 U
Polycyclic Aromatic Hydrocarbons (mg/kg)														
1-Methylnaphthalene	34	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
2-Methylnaphthalene	320	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U

	Sample ID	**IAEX-26-3**	**IAEX-27-25**	**IAEX-28-28**	**IAEX-29-25**	**IAEX-30-30**	**IAEX-31-3**	**IAEX-32-5**	**IAEX-33-2**	**IAEX-34-2**	**DUP-210511**	**IAEX-35-2**	**IAEX-36-2**	**IAEX-37-2**
	Sample Date	**05/06/21**	**05/07/21**	**05/07/21**	**05/07/21**	**05/07/21**	**05/10/21**	**05/10/21**	**05/11/21**	**05/11/21**	**05/11/21**	**05/11/21**	**05/11/21**	**05/11/21**
	Sheen	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
	PID (ppm)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Parameter	**Soil Interim Action Level**													
Acenaphthene	3.1	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0081	0.0097	0.0074 U
Acenaphthylene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Anthracene	47	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Benzo(a)anthracene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Benzo(a)pyrene	NE	0.0080 U	0.0073 U	0.014	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Benzo(b)fluoranthene	NE	0.0080 U	0.0073 U	0.012	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Benzo(g,h,i)perylene	NE	0.0080 U	0.0073 U	0.015	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Benzo(j,k)fluoranthene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Chrysene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Dibenzo(a,h)anthracene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Fluoranthene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Fluorene	1.6	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Indeno(1,2,3-c,d)pyrene	NE	0.0080 U	0.0073 U	0.014	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Naphthalene	4.5	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Phenanthrene	NE	0.0080 U	0.0073 U	0.0075 U	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0078 U	0.0083 U	0.0074 U
Pyrene	0.02	0.0080 U	0.0073 U	0.01	0.0071 U	0.0074 U	0.0072 U	0.0071 U	0.0079 U	0.0071 U	0.0071 U	0.0094	0.0083 U	0.0074 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.0060 U	0.0055 U	0.018	0.0054 U	0.0056 U	0.0054 U	0.0054 U	0.0060 U	0.0054 U	0.0054 U	0.0059 U	0.0063 U	0.0056 U
Total PCB Aroclors	0.05	0.060 U	0.055 U	0.056 U	0.053 U	0.056 U	0.054 U	0.053 U	0.059 U	0.053 U	0.053 U	0.059 U	0.062 U	0.056 U
Organochlorine Pesticides (mg/kg)														
4,4'-DDD	0.01	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
4,4'-DDE	0.01	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
4,4'-DDT	0.01	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Aldrin	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Alpha-BHC	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Beta-BHC	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
cis-Chlordane	0.01	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
trans-Chlordane	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Chlordane (Total)	NE	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Delta-BHC	6	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Dieldrin	0.01	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Endosulfan I	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Endosulfan II	0.01	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Endosulfan Sulfate	480	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Endrin	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Endrin Aldehyde	NE	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Endrin Ketone	NE	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Gamma-BHC	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Heptachlor	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Heptachlor Epoxide	0.005	0.0060 U	0.0055 U	0.0056 U	0.0053 U	0.0056 U	0.0054 U	0.0053 U	0.0059 U	0.0053 U	0.0053 U	0.0059 U	0.0062 U	0.0056 U
Methoxychlor	0.032	0.012 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.012 U	0.011 U	0.011 U	0.012 U	0.012 U	0.011 U
Toxaphene	0.05	0.06 U	0.055 U	0.056 U	0.053 U	0.056 U	0.054 U	0.053 U	0.059 U	0.053 U	0.053 U	0.059 U	0.062 U	0.056 U
Chlorinated Acid Hericides (mg/kg)														
2,4,5-T	800	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.012 U	0.011 U
2,4,5-TP	640	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.012 U	0.011 U

Parameter	Sample ID	IAEX-26-3	IAEX-27-25	IAEX-28-28	IAEX-29-25	IAEX-30-30	IAEX-31-3	IAEX-32-5	IAEX-33-2	IAEX-34-2	DUP-210511	IAEX-35-2	IAEX-36-2	IAEX-37-2
	Sample Date	05/06/21	05/07/21	05/07/21	05/07/21	05/07/21	05/10/21	05/10/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21	05/11/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-D	800	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.012 U	0.01 U
2,4-DB	2400	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.012 U	0.011 U
Dalapon	2400	0.22 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.2 U	0.22 U	0.2 U	0.2 U	0.21 U	0.23 U	0.2 U
Dicamba	2400	0.011 U	0.01 UJ	0.011 UJ	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.012 U	0.01 U
Dichlorprop	NE	0.085 U	0.078 U	0.08 U	0.075 U	0.079 U	0.076 U	0.075 U	0.084 U	0.076 U	0.076 U	0.083 U	0.088 U	0.079 U
Dinoseb	80	0.011 U	0.01 U	0.011 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.01 U	0.01 U	0.011 U	0.012 U	0.011 U
MCPA	40	2.8 U	2.6 U	2.6 U	2.5 U	2.6 U	2.5 U	2.5 U	2.8 U	2.5 U	2.5 U	2.7 U	2.9 U	2.6 U
MCPP	80	1.1 U	1 U	1.1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U	1.1 U	1.2 U	1 U
Metals (mg/kg)														
Arsenic	20	12 U	11 U	11 U	11 U	11 U	11 U	11 U	12 U	11 U	11 U	12 U	12 U	11 U
Cadmium	0.8	0.60 U	0.55 U	0.56 U	0.53 U	0.56 U	0.54 U	0.53 U	0.59 U	0.53 U	0.53 U	0.59 U	0.62 U	0.56 U
Chromium	48	28	26	24	23	26	34	29	25	23	23	25	26	24
Copper	36	9.4	11	11	9.7	9.1	12	9.7	10	9.6	9.4	13	11	8.6
Lead	50	6.0 U	5.5 U	5.6 U	5.3 U	5.6 U	8.3	5.3 U	5.9 U	5.3 U	5.3 U	5.9 U	6.2 U	5.6 U
Mercury	0.07	0.039	0.035	0.022 U	0.021 U	0.022 U	0.026	0.021 U	0.024 U	0.021 U	0.021 U	0.028	0.025 U	0.022 U
Nickel	48	41	44	46	41	37	67	44	45	42	42	53	53	46
Selenium	0.8	0.60 U	0.55 U	0.56 U	0.53 U	0.56 U	0.54 U	0.53 U	0.59 U	0.53 U	0.53 U	0.59 U	0.62 U	0.56 U
Zinc	86	22	25	29	22	25	30	25	29	31	25	33	30	24

Parameter	Sample ID	IAEX-39-20	IAEX-40-55	IAEX-41-20	IAEX-42-20	IAEX-43-30	IAEX-44-30	IAEX-45-35	IAEX-46-10	IAEX-47-10	IAEX-48-15	DUP-210517	IAEX-53-17	IAEX-49-20
	Sample Date	05/12/21	05/12/21	05/13/21	05/13/21	05/13/21	05/14/21	05/14/21	05/14/21	05/17/21	05/17/21		05/21/21	05/17/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS		NS	SS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Parameter	Soil Interim Action Level													
Total Petroleum Hydrocarbons (mg/kg)														
Gasoline-range hydrocarbons	100	6.6 U	7.2 U	6 U	7.4 U	6.6 U	6.5 U	7.3 U	6.1 U	6.5 U	7.2 U	6.8 U	--	5.8 U
Diesel-range hydrocarbons	NE	31 U	32 U	30 U	31 U	31 U	32 U	33 U	28 U	29 U	33 U	32 U	--	28 U
Lube oil-range hydrocarbons	NE	62 U	65 U	60 U	63 U	63 U	64 U	67 U	55 U	58 U	65 U	65 U	--	55 U
Total (sum of) diesel & oil range hydrocarbons	260	62 U	65 U	60 U	63 U	63 U	64 U	67 U	55 U	58 U	65 U	65 U	--	55 U
Volatile Organic Compounds (mg/kg)														
1,1,1,2-Tetrachloroethane	38	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,1,1-Trichloroethane	1.5	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,1,2,2-Tetrachloroethane	0.001	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,1,2-Trichloroethane	0.0019	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,1-Dichloroethane	0.041	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,1-Dichloroethylene	0.044	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,1-Dichloropropene	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2,3-Trichlorobenzene	20	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2,3-Trichloropropane	0.033	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2,4-Trichlorobenzene	0.033	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2,4-Trimethylbenzene	800	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2-Dibromo-3-Chloropropane	1.3	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
1,2-Dibromoethane	0.001	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2-Dichlorobenzene	7	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2-Dichloroethane	0.023	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,2-Dichloropropane	0.0036	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,3,5-Trimethylbenzene	800	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,3-Dichlorobenzene	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,3-Dichloropropane	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
1,4-Dichlorobenzene	0.98	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
2,2-Dichloropropane	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
2-Chloroethyl vinyl ether	NE	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
2-Chlorotoluene	1600	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
2-Hexanone	400	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
4-Chlorotoluene	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
4-Isopropyltoluene	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Acetone	29	0.010 U	0.012 U	0.011 U	0.013 U	0.05	0.010 U	0.011 U	0.011 U	0.012 U	0.011 U	0.012 U	--	0.01 U
Benzene	0.0024	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Bromobenzene	0.56	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Bromochloromethane	NE	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Bromoform	0.03	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Bromomethane	0.05	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Carbon Disulfide	5	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0013 U	0.0015 U	0.0015 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U

Parameter	Sample ID	IAEX-39-20	IAEX-40-55	IAEX-41-20	IAEX-42-20	IAEX-43-30	IAEX-44-30	IAEX-45-35	IAEX-46-10	IAEX-47-10	IAEX-48-15	DUP-210517	IAEX-53-17	IAEX-49-20
	Sample Date	05/12/21	05/12/21	05/13/21	05/13/21	05/13/21	05/14/21	05/14/21	05/14/21	05/17/21	05/17/21		05/21/21	05/17/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS		NS	SS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Carbon Tetrachloride	0.0017	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Chlorobenzene	0.17	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Chloroethane	NE	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Chloroform	0.074	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Chloromethane	NE	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0068 U	0.0076 U	0.0075 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
cis-1,2-Dichloroethylene	0.078	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
cis-1,3-Dichloropropene	0.0011	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Dibromochloromethane	0.0032	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Dibromomethane	800	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Dichlorobromomethane	0.0038	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Dichlorodifluoromethane	16000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Ethylbenzene	0.24	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Hexachlorobutadiene	0.033	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Isopropylbenzene	8000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Methyl ethyl ketone (MEK)	48000	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.008	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Methyl Iodide	NE	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0070 U	0.0078 U	0.0078 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Methyl isobutyl ketone	6400	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Methyl tert-butyl ether	0.1	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Methylene Chloride	0.021	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Naphthalene	4.5	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
n-Butylbenzene	4000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
n-Propylbenzene	8000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Sec-Butylbenzene	8000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Styrene	2.2	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Tert-Butylbenzene	8000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Tetrachloroethylene	0.024	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Toluene	0.4	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Total Xylenes	14	0.0020 U	0.0025 U	0.0022 U	0.0025 U	0.0027 U	0.0021 U	0.0023 U	0.0023 U	0.0024 U	0.0021 U	0.0024 U	--	0.0020 U
trans-1,2-Dichloroethylene	0.52	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
trans-1,3-Dichloropropene	0.0011	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Trichloroethylene	0.0019	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Trichlorofluoromethane	24000	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Vinyl Acetate	33	0.0051 U	0.0062 U	0.0055 U	0.0063 U	0.0067 U	0.0052 U	0.0057 U	0.0057 U	0.006 U	0.0053 U	0.0061 U	--	0.0051 U
Vinyl Chloride	0.001	0.0010 U	0.0012 U	0.0011 U	0.0013 U	0.0013 U	0.0010 U	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.0012 U	--	0.001 U
Semi-Volatile Organic Compounds (mg/kg)														
1,2-Dinitrobenzene	8	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
1,2-Diphenylhydrazine	1.3	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
1,3-Dinitrobenzene	8	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
1,4-Dinitrobenzene	8	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,3,4,6-Tetrachlorophenol	2400	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,3,5,6-Tetrachlorophenol	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,3-Dichloroaniline	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,4,5-Trichlorophenol	4	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,4,6-Trichlorophenol	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,4-Dichlorophenol	0.069	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,4-Dimethylphenol	0.7	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U

Parameter	Sample ID	IAEX-39-20	IAEX-40-55	IAEX-41-20	IAEX-42-20	IAEX-43-30	IAEX-44-30	IAEX-45-35	IAEX-46-10	IAEX-47-10	IAEX-48-15	DUP-210517	IAEX-53-17	IAEX-49-20
	Sample Date	05/12/21	05/12/21	05/13/21	05/13/21	05/13/21	05/14/21	05/14/21	05/14/21	05/17/21	05/17/21		05/21/21	05/17/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS		NS	SS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-Dinitrophenol	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.29 U	0.30 U	0.32 U	0.34 U	0.38 U	0.38 U	--	0.32 U
2,4-Dinitrotoluene	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2,6-Dinitrotoluene	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2-Chloronaphthalene	6400	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2-Chlorophenol	0.18	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2-methylphenol	2.3	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2-Nitroaniline	800	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
2-Nitrophenol	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
3,3'-Dichlorobenzidine	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
3+4-Methylphenol	4000	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
3-Nitroaniline	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
4,6-Dinitro-2-Methylphenol	NE	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.28 U	0.29 U	0.33 U	0.33 U	--	0.28 U
4-Bromophenyl phenyl ether	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
4-Chloro-3-Methylphenol	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
4-Chloroaniline	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
4-Chlorophenyl phenyl ether	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
4-Nitroaniline	320	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
4-Nitrophenol	7	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Aniline	180	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Benzyl Alcohol	8000	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Bis(2-Chloroethoxy)Methane	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Bis(2-Chloroethyl)Ether	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Bis(2-chloroisopropyl) ether	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Bis(2-Ethylhexyl) Phthalate	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Butyl benzyl Phthalate	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Carbazole	3.7	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Di(2-ethylhexyl)adipate	NE	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Dibenzofuran	NE	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Dibutyl Phthalate	0.28	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Diethyl Phthalate	1.1	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Dimethyl Phthalate	200	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Di-N-Octyl Phthalate	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Hexachlorobenzene	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Hexachlorocyclopentadiene	4	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Hexachloroethane	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Isophorone	0.13	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Nitrobenzene	0.064	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
N-Nitrosodimethylamine	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
N-Nitrosodi-n-propylamine	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
N-Nitrosodiphenylamine	0.033	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Pentachlorophenol	0.17	0.21 U	0.22 U	0.2 U	0.21 U	0.21 U	0.21 U	0.22 U	0.18 U	0.19 U	0.22 U	0.22 U	--	0.18 U
Phenol	0.74	0.042 U	0.043 U	0.04 U	0.042 U	0.042 U	0.043 U	0.045 U	0.037 U	0.039 U	0.043 U	0.043 U	--	0.037 U
Pyridine	80	0.42 U	0.43 U	0.4 U	0.42 U	0.42 U	0.43 U	0.45 U	0.37 U	0.39 U	0.43 U	0.43 U	--	0.37 U
Polycyclic Aromatic Hydrocarbons (mg/kg)														
1-Methylnaphthalene	34	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
2-Methylnaphthalene	320	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U

Parameter	Sample ID	IAEX-39-20	IAEX-40-55	IAEX-41-20	IAEX-42-20	IAEX-43-30	IAEX-44-30	IAEX-45-35	IAEX-46-10	IAEX-47-10	IAEX-48-15	DUP-210517	IAEX-53-17	IAEX-49-20
	Sample Date	05/12/21	05/12/21	05/13/21	05/13/21	05/13/21	05/14/21	05/14/21	05/14/21	05/17/21	05/17/21		05/21/21	05/17/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS		NS	SS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Acenaphthene	3.1	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Acenaphthylene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Anthracene	47	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Benzo(a)anthracene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Benzo(a)pyrene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Benzo(b)fluoranthene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Benzo(g,h,i)perylene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Benzo(j,k)fluoranthene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Chrysene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Dibenzo(a,h)anthracene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Fluoranthene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Fluorene	1.6	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Indeno(1,2,3-c,d)pyrene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Naphthalene	4.5	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Phenanthrene	NE	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Pyrene	0.02	0.0083 U	0.0086 U	0.008 U	0.0083 U	0.0083 U	0.0086 U	0.0089 U	0.0074 U	0.0077 U	0.0087 U	0.0086 U	--	0.0074 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.0063 U	0.0065 U	0.0060 U	0.0063 U	0.0063 U	0.0065 U	0.0067 U	0.0056 U	0.0058 U	0.0066 U	0.0065 U	--	0.0056 U
Total PCB Aroclors	0.05	0.062 U	0.065 U	0.060 U	0.063 U	0.063 U	0.064 U	0.067 U	0.055 U	0.058 U	0.065 U	0.065 U	--	0.055 U
Organochlorine Pesticides (mg/kg)														
4,4'-DDD	0.01	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
4,4'-DDE	0.01	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
4,4'-DDT	0.01	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Aldrin	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Alpha-BHC	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Beta-BHC	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
cis-Chlordane	0.01	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 UJ	0.013 UJ	0.011 UJ	0.012 U	0.013 U	0.013 U	--	0.011 U
trans-Chlordane	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 UJ	0.0067 UJ	0.0055 UJ	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Chlordane (Total)	NE	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Delta-BHC	6	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Dieldrin	0.01	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Endosulfan I	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Endosulfan II	0.01	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Endosulfan Sulfate	480	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Endrin	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Endrin Aldehyde	NE	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Endrin Ketone	NE	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Gamma-BHC	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Heptachlor	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Heptachlor Epoxide	0.005	0.0062 U	0.0065 U	0.006 U	0.0063 U	0.0063 U	0.0064 U	0.0067 U	0.0055 U	0.0058 U	0.0065 U	0.0065 U	--	0.0055 U
Methoxychlor	0.032	0.012 U	0.013 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.011 U	0.012 U	0.013 U	0.013 U	--	0.011 U
Toxaphene	0.05	0.062 U	0.065 U	0.06 U	0.063 U	0.063 U	0.064 U	0.067 U	0.055 U	0.058 U	0.065 U	0.065 U	--	0.055 U
Chlorinated Acid Hericides (mg/kg)														
2,4,5-T	800	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.013 U	0.01 U	0.011 U	0.012 U	0.012 U	--	0.01 U
2,4,5-TP	640	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.013 U	0.011 U	0.011 U	0.012 U	0.012 U	--	0.011 U

Parameter	Sample ID	IAEX-39-20	IAEX-40-55	IAEX-41-20	IAEX-42-20	IAEX-43-30	IAEX-44-30	IAEX-45-35	IAEX-46-10	IAEX-47-10	IAEX-48-15	DUP-210517	IAEX-53-17	IAEX-49-20
	Sample Date	05/12/21	05/12/21	05/13/21	05/13/21	05/13/21	05/14/21	05/14/21	05/14/21	05/17/21	05/17/21		05/21/21	05/17/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	SS	NS		NS	SS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-D	800	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.013 U	0.01 U	0.011 U	0.012 U	0.012 U	--	0.01 U
2,4-DB	2400	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.013 U	0.01 U	0.011 U	0.012 U	0.012 U	--	0.01 U
Dalapon	2400	0.23 U	0.24 U	0.22 U	0.23 U	0.23 U	0.24 U	0.24 U	0.2 U	0.21 U	0.24 U	0.24 U	--	0.2 U
Dicamba	2400	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.013 U	0.01 U	0.011 U	0.012 U	0.012 U	--	0.01 U
Dichlorprop	NE	0.088 U	0.091 U	0.085 U	0.089 U	0.089 U	0.091 U	0.095 U	0.078 U	0.082 U	0.092 U	0.092 U	--	0.078 U
Dinoseb	80	0.012 U	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.013 U	0.01 U	0.011 U	0.012 U	0.012 U	--	0.01 U
MCPA	40	2.9 U	3 U	2.8 U	2.9 U	2.9 U	3 U	3.1 U	2.6 U	2.7 U	3 U	3 U	--	2.6 U
MCPP	80	1.2 U	1.2 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	1 U	1.1 U	1.2 U	1.2 U	--	1 U
Metals (mg/kg)														
Arsenic	20	12 U	13	12 U	13 U	13 U	13 U	13 U	11 U	12 U	13 U	13 U	--	11 U
Cadmium	0.8	0.62 U	0.65 U	0.6 U	0.63 U	0.63 U	0.64 U	0.67 U	0.55 U	0.58 U	0.65 U	0.65 U	--	0.55 U
Chromium	48	49	39	24	28	39	47	27	24	31	32	32	--	31
Copper	36	7.1	7.1	9.6	9.1	7.8	13	7.7	11	18	17	16	--	9.1
Lead	50	6.2 U	6.5 U	6 U	6.3 U	6.3 U	6.4 U	6.7 U	5.5 U	11 J	6.5 U	6.5 U	--	5.5 U
Mercury	0.07	0.022 U	0.023 U	0.03	0.024	0.022 U	0.026	0.020 U	0.017 U	0.043	0.061	0.14	0.023 U	0.05
Nickel	48	29	34	37	48	39	41	39	41	46	55	55	See note 4	47
Selenium	0.8	0.62 U	0.65 U	0.6 U	0.63 U	0.63 U	0.64 U	0.67 U	0.55 U	0.58 U	0.65 U	0.65 U	--	0.55 U
Zinc	86	23	26	23	25	22	41	27	25	33 J	37 J	37 J	--	19 J

Parameter	Sample ID	IAEX-50-2	IAEX-56-6	IAEX-51-3	IAEX-52-3	IAEX-54-4	IAEX-57-6	IAEX-55-3	IAEX-58-5	IAEX-59-5	IAEX-61-6	IAEX-60-5	IAEX-62-5	IAEX-63-4
	Sample Date	05/20/21	05/27/21	05/20/21	05/20/21	05/24/21	05/27/21	05/24/21	05/27/21	06/03/21	06/08/21	06/03/21	06/08/21	06/08/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Total Petroleum Hydrocarbons (mg/kg)														
Gasoline-range hydrocarbons	100	6.5 U	--	5.8 U	6.4 U	7.5 U	--	6.9 U	--	5.6 U	--	5 U	5.7 U	6.4 U
Diesel-range hydrocarbons	NE	29 U	--	27 U	29 U	32 U	--	33 U	--	31 U	--	30 U	30 U	29 U
Lube oil-range hydrocarbons	NE	58 U	--	54 U	58 U	64 U	--	65 U	--	62 U	--	60 U	60 U	58 U
Total (sum of) diesel & oil range hydrocarbons	260	58 U	--	54 U	58 U	64 U	--	65 U	--	62 U	--	60 U	60 U	58 U
Volatile Organic Compounds (mg/kg)														
1,1,1,2-Tetrachloroethane	38	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,1,1-Trichloroethane	1.5	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,1,2,2-Tetrachloroethane	0.001	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,1,2-Trichloroethane	0.0019	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,1-Dichloroethane	0.041	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,1-Dichloroethylene	0.044	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,1-Dichloropropene	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2,3-Trichlorobenzene	20	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2,3-Trichloropropane	0.033	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2,4-Trichlorobenzene	0.033	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2,4-Trimethylbenzene	800	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2-Dibromo-3-Chloropropane	1.3	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
1,2-Dibromoethane	0.001	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2-Dichlorobenzene	7	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2-Dichloroethane	0.023	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,2-Dichloropropane	0.0036	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,3,5-Trimethylbenzene	800	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,3-Dichlorobenzene	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,3-Dichloropropane	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
1,4-Dichlorobenzene	0.98	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
2,2-Dichloropropane	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
2-Chloroethyl vinyl ether	NE	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
2-Chlorotoluene	1600	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
2-Hexanone	400	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
4-Chlorotoluene	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
4-Isopropyltoluene	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Acetone	29	0.010 U	--	0.012 U	0.014	0.010 U	--	0.017	--	0.0096 U	--	0.013 U	0.053	0.012 U
Benzene	0.0024	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Bromobenzene	0.56	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Bromochloromethane	NE	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Bromoform	0.03	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Bromomethane	0.05	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.0068 U	0.0085 U
Carbon Disulfide	5	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.0012 U	--	0.0018 U	0.0013 U	0.0016 U

Parameter	Sample ID	IAEX-50-2	IAEX-56-6	IAEX-51-3	IAEX-52-3	IAEX-54-4	IAEX-57-6	IAEX-55-3	IAEX-58-5	IAEX-59-5	IAEX-61-6	IAEX-60-5	IAEX-62-5	IAEX-63-4
	Sample Date	05/20/21	05/27/21	05/20/21	05/20/21	05/24/21	05/27/21	05/24/21	05/27/21	06/03/21	06/08/21	06/03/21	06/08/21	06/08/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Carbon Tetrachloride	0.0017	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Chlorobenzene	0.17	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Chloroethane	NE	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Chloroform	0.074	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Chloromethane	NE	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
cis-1,2-Dichloroethylene	0.078	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
cis-1,3-Dichloropropene	0.0011	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Dibromochloromethane	0.0032	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Dibromomethane	800	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Dichlorobromomethane	0.0038	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Dichlorodifluoromethane	16000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Ethylbenzene	0.24	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Hexachlorobutadiene	0.033	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Isopropylbenzene	8000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Methyl ethyl ketone (MEK)	48000	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.0087	0.0062 U
Methyl Iodide	NE	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.0084 U	0.01 U
Methyl isobutyl ketone	6400	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Methyl tert-butyl ether	0.1	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Methylene Chloride	0.021	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Naphthalene	4.5	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
n-Butylbenzene	4000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
n-Propylbenzene	8000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Sec-Butylbenzene	8000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Styrene	2.2	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Tert-Butylbenzene	8000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Tetrachloroethylene	0.024	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Toluene	0.4	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Total Xylenes	14	0.0021 U	--	0.0025 U	0.0024 U	0.0021 U	--	0.0024 U	--	0.0019 U	--	0.0027 U	0.0020 U	0.0025 U
trans-1,2-Dichloroethylene	0.52	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
trans-1,3-Dichloropropene	0.0011	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Trichloroethylene	0.0019	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Trichlorofluoromethane	24000	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Vinyl Acetate	33	0.0052 U	--	0.0062 U	0.0060 U	0.0052 U	--	0.0060 U	--	0.0048 U	--	0.0067 U	0.005 U	0.0062 U
Vinyl Chloride	0.001	0.0010 U	--	0.0012 U	0.0012 U	0.0010 U	--	0.0012 U	--	0.00096 U	--	0.0013 U	0.001 U	0.0012 U
Semi-Volatile Organic Compounds (mg/kg)														
1,2-Dinitrobenzene	8	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
1,2-Diphenylhydrazine	1.3	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
1,3-Dinitrobenzene	8	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
1,4-Dinitrobenzene	8	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,3,4,6-Tetrachlorophenol	2400	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,3,5,6-Tetrachlorophenol	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,3-Dichloroaniline	NE	0.048 U	--	0.046 U	0.048 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,4,5-Trichlorophenol	4	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,4,6-Trichlorophenol	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,4-Dichlorophenol	0.069	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,4-Dimethylphenol	0.7	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U

Parameter	Sample ID	IAEX-50-2	IAEX-56-6	IAEX-51-3	IAEX-52-3	IAEX-54-4	IAEX-57-6	IAEX-55-3	IAEX-58-5	IAEX-59-5	IAEX-61-6	IAEX-60-5	IAEX-62-5	IAEX-63-4
	Sample Date	05/20/21	05/27/21	05/20/21	05/20/21	05/24/21	05/27/21	05/24/21	05/27/21	06/03/21	06/08/21	06/03/21	06/08/21	06/08/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-Dinitrophenol	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
2,4-Dinitrotoluene	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2,6-Dinitrotoluene	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2-Chloronaphthalene	6400	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2-Chlorophenol	0.18	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2-methylphenol	2.3	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2-Nitroaniline	800	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
2-Nitrophenol	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
3,3'-Dichlorobenzidine	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
3+4-Methylphenol	4000	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
3-Nitroaniline	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
4,6-Dinitro-2-Methylphenol	NE	0.27 U	--	0.26 U	0.27 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
4-Bromophenyl phenyl ether	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
4-Chloro-3-Methylphenol	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
4-Chloroaniline	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
4-Chlorophenyl phenyl ether	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
4-Nitroaniline	320	0.049 U	--	0.046 U	0.049 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
4-Nitrophenol	7	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Aniline	180	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Benzyl Alcohol	8000	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Bis(2-Chloroethoxy)Methane	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Bis(2-Chloroethyl)Ether	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.021 U	--	0.02 U	0.04 U	0.038 U
Bis(2-chloroisopropyl) ether	NE	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Bis(2-Ethylhexyl) Phthalate	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Butyl benzyl Phthalate	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Carbazole	3.7	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Di(2-ethylhexyl)adipate	NE	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Dibenzofuran	NE	0.048 U	--	0.045 U	0.048 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Dibutyl Phthalate	0.28	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Diethyl Phthalate	1.1	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Dimethyl Phthalate	200	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Di-N-Octyl Phthalate	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Hexachlorobenzene	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Hexachlorocyclopentadiene	4	0.073 U	--	0.069 U	0.073 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Hexachloroethane	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Isophorone	0.13	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Nitrobenzene	0.064	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
N-Nitrosodimethylamine	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
N-Nitrosodi-n-propylamine	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
N-Nitrosodiphenylamine	0.033	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Pentachlorophenol	0.17	0.19 U	--	0.18 U	0.19 U	0.21 U	--	0.22 U	--	0.21 U	--	0.2 U	0.2 U	0.19 U
Phenol	0.74	0.038 U	--	0.036 U	0.038 U	0.042 U	--	0.043 U	--	0.041 U	--	0.04 U	0.04 U	0.038 U
Pyridine	80	0.38 U	--	0.36 U	0.38 U	0.42 U	--	0.43 U	--	0.41 U	--	0.4 U	0.4 U	0.38 U
Polycyclic Aromatic Hydrocarbons (mg/kg)														
1-Methylnaphthalene	34	0.0077 U	--	0.0072 U	0.0077 U	0.024	--	0.012	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
2-Methylnaphthalene	320	0.0077 U	--	0.0072 U	0.0077 U	0.029	--	0.018	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U

Parameter	Sample ID	IAEX-50-2	IAEX-56-6	IAEX-51-3	IAEX-52-3	IAEX-54-4	IAEX-57-6	IAEX-55-3	IAEX-58-5	IAEX-59-5	IAEX-61-6	IAEX-60-5	IAEX-62-5	IAEX-63-4
	Sample Date	05/20/21	05/27/21	05/20/21	05/20/21	05/24/21	05/27/21	05/24/21	05/27/21	06/03/21	06/08/21	06/03/21	06/08/21	06/08/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
Acenaphthene	3.1	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Acenaphthylene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Anthracene	47	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Benzo(a)anthracene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Benzo(a)pyrene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Benzo(b)fluoranthene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Benzo(g,h,i)perylene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Benzo(j,k)fluoranthene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Chrysene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Dibenzo(a,h)anthracene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Fluoranthene	NE	0.01	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Fluorene	1.6	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Indeno(1,2,3-c,d)pyrene	NE	0.0077 U	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Naphthalene	4.5	0.0077 U	--	0.0072 U	0.0077 U	0.015	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Phenanthrene	NE	0.0087	--	0.0072 U	0.0077 U	0.015	--	0.011	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Pyrene	0.02	0.0096	--	0.0072 U	0.0077 U	0.0085 U	--	0.0087 U	--	0.0083 U	--	0.008 U	0.0079 U	0.0077 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.0058 U	--	0.0054 U	0.0058 U	0.0064 U	--	0.0066 U	--	0.0063 U	--	0.0060 U	0.0060 U	0.0058 U
Total PCB Aroclors	0.05	0.057 U	--	0.054 U	0.057 U	0.064 U	--	0.065 U	--	0.062 U	--	0.060 U	0.059 U	0.058 U
Organochlorine Pesticides (mg/kg)														
4,4'-DDD	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
4,4'-DDE	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
4,4'-DDT	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Aldrin	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Alpha-BHC	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Beta-BHC	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
cis-Chlordane	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
trans-Chlordane	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Chlordane (Total)	NE	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Delta-BHC	6	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Dieldrin	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Endosulfan I	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Endosulfan II	0.01	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Endosulfan Sulfate	480	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Endrin	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Endrin Aldehyde	NE	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Endrin Ketone	NE	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Gamma-BHC	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Heptachlor	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Heptachlor Epoxide	0.005	0.0057 U	--	0.0054 U	0.0057 U	0.0064 U	--	0.0065 U	--	0.0062 U	--	0.006 U	0.0059 U	0.0058 U
Methoxychlor	0.032	0.011 U	--	0.011 U	0.011 U	0.013 U	--	0.013 U	--	0.012 U	--	0.012 U	0.012 U	0.012 U
Toxaphene	0.05	0.057 U	--	0.054 U	0.057 U	0.064 U	--	0.065 U	--	0.062 U	--	0.06 U	0.059 U	0.058 U
Chlorinated Acid Hericides (mg/kg)														
2,4,5-T	800	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.012 U	--	0.012 U	--	0.011 U	0.011 U	0.011 U
2,4,5-TP	640	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.012 U	--	0.012 U	--	0.011 U	0.011 U	0.011 U

Parameter	Sample ID	IAEX-50-2	IAEX-56-6	IAEX-51-3	IAEX-52-3	IAEX-54-4	IAEX-57-6	IAEX-55-3	IAEX-58-5	IAEX-59-5	IAEX-61-6	IAEX-60-5	IAEX-62-5	IAEX-63-4
	Sample Date	05/20/21	05/27/21	05/20/21	05/20/21	05/24/21	05/27/21	05/24/21	05/27/21	06/03/21	06/08/21	06/03/21	06/08/21	06/08/21
	Sheen	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level													
2,4-D	800	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.012 U	--	0.012 U	--	0.011 U	0.011 U	0.011 U
2,4-DB	2400	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.012 U	--	0.012 U	--	0.011 U	0.011 U	0.011 U
Dalapon	2400	0.21 U	--	0.2 U	0.21 U	0.23 U	--	0.24 U	--	0.23 U	--	0.22 U	0.22 U	0.21 U
Dicamba	2400	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.012 U	--	0.012 U	--	0.011 U	0.011 U	0.011 U
Dichlorprop	NE	0.081 U	--	0.077 U	0.081 U	0.09 U	--	0.092 U	--	0.088 U	--	0.085 U	0.084 U	0.082 U
Dinoseb	80	0.011 U	--	0.01 U	0.011 U	0.012 U	--	0.012 U	--	0.012 U	--	0.011 U	0.011 U	0.011 U
MCPA	40	2.7 U	--	2.5 U	2.7 U	3 U	--	3 U	--	2.9 U	--	2.8 U	2.8 U	2.7 U
MCPP	80	1.1 U	--	1 U	1.1 U	1.2 U	--	1.2 U	--	1.2 U	--	1.1 U	1.1 U	1.1 U
Metals (mg/kg)														
Arsenic	20	11 U	--	11 U	11 U	13 U	--	13 U	--	12 U	--	12 U	12 U	12 U
Cadmium	0.8	0.57 U	--	0.54 U	0.57 U	0.64 U	--	0.65 U	--	0.62 U	--	0.6 U	0.59 U	0.58 U
Chromium	48	30	--	27	24	45	--	43	--	57	30	27	27	26
Copper	36	11	--	10	8.7	44	8.5	39	8.8	53	9.1	11	8.4	8.5
Lead	50	8.2	--	5.4 U	5.7 U	6.4 U	--	6.5 U	--	8.7	--	6 U	5.9 U	5.8 U
Mercury	0.07	0.083	0.023 U	0.022 U	0.023 U	0.057	--	0.074	0.021 U	0.15	0.024 U	0.026	0.025	0.023 U
Nickel	48	44	--	52	48	73	See note 4	68	See note 4	74	See note 4	41	36	35
Selenium	0.8	0.57 U	--	0.54 U	0.57 U	0.64 U	--	0.65 U	--	0.62 U	--	0.6 U	0.59 U	0.58 U
Zinc	86	36	--	44	25	67	--	63	--	93	25	28	22	23

Parameter	Sample ID	IAEX-64-8	IAEX-65-15	IAEX-66-5	IAEX-67-30	IAEX-68-5
	Sample Date	06/11/21	06/11/21	06/16/21	06/17/21	06/17/21
	Sheen	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level					
Total Petroleum Hydrocarbons (mg/kg)						
Gasoline-range hydrocarbons	100	8.2 U	8.5 U	6.9 U	7.4 U	5.9 U
Diesel-range hydrocarbons	NE	33 U	33 U	31 U	33 U	29 U
Lube oil-range hydrocarbons	NE	66 U	65 U	62 U	65 U	57 U
Total (sum of) diesel & oil range hydrocarbons	260	66 U	65 U	62 U	65 U	57 U
Volatile Organic Compounds (mg/kg)						
1,1,1,2-Tetrachloroethane	38	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,1,1-Trichloroethane	1.5	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,1,2,2-Tetrachloroethane	0.001	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,1,2-Trichloroethane	0.0019	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,1-Dichloroethane	0.041	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,1-Dichloroethylene	0.044	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,1-Dichloropropene	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2,3-Trichlorobenzene	20	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2,3-Trichloropropane	0.033	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2,4-Trichlorobenzene	0.033	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2,4-Trimethylbenzene	800	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2-Dibromo-3-Chloropropane	1.3	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
1,2-Dibromoethane	0.001	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2-Dichlorobenzene	7	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2-Dichloroethane	0.023	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,2-Dichloropropane	0.0036	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,3,5-Trimethylbenzene	800	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,3-Dichlorobenzene	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,3-Dichloropropane	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
1,4-Dichlorobenzene	0.98	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
2,2-Dichloropropane	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
2-Chloroethyl vinyl ether	NE	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
2-Chlorotoluene	1600	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
2-Hexanone	400	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
4-Chlorotoluene	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
4-Isopropyltoluene	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Acetone	29	0.013 U	0.010 U	0.017	0.02	0.013 U
Benzene	0.0024	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Bromobenzene	0.56	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Bromochloromethane	NE	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Bromoform	0.03	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Bromomethane	0.05	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Carbon Disulfide	5	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U

Parameter	Sample ID Sample Date Sheen PID (ppm) Soil Interim Action Level	IAEX-64-8 06/11/21 NS 0.0	IAEX-65-15 06/11/21 NS 0.0	IAEX-66-5 06/16/21 NS 0.0	IAEX-67-30 06/17/21 NS 0.0	IAEX-68-5 06/17/21 NS 0.0
Carbon Tetrachloride	0.0017	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Chlorobenzene	0.17	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Chloroethane	NE	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Chloroform	0.074	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Chloromethane	NE	0.0086 U	0.0071 U	0.0061 U	0.0057 U	0.0063 U
cis-1,2-Dichloroethylene	0.078	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
cis-1,3-Dichloropropene	0.0011	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Dibromochloromethane	0.0032	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Dibromomethane	800	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Dichlorobromomethane	0.0038	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Dichlorodifluoromethane	16000	0.0019 U	0.0015 U	0.0012 U	0.0011 U	0.0013 U
Ethylbenzene	0.24	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Hexachlorobutadiene	0.033	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Isopropylbenzene	8000	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Methyl ethyl ketone (MEK)	48000	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Methyl Iodide	NE	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Methyl isobutyl ketone	6400	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Methyl tert-butyl ether	0.1	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Methylene Chloride	0.021	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Naphthalene	4.5	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
n-Butylbenzene	4000	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
n-Propylbenzene	8000	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Sec-Butylbenzene	8000	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Styrene	2.2	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Tert-Butylbenzene	8000	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Tetrachloroethylene	0.024	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Toluene	0.4	0.0063 U	0.0051 U	0.009	0.0057 U	0.0063 U
Total Xylenes	14	0.0025 U	0.0021 U	0.0024 U	0.0023 U	0.0025 U
trans-1,2-Dichloroethylene	0.52	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
trans-1,3-Dichloropropene	0.0011	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Trichloroethylene	0.0019	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Trichlorofluoromethane	24000	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Vinyl Acetate	33	0.0063 U	0.0051 U	0.0061 U	0.0057 U	0.0063 U
Vinyl Chloride	0.001	0.0013 U	0.0010 U	0.0012 U	0.0011 U	0.0013 U
Semi-Volatile Organic Compounds (mg/kg)						
1,2-Dinitrobenzene	8	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
1,2-Diphenylhydrazine	1.3	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
1,3-Dinitrobenzene	8	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
1,4-Dinitrobenzene	8	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,3,4,6-Tetrachlorophenol	2400	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,3,5,6-Tetrachlorophenol	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,3-Dichloroaniline	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,4,5-Trichlorophenol	4	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,4,6-Trichlorophenol	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,4-Dichlorophenol	0.069	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,4-Dimethylphenol	0.7	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U

Parameter	Sample ID	IAEX-64-8	IAEX-65-15	IAEX-66-5	IAEX-67-30	IAEX-68-5
	Sample Date	06/11/21	06/11/21	06/16/21	06/17/21	06/17/21
	Sheen	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level					
2,4-Dinitrophenol	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
2,4-Dinitrotoluene	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2,6-Dinitrotoluene	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2-Chloronaphthalene	6400	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2-Chlorophenol	0.18	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2-methylphenol	2.3	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2-Nitroaniline	800	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
2-Nitrophenol	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
3,3'-Dichlorobenzidine	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
3+4-Methylphenol	4000	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
3-Nitroaniline	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
4,6-Dinitro-2-Methylphenol	NE	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
4-Bromophenyl phenyl ether	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
4-Chloro-3-Methylphenol	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
4-Chloroaniline	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
4-Chlorophenyl phenyl ether	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
4-Nitroaniline	320	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
4-Nitrophenol	7	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Aniline	180	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Benzyl Alcohol	8000	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Bis(2-Chloroethoxy)Methane	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Bis(2-Chloroethyl)Ether	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Bis(2-chloroisopropyl) ether	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Bis(2-Ethylhexyl) Phthalate	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Butyl benzyl Phthalate	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Carbazole	3.7	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Di(2-ethylhexyl)adipate	NE	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Dibenzofuran	NE	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Dibutyl Phthalate	0.28	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Diethyl Phthalate	1.1	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Dimethyl Phthalate	200	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Di-N-Octyl Phthalate	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Hexachlorobenzene	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Hexachlorocyclopentadiene	4	0.044 U	0.043 U	0.058 U	0.061 U	0.038 U
Hexachloroethane	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Isophorone	0.13	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Nitrobenzene	0.064	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
N-Nitrosodimethylamine	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
N-Nitrosodi-n-propylamine	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
N-Nitrosodiphenylamine	0.033	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Pentachlorophenol	0.17	0.22 U	0.22 U	0.21 U	0.22 U	0.19 U
Phenol	0.74	0.044 U	0.043 U	0.042 U	0.043 U	0.038 U
Pyridine	80	0.44 U	0.43 U	0.42 U	0.43 U	0.38 U
Polycyclic Aromatic Hydrocarbons (mg/kg)						
1-Methylnaphthalene	34	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
2-Methylnaphthalene	320	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U

Parameter	Sample ID	IAEX-64-8	IAEX-65-15	IAEX-66-5	IAEX-67-30	IAEX-68-5
	Sample Date	06/11/21	06/11/21	06/16/21	06/17/21	06/17/21
	Sheen	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level					
Acenaphthene	3.1	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Acenaphthylene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Anthracene	47	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Benzo(a)anthracene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Benzo(a)pyrene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Benzo(b)fluoranthene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Benzo(g,h,i)perylene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Benzo(j,k)fluoranthene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Chrysene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Dibenzo(a,h)anthracene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Fluoranthene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Fluorene	1.6	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Indeno(1,2,3-c,d)pyrene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Naphthalene	4.5	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Phenanthrene	NE	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Pyrene	0.02	0.0089 U	0.0087 U	0.0083 U	0.0087 U	0.0076 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.0067 U	0.0066 U	0.0063 U	0.0066 U	0.0057 U
Total PCB Aroclors	0.05	0.027 U	0.026 U	0.062 U	0.065 U	0.057 U
Organochlorine Pesticides (mg/kg)						
4,4'-DDD	0.01	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
4,4'-DDE	0.01	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
4,4'-DDT	0.01	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Aldrin	0.005	0.0066 U	0.0065 U	0.0062 U	0.024	0.0057 U
Alpha-BHC	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Beta-BHC	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
cis-Chlordane	0.01	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
trans-Chlordane	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Chlordane (Total)	NE	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Delta-BHC	6	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Dieldrin	0.01	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Endosulfan I	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Endosulfan II	0.01	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Endosulfan Sulfate	480	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Endrin	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Endrin Aldehyde	NE	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Endrin Ketone	NE	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Gamma-BHC	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Heptachlor	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Heptachlor Epoxide	0.005	0.0066 U	0.0065 U	0.0062 U	0.0065 U	0.0057 U
Methoxychlor	0.032	0.013 U	0.013 U	0.012 U	0.013 U	0.011 U
Toxaphene	0.05	0.066 U	0.065 U	0.062 U	0.065 U	0.057 U
Chlorinated Acid Hericides (mg/kg)						
2,4,5-T	800	0.013 U	0.012 U	0.012 U	0.012 U	0.011 U
2,4,5-TP	640	0.013 U	0.012 U	0.012 U	0.012 U	0.011 U

Parameter	Sample ID	IAEX-64-8	IAEX-65-15	IAEX-66-5	IAEX-67-30	IAEX-68-5
	Sample Date	06/11/21	06/11/21	06/16/21	06/17/21	06/17/21
	Sheen	NS	NS	NS	NS	NS
	PID (ppm)	0.0	0.0	0.0	0.0	0.0
	Soil Interim Action Level					
2,4-D	800	0.012 U	0.012 U	0.012 U	0.012 U	0.011 U
2,4-DB	2400	0.013 U	0.012 U	0.012 U	0.012 U	0.011 U
Dalapon	2400	0.24 U	0.24 U	0.23 U	0.24 U	0.21 U
Dicamba	2400	0.012 U	0.012 U	0.012 U	0.012 U	0.011 U
Dichlorprop	NE	0.094 U	0.092 U	0.088 U	0.092 U	0.081 U
Dinoseb	80	0.013 U	0.012 U	0.012 U	0.012 U	0.011 U
MCPA	40	3.1 U	3 U	2.9 U	3 U	2.7 U
MCPP	80	1.2 U	1.2 U	1.2 U	1.2 U	1.1 U
Metals (mg/kg)						
Arsenic	20	13 U	13 U	12 U	13 U	11 U
Cadmium	0.8	0.66 U	0.65 U	0.62 U	0.65 U	0.57 U
Chromium	48	35	30	36	46	28
Copper	36	7.6	10	9.8	9	8.3
Lead	50	6.6 U	6.5 U	6.2 U	6.5 U	5.7 U
Mercury	0.07	0.023 U	0.033	0.025 U	0.026 U	0.023 U
Nickel	48	34	41	47	33	36
Selenium	0.8	0.33 U	0.33 U	0.31 U	0.33 U	0.28 U
Zinc	86	17	26	26	31	22

Notes:

[1] Sample nomenclature is according to the following example: IAEX-1-6 = Interim Action Excavation soil sample number 1, collected at a depth of approximately 6 feet below future final grade.

[2] All samples analyzed by Onsite Environmental Laboratory.

[3] All results are in mg/kg (milligrams per kilogram)

[4] Nickel concentrations in native soil were observed to be consistently higher than the interim action level, and areas that exceeded interim action levels were not overexcavated. See report text for further discussion.

U = Analyte not detected at the indicated reporting limit

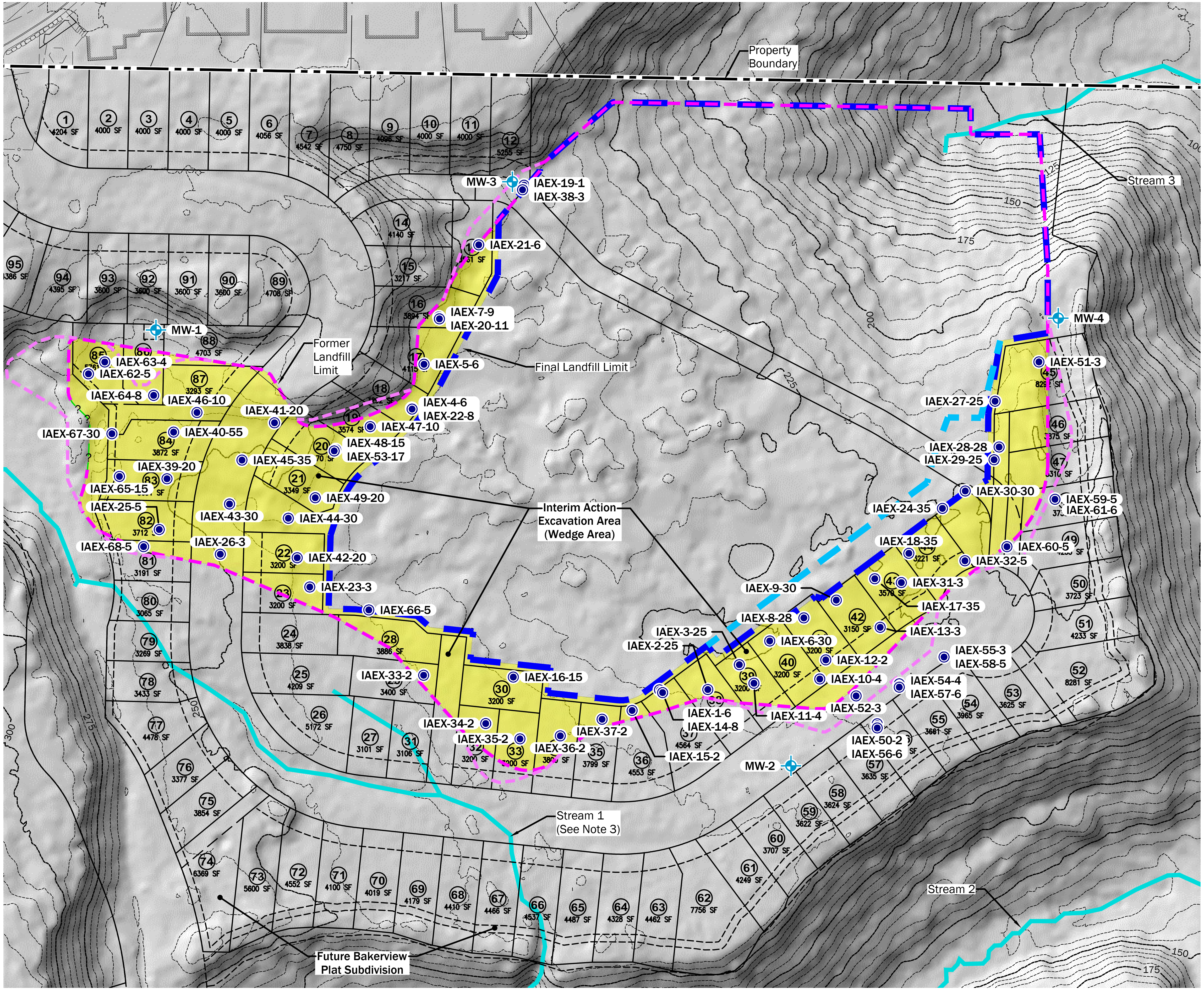
-- = Analysis not performed

NE = Soil Interim Action Level Not Established

Bold font indicates the analyte was detected

Blue shading indicates the analyte was not detected, at a concentration greater than the Soil Interim Action Level.

Yellow shading indicates the analyte was detected at a concentration greater than the Soil Interim Action Level.



Legend

- Property Boundary
- Interim Action Excavation Area (Wedge Area)
- Former Landfill Limit - Anticipated
- Former Landfill Limit - Actual
- Final Landfill Limit - Anticipated
- Final Landfill Limit - Actual
- Confirmation Soil Sampling Location
- Groundwater Monitoring Well (AESI, 2009)

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. As of report preparation (August 2021), the stream course has been modified.

Data Source: Property boundary survey from PACE Engineers, dated 1/27/2020. Lidar image and elevation contours from Puget Sound Lidar Consortium dated 2013.

Projection: HPGN (HARN) Washington State Planes, North Zone, US Foot

N E S W

100 0 100
Feet

Interim Action Confirmation Soil Sampling Locations

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 3

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APPENDIX B
Monitoring Well Boring and Well Construction Logs

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-1	1 of 3

Project Name	Go East Landfill	Location	Snohomish County, WA
Elevation (Top of Well Casing)	~262'	Surface Elevation (ft)	~259'
Water Level Elevation	~211'	Date Start/Finish	8/11/09,8/12/09
Drilling/Equipment	Cascade CME 75	Hole Diameter (in)	6 1/4" I.D.
Hammer Weight/Drop	140# / 30"		

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Well monument (aboveground) Concrete				**Vashon Advance Outwash**
5		Bentonite chips		8 12 28		Moist, slightly rust-stained brownish gray, fine to medium SAND, with trace gravel.
10				14 28 40		Moist, brownish gray, fine to medium SAND, with silty zones and coarse sand beds.
15				10 15 25		Wet, slightly rust-stained brownish gray, fine to medium SAND, with trace gravel.
20		Bentonite grout		8 18 21		Moist, bluish gray, SILT.
25				50/6"		Moist, brownish gray, fine to medium SAND.
30				25 50/5"		Moist, slightly rust-stained brownish gray, fine to medium SAND, with a silt lens containing trace charcoal.
35				18 33 34		Moist, brownish gray, fine to medium SAND, with siltier zones.

Sampler Type (ST):

- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture

Water Level (8/19/09)

Water Level at time of drilling (ATD)

Logged by: JPL

Approved by:

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-1	2 of 3

Project Name: Go East Landfill
Elevation (Top of Well Casing): ~262'
Water Level Elevation: ~211'
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~259'
Date Start/Finish: 8/11/09 8/12/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	Blows/6"	DESCRIPTION
			36 50/5"	Moist, bluish gray, fine to medium SAND, with siltier zones.
				Driller reports significant water.
45			50/6"	Above bottom 6": Same as above (filled sampler [heave?]). Bottom 6": Moist, bluish gray, SILT, with a few light gray, very fine sand partings.
	∇			
50			24 27 41	Moist, bluish gray, silty very fine SAND interbedded with sandy SILT.
55			14 17 32	Moist, bluish gray, SILT.
60		Bentonite chips	10 23 26	Moist to wet, bluish gray, fine SAND.
		Silica sand 2/12		
65			18 28 39	Wet, same.
70		2" I.D. Schedule 40 PVC machine slotted well screen with 0.010" slots (65' to 75')	16 24 36	Wet, bluish gray, silty very fine SAND interbedded with SILT, with fine sand.
				Pre-Vashon Glacial Lacustrine
75		Threaded end cap	10 22 27	Wet, bluish gray, SILT, with very fine sand, a few very fine sand partings and beds of fine to medium sand.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
∇ Water Level (8/19/09)
▼ Water Level at time of drilling (ATD)

Logged by: JPL
Approved by:

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-1	3 of 3

Project Name: Go East Landfill
Elevation (Top of Well Casing): ~262'
Water Level Elevation: ~211'
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~259'
Date Start/Finish: 8/11/09 8/12/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
				14 22 28		Moist, bluish gray, SILT, with scattered white sand-sized grains.
85				18 23 24		Moist, bluish gray, SILT, with a few very fine sand partings.
90				15 21 25		Moist, bluish gray, SILT.
95				9 17 30		Moist, bluish gray, SILT, with a few very fine sand partings and a fine sand bed.
100				12 19 26		Moist, bluish gray, SILT, with a few very fine sand partings.
						Boring terminated at 101.5 feet on 8/12/09
105						
110						
115						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (8/19/09)
Water Level at time of drilling (ATD)

Logged by: JPL
Approved by:

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-2	1 of 2

Project Name: Go East Landfill
Elevation (Top of Well Casing): ~234'
Water Level Elevation: ~183'
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~232'
Date Start/Finish: 8/12/09 8/12/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Well monument (aboveground) Concrete				**Vashon Advance Outwash**
5		Bentonite chips		10 12 14		~4" moist, rust-stained brownish gray, fine to medium SAND over moist, brownish gray to bluish gray (with depth), SILT.
10				11 11 13		Moist, brownish gray, fine SAND.
15				9 19 29		Moist, brownish gray, fine SAND interbedded with brownish gray, SILT, rust staining at contacts.
20		Bentonite grout		8 12 17		Moist to wet, brownish gray, silty fine SAND, with a medium sand bed, interbedded with brownish gray, SILT.
25				5 14 22		Moist, brownish gray, fine SAND.
30				13 21 33		Wet, same, with slight rust staining.
35				21 26 33		Wet, same with siltier zones.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (8/19/09)
Water Level at time of drilling (ATD)

Logged by: JPL
Approved by:

NWWELL 090231A.GPJ BORING.GDT 9/10/09

Associated Earth Sciences, Inc.	Geologic & Monitoring Well Construction Log		
	Project Number: KE090231A	Well Number: MW-2	

Project Name: Go East Landfill
Elevation (Top of Well Casing): ~234'
Water Level Elevation: ~183'
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~232'
Date Start/Finish: 8/12/09 8/12/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	Blows/6"	DESCRIPTION
			11 21 21	Moist to wet, brownish gray, SILT, with fine sand beds.
45		Bentonite chips	12 26 37	Moist to wet, brownish gray to bluish gray, silty very fine SAND interbedded with SILT, with fine sand.
	∇	Silica sand 2/12		
50		2" I.D. Schedule 40 PVC machine slotted well screen with 0.010" slots (50' to 60')	11 19 22	Wet, bluish gray, fine SAND, medium sand laminae with organics at 50.5'.
55			12 20 24	Wet, bluish gray, silty very fine SAND.
				Pre-Vashon Glacial Lacustrine
60		Threaded end cap	7 19 22	Moist, bluish gray, SILT.
				Boring terminated at 61.5 feet on 8/12/09
65				
70				
75				

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
∇ Water Level (8/19/09)
▼ Water Level at time of drilling (ATD)

Logged by: JPL
Approved by:

Associated Earth Sciences, Inc.	Geologic & Monitoring Well Construction Log		
	Project Number: KE090231A	Well Number: MW-3	Sheet: 1 of 2

Project Name: Go East Landfill
Elevation (Top of Well Casing): ~245'
Water Level Elevation: ~214'
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~243'
Date Start/Finish: 8/13/09 8/13/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Well monument (aboveground) Concrete				**Vashon Advance Outwash**
5		Bentonite chips		2 4 6		Wet, slightly rust-stained brownish gray, fine to medium SAND.
10				6 11 13		Moist, rust-stained bluish gray, bedded SILT. Bottom 3": Moist, brownish gray, fine to medium SAND, with trace gravel.
15				10 16 21		Moist, brownish gray, fine to medium SAND, with trace gravel.
20		Bentonite grout		8 13 13		Moist, brownish gray, fine to medium SAND.
25				10 13 16		Moist, same.
	∇					
30				20 29 22		Wet, brownish gray, fine SAND, with siltier zones.
35				11 18 29		Top 4": Wet, rust-stained brownish gray, fine to medium SAND, with silt. Wet, bluish gray, silty very fine SAND interbedded with SILT, with fine sand.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
∇ Water Level (8/19/09)
▼ Water Level at time of drilling (ATD)

Logged by: JPL
Approved by:

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-3	2 of 2

Project Name: Go East Landfill
Elevation (Top of Well Casing): ~245'
Water Level Elevation: ~214'
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~243'
Date Start/Finish: 8/13/09,8/13/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
				12 20 26		Moist, bluish gray, SILT.
45		Bentonite chips		12 21 29		Wet, bluish gray, fine SAND, with silt.
		Silica sand 2/12				
50				14 18 21		Wet, same.
		2" I.D. Schedule 40 PVC machine slotted well screen with 0.010" slots (50' to 60')				
55				12 24 30		Moist to wet, bluish gray, laminated SILT, with very fine sand.
						Pre-Vashon Glacial Lacustrine
60		Threaded end cap		14 24 28		Moist, bluish gray, SILT, with a few very fine sand partings and a bed of fine sand.
						Boring terminated at 61.5 feet on 8/13/09
65						
70						
75						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level (8/19/09)
Water Level at time of drilling (ATD)

Logged by: JPL
Approved by:

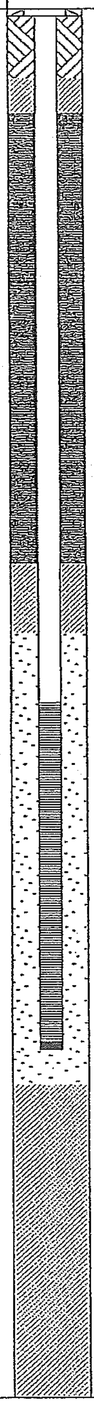
Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-4	1 of 2

Project Name: Go East Landfill
Elevation (Top of Well Casing):
Water Level Elevation: No water (8/19/09)
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~206'
Date Start/Finish: 8/14/09 8/14/09
Hole Diameter (in): 6 1/4" I.D.



Depth (ft)	Water Level	WELL CONSTRUCTION	S T	Blows/ 6"	Graphic Symbol	DESCRIPTION
		Locking cap				**Vashon Advance Outwash**
		Concrete				
		Bentonite chips				
5		Bentonite grout		6 8 10		Moist, grayish brown, fine SAND, little silt (SM).
10		2" I.D. Schedule 40 PVC blank		7 9 10		Moist, grayish brown, fine SAND, few silt (SP).
15				7 11 12		Becomes slightly more gray, trace silt, trace rust mottling.
		Bentonite chips				
		#2/12 silica sand				Moist to very moist, grayish tan, silty fine SAND (SM).
20				9 15 18		
		2" I.D. Schedule 40 PVC machine slotted well screen with 0.010" slots (20' to 30')				
25				6 14 19		
						Pre-Vashon Glacial Lacustrine
30		Threaded end cap		6 8 16		Wet, grayish tan, SILT (ML); non-plastic, contains dilatant zones.
35		Bentonite chips		5 9 11		Becomes blue-gray and very moist to wet.

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level ()
Water Level at time of drilling (ATD)

Logged by: TJP
Approved by:

Associated Earth Sciences, Inc.

Geologic & Monitoring Well Construction Log

Project Number	Well Number	Sheet
KE090231A	MW-4	2 of 2

Project Name: Go East Landfill
Elevation (Top of Well Casing):
Water Level Elevation: No water (8/19/09)
Drilling/Equipment: Cascade CME 75
Hammer Weight/Drop: 140# / 30"

Location: Snohomish County, WA
Surface Elevation (ft): ~206'
Date Start/Finish: 8/14/09 8/14/09
Hole Diameter (in): 6 1/4" I.D.

Depth (ft)	Water Level	WELL CONSTRUCTION	ST	Blows/ 6"	Graphic Symbol	DESCRIPTION
				11 13 17		
45				9 12 18		Boring terminated at 46.5 feet on 8/14/09
50						
55						
60						
65						
70						
75						

Sampler Type (ST):
- 2" OD Split Spoon Sampler (SPT)
- 3" OD Split Spoon Sampler (D & M)
- Grab Sample
- No Recovery
- Ring Sample
- Shelby Tube Sample

M - Moisture
Water Level ()
Water Level at time of drilling (ATD)

Logged by: TJP
Approved by:

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS MORE THAN 50% RETAINED ON NO. 200 SIEVE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

Sampler Symbol Descriptions

- 2.4-inch I.D. split barrel / Dames & Moore (D&M)
- Standard Penetration Test (SPT)
- Shelby tube
- Piston
- Direct-Push
- Bulk or grab
- Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

- Measured groundwater level in exploration, well, or piezometer
- Measured free product in well or piezometer

Graphic Log Contact

- Distinct contact between soil strata
- Approximate contact between soil strata

Material Description Contact

- Contact between geologic units
- Contact between soil of the same geologic unit

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PL	Point lead test
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
UU	Unconsolidated undrained triaxial compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

GEOENGINEERS

Figure A-1

Drilled	Start 8/13/2021	End 8/17/2021	Total Depth (ft)	106.5	Logged By AG / Checked By GRL	Driller	Holt Services	Drilling Method	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile Drill B57
Surface Elevation (ft) / Vertical Datum	293.71 / NAVD88	Top of Casing Elevation (ft)	292.10
Easting (X) / Northing (Y)	1311526 / 330977	Horizontal Datum	WA State Plane North NAD83 (feet)

DOE Well I.D.: BNN 139
A 2-in well was installed on 8/10/2021 to a depth of 80 ft.

Groundwater

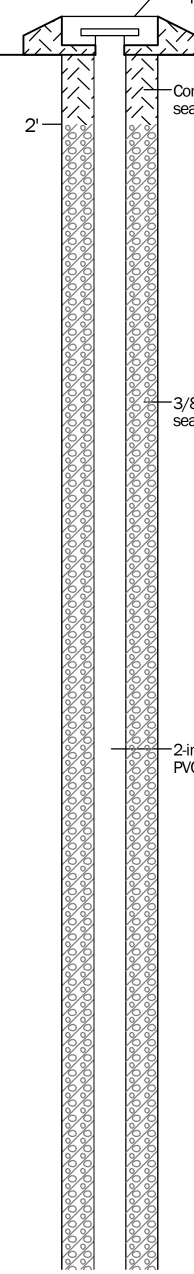
Date Measured	Depth to Water (ft)	Elevation (ft)
8/16/2021	40.00	253.71

Notes:

Depth (feet)	Interval / Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
0						SP	Brown fine to medium sand with occasional gravel, trace wood (loose, dry)		
5	6	6						NS	<1
10	9	33					Becomes gray with trace silt, increased gravel content, dense	NS	<1
15	15	33					Becomes gray to brown, without silt, decreased gravel content	NS	<1
20	16	24					Becomes medium dense	NS	<1
25	15	41					Without gravel	NS	<1
30	15	19						NS	<1
35									

Elevation (feet): 290, 285, 280, 275, 270, 265, 260

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on data provided by PACE Engineers. Vertical approximated based on data provided by PACE Engineers.

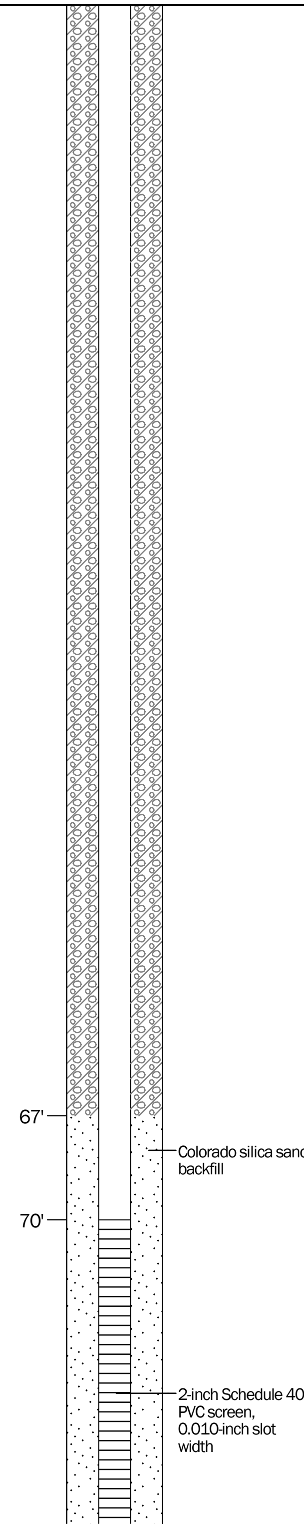
Log of Monitoring Well MW-5

GeoEngineers

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

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)
	35	X	18	76						Becomes very dense, with occasional gravel	NS	<1
255												
	40	X	18	40			▼			Becomes dense and wet, without gravel	NS	<1
250												
	45	X	18	21							NS	<1
245									ML	Gray to brown silt (stiff, wet)		
	50	X	18	58							NS	<1
									SP-SM	Gray to brown fine to medium sand with silt (medium dense, wet)		
240												
	55	X	0	50					NR	No recovery, possibly pushing large gravel or rock		
235												
	60	X	4	86					SP	Gray fine to medium sand (very dense, wet)	NS	<1
230									SP-SM	Gray fine to medium sand with silt (very dense, wet)		
	65	X	9	105							NS	<1
225									SP	Gray fine to medium sand (very dense, wet)		
	70	X	9	80							NS	<1
220												
	75	X	12	64							NS	<1
215												

WELL LOG



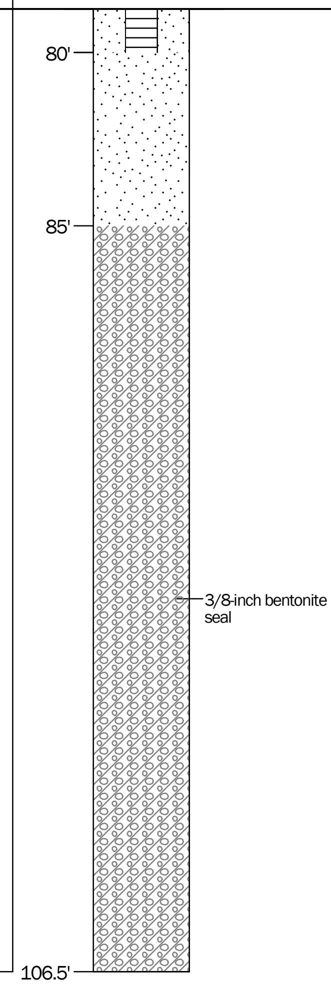
Log of Monitoring Well MW-5 (continued)

GeoEngineers

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

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)
									ML	Gray silt with trace sand (hard, moist)		
	80	X	16	61							NS	<1
210												
	85	X	18	58		MW-5-85-86.5				Without sand	NS	<1
205												
	90	X	0	74					NR	No recovery		
200												
	95	X	9	80		MW-5-95-96.5			SP-SM	Gray fine sand with silt (very dense, wet)	NS	<1
195									ML	Gray silt (hard, wet)		
	100	X	18	71							NS	<1
190												
	105	X	18	64						Becomes gray to brown with sand (hard, moist)	NS	<1

WELL LOG



Log of Monitoring Well MW-5 (continued)

GEOENGINEERS

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

Drilled	Start 11/22/2021	End 11/22/2021	Total Depth (ft)	56.5	Logged By AG / Checked By GRL	Driller	Holt Services	Drilling Method	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile Drill B57
Surface Elevation (ft) / Vertical Datum	257.11 / NAVD88	Top of Casing Elevation (ft)	259.93
Easting (X) / Northing (Y)	1311798 / 330581	Horizontal Datum	WA State Plane North NAD83 (feet)

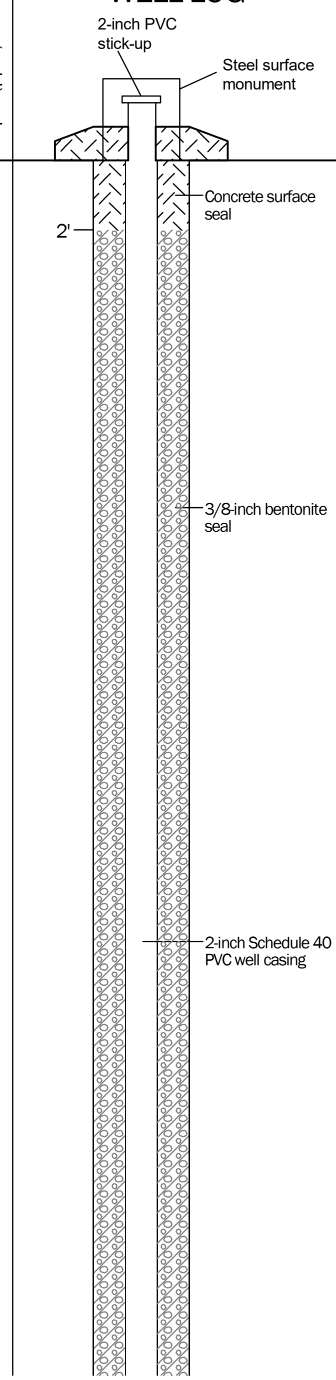
A 2-in well was installed on 11/22/2021 to a depth of 56.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
11/22/2021	45.00	212.11

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							SP	Gray fine to coarse sand (medium dense, moist)		
255											
	5	12	12							NS	<1
250											
	10	12	12					SP-SM	Brown fine to medium sand with silt (medium dense, dry)	NS	<1
								SM	Gray silty fine to medium sand (medium dense, moist)		
								SP	Gray fine to medium sand (medium dense, moist)		
245											
	15	6	14					ML	Gray silt (stiff, moist)	NS	<1
240											
	20	12	8							NS	<1
235											
	25	0	8							--	--
230											
	30	12	14							NS	<1
225											
	35										

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on data provided by PACE Engineers. Vertical approximated based on data provided by PACE Engineers.

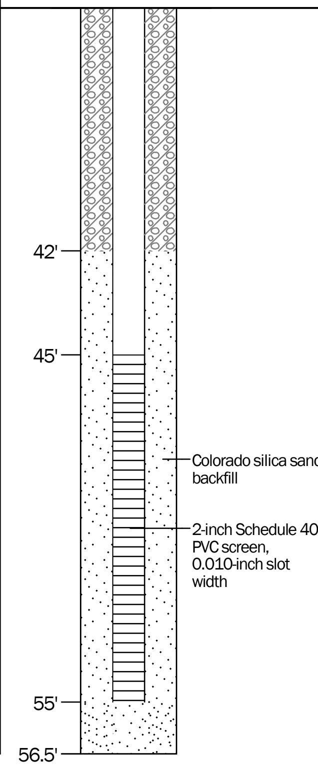
Log of Monitoring Well MW-6

GEOENGINEERS

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

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)
220	35	X	18	14							NS	<1
215	40	X	18	10		MW-6-40-41.5					NS	<1
210	45	X	9	15		MW-6-45-46.5	▼		SP	Brown-gray fine to coarse sand (medium dense, wet)	NS	<1
205	50	X	18	5					SP	Brown-gray fine to medium sand with occasional gravel (loose, dry)	NS	<1
									SM	Gray silty fine to medium sand (loose, moist)		
									SP	Gray fine to medium sand (loose, moist)		
	55	X	18	74					ML	Gray silt (hard, moist)	NS	<1

WELL LOG



Log of Monitoring Well MW-6 (continued)

GEOENGINEERS

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

Drilled	Start 8/9/2021	End 8/10/2021	Total Depth (ft)	66.5	Logged By AG / Checked By GRL	Driller	Holt Services	Drilling Method	Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile Drill B57
Surface Elevation (ft) / Vertical Datum	241.93 / NAVD88	Top of Casing Elevation (ft)	243.00
Easting (X) / Northing (Y)	1311947 / 330440	Horizontal Datum	WA State Plane North NAD83 (feet)

DOE Well I.D.: BNN 137
A 2-in well was installed on 8/17/2021 to a depth of 60 ft.

Groundwater

Date Measured	Depth to Water (ft)	Elevation (ft)
8/9/2021	25.60	216.33

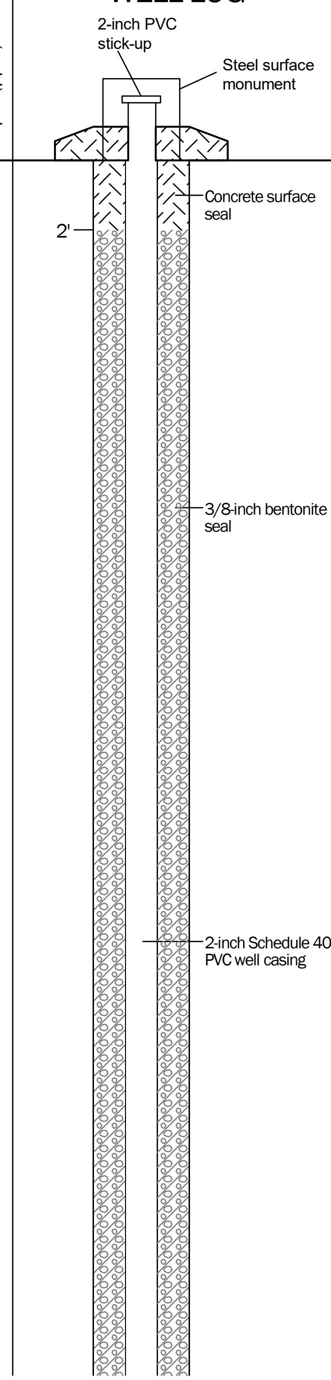
Notes:

FIELD DATA

Elevation (feet)	Depth (feet)	Recovered (in)	Blows/foot	Sample Name / Testing	Water Level	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
	0					SP	Brown fine to medium sand with trace silt (medium dense, moist)		
	5	14	12					NS	<1
	10	12	14					NS	<1
						SM	Dark brown silty fine to medium sand (medium dense, moist)		
	15	18	29					NS	<1
						ML	Brown-gray silt (very stiff, moist)		
						SP	Brown and gray fine to medium sand (dense, moist)		
	20	16	41					NS	<1
	25	18	32		▼			NS	<1
	30	18	49	MW-7-30-31.5				NS	<1
	35								

Elevation scale: 240, 235, 230, 225, 220, 215, 210

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on data provided by PACE Engineers. Vertical approximated based on data provided by PACE Engineers.

Log of Monitoring Well MW-7

GEOENGINEERS

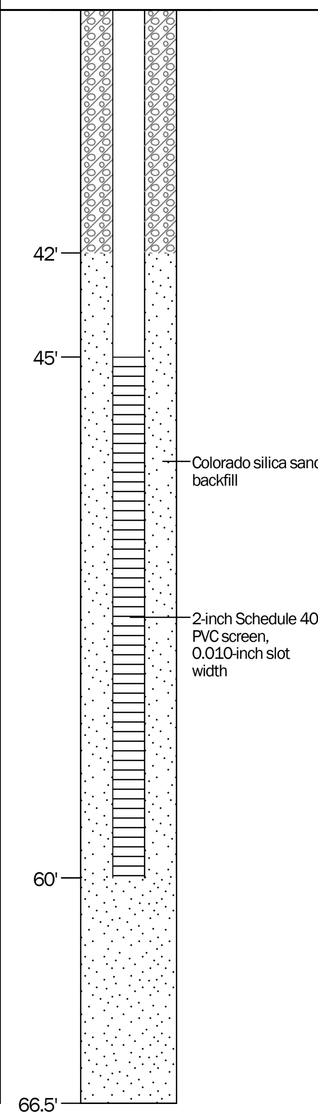
Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

Figure A-4
Sheet 1 of 2

Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Water Level	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)
35	X	18	62					Becomes very dense	NS	<1
40	X	15	60						NS	<1
							SP-SM	Brown fine to medium sand with silt (very dense, moist)		
							SM	Brown silty fine to medium sand (very dense, moist)		
45	X	15	51				ML	Brown silt (hard, moist)	NS	<1
							SM	Brown silty fine to medium sand (very dense, moist)		
50	X	10	52						NS	<1
55	X	12	71					Becomes wet	NS	<1
							ML	Brown silt with trace sand (hard, wet)		
60	X	15	60						NS	<1
65	X	15	55		MW-7-65-66.5				NS	<1

Elevation (feet): 205, 200, 195, 190, 185, 180

WELL LOG



Log of Monitoring Well MW-7 (continued)

GEOENGINEERS

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

Drilled	Start 8/11/2021	End 8/12/2021	Total Depth (ft) 61.5	Logged By AG / Checked By GRL	Driller Holt Services	Drilling Method Hollow-stem Auger

Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile Drill B57
Surface Elevation (ft) / Vertical Datum	228.14 / NAVD88	Top of Casing Elevation (ft)	230.80
Easting (X) / Northing (Y)	1312466 / 330604	Horizontal Datum	WA State Plane North NAD83 (feet)

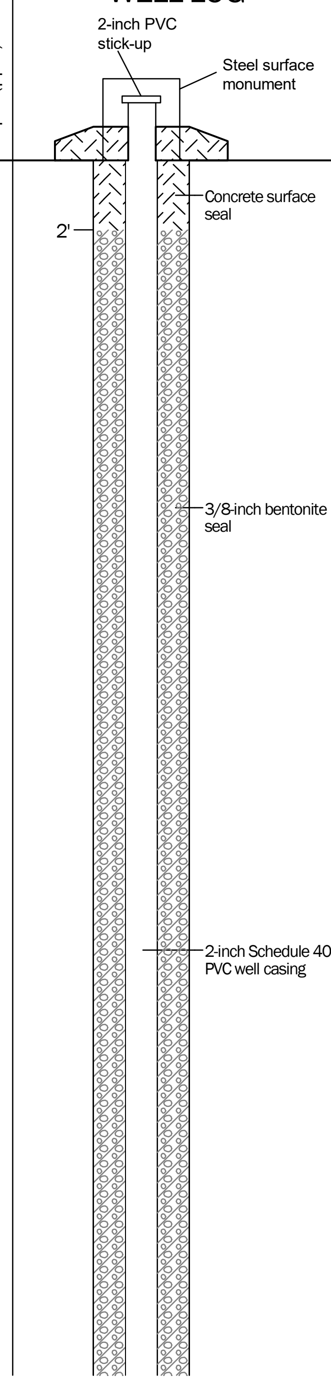
DOE Well I.D.: BNN 138
A 2-in well was installed on 8/12/2021 to a depth of 61.5 ft.

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
8/11/2021	49.20	178.94

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								SP	Gray fine to coarse sand with occasional gravel (medium dense, dry)		
225												
	5	X	NR								NS	<1
220												
	10	X	12	16						Becomes brown	NS	<1
215												
	15	X	15	28						Becomes brown and gray, moist	NS	<1
210												
	20	X	0	35					NR	No recovery		
205												
	25	X	6	16					SP	Brown fine to medium sand with occasional gravel (medium dense, moist)	NS	<1
200												
	30	X	12	27						Without gravel	NS	<1
195												
	35											

WELL LOG



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on data provided by PACE Engineers. Vertical approximated based on data provided by PACE Engineers.

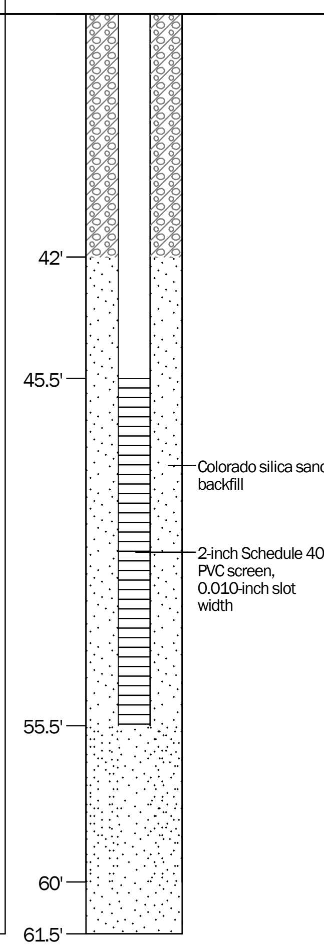
Log of Monitoring Well MW-8

GEOENGINEERS

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

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)
	35	X	12	35						Becomes dense	NS	<1
190									ML	Gray-brown silt with mica sand (very stiff, moist)		
	40	X	18	29							NS	<1
185									SP-SM	Gray-brown fine to medium sand with silt (very dense, moist)		
	45	X	18	57							NS	<1
180							▼		SM	Gray-brown silty fine to medium sand (dense, wet)		
	50	X	18	36		MW-8-50-51.5						
175									ML	Gray-brown silt with trace sand (medium dense to dense, moist)		
	55	X	18	25							NS	<1
170												
	60	X	18	36		MW-8-60-61.5				Becomes gray		

WELL LOG



Log of Monitoring Well MW-8 (continued)

GEOENGINEERS

Project: Go East Landfill
Project Location: Snohomish County, Washington
Project Number: 6694-002-05

Figure A-5
Sheet 2 of 2

Date:4/27/23 Path:P:\6\6694002\GINT\669400205.GPJ DBLibrary/Library:GEOENGINEERS_DF_STD_US_JUNE_2017.GLB/GEI8_ENVIRONMENTAL_WELL

DEPARTMENT OF ECOLOGY State of Washington

Resource Protection Well Report

Submit one well report per well installed. See page two for instructions.

Type of Work:

☒ Construction

☐ Decommission ⇨ Original NOI No. RE 22065

Ecology Well ID Tag No. BNL 755

Site Well Name Go east Landfill

Consulting Firm Pace

Was a variance approved for this well/boring? ☐ Yes ☐ No

If yes, what was the variance for? ______

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported are true to my best knowledge and belief.

☒ Driller ☐ Trainee ☐ Engineer

Name (Print Last, First Name) [signature]

Driller/Engineer/Trainee Signature [signature]

License No. 3178

Company Name Holt

If trainee box is checked, sponsor's license number: ______

Sponsor's signature ______

Notice of Intent No. ______

Type of Well:

☒ Resource Protection Well ☐ Injection Point

☐ Remediation Well ☐ Grounding Well

☐ Geotechnical Soil Boring ☐ Ground Source Heat Pump

☐ Environmental Boring ☐ Other ______

↳ ☐ Soil- ☐ Vapor- ☐ Water-sampling

Property Owner ______

Well Street Address ______

City ______ County ______

Tax Parcel No. ______

Location (see instructions): WWM ☐ or EWM ☐

SE ¼-¼ NW ¼, Section 21 Town 20N Range 5E

Latitude (Example: 47.12345) ______

Longitude (Example: -120.12345) ______

(WGS 84 Coordinate System)

Borehole diameter 3 inches Casing diameter 2 inches

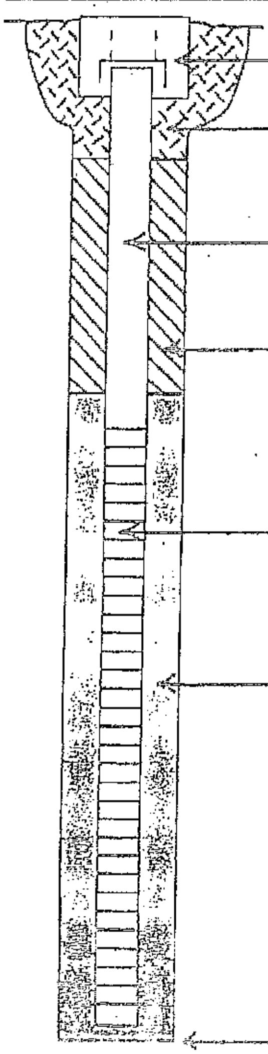
Static water level 2 ft below top of casing Date 3/17/2022

☒ Above-ground completion with bollards ☐ Flush monument

↳ Stick-up of top of well casing 5 ft above ground surface

Start Date 3/17/2022 Completed Date 3/17/2022

Construction/Design	Well Data	Formation Description
	MONUMENT TYPE: Above	0 - ft. No Samples Pushed Casing
	CONCRETE SURFACE SEAL 2 ft.	- ft.
	PVC BLANK 2"x 5'	- ft.
	BACKFILL 5 ft. TYPE: Betunite	- ft.
	PVC SCREEN 2"x 5'	
	SLOT SIZE: 10	
	TYPE: PVC PrePack	
	GRAVEL PACK 5 ft. MATERIAL: 12/20	
	WELL DEPTH ______ "	REMARKS ______



MW-9 Licensed Drillers Log

DEPARTMENT OF ECOLOGY State of Washington

Resource Protection Well Report

Submit one well report per well installed. See page two for instructions.

Type of Work:

☒ Construction

☐ Decommission ⇒ Original NOI No. RE 22065

Ecology Well ID Tag No. BNL 754

Site Well Name Go east landfill

Consulting Firm Pace

Was a variance approved for this well/boring? ☐ Yes ☐ No

If yes, what was the variance for? ______

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported are true to my best knowledge and belief.

☒ Driller ☐ Trainee ☐ Engineer

Name (Print Last, First Name) Li FQ

Driller/Engineer/Trainee Signature [signature]

License No. 3178

Company Name Holt

If trainee box is checked, sponsor's license number: ______

Sponsor's signature ______

Notice of Intent No ______

Type of Well:

☒ Resource Protection Well ☐ Injection Point

☐ Remediation Well ☐ Grounding Well

☐ Geotechnical Soil Boring ☐ Ground Source Heat Pump

☐ Environmental Boring ☐ Other ______

↳ ☐ Soil- ☐ Vapor- ☐ Water-sampling

Property Owner ______

Well Street Address ______

City ______ County ______

Tax Parcel No. ______

Location (see instructions): WWM ☐ or EWM ☐

SE ¼-¼ NW ¼, Section 21 Town 20N Range 5E

Latitude (Example: 47.12345) ______

Longitude (Example: -120.12345) ______

(WGS 84 Coordinate System)

Borehole diameter 3 inches Casing diameter 2 inches

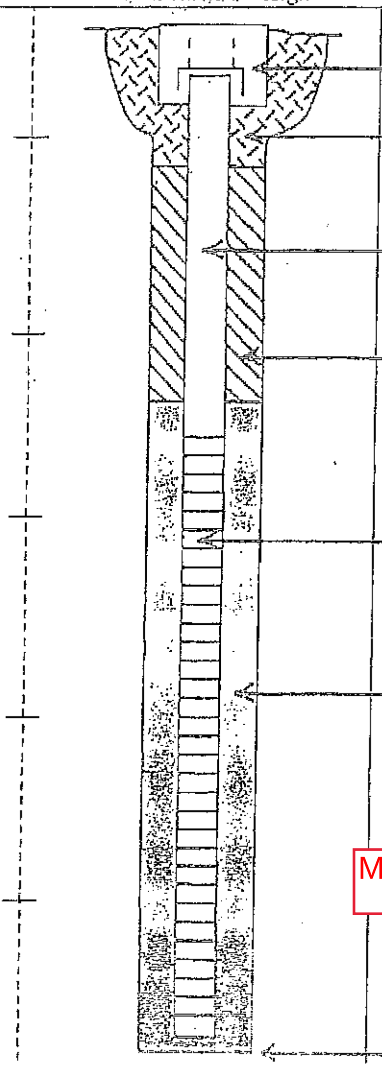
Static water level 2 ft below top of casing. Date 3/17/2022

☒ Above-ground completion with bollards ☐ Flush monument

↳ Stick-up of top of well casing 5 ft above ground surface

Start Date 3/17/2022 Completed Date 3/17/2022

Construction/Design	Well Data	Formation Description



MONUMENT TYPE: Above

CONCRETE SURFACE SEAL 2 ft.

PVC BLANK 2 "x 5'

BACKFILL 5 ft.

TYPE: Betonite

PVC SCREEN 2 "x 5'

SLOT SIZE: 10

TYPE: PVC PrePack

GRAVEL PACK 5 ft.

MATERIAL: 12/20

WELL DEPTH ______

0 - ft.

No Samples Pushed Casing

- ft.

- ft.

- ft.

- ft.

MW-10 Licensed Drillers Log

REMARKS ______

APPENDIX C
2023 Monitoring Well Survey


PACE CONTROL POINT #6
FOUND RAILROAD SPIKE IN ASPHALT
ELEV. = 298.65 (NAVD88)
MW-5
METAL RIM S SIDE EL=293.70
PVC LIP S SIDE EL=292.89
GND EL S SIDE=293.71
GP-2
MW-3
METAL RIM S SIDE EL=265.79
PVC LIP S SIDE EL=263.93
GND EL S SIDE=263.80
(WITH YELLOW CAP -NOT WATERTIGHT)
MW-10
METAL RIM S SIDE EL=98.90
PVC LIP S SIDE EL=98.94
GND EL S SIDE=94.97
MW-9
METAL RIM S SIDE EL=98.68
PVC LIP S SIDE EL=98.74
GND EL S SIDE=95.31
MW-1
METAL RIM S SIDE EL=264.12
PVC LIP S SIDE EL=263.99
GND EL S SIDE=264.15
(MAY BE HIT/DISTURBED)
N
SCALE: 1" = 40'
GP-3
MW-8
METAL RIM S SIDE EL=231.06
PVC LIP EL=230.78
GND EL SOUTH=228.14
MW-6
METAL RIM S SIDE EL=259.94
PVC LIP S SIDE EL=259.92
GND EL S SIDE=257.11
MW-7
METAL RIM S SIDE EL=243.81
PVC LIP S SIDE EL=242.99
GND EL S SIDE=241.93
GP-4
3800 SF
4564 SF
GP-1
MW-2
METAL RIM EL=235.19
PVC LIP S SIDE EL=234.51
GND EL S SIDE=230.49

MEAD GILMAN
LAND SURVEYORS

Point Number	Northing	Easting	Metal Rim	PVC Lip	Ground	Description
26324	330767.88	1311648.14	264.12	263.99	264.15	MW 1
26315	330333.63	1312278.75	235.19	234.51	230.49	MW 2
26328	330915.18	1312001.58	265.79	263.93	263.80	MW 3
26331	330976.39	1311526.35	293.70	292.89	293.71	MW 5
26321	330581.27	1311798.03	259.94	259.92	257.11	MW 6
26318	330440.31	1311946.36	243.81	242.99	241.93	MW 7
26311	330604.17	1312465.61	231.06	230.78	228.14	MW 8
26334	330994.87	1312493.01	98.68	98.74	95.31	MW9
26337	331008.96	1312490.95	98.90	98.94	94.97	MW 10

All shots on the metal rim, pvc lip and ground are on the south side
Northing and Eastings are provided in Washington State Plane Coordinate System, North Zone - US Foot
Elevations provided are based on the North Amercian Vertical Datum of 1988 (NAVD88) per benchmarks provided by Pace
Benchmark (Per sheet C0.0 of the civil plans):
Pace control point #6
N 331034.63 E 1311438.06 Elev: 298.65 (NAVD88)
Found rail road spike in asphalt at the northwest corner of the subject parcel

MARK RUSSEL PENDERGRAFT
STATE OF WASHINGTON
48383
REGISTERED
PROFESSIONAL LAND SURVEYOR

APPENDIX D
Slope Reconnaissance and Observations

Full Report available at https://apps.ecology.wa.gov/cleanupsearch/document/111241

GeoEngineers

554 West Bakerview Road, Bellingham, Washington 98226, Telephone: 360.647.1510, Fax: 360.647.5044 www.geoengineers.com

Memorandum

To: Marty Penhallegon, P.E.

From: Garrett Leque, LG; Terry McPhetridge, LG, LHG GL TRM

Date: April 7, 2022

File: 6694-002-05

Subject: Go East Landfill Northeast Slope Reconnaissance and Observations

This memorandum discusses the results of a slope reconnaissance, debris removal, and results of other observations of the northeast slope at the former Go East Landfill located at 4330 108th Street Southeast in Everett, Washington.

Slope Reconnaissance

GeoEngineers performed a slope reconnaissance on December 17, 2021 that was attended by representatives from the Washington State Department of Ecology and the Snohomish Health District. The area reconnoitered generally consisted of the northeast slope of the former landfill (Figure 1).

The reconnaissance members traversed the slope observing this area for hazardous materials. We observed the ground surface, and the tree wells of fallen trees where recently-exposed soil was observed. No evidence of hazardous materials (e.g., drums, soil staining) were observed on the ground surface or in tree wells during the reconnaissance. Small pieces of inert solid debris were observed in isolated locations on the ground (e.g. cinder block, concrete, glass, metal); see attached representative photos in Attachment A. Field screening of soil in these locations using a photoionization detector to screen for volatile organic compounds did not indicate evidence of contamination. No soil sampling was deemed necessary for these inert items.

There were two locations where metal was observed including a steel pipe and steel I-beam (See Figure 1 and Attachment A). Field screening of soil in these locations using a photoionization detector to screen for volatile organic compounds did not indicate evidence of contamination. We were not able to remove the metal at the time of the slope reconnaissance. We recommend AERO Construction (AERO) cut off the pipe and I-beam as close to the ground surface as possible for physical safety reasons.

One erosional feature was observed near the top of the northeast slope (see Figure 1 and Attachment A). No evidence of hazardous materials were observed in the feature. We understand that surface water runoff into the feature has been diverted to prevent further erosion. We further understand that erosion control materials will be applied to the erosional feature, and that PACE Engineering will monitor the feature from a construction stormwater perspective.

Debris Removal

Metal debris was encountered by crews working to install the buttress and weir box at the toe of the northeast slope on March 21, 2022. The metal debris was encountered upslope from the weir box (see Figure 1 and Attachment A). The metal debris appeared to be consistent with photos and description of metal debris described in a March 31, 2019 letter by Practical Environmental Solutions to the Washington State Department of Ecology. GeoEngineers observed AERO remove the metal debris and underlying soil/mixed debris (plastic, wood debris etc.) on March 25, 2022. GeoEngineers field screened soil at the excavation limits which was approximately 10 feet by 17 feet, and 2.4 feet in depth. GeoEngineers collected four confirmation soil samples and submitted them to OnSite Environmental, Inc. for analysis of contaminants of potential concern in consultation with the Ecology project manager for the Go East Landfill Site. Results are shown in Table 1 and summarized below:

- Diesel-range petroleum hydrocarbons, oil-range petroleum hydrocarbons, and/or the sum of diesel- and oil-range petroleum hydrocarbons exceeded the Site screening level of 260 milligrams per kilogram (mg/kg) in two samples (Slope-1-20220325 and Slope-3-20220325).
- The metals cadmium, lead, and mercury exceeded Site screening levels in sample Slope-3-20220325.
- Other analytes were either non-detect or below screening levels.

GeoEngineers returned to the Site on March 30, 2022 and observed AERO over-excavate the two exceedance areas (samples from Slope-1 and Slope-3) to depths up to approximately 6 feet below ground surface at each location. GeoEngineers field screened soil and collected additional samples underneath the previous sample locations and submitted the samples for the analytes that previously exceeded screening levels. Results indicate that the analytes of concern were non-detect or below screening levels in the samples, designated as Slope-1A-20220330 and Slope-3A-20220330. The sample locations were surveyed and AERO backfilled the excavation with clean fill soil.

The laboratory analytical reports for the samples are included as Attachment B.

No other debris was observed by crews in other areas where the buttress was installed.

Other Observations

There are several other observations in addition to the slope reconnaissance that indicate the absence of hazardous materials on the slope. A mud slide occurred on the northern portion of the northeast slope on September 17, 2021 (Figure 1). The mud slide was caused by fill placement combined with heavy rainfall. GeoEngineers visited the site on September 21, 2021 to observe the affected area. GeoEngineers provided a letter dated October 1, 2021 that included our observations and conclusions of the mud slide area. One conclusion was that the mud slide involved fill that had been placed by the contractor, and that there were no indications that any portion of the landfill slope had failed or been impacted by the mud slide.

AERO built an access path on the northern portion of the northeast slope that required excavation following the mud slide. Our geotechnical field personnel were present during excavation activities. Field reports dated September 27 through September 29, and October 6, note an absence of landfill debris in excavated areas. Representative photos are included in Attachment A.

We understand AERO has periodically worked on other areas of the northeast slope and reports not observing debris at the ground surface in the areas they have worked.

We trust this memorandum meets your needs. Please call GeoEngineers if you have any questions.

Attachments:

Table 1. Northeast Slope Soil Sample Data Summary – Detections Only

Figure 1. Northeast Slope Observations

Attachment A. Site Photographs

Attachment B. Laboratory Analytical Reports

Table 1

Northeast Slope Soil Sample Summary - Detections Only[1]

Go East Corp Landfill Site

Everett, Washington

Analyte	Interim Action Level	Slope-1-20220324	Slope-1A-20220330	Slope-2-20220324	Slope-3-20220324	Slope-3A-20220330	Slope-4-20220324
Sample Date		3/24/2022	3/30/2022	3/24/2022	3/24/2022	3/30/2022	3/24/2022
Total Petroleum Hydrocarbons (mg/kg)							
Diesel-range hydrocarbons	NE	**65**	30 U	**63**	37 U	35 U	31 U
Lube oil-range hydrocarbons	NE	**220**	**110**	**190**	**370**	69 U	61 U
Total (Sum of) Diesel- and Lube oil-range hydrocarbons	260	**285**	**110**	**253**	**370**	69 U	61 U
Semi-Volatile Organic Compounds (mg/kg)							
Benzyl Alcohol	11	--	--	--	**0.28**	--	--
Phenanthrene	NE	--	--	--	**0.010**	--	--
Fluoranthene	NE	--	--	--	**0.010**	--	--
Pyrene	0.02	--	--	--	**0.010**	--	--
Bis(2-Ethylhexyl) Phthalate	0.17	--	--	--	**1.2**	--*	--
Polycyclic Aromatic Hydrocarbons (mg/kg)							
Benzo(a)anthracene	NE	**0.028**	--	0.0093 U	0.0099 U	--	0.0082 U
Benzo(a)pyrene	NE	**0.036**	--	0.0093 U	0.0099 U	--	0.0082 U
Benzo(b)fluoranthene	NE	**0.044**	--	**0.0096**	0.0099 U	--	0.0082 U
Benzo(j,k)fluoranthene	NE	**0.012**	--	0.0093 U	0.0099 U	--	0.0082 U
Chrysene	NE	**0.039**	--	**0.010**	0.0099 U	--	0.0082 U
Dibenzo(a,h)anthracene	NE	0.010 U	--	0.0093 U	0.0099 U	--	0.0082 U
Indeno(1,2,3-c,d)pyrene	NE	**0.029**	--	**0.0096**	0.0099 U	--	0.0082 U
cPAH TTEC	0.084	**0.048**	--	**0.008**	0.007 U	--	--
Metals (mg/kg)							
Cadmium	0.8	--	--	--	**4.4**	0.69 U	--
Chromium	48	--	--	--	**27**	--	--
Copper	36	--	--	--	**18**	--	--
Iron	NE	--	--	--	**16,000**	--	--
Lead	50	**43**	--	**26**	**70**	**11**	15 U
Manganese	NE	--	--	--	**680**	--	--
Mercury	0.07	--	--	--	**0.15**	**0.046**	--
Nickel	48	--	--	--	**33**	--	--

Notes:

[1] See laboratory deliverables for all results.

mg/kg = milligram per kilogram

U = Analyte not detected at the indicated reporting limit

-- = Analysis not performed

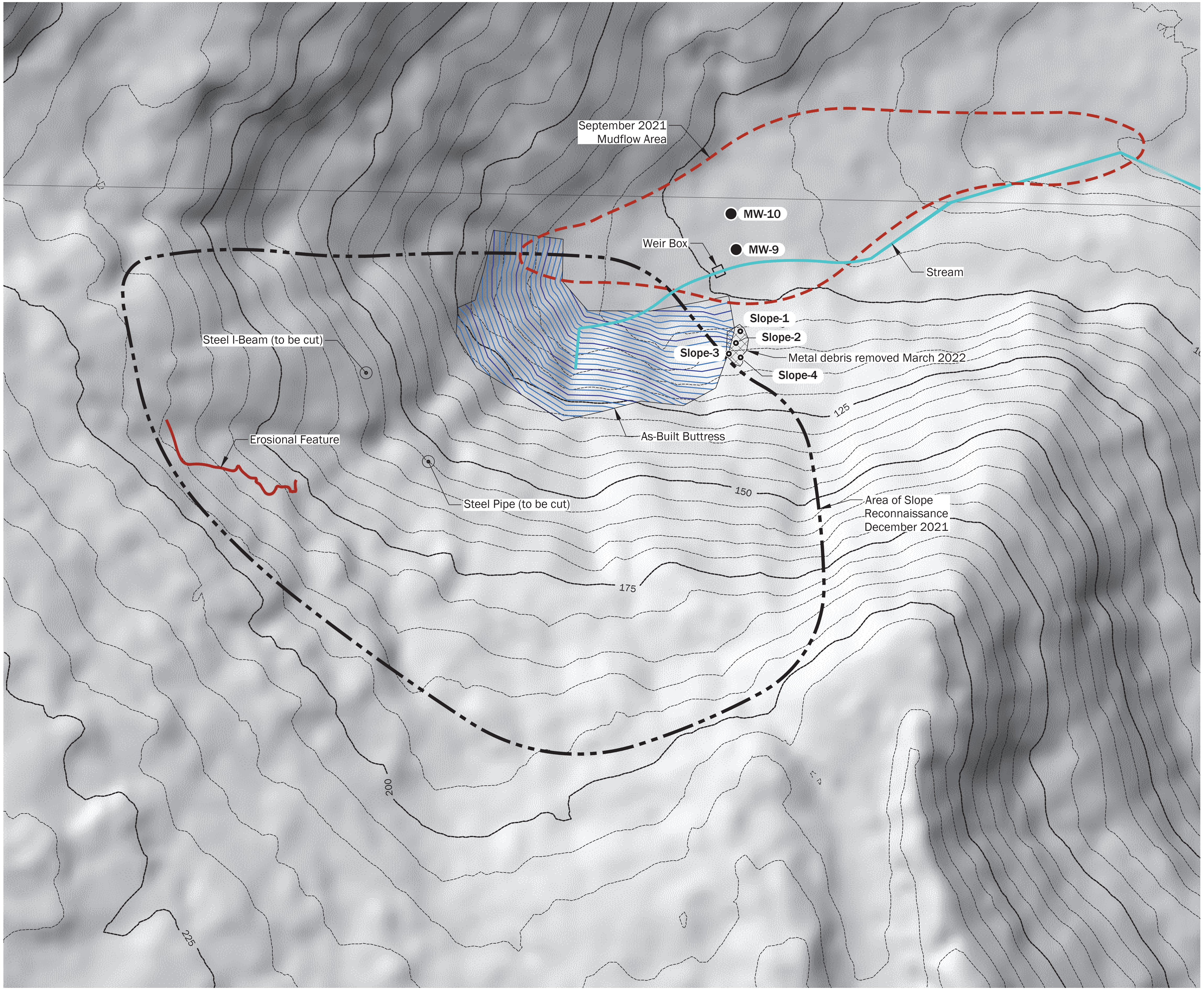
NE = Soil Interim Action Level Not Established

Bold font indicates the analyte was detected

Yellow shading indicates the analyte was detected at a concentration greater than the Soil Interim Action Level.

Gray shading indicates the analyte concentration is less than the Soil Interim Action Level and that overexcavation of the soil containing exceedances (yellow highlighted result) was removed.

* Bis(2-ethylhexyl) Phthalate is ubiquitous in the environment and has not been previously detected at the Go East site. Therefore, it was determined that no additional sampling was needed for Bis(2-ethylhexyl) Phthalate.



Legend

- **MW-9** ● Monitoring Well, 2022
- **Slope-1** ∘ Soil Sample locaiton

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: Property boundary survey from PACE Engineers, dated 1/27/2020.
Lidar image and elevation contours from Puget Sound Lidar Consortium dated 2013.
As-built Buttress from Client, no date given.

Projection: NAD83 Washington State Planes, North Zone, US Foot

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Feet

Northeast Slope Observations

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 1

ATTACHMENT A

Site Photographs

Photograph 1. View of the northeast slope. View is to the southeast. Quarry spalls in foreground are for stabilization of an access route for equipment down to the toe of the landfill. The orange silt fence in the middle-ground of the photo (between the green arrows) approximates the top of the northeast slope.

Photograph 2. View turned slightly left of Photograph 1. View is down the access route to the toe of the landfill.

Site Photographs

Go East Landfill Slope Reconnaissance
City, State

GeoEngineers

Attachment A

06694-02-05 Exported: 03.14.2022

Photograph 3. One cinder block found at ground surface.
The glove is shown for scale.

Photograph 4. One piece of concrete at ground surface.

Site Photographs

Go East Landfill Slope Reconnaissance
City, State

GEOENGINEERS

Attachment A

Photograph 5. One I-beam protruding from concrete. We recommend the I-beam be cut off for physical safety reasons.

Photograph 6. Close-up of I-beam.

Site Photographs

Go East Landfill Slope Reconnaissance
City, State

GEOENGINEERS

Attachment A

Photograph 7. One steel pipe. Field screening did not indicate presence of contamination. We recommend the pipe be cut off for physical safety reasons.

Photograph 8. Erosional feature. Surface water has been diverted to reduce further erosion. Contractor to use erosion control materials and monitor for erosion.

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GEOENGINEERS	Attachment A

Photograph 9. Small pieces of glass. The green arrow points to a typical piece.

Photograph 10. Metal debris observed upslope of weir box on March 21, 2022.

Site Photographs

Go East Landfill Slope Reconnaissance
City, State

GeoEngineers

Attachment A

Photograph 11. Additional view of metal debris discovered upslope of weir box.

Photograph 12. Excavation of metal debris

Site Photographs	
Go East Landfill Slope Reconnaissance City, State	
GEOENGINEERS	Attachment A

Photograph 13. Lined stockpile of excavated metal debris, soil, and other debris.

APPENDIX E
Cul-de-Sac Soil Sampling Results

Full Report available at
https://apps.ecology.wa.gov/cleanupsearch/document/119850

GeoEngineers

554 West Bakerview Road, Bellingham, Washington 98226, Telephone: 360.647.1510, Fax: 360.647.5044 www.geoengineers.com

Memorandum

To:	Alan Noell, PhD, PE
From:	Garrett Leque, LG; Terry McPhetridge, LG, LHG
Date:	December 20, 2022
File:	6694-002-05
Subject:	Interim Action Completion Report Addendum – Cul-de-Sac Soil Sampling Results

INTRODUCTION AND BACKGROUND

This Interim Action Completion Report Addendum documents the results of six soil samples collected at the “cul-de-sac” area of the Go East site for chemical analysis. The Go East site location is shown in Figure 1.

The site contains a former landfill that is being cleaned up under the Model Toxics Control Act (MTCA; Ecology Facility Site Identification [FSID] 2708) and closed under Washington Administrative Code (WAC) 173-350-400 (limited purpose landfill regulation). An interim action was completed in 2021 and consisted of consolidating the “wedge area” of the landfill into the main landfill mass as documented in the report titled Final Interim Action Completion Report – Go East Landfill Corp Site (GeoEngineers 2021).

The site is covered by Washington State’s Construction Stormwater General Permit (CSGP; Permit number WAR306901). Construction stormwater was temporarily detained in an unlined stormwater pond in the future cul-de-sac area of the site from the fall of 2021 until the summer of 2022. The approximate location of the temporary ponded water is shown in Figure 2.

Stormwater was pumped from the pond through a treatment system prior to discharge. Treatment was necessary per the CSGP primarily to reduce turbidity (water cloudiness). Treatment was also performed due to known or suspected site contaminants such as petroleum hydrocarbons, metals, and polycyclic aromatic hydrocarbons (PAHs). The Washington State Department of Ecology (Ecology) requested that six soil samples be collected from the detention pond after it was permanently dry in the summer of 2022. The purpose of the soil sampling was to confirm that construction stormwater did not contaminate the soils at the pond/future cul-de-sac area. The cul-de-sac area will be paved in the future.

METHODS

The approximate area where stormwater was temporarily ponded is shown in Figure 2[1]. The pond was dry by late July 2022 and the pond will no longer be used for stormwater detention. Soil samples were collected from six locations on August 3, 2022. The six locations are labeled “Soil-1-220803” through “Soil-6-220803” and shown in Figure 2. Figure 2 also includes the prior soil sampling locations completed during the Interim Action (“IAEX” sample locations).

The six soil samples were collected from the base of the stormwater pond/future cul-de-sac area. A decontaminated steel trowel was used to collect the soil samples. Each soil sample was collected between

[1] The pond changed in size over time depending on weather conditions. The area outlined in Figure 2 is considered to be the approximate “average” extent of the pond throughout the majority of the project based on review of drone photography on multiple different days.

0 to 0.5 feet below ground surface (bgs). Sampling was performed in general accordance with soil sampling procedures specified in the Interim Action Work Plan (GeoEngineers 2020). Samples were delivered in a cooler with ice to OnSite Environmental, Inc. in Redmond, Washington. Samples were analyzed for petroleum hydrocarbons (diesel- and lube-oil-range), metals, and PAHs.

RESULTS

There was no field screening evidence of soil contamination at the sampling locations on the day of sampling. Chemical analytical results are summarized in Table 1 and the laboratory reports are attached as Appendix A. Petroleum hydrocarbons, metals, and PAHs were generally either not detected or were detected at concentrations less than the respective soil screening levels. The exceptions to this included nickel concentrations that exceeded the screening level of 48 milligrams per kilogram (mg/kg) in four samples, and one chromium detection slightly above the screening level of 48 mg/kg.

The concentrations of nickel ranged from 42 to 64 mg/kg, which are below the protective concentration of 1,600 mg/kg for the direct contact and 130 mg/kg for the leaching-to-groundwater exposure pathways (Ecology 2022). The concentrations of nickel exceeded the 30 mg/kg protective concentration for the terrestrial ecology exposure pathway, and in four samples, exceeded the 48 mg/kg Puget Sound Basin background concentration for nickel (Ecology 1994). Nickel appears to be elevated in soil generally in the project area as discussed in the Interim Action Completion Report (GeoEngineers 2021). The concentrations of nickel in confirmation soil samples IAEX-59-5, IAEX-55-3, and IAEX-54-4 ranged from 68 to 74 mg/kg. As shown in Figure 4 (GeoEngineers 2021), these samples were collected beyond the waste limits near the cul-de-sac area in May and June 2021, prior to any stormwater storage. Nickel exceedances are therefore unlikely a result of the stormwater that was temporarily detained. No further action is recommended regarding the nickel exceedances.

The concentrations of chromium ranged from 23 to 51 mg/kg, which are below the protective concentration of 120,000 mg/kg for the direct contact and 480,000 mg/kg leaching-to-groundwater exposure pathway for trivalent chromium. Two soil samples exceeded the 42 mg/kg protective concentration for the terrestrial ecology exposure pathway, but only one soil sample exceeded the 48 mg/kg Puget Sound Basin background concentration for chromium (Ecology 1994). The single slight exceedance of chromium is also likely related to background soils in this area and not related to the stormwater that was temporarily detained. A total of 67 soil samples have been analyzed for chromium at the site between the Interim Action and this sampling event combined. Only three soil samples exceeded the chromium screening level of 48 mg/kg out of the 67 soil samples which equals an exceedance frequency of 4.4 percent. The chromium concentrations of the three samples that exceeded the screening level were 49 mg/kg (IAEX-39-20), 57 mg/kg (IAEX-59-5), and 51 mg/kg (SOIL-3-220803). The concentrations of chromium are statistically compliant with the soil cleanup level based on the Puget Sound Basin background, in accordance with WAC 173-340-740(7)(e), because the soil chromium exceedance frequency is less than 10 percent, and the soil sample chromium concentrations are less than two times the screening level (i.e., less than 96 mg/kg). No further action is recommended regarding the chromium exceedance.

DISCUSSION AND CONCLUSIONS

This memorandum documents the analytical results of the six soil samples collected from the proposed the cul-de-sac area at the Go East Site. Samples were collected from the base of a temporary stormwater detention pond. The purpose of the sampling was to confirm that the temporarily detained construction stormwater did not contaminate the soils beneath the pond. The temporarily detained stormwater did not impact the soils beneath the pond based on our field screening and chemical analytical results. Therefore, no further action is recommended.

REFERENCES

Ecology, 1994, Natural Background Soil Metals Concentrations in Washington State, Ecology Publication No. 94-115, October 1994.

Ecology, 2022, CLARC data tables and other technical information, updated July 2022, https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Contamination-clean-up-tools/CLARC/Data-tables.

GeoEngineers, Inc., 2020. *Interim Action Work Plan, Go East Corp Landfill Site Everett, Washington, Ecology Agreed Order No. DE 18121*. August 10, 2020.

GeoEngineers, Inc., 2021. *Final Interim Action Completion Report – Go East Landfill Corp Site, 4430 108th Street SE, Everett, Washington.* November 23, 2021.

We trust the information provided in the memo meets your needs at this time. Please call Garrett Leque at 253.312.7958 with any questions.

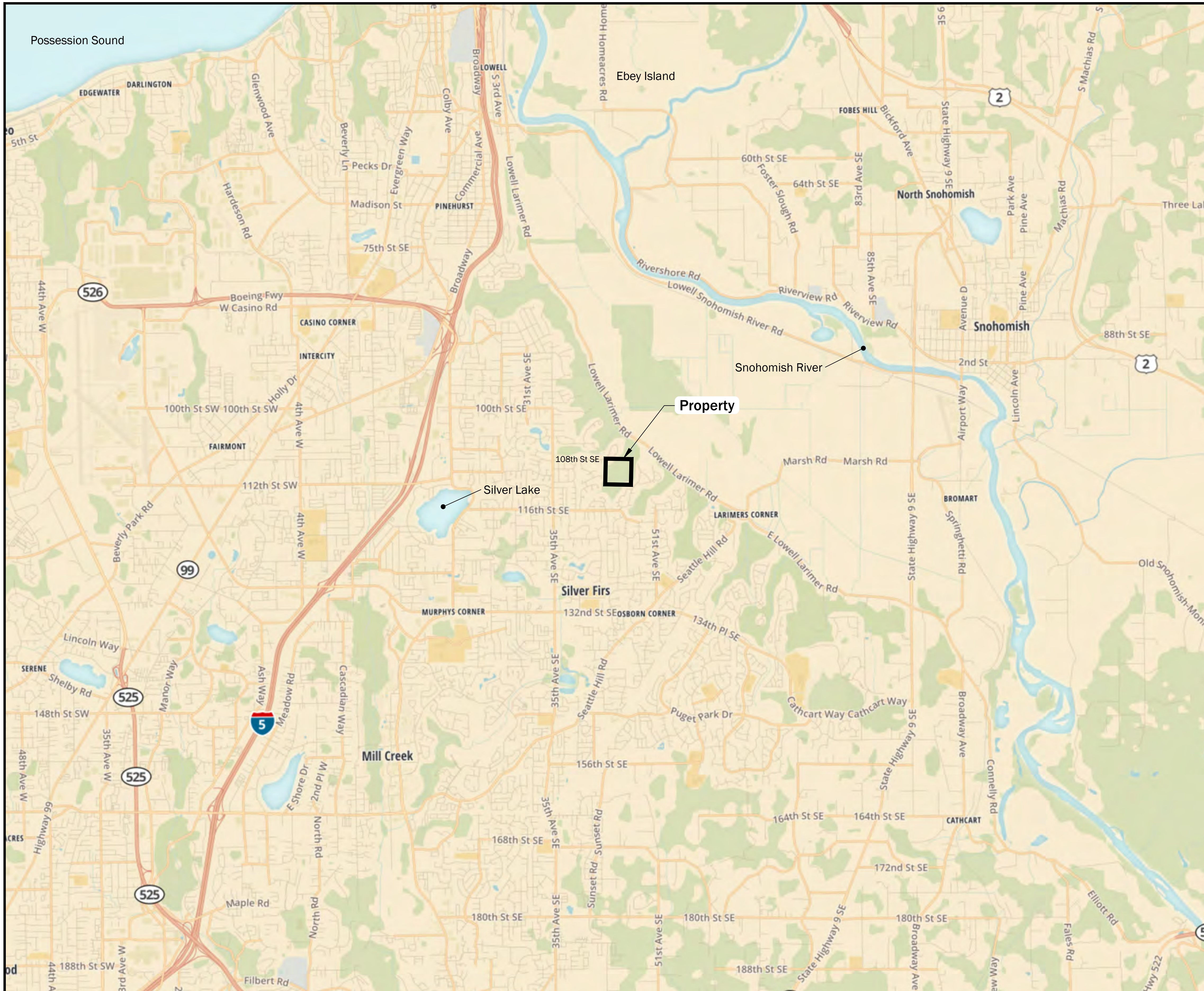
Attachments:

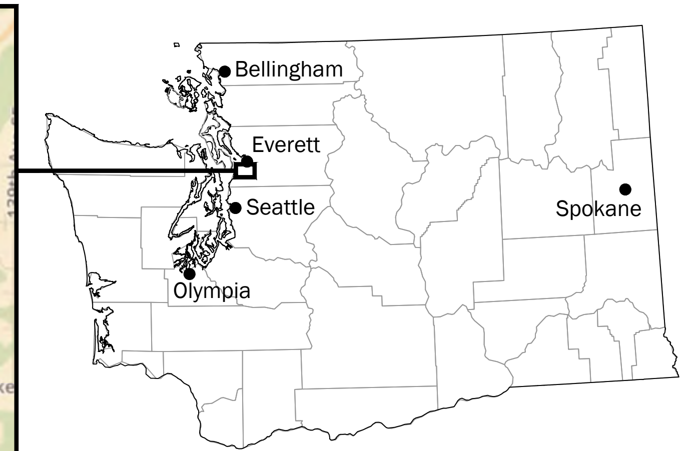
Figure 1. Vicinity Map

Figure 2. Cul de Sac Soil Sampling Locations

Table 1. Cul de Sac Soil Sampling Results

Appendix A. Laboratory Analytical Data





Not To Scale

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: Mapbox Open Street Map, 2016.

Projection: NAD 1983 UTM Zone 10N

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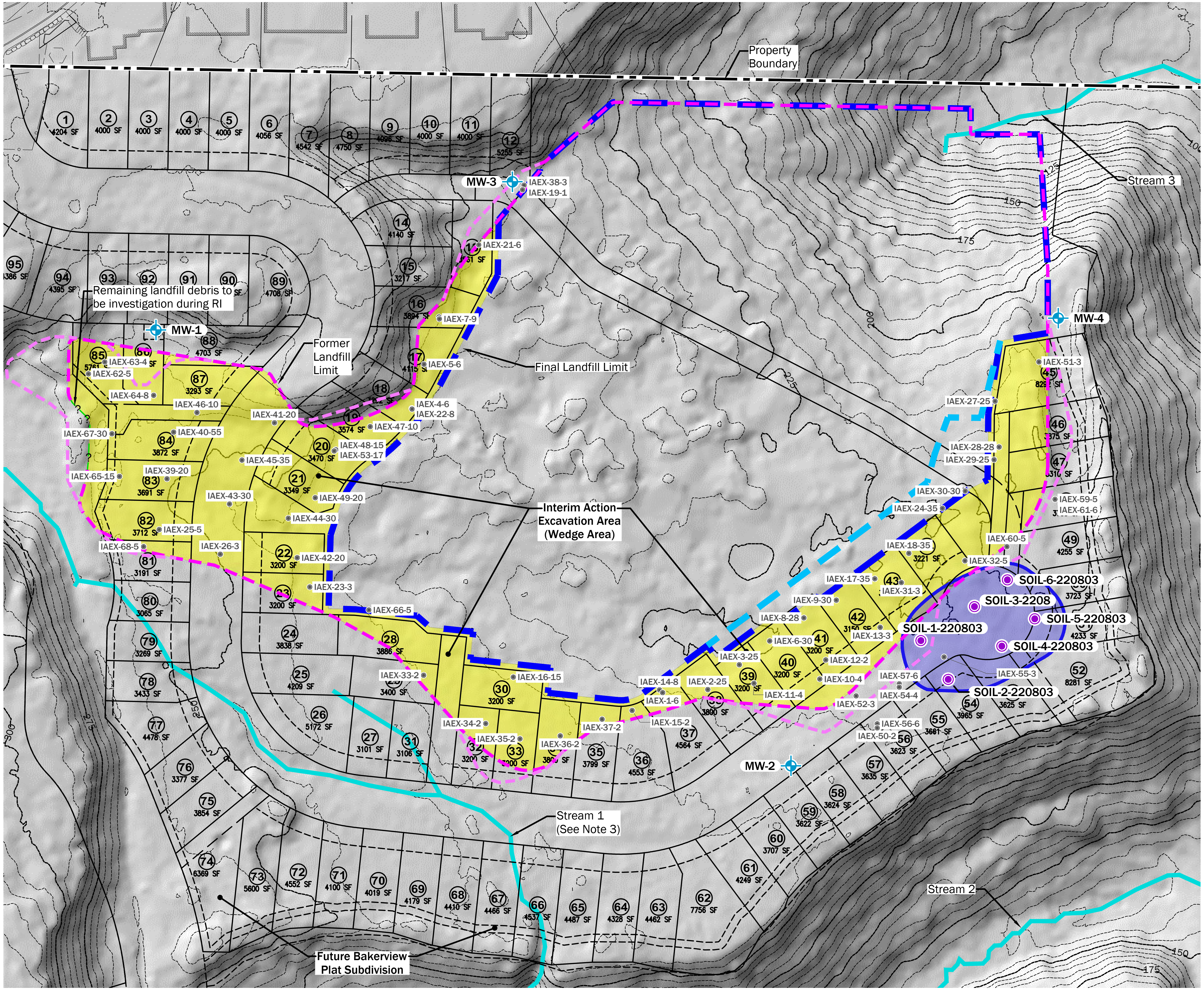
Vicinity Map

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 1

\\geoengineers.com\WAN\Projects\6\6694002\CAD\03\Geotech\669400203_F01_Vicinity Map.dwg TAB:F01 Date Exported: 01/31/20 - 11:52 by mwoods



Legend

- Property Boundary
- Interim Action Excavation Area (Wedge Area)
- Former Landfill Limit - Anticipated
- Former Landfill Limit - Actual
- Final Landfill Limit - Anticipated
- Final Landfill Limit - Actual
- Confirmation Soil Sampling Location
- Groundwater Monitoring Well (AESI, 2009)
- Approximate Location of Temporarily Ponded Stormwater
- Cul de Sac Soil Sampling Location

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. As of report preparation (August 2021), the stream course has been modified.

Data Source: Property boundary survey from PACE Engineers, dated 1/27/2020. Lidar image and elevation contours from Puget Sound Lidar Consortium dated 2013.

Projection: HPGN (HARN) Washington State Planes, North Zone, US Foot

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Feet

Cul de Sac Soil Sampling Locations

Go East Corp Landfill Site
Everett, Washington

GeoEngineers

Figure 2

P:\6\6694002\CAD\05\Cul de sac sampling report addendum\669400203_F02_Cul de Sac Soil Samplint Locations.dwg TAB:F02 Date Exported: 09/22/22 - 11:34 by mwoods

Table 1

Cul de Sac Soil Sampling Analytical Results

Go East Corp Landfill Site

Everett, Washington

Analyte	Soil Screening Level[1]	SOIL-1	SOIL-2	SOIL-3	SOIL-4	SOIL-5	SOIL-6
Location ID		SOIL-1	SOIL-2	SOIL-3	SOIL-4	SOIL-5	SOIL-6
Sample ID		SOIL-1-220803	SOIL-2-220803	SOIL-3-220803	SOIL-4-220803	SOIL-5-220803	SOIL-6-220803
Sample Date		8/3/2022	8/3/2022	8/3/2022	8/3/2022	8/3/2022	8/3/2022
Start Depth		0	0	0	0	0	0
End Depth		0.5	0.5	0.5	0.5	0.5	0.5
Depth Unit		feet bgs	feet bgs	feet bgs	feet bgs	feet bgs	feet bgs
Petroleum Hydrocarbons (mg/kg)							
Diesel-range hydrocarbons	NE	28 U	30 U	27 U	28 U	27 U	26 U
Lube oil-range hydrocarbons	NE	**66**	59 U	54 U	56 U	54 U	53 U
Sum of DRO+ORO	260	**66**	59 U	54 U	56 U	54 U	53 U
Metals (mg/kg)							
Arsenic	20	11 U	12 U	11 U	11 U	11 U	11 U
Cadmium	0.80	0.55 U	0.59 U	0.54 U	0.56 U	0.54 U	0.53 U
Chromium	48	**26**	**44**	**51**	**29**	**32**	**23**
Copper	36	**12**	**28**	**21**	**14**	**14**	**11**
Iron	56,000	**17,000**	**21,000**	**20,000**	**17,000**	**19,000**	**16,000**
Lead	50	**6.8**	5.9 U	5.4 U	5.6 U	5.4 U	5.3 U
Magnesium	NE	**7,000**	**8,400**	**8,100**	**6,300**	**6,700**	**6,400**
Manganese	3,700	**320**	**350**	**380**	**340**	**320**	**280**
Mercury	0.070	**0.034**	**0.030**	**0.021**	**0.027**	0.022 U	0.021 U
Nickel	48	**54**	**64**	**54**	**48**	**46**	**42**
Selenium	0.80	0.28 U	**0.32**	**0.28**	0.28 U	0.27 U	0.26 U
Zinc	86	**34**	**57**	**38**	**37**	**34**	**28**
Polycyclic Aromatic Hydrocarbons (mg/kg)							
1-Methylnaphthalene	34	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
2-Methylnaphthalene	320	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Acenaphthene	3.1	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Acenaphthylene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Anthracene	47	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Benzo(a)anthracene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Benzo(a)pyrene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Benzo(b)fluoranthene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Benzo(g,h,i)perylene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Benzo(j,k)fluoranthene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Chrysene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Dibenzo(a,h)anthracene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Fluoranthene	0.020	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Fluorene	1.6	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Indeno(1,2,3-c,d)pyrene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Naphthalene	4.5	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Phenanthrene	NE	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Pyrene	0.020	0.0073 U	0.0079 U	0.0071 U	0.0075 U	0.0073 U	0.0070 U
Total cPAH TEQ (ND=0.5RL)	0.084	0.00551 U	0.00596 U	0.00536 U	0.00566 U	0.00551 U	0.00528 U

Notes:

[1] Soil screening levels shown are from the June 30, 2021 Final Remedial Investigation Workplan.

NE = Screening level not established

BDL = Below detection limit

Sum of DRO+ORO = Sum of diesel-range organics and oil-range organics

U = Not detected at the indicated laboratory reporting limit

bgs = below ground surface

Total cPAH TEQ (ND=0.5RL) = The total cPAH toxic equivalency concentration calculated per WAC 173-340-900 Table 708-2 using non-detects at one half the reporting limit.

Bold font indicates analyte was detected.

Gray shading indicates the concentration exceeds the screening level.

APPENDIX F
Laboratory and Data Validation Reports

Appendix F available at https://apps.ecology.wa.gov/cleanupsearch/document/143100

APPENDIX G
Landfill Indicators and Background Metals and Piper-Stiff / Spider Diagrams

Table G-1

Landfill Indicators and Background Metals Concentrations

Go East Corp Landfill Site

Everett, Washington

Category	ID	Sample Date	Total As (µg/L)	Total Fe (µg/L)	Total Mn (µg/L)	Leachate Indicator Parameters (WAC 173-350-500(4)(h)(iii))			Geochemical Indicator Parameters (WAC 173-350-500(4)(h)(ii))													
						NH_3 (mg/L)	TOC (mg/L)	TDS (mg/L)	Alk (as CaCO3) (mg/L)	Bicarb (HCO3) (mg/L)	Dissolved Ca (µg/L)	Cl^- (mg/L)	Total Fe (µg/L)	Diss Fe (µg/L)	Total Mg (µg/L)	Diss Mg (µg/L)	Total Mn (µg/L)	Diss Mn (µg/L)	NO_3 (mg/L)	Diss K (mg/L)	Diss Na (mg/L)	SO_4 (mg/L)
Statistical distribution			Lognormal	Lognormal	Lognormal			Nonparametric	Nonparametric												Normal	
Statistical outliers (outliers not removed from bckgrd calcs)			11	6,200	NA			NA	NA												NA	
50th percentile			5.3	775	260								775	775			260	260				
Four times the 50th percentile			21.2	3,100	1,040								3,100	3,100			1,040	1,040				
90% percentile			7.3	3,010	354								3,010	3,010			354	354				
Site-specific background (WAC 173-340-709(3))			7.3	3,010	354								3,010	3,010			354	354	10			250
Upgradient	MW-1	4/6/2021	5.1	860	270	-	0.77	120	87	87	16,000	3.6	860	74	89,000	8,500	270	240	< 0.15	2,700	4,900	1.2
Upgradient	MW-1	3/3/2022	5.8	1,900	390	0.21	-	100	86	86	18,000	3.9	1,900	330	10,000	9,200	390	350	< 0.05	2,500	5,700	< 5
Upgradient	MW-1	5/4/2022	5.3	2,200	360	0.13	-	120	86	86	17,000	2.3	2,200	440	9,900	8,800	360	310	< 0.05	2,100	5,400	< 5
Upgradient	MW-1	6/28/2022	5.7	580	290	0.18	< 1	130	92	92	21,000	3	580	220	8,600	9,900	290	330	< 0.05	2,800	6,100	< 5
Upgradient	MW-1	9/22/2022	5.3	960	260	0.16	< 1	130	80	80	17,000	2.3	960	160	8,300	9,200	260	240	< 0.05	2,100	5,100	5.2
Upgradient	MW-2	4/6/2021	4.7	1,200	230	-	0.56	160	110	110	20,000	4.6	1,200	48	14,000	13,000	230	210	< 0.15	3,000	6,000	8.1
Upgradient	MW-2	12/8/2021	4.8	370	300	0.097	-	150	120	120	20,000	5.7	370	< 56	18,000	16,000	300	270	< 0.05	2,000	7,000	12
Upgradient	MW-2	3/18/2022	5.3	1,600	310	0.11	-	160	120	120	22,000	5.1	1,600	< 56	17,000	15,000	310	250	0.079	2,700	6,600	10
Upgradient	MW-2	5/5/2022	11	6,200	350	0.14	-	170	110	110	23,000	3.4	6,200	< 56	15,000	13,000	350	200	< 0.05	2,700	6,400	7.7
Upgradient	MW-2	6/28/2022	5.3	690	250	0.094	< 1	150	110	110	22,000	4	690	< 56	16,000	15,000	250	220	< 0.05	2,500	6,800	12
Upgradient	MW-2	9/22/2022	4.5	1,100	230	0.1	< 1	160	110	110	21,000	3	1,100	< 56	14,000	15,000	230	210	< 0.15	3,000	6,000	8.8
Upgradient	MW-3	4/6/2021	4.4	4,100	260	-	< 0.5	170	110	110	24,000	6.5	4,100	32	14,000	12,000	260	140	0.25	2,800	7,200	14
Upgradient	MW-3	12/6/2021	3.6	110	190	0.059	-	140	110	110	22,000	6.3	110	< 56	15,000	14,000	190	170	< 0.05	1,900	8,200	14
Upgradient	MW-3	3/9/2022	5	2,500	240	0.061	-	170	110	110	23,000	6.6	2,500	< 56	14,000	13,000	240	180	0.09	1,900	7,000	9.7
Upgradient	MW-3	4/27/2022	3.6	3,800	220	0.06	-	170	100	100	24,000	6.4	3,800	< 56	14,000	13,000	220	150	< 0.05	2,400	7,000	13
Upgradient	MW-3	6/21/2022	4.6	1,400	190	< 0.050	< 1	170	110	110	23,000	11	1,400	< 56	14,000	13,000	190	140	< 0.05	2,300	8,000	15
Upgradient	MW-3	9/20/2022	< 3.3	610	160	0.05	< 1	160	110	110	23,000	6	610	< 56	13,000	14,000	160	140	< 0.05	2,200	7,400	13
Upgradient	MW-5	12/7/2021	5.1	360	390	< 0.05	-	160	-	-	27,000	7.3	360	< 56	17,000	15,000	390	330	0.21	2,000	7,400	14
Upgradient	MW-5	2/3/2021	5.8	1,000	290	< 0.05	-	160	-	-	26,000	7.1	1,000	< 56	15,000	14,000	290	260	0.063	3,600	6,600	15
Upgradient	MW-5	3/7/2022	6.6	130	270	< 0.05	-	150	120	120	28,000	6.2	130	65	13,000	14,000	270	280	< 0.05	2,000	6,500	14
Upgradient	MW-5	4/7/2022	6.6	200	230	< 0.05	-	160	120	120	24,000	6.7	200	< 56	15,000	12,000	230	190	< 0.05	2,400	6,700	14
Upgradient	MW-5	5/18/2022	7.8	600	290	< 0.05	-	200	120	120	27,000	6.9	600	< 56	14,000	16,000	290	300	< 0.05	2,500	7,200	14
Upgradient	MW-5	6/10/2022	5.7	470	260	< 0.05	-	170	120	120	28,000	7.1	470	< 56	15,000	14,000	260	250	< 0.05	2,700	7,200	19
Upgradient	MW-5	6/24/2022	6.5	220	290	< 0.05	< 1	170	120	120	29,000	6.4	220	< 56	14,000	14,000	290	260	< 0.05	2,300	7,700	14
Upgradient	MW-5	8/3/2022	6	240	150	< 0.05	< 1	190	120	120	27,000	< 2	240	< 56	13,000	14,000	150	110	< 0.05	2,500	6,700	14
Upgradient	MW-5	9/22/2023	4.8	380	170	0.061	< 1	170	120	120	27,000	5.9	380	< 56	15,000	16,000	170	120	< 0.05	2,500	7,000	13
Wedge Area	MW-6	12/9/2021	3.5	420	1,800	0.1	-	250	190	190	41,000	5.3	420	62	23,000	22,000	1,800	1,800	0.62	2,400	18,000	26
Wedge Area	MW-6	3/11/2022	4.2	1,100	2,100	0.096	-	270	200	200	44,000	5.7	1,100	74	24,000	21,000	2,100	2,000	0.12	2,500	19,000	25
Wedge Area	MW-6	5/3/2022	5.8	2,000	2,100	0.1	-	290	230	230	44,000	3.9	2,000	67	24,000	23,000	2,100	2,000	0.12	2,500	16,000	26
Wedge Area	MW-6	6/20/2022	5.2	1,200	2,400	0.068	4.6	300	220	220	49,000	5.5	1,200	310	24,000	24,000	2,400	2,400	< 0.05	3,100	17,000	28
Wedge Area	MW-6	9/21/2022	5.7	510	1,700	0.1	3.7	230	190	190	37,000	5.3	510	300	21,000	23,000	1,700	1,700	0.074	2,600	13,000	18
Wedge Area	MW-7	12/9/2021	11	6,900	680	< 0.05	-	120	100	100	20,000	9	6,900	< 56	18,000	14,000	680	250	0.22	1,900	7,600	8.5
Wedge Area	MW-7	3/14/2022	10	2,100	180	< 0.05	-	140	94	94	18,000	5.3	2,100	< 56	13,000	12,000	180	62	0.12	2,200	6,000	5.9
Wedge Area	MW-7	5/6/2022	12	24,000	1,300	< 0.05	-	150	110	110	20,000	2.5	24,000	< 56	24,000	13,000	1,300	32	< 0.05	2,100	6,600	< 5
Wedge Area	MW-7	6/20/2022	11	550	40	< 0.05	< 1	140	96	96	20,000	5.6	550	< 56	11,000	12,000	40	37	< 0.05	2,300	6,300	5.7
Wedge Area	MW-7	9/21/2022	8.8	3,000	190	< 0.05	< 1	140	100	100	20,000	5.2	3,000	< 56	14,000	14,000	190	74	0.05	2,200	6,200	6.9
Wedge Area	MW-8	12/13/2021	< 3.3	1,300	2,100	< 0.05	-	320	230	230	37,000	4.5	1,300	120	50,000	41,000	2,100	1,900	0.1	4,100	11,000	73
Wedge Area	MW-8	12/13/2021	< 3.3	1,400	2,200	< 0.05	-	320	220	220	38,000	4.5	1,400	110	50,000	42,000	2,200	1,900	0.65	4,500	11,000	71

Category	ID	Sample Date	Total As (µg/L)	Total Fe (µg/L)	Total Mn (µg/L)	Leachate Indicator Parameters (WAC 173-350-500(4)(h)(iii))			Geochemical Indicator Parameters (WAC 173-350-500(4)(h)(ii))													
						NH_3 (mg/L)	TOC (mg/L)	TDS (mg/L)	Alk (as CaCO3) (mg/L)	Bicarb (HCO3) (mg/L)	Dissolved Ca (µg/L)	Cl^- (mg/L)	Total Fe (µg/L)	Diss Fe (µg/L)	Total Mg (µg/L)	Diss Mg (µg/L)	Total Mn (µg/L)	Diss Mn (µg/L)	NO_3 (mg/L)	Diss K (mg/L)	Diss Na (mg/L)	SO_4 (mg/L)
Wedge Area	MW-8	3/22/2022	< 3.3	2,800	2,400	< 0.05	-	320	220	220	40,000	4.6	2,800	99	47,000	40,000	2,400	2,200	2.9	4,500	9,800	69
Wedge Area	MW-8	5/2/2022	< 3.3	2,100	1,600	< 0.05	-	280	200	200	33,000	2.5	2,100	65	33,000	36,000	1,600	1,700	< 0.05	3,700	9,200	49
Wedge Area	MW-8	6/22/2022	< 3.3	1,400	1,900	< 0.05	4.6	290	210	210	34,000	3	1,400	190	35,000	35,000	1,900	1,800	< 0.05	4,100	9,200	57
Wedge Area	MW-8	9/20/2022	< 3.3	1,100	1,400	< 0.05	1.6	270	180	180	32,000	4.1	1,100	< 56	34,000	39,000	1,400	1,300	< 0.05	3,800	8,700	60
Downgradient	MW-9	4/4/2022	< 3.3	5,100	1,500	1.8	-	460	390	390	110,000	6.7	5,100	< 56	30,000	26,000	1,500	1,300	0.066	6,900	14,000	25
Downgradient	MW-9	5/19/2022	< 3.3	2,300	1,100	1.1	-	400	340	340	93,000	6.2	2,300	1,900	24,000	26,000	1,100	1,200	0.05	5,300	13,000	21
Downgradient	MW-9	6/23/2022	3.9	8,600	1,800	1.4	10	470	410	410	110,000	5.7	8,600	3,100	27,000	26,000	1,800	1,700	< 0.05	5,900	14,000	20
Downgradient	MW-9	9/21/2022	< 3.3	2,400	1,400	1.1	7.4	430	370	370	94,000	6.2	2,400	1,900	27,000	28,000	1,400	1,300	0.1	5,800	13,000	5.7
Downgradient	MW-10	4/4/2022	4.3	6,800	320	< 0.05	-	270	170	170	48,000	6.1	6,800	100	23,000	18,000	320	200	0.18	4,300	8,200	48
Downgradient	MW-10	5/19/2022	< 3.3	1,400	460	0.22	-	300	230	230	65,000	4.5	1,400	1,000	21,000	23,000	460	440	0.11	3,400	9,400	33
Downgradient	MW-10	6/3/2022	< 3.3	1,300	450	0.088	7.4	330	250	250	78,000	3.7	1,300	930	21,000	22,000	450	450	0.074	3,300	9,900	35
Downgradient	MW-10	9/21/2022	< 3.3	6,400	1,600	1	8.4	390	360	360	91,000	6.2	6,400	6,000	26,000	28,000	1,600	1,600	< 0.050	5,700	12,000	7.4
Downgradient	SWS-1	11/1/2021	< 3.3	11,000	1,500		11						11,000	1,300			1,500	2,400				
Downgradient	SWS-1	12/8/2021	< 3.3	8,000	1,800	2.5	11	490					8,000				1,800					
Downgradient	SWS-1	3/21/2022	< 3.3	12,000	2,000	2.3	13	530					12,000				2,000					
Downgradient	SWS-1	5/3/2022	< 3.3	6,400	1,600	2	11	470					6,400		57,000		1,600					
Downgradient	SWS-1	6/21/2022	< 3.3	5,000	1,500	2.3	10	500	430	430	100,000	6.3	5,000	1,600	26,000	28,000	1,500	< 56	0.088	7,500	15,000	6.3
Downgradient	SWS-1	9/20/2022	< 3.3	7,300	1,600	1.7	8.7	430	390	390		6.6	7,300		27,000		1,600		< 0.05			< 5

Notes:

(1) WAC 173-200 background is 95th UTL with 95 percent coverage.

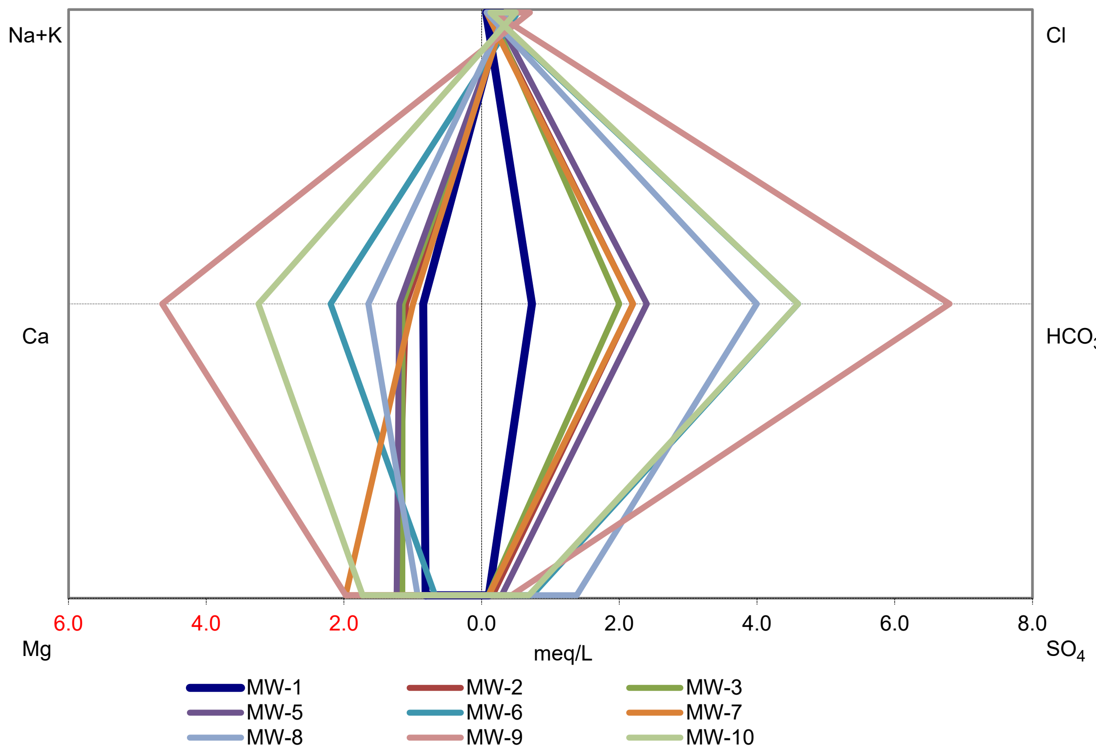
(2) MTCA distributions are assumed lognormal. If not lognormal, a test for normal is performed.

(3) If lognormal under MTCA, lognormal is used under WAC 173-200, even if data are more normal than lognormal.

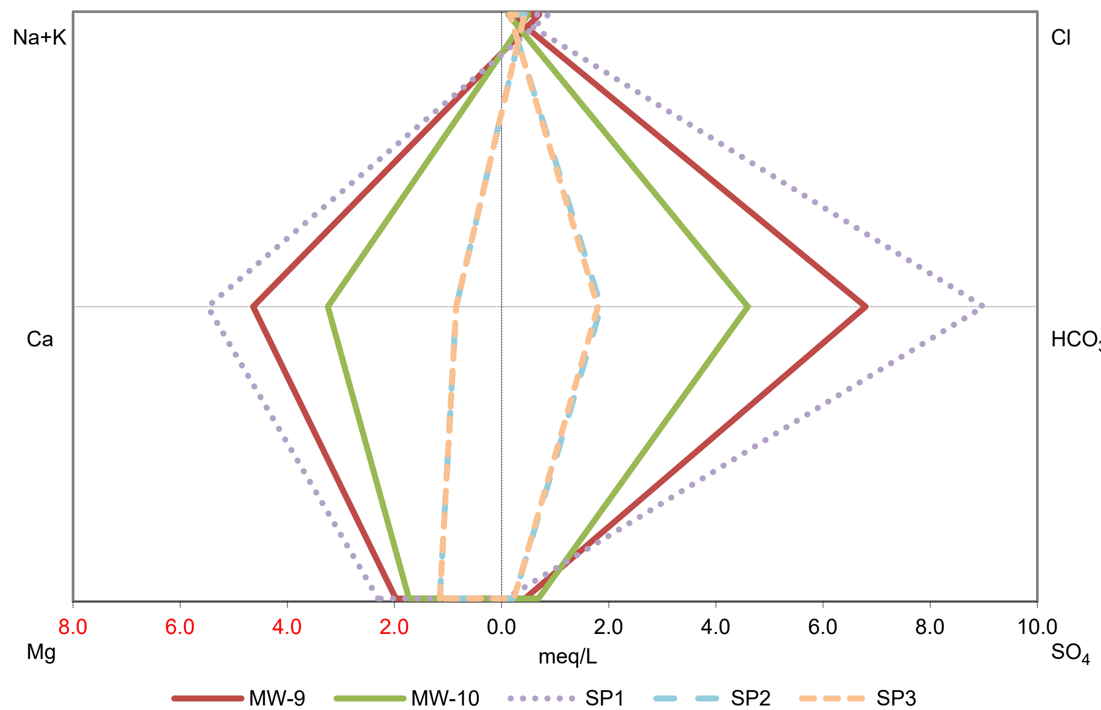
(4) Iron background is reduced from 3,150 to 3,100 ug/L to bound by 4 times 50th percentile.

Exceeds apparent background

Exceeds cleanup level



Stiff diagram for all wells.



Stiff diagram for MW-9, MW-10, and SP1, SP2, and SP3. MW-9, MW-10, and SP1 are different from SP2 and SP3.

XXXXX-XXX-XX Date Exported: 07/31/23

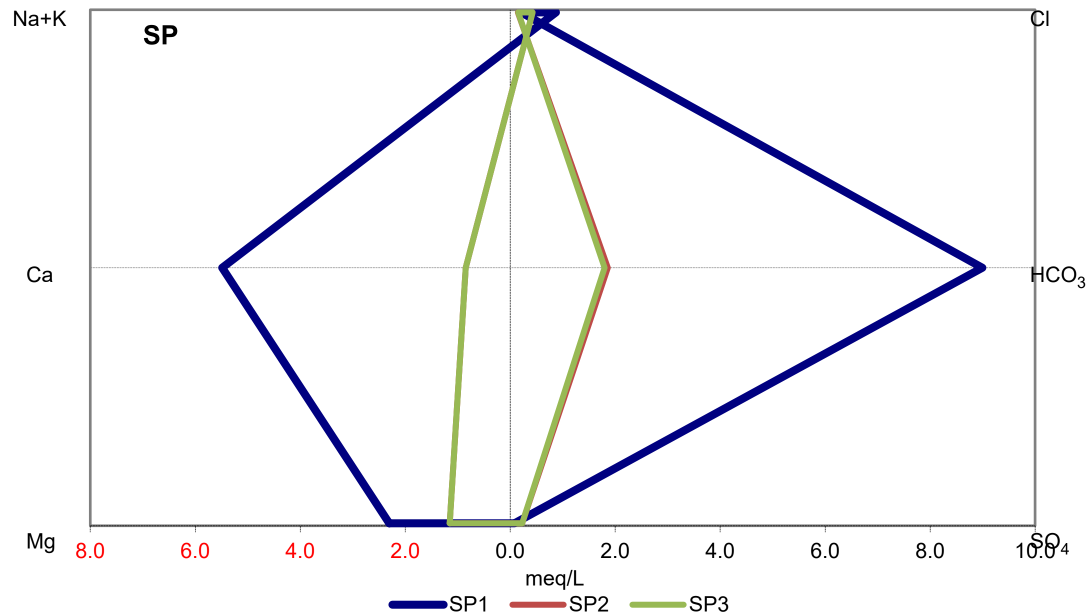
Disclaimer: This figure was created for a specific purpose and project. Any use of this figure for any other project or purpose shall be at the user's sole risk and without liability to GeoEngineers. The locations of features shown may be approximate. GeoEngineers makes no warranty or representation 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.

Spider and/or Stiff Diagrams

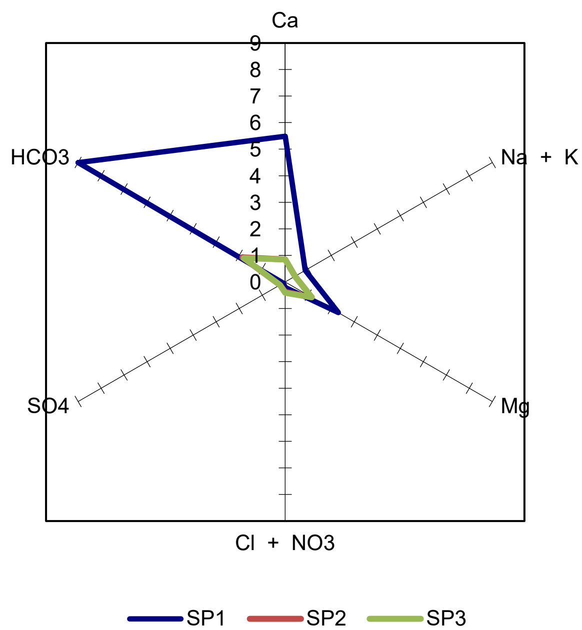
Report Title
City, State

GEOENGINEERS

Figure G-1



Stiff diagram for SP1 (SWS-1), SP-2, and SP-3. SP1 (SWS-1) is in Stream 2 downgradient of the landfill, and has a different signature compared to SP2 and SP3 which are in Stream 1.



Spider diagram for SP1 (SWS-1), SP-2, and SP-3. SP1 (SWS-1) has a different signature compared to SP2 and SP3.

XXXXX-XXX-XX Date Exported: 07/31/23

Spider and/or Stiff Diagrams	
Go East Landfill Site Everett, Washington	
GeoEngineers	Figure G-2

APPENDIX H
Ecology Cleanup Level Workbook

Table H-1

PCUL Workbook - Groundwater Summary for Freshwater Sites

Chemical (all concentrations are in ug/L)	**Most Stringent PCUL Potable Water GW #s 1-5**	**GW-1 Protect Drinking Water PW**	**GW-2 Protect Surface Water SW-FW**	**GW-3 Protect Sediment LeachFW**	**GW-5 Site Specific Background**
Metals					
Arsenic	7.3E+00	5.8E-01	1.8E-02	3.5E+02	7.3E+00
Iron	3.0E+02	3.0E+02	1.0E+03	na	na
Lead	2.5E+00	1.5E+01	2.5E+00	1.5E+01	na
Manganese	5.0E+01	5.0E+01	5.0E+01	na	na
Nickel	2.6E+01	1.0E+02	5.2E+01	2.6E+01	na
SVOCs - PAHs					
Fluoranthene	6.0E+00	6.4E+02	6.0E+00	3.8E+03	na
Pyrene	8.0E+00	2.4E+02	8.0E+00	2.1E+03	na
Total cPAH TEQ	9.5E-03	2.3E-02	9.7E-03	9.5E-03	na
Pesticides					
cis-Chlordane	3.6E-04	1.3E-01	3.6E-04	2.1E+00	na
Heptachlor	3.4E-07	9.7E-02	3.4E-07	5.5E-04	na

Table H-2

PCUL Workbook - Sediment Summary for Freshwater Sites

Chemical (All concentrations are in mg/kg DW, except as noted)	PBT List WAC 173-333-310	DMMP List 1 or 2	Bioaccum-ulative Param	Lower Tier Marine Natural Background SCUM Table 10-1	PQL SCUM Tables 11-1, D-1	SMS Lower Tier SCO Fresh Benthic SCUM Table 8-1	SMS Upper Tier CSL Fresh Benthic SCUM Table 8-1	SMS Lower Tier Human Health Beach Play SCO SedEq	SMS Upper Tier Human Health Beach Play CSL SedEq	Lower Tier Risk-Based Concentration for Bioaccum SCO	Upper Tier Risk-Based Concentration for Bioaccum CSL	Lower Tier Risk-Based Concentration for Non-Bioaccum SCO	Upper Tier Risk-Based Concentration for Non-Bioaccum CSL	SMS Lower Tier SCO PCUL with Bioaccum	SMS Upper Tier CSL PCUL with Bioaccum	Initial SCO without Bioaccumulation (Benthic & Beach Play Only, Adjusted to Bknd or PQL as Appropriate)
Metals																
Arsenic	no	YES	YES	1.10E+01	3.00E-01	1.40E+01	1.20E+02	2.08E+00	2.08E+01	1.10E+01	1.10E+01	na	na	1.10E+01	1.10E+01	1.10E+01
Iron	no	no	no	na	na	na	na	4.67E+05	4.67E+05	na	na	4.67E+05	4.67E+05	4.67E+05	4.67E+05	4.67E+05
Lead	YES	YES	YES	2.10E+01	1.00E-01	3.60E+02	1.30E+03	na	na	2.10E+01	2.10E+01	na	na	2.10E+01	2.10E+01	3.60E+02
Manganese	no	no	no	na	na	na	na	3.12E+04	3.12E+04	na	na	3.12E+04	3.12E+04	3.12E+04	3.12E+04	3.12E+04
Nickel	no	no	no	5.00E+01	2.00E-01	2.60E+01	1.10E+02	1.34E+04	1.34E+04	na	na	2.60E+01	1.10E+02	5.00E+01	1.10E+02	5.00E+01
SVOCs - PAHs																
Fluoranthene	YES	YES	YES	na	5.00E-03	na	na	3.57E+03	3.57E+03	5.00E-03	5.00E-03	na	na	5.00E-03	5.00E-03	3.57E+03
Pyrene	no	YES	YES	na	5.00E-03	na	na	2.68E+03	2.68E+03	5.00E-03	5.00E-03	na	na	5.00E-03	5.00E-03	2.68E+03
Total cPAH TEQ	YES	no	YES	2.10E-02	9.00E-03	na	na	1.74E-01	1.74E+00	2.10E-02	2.10E-02	na	na	2.10E-02	2.10E-02	1.74E-01
Pesticides																
cis-Chlordane	YES	YES	YES	na	1.00E-04	na	na	2.03E+00	2.03E+01	1.00E-04	1.00E-04	na	na	1.00E-04	1.00E-04	2.03E+00
Heptachlor	YES	no	YES	na	1.00E-04	na	na	2.89E-01	2.89E+00	1.00E-04	1.00E-04	na	na	1.00E-04	1.00E-04	2.89E-01

APPENDIX I
Groundwater and Sediment Background Calculations

Groundwater Background Calculations

Outlier Tests for Selected Uncensored Variables

User Selected Options
Date/Time of Computation ProUCL 5.2 6/14/2023 10:05:17 AM
From File WorkSheet.xls
Full Precision OFF

Rosner's Outlier Test for Arsenic

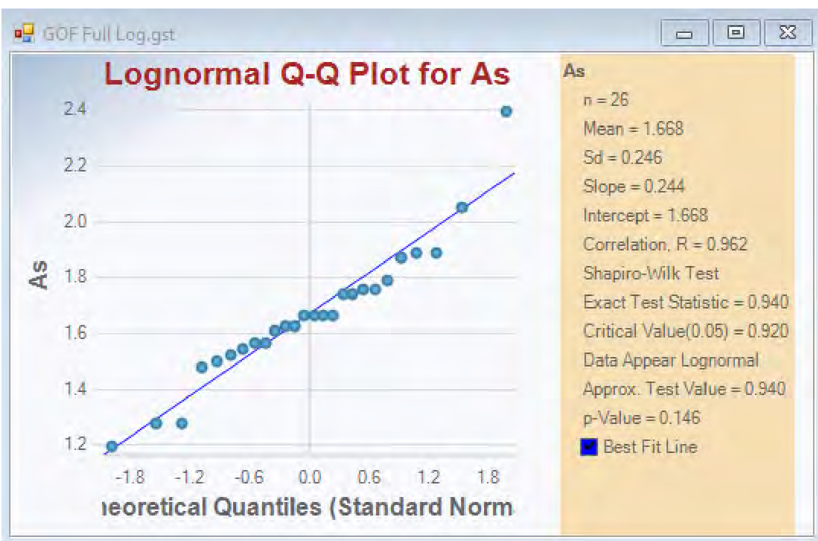
Mean Arsenic	5.469
Standard Deviation	1.508
Number of data	26
Number of suspected outliers	1

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	5.469	1.479	11	9	3.739	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier
Potential outliers is: 11

For 1% Significance Level, there is 1 Potential Outlier
Potential outliers is: 11

Note: No outliers removed



Note: Data are lognormal

Lognormal Background Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.2 6/14/2023 10:08:20 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

As

General Statistics			
Total Number of Observations	26	Number of Distinct Observations	17
Minimum	3.3	First Quartile	4.725
Second Largest	7.8	Median	5.3
Maximum	11	Third Quartile	5.8
Mean	5.469	SD	1.508
Coefficient of Variation	0.276	Skewness	2.005
Mean of logged Data	1.668	SD of logged Data	0.246
Critical Values for Background Threshold Values (BTVs)			
Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.94	Shapiro Wilk Lognormal GOF Test	
10% Shapiro Wilk Critical Value	0.933	Data appear Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.127	Lilliefors Lognormal GOF Test	
10% Lilliefors Critical Value	0.156	Data appear Lognormal at 10% Significance Level	
Data appear Lognormal at 10% Significance Level			
Background Statistics assuming Lognormal Distribution			
95% UTL with 95% Coverage	9.273	**90% Percentile (z)**	**7.265**
95% UPL (t)	8.133	95% Percentile (z)	7.944
95% USL	10.25	99% Percentile (z)	9.391

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

Note: 90th percentile is 7.265 ug/L for a lognormal distribution.

	General Statistics on Uncensored Full Data
Date/Time of Computation	ProUCL 5.2 6/14/2023 10:10:12 AM
User Selected Options	
From File	WorkSheet.xls
Full Precision	OFF

From File: WorkSheet.xls

General Statistics for Uncensored Dataset

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Geo-Mean	SD	SEM	MAD/0.67!	Skewness	CV
As	26	0	3.3	11	5.469	5.303	1.508	0.296	0.815	2.005	0.276

Percentiles for Uncensored Dataset

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	**50%ile(Q2**	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
As	26	0	4	4.6	4.725	**5.3**	5.8	6	6.6	7.5	10.2

Note that 90%ile is based on raw statistics, not a lognormal distribution

4 x 50th percentile	21.2	ug/L
90th percentile	7.265	ug/L

Arsenic Background (ug/L) = 7.27

WAC 173-340-709(3)

Outlier Tests for Selected Uncensored Variables

User Selected Options

Date/Time of Computation	ProUCL 5.2 6/14/2023 10:16:11 AM
From File	WorkSheet.xls
Full Precision	OFF

Rosner's Outlier Test for Manganese

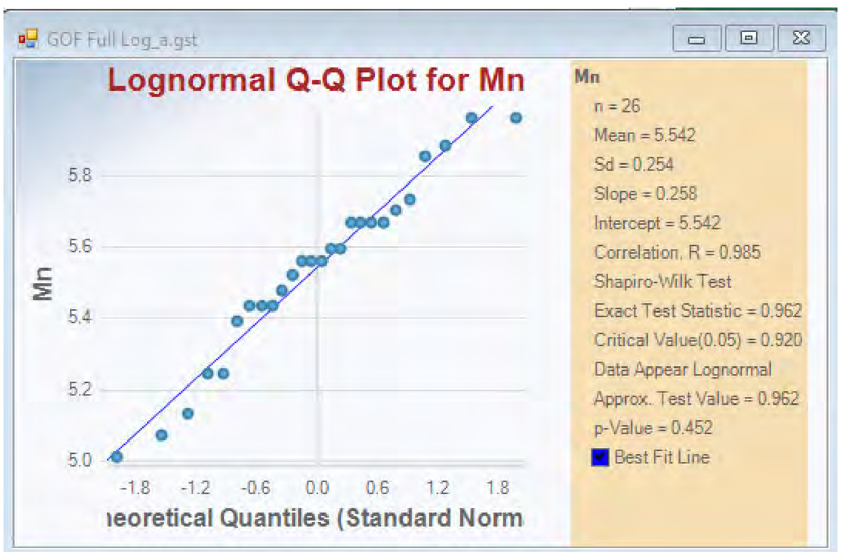
Mean Manganese	263.1
Standard Deviation	64.61
Number of data	26
Number of suspected outliers	1

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	263.1	63.35	390	2	2.003	2.84	3.16

For 5% Significance Level, there is no Potential Outlier

For 1% Significance Level, there is no Potential Outlier

Note: No outliers removed



Note: Data are lognormal

Lognormal Background Statistics for Uncensored Full Data Sets

User Selected Options			
Date/Time of Computation	ProUCL 5.2 6/14/2023 10:18:05 AM		
From File	WorkSheet.xls		
Full Precision	OFF		
Confidence Coefficient	95%		
Coverage	95%		
New or Future K Observations	1		
Number of Bootstrap Operations	2000		

Mn

General Statistics			
Total Number of Observations	26	Number of Distinct Observations	16
Minimum	150	First Quartile	230
Second Largest	390	Median	260
Maximum	390	Third Quartile	290
Mean	263.1	SD	64.61
Coefficient of Variation	0.246	Skewness	0.25
Mean of logged Data	5.542	SD of logged Data	0.254
Critical Values for Background Threshold Values (BTVs)			
Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.962	Shapiro Wilk Lognormal GOF Test	
10% Shapiro Wilk Critical Value	0.933	Data appear Lognormal at 10% Significance Level	
Lilliefors Test Statistic	0.11	Lilliefors Lognormal GOF Test	
10% Lilliefors Critical Value	0.156	Data appear Lognormal at 10% Significance Level	
Data appear Lognormal at 10% Significance Level			
Background Statistics assuming Lognormal Distribution			
95% UTL with 95% Coverage	454.9	**90% Percentile (z)**	**353.5**
95% UPL (t)	397.2	95% Percentile (z)	387.7
95% USL	504.3	99% Percentile (z)	460.9

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

Note: 90th percentile is 353.5 ug/L for a lognormal distribution.

General Statistics on Uncensored Full Data

Date/Time of Computation	ProUCL 5.2 6/14/2023 10:19:19 AM
User Selected Options	
From File	WorkSheet.xls
Full Precision	OFF

From File: WorkSheet.xls

General Statistics for Uncensored Dataset

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Geo-Mean	SD	SEM	MAD/0.67!	Skewness	CV
Mn	26	0	150	390	263.1	255.3	64.61	12.67	44.48	0.25	0.246

Percentiles for Uncensored Dataset

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	**50%ile(Q2]**	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Mn	26	0	180	220	230	**260**	290	300	355	382.5	390

Note that 90%ile is based on raw statistics, not a lognormal distribution

4 x 50th percentile	1040	ug/L
90th percentile	353.5	ug/L

Manganese Background (ug/L) = 354

WAC 173-340-709(3)

Outlier Tests for Selected Uncensored Variables

User Selected Options	
Date/Time of Computation	ProUCL 5.2 6/14/2023 10:23:27 AM
From File	WorkSheet.xls
Full Precision	OFF

Rosner's Outlier Test for Iron

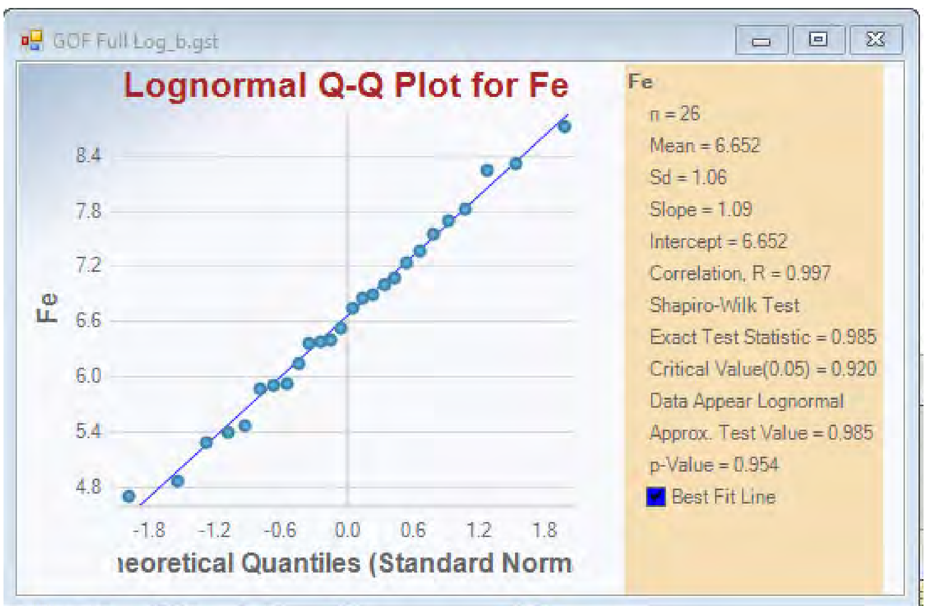
Mean Iron	1299
Standard Deviation	1452
Number of data	26
Number of suspected outliers	1

#	Mean	sd	Potential outlier	Obs. Number	Test value	Critical value (5%)	Critical value (1%)
1	1299	1423	6200	9	3.443	2.84	3.16

For 5% Significance Level, there is 1 Potential Outlier
Potential outliers is: 6200

For 1% Significance Level, there is 1 Potential Outlier
Potential outliers is: 6200

Note: No outliers removed



Note: Data are lognormal

Lognormal Background Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.2 6/14/2023 10:25:21 AM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Fe

General Statistics

Total Number of Observations	26	Number of Distinct Observations	26
Minimum	110	First Quartile	372.5
Second Largest	4100	Median	775
Maximum	6200	Third Quartile	1550
Mean	1299	SD	1452
Coefficient of Variation	1.117	Skewness	2.076
Mean of logged Data	6.652	SD of logged Data	1.06

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.275	d2max (for USL)	2.681

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.985	Shapiro Wilk Lognormal GOF Test
10% Shapiro Wilk Critical Value	0.933	Data appear Lognormal at 10% Significance Level
Lilliefors Test Statistic	0.0577	Lilliefors Lognormal GOF Test
10% Lilliefors Critical Value	0.156	Data appear Lognormal at 10% Significance Level

Data appear Lognormal at 10% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	8642	**90% Percentile (z)**	**3014**
95% UPL (t)	4904	95% Percentile (z)	4430
95% USL	13290	99% Percentile (z)	9125

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Note: 90th percentile is 3,014 ug/L for a lognormal distribution.

	General Statistics on Uncensored Full Data
Date/Time of Computation	ProUCL 5.2 6/14/2023 10:26:58 AM
User Selected Options	
From File	WorkSheet.xls
Full Precision	OFF

From File: WorkSheet.xls

General Statistics for Uncensored Dataset

Variable	NumObs	# Missing	Minimum	Maximum	Mean	Geo-Mean	SD	SEM	MAD/0.675	Skewness	CV
Fe	26	0	110	6200	1299	774.4	1452	284.7	711.6	2.076	1.117

Percentiles for Uncensored Dataset

Variable	NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	**50%ile(Q2)**	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
Fe	26	0	210	360	372.5	**775**	1550	1900	3150	4025	5675

Note that 90%ile is based on raw statistics, not a lognormal distribution

4 x 50th percentile	3100	ug/L
90th percentile	3014	ug/L

Iron Background (ug/L) = 3014

WAC 173-340-709(3)

Sediment Background Calculations

Sediment Background Metals Concentrations - Iron, Manganese, Nickel

Selected concentration is 90% UTL with 90 coverage (yellow highlighted cells)

Background Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.18/10/2022 4:41:27 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	90%
Coverage	90%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Iron

General Statistics

Total Number of Observations	8	Number of Distinct Observations	5
Minimum	11000	First Quartile	15000
Second Largest	17000	Median	16000
Maximum	20000	Third Quartile	16250
Mean	15750	SD	2493
Coefficient of Variation	0.158	Skewness	-0.36
Mean of logged Data	9.653	SD of logged Data	0.167

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	2.219	d2max (for USL)	1.909

Normal GOF Test

Shapiro Wilk Test Statistic	0.899	**Shapiro Wilk GOF Test**
5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.257	**Lilliefors GOF Test**
5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

90% UTL with 90% Coverage	21282	90% Percentile (z)	18945
90% UPL (t)	19491	95% Percentile (z)	19850
90% USL	20509	99% Percentile (z)	21549

Gamma GOF Test

A-D Test Statistic	0.593	**Anderson-Darling Gamma GOF Test**
5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.27	**Kolmogorov-Smirnov Gamma GOF Test**
5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	42.71	k star (bias corrected MLE)	26.78
Theta hat (MLE)	368.7	Theta star (bias corrected MLE)	588.2
nu hat (MLE)	683.4	nu star (bias corrected)	428.5
MLE Mean (bias corrected)	15750	MLE Sd (bias corrected)	3044

Background Statistics Assuming Gamma Distribution			
90% Wilson Hilferty (WH) Approx. Gamma UPL	19799	90% Percentile	19755
90% Hawkins Wixley (HW) Approx. Gamma UPL	19847	95% Percentile	21068
90% WH Approx. Gamma UTL with 90% Coverage	22033	99% Percentile	23681
90% HW Approx. Gamma UTL with 90% Coverage	22154		
90% WH USL	21049	90% HW USL	21135
Lognormal GOF Test			
Shapiro Wilk Test Statistic	0.868	**Shapiro Wilk Lognormal GOF Test**	
5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.287	**Lilliefors Lognormal GOF Test**	
5% Lilliefors Critical Value	0.283	Data Not Lognormal at 5% Significance Level	
Data appear Approximate Lognormal at 5% Significance Level			
Background Statistics assuming Lognormal Distribution			
90% UTL with 90% Coverage	22568	90% Percentile (z)	19290
90% UPL (t)	20011	95% Percentile (z)	20500
90% USL	21427	99% Percentile (z)	22977
Nonparametric Distribution Free Background Statistics			
Data appear Normal at 5% Significance Level			
Nonparametric Upper Limits for Background Threshold Values			
Order of Statistic, r	8	90% UTL with 90% Coverage	20000
Approx, f used to compute achieved CC	0.889	Approximate Actual Confidence Coefficient achieved by UTL	0.57
		Approximate Sample Size needed to achieve specified CC	22
90% Percentile Bootstrap UTL with 90% Coverage	20000	90% BCA Bootstrap UTL with 90% Coverage	20000
90% UPL	20000	90% Percentile	17900
90% Chebyshev UPL	23682	95% Percentile	18950
95% Chebyshev UPL	27275	99% Percentile	19790
90% USL	20000		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

	A	B	C	D	E	F	G	H	I	J	K	L
95	Manganese											
96												
97	General Statistics											
98					Total Number of Observations	8					Number of Distinct Observations	5
99					Minimum	140					First Quartile	207.5
100					Second Largest	250					Median	220
101					Maximum	250					Third Quartile	235
102					Mean	215					SD	35.46
103					Coefficient of Variation	0.165					Skewness	-1.423
104					Mean of logged Data	5.357					SD of logged Data	0.186
105												
106					Critical Values for Background Threshold Values (BTVs)							
107					Tolerance Factor K (For UTL)	2.219					d2max (for USL)	1.909
108												
109					Normal GOF Test							
110					Shapiro Wilk Test Statistic	0.86	Shapiro Wilk GOF Test					
111					5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level					
112					Lilliefors Test Statistic	0.211	Lilliefors GOF Test					
113					5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level					
114					Data appear Normal at 5% Significance Level							
115												
116					Background Statistics Assuming Normal Distribution							
117					90% UTL with 90% Coverage	293.7					90% Percentile (z)	260.4
118					90% UPL (t)	268.2					95% Percentile (z)	273.3
119					90% USL	282.7					99% Percentile (z)	297.5
120												
121					Gamma GOF Test							
122					A-D Test Statistic	0.616	Anderson-Darling Gamma GOF Test					
123					5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level					
124					K-S Test Statistic	0.23	Kolmogorov-Smirnov Gamma GOF Test					
125					5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level					
126					Detected data appear Gamma Distributed at 5% Significance Level							
127												
128					Gamma Statistics							
129					k hat (MLE)	35.93					k star (bias corrected MLE)	22.54
130					Theta hat (MLE)	5.984					Theta star (bias corrected MLE)	9.539
131					nu hat (MLE)	574.9					nu star (bias corrected)	360.6
132					MLE Mean (bias corrected)	215					MLE Sd (bias corrected)	45.29
133												
134					Background Statistics Assuming Gamma Distribution							
135					90% Wilson Hilferty (WH) Approx. Gamma UPL	275.5					90% Percentile	274.7
136					90% Hawkins Wixley (HW) Approx. Gamma UPL	276.7					95% Percentile	294.5
137					90% WH Approx. Gamma UTL with 90% Coverage	309.3					99% Percentile	334.1
138					90% HW Approx. Gamma UTL with 90% Coverage	311.8						
139					90% WH USL	294.4					90% HW USL	296.3
140												
141					Lognormal GOF Test							
142					Shapiro Wilk Test Statistic	0.804	Shapiro Wilk Lognormal GOF Test					
143					5% Shapiro Wilk Critical Value	0.818	Data Not Lognormal at 5% Significance Level					
144					Lilliefors Test Statistic	0.252	Lilliefors Lognormal GOF Test					

	A	B	C	D	E	F	G	H	I	J	K	L
145					5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level					
146	**Data appear Approximate Lognormal at 5% Significance Level**											
147												
148	**Background Statistics assuming Lognormal Distribution**											
149					90% UTL with 90% Coverage	320.7					90% Percentile (z)	269.2
150					90% UPL (t)	280.5					95% Percentile (z)	288.1
151					90% USL	302.7					99% Percentile (z)	327.2
152												
153	**Nonparametric Distribution Free Background Statistics**											
154	**Data appear Normal at 5% Significance Level**											
155												
156	**Nonparametric Upper Limits for Background Threshold Values**											
157					Order of Statistic, r	8					90% UTL with 90% Coverage	250
158					Approx, f used to compute achieved CC	0.889					Approximate Actual Confidence Coefficient achieved by UTL	0.57
159											Approximate Sample Size needed to achieve specified CC	22
160					90% Percentile Bootstrap UTL with 90% Coverage	250					90% BCA Bootstrap UTL with 90% Coverage	250
161					90% UPL	250					90% Percentile	250
162					90% Chebyshev UPL	327.8					95% Percentile	250
163					95% Chebyshev UPL	378.9					99% Percentile	250
164					90% USL	250						
165												
166	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.											
167	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers											
168	and consists of observations collected from clean unimpacted locations.											
169	The use of USL tends to provide a balance between false positives and false negatives provided the data											
170	represents a background data set and when many onsite observations need to be compared with the BTV.											
171												

	A–E	F	G–K	L
172	Nickel			
173				
174	General Statistics			
175	Total Number of Observations	8	Number of Distinct Observations	7
176	Minimum	35	First Quartile	39.75
177	Second Largest	44	Median	42.5
178	Maximum	48	Third Quartile	43.25
179	Mean	41.75	SD	3.845
180	Coefficient of Variation	0.0921	Skewness	-0.249
181	Mean of logged Data	3.728	SD of logged Data	0.0937
182				
183	Critical Values for Background Threshold Values (BTVs)			
184	Tolerance Factor K (For UTL)	2.219	d2max (for USL)	1.909
185				
186	Normal GOF Test			
187	Shapiro Wilk Test Statistic	0.972	Shapiro Wilk GOF Test	
188	5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level	
189	Lilliefors Test Statistic	0.154	Lilliefors GOF Test	
190	5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level	
191	Data appear Normal at 5% Significance Level			
192				
193	Background Statistics Assuming Normal Distribution			
194	90% UTL with 90% Coverage	50.28	90% Percentile (z)	46.68
195	90% UPL (t)	47.52	95% Percentile (z)	48.07
196	90% USL	49.09	99% Percentile (z)	50.7
197				
198	Gamma GOF Test			
199	A-D Test Statistic	0.252	Anderson-Darling Gamma GOF Test	
200	5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level	
201	K-S Test Statistic	0.164	Kolmogorov-Smirnov Gamma GOF Test	
202	5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level	
203	Detected data appear Gamma Distributed at 5% Significance Level			
204				
205	Gamma Statistics			
206	k hat (MLE)	132	k star (bias corrected MLE)	82.57
207	Theta hat (MLE)	0.316	Theta star (bias corrected MLE)	0.506
208	nu hat (MLE)	2112	nu star (bias corrected)	1321
209	MLE Mean (bias corrected)	41.75	MLE Sd (bias corrected)	4.595
210				
211	Background Statistics Assuming Gamma Distribution			
212	90% Wilson Hilferty (WH) Approx. Gamma UPL	47.74	90% Percentile	47.74
213	90% Hawkins Wixley (HW) Approx. Gamma UPL	47.77	95% Percentile	49.58
214	90% WH Approx. Gamma UTL with 90% Coverage	50.86	99% Percentile	53.18
215	90% HW Approx. Gamma UTL with 90% Coverage	50.94		
216	90% WH USL	49.5	90% HW USL	49.55

	A–E	F	G–K	L
217				
218	**Lognormal GOF Test**			
219	Shapiro Wilk Test Statistic	0.963	**Shapiro Wilk Lognormal GOF Test**	
220	5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level	
221	Lilliefors Test Statistic	0.166	**Lilliefors Lognormal GOF Test**	
222	5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level	
223	**Data appear Lognormal at 5% Significance Level**			
224				
225	**Background Statistics assuming Lognormal Distribution**			
226	90% UTL with 90% Coverage	51.2	90% Percentile (z)	46.9
227	90% UPL (t)	47.87	95% Percentile (z)	48.52
228	90% USL	49.74	99% Percentile (z)	51.72
229				
230	**Nonparametric Distribution Free Background Statistics**			
231	**Data appear Normal at 5% Significance Level**			
232				
233	**Nonparametric Upper Limits for Background Threshold Values**			
234	Order of Statistic, r	8	90% UTL with 90% Coverage	48
235	Approx, f used to compute achieved CC	0.889	Approximate Actual Confidence Coefficient achieved by UTL	0.57
236			Approximate Sample Size needed to achieve specified CC	22
237	90% Percentile Bootstrap UTL with 90% Coverage	48	90% BCA Bootstrap UTL with 90% Coverage	48
238	90% UPL	48	90% Percentile	45.2
239	90% Chebyshev UPL	53.99	95% Percentile	46.6
240	95% Chebyshev UPL	59.53	99% Percentile	47.72
241	90% USL	48		
242				
243	Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.			
244	Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers			
245	and consists of observations collected from clean unimpacted locations.			
246	The use of USL tends to provide a balance between false positives and false negatives provided the data			
247	represents a background data set and when many onsite observations need to be compared with the BTV.			
248				