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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

August 23, 2024

John Eliason
King County Housing Authority
600 Andover Park W
Tukwila WA 98188
(JohnE@kcha.org)

Re: No Further Action opinion for the following contaminated Site

Site name: Park Lake Homes Maintenance Shop
Site address: 9800 8th Avenue SW, Seattle WA 98106
Facility/Site ID: 24359391
Cleanup Site ID: 8417
VCP Project No.: NW3033

Dear John Eliason:

The Washington State Department of Ecology (Ecology) received your request for an opinion regarding the sufficiency of your independent cleanup of the Park Lake Homes Maintenance Shop facility (Site) under the [Voluntary Cleanup Program \(VCP\)](#).¹ This letter provides our opinion and analysis. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), [Chapter 70A.305 RCW](#).²

Opinion

Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

Ecology bases this opinion on an analysis of whether the remedial action meets the substantive requirements of MTCA and its implementing regulations, which are specified in Chapter 70A.305 RCW and [Chapter 173-340 WAC](#)³ (collectively called "MTCA").

Site Description

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release(s):

¹ <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program>

² <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305>

³ <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340>

- Total petroleum hydrocarbons as gasoline (TPH-G), diesel (TPH-D), and oil (TPH-O); and benzene, toluene, ethylbenzene, and xylenes (BTEX) in soil.
- TPH-D, TPH-O, heptachlor epoxide, and highly alkaline pH to groundwater.

Enclosure A includes Site description, history, and diagrams.

Please note the parcels of real property associated with this Site are also located within the projected boundaries of the Tacoma Smelter Plume King County facility (Facility Site ID 66948686). At this time, Ecology has no information indicating that contamination from Tacoma Smelter Plume King County facility affects those parcels. This opinion does not apply to any contamination associated with the Tacoma Smelter Plume King County facility.

Basis for the Opinion

Ecology bases this opinion on information in the documents listed in Enclosure B. You can request these documents by filing a [records request](#).⁴ For help making a request, contact the Public Records Officer at recordsofficer@ecy.wa.gov or call (360) 407-6040. Before making a request, check if the documents are available on the [Site webpage](#).⁵

This opinion is void if information in any of the listed documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that no further remedial action is necessary to clean up contamination at the Site. Ecology bases its conclusion on the following analysis:

Characterizing the Site

Ecology has determined your completed Site characterization is sufficient for setting cleanup standards and selecting a cleanup action. Enclosure A describes the Site.

Setting cleanup standards

Ecology has determined the cleanup levels and points of compliance you set for the Site meet the substantive requirements of MTCA.

Cleanup Levels

Soil

MTCA Method A soil cleanup levels for unrestricted land uses are based on protection of groundwater and are the default cleanup levels. The Site is located in an area that qualifies for a Terrestrial Ecological Evaluation (TEE) exclusion and does not require additional evaluation, in accordance with [WAC 173-340-7491\(1\)\(c\)\(i\)](#).⁶ There are less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site. Therefore, soil cleanup levels protective of terrestrial species are not needed at this Site.

⁴ <https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>

⁵ <https://apps.ecology.wa.gov/cleanupsearch/site/8417>

⁶ <https://app.leg.wa.gov/wac/default.aspx?cite=173-340-7491>

Groundwater

The highest beneficial use for groundwater under MTCA is considered to be as a drinking water source, unless it can be demonstrated that the groundwater is not potable. MTCA Method A groundwater cleanup levels are protective of potable use and are therefore the default.

Air

Air cleanup levels are considered necessary to protect against vapor intrusion (VI) into existing buildings. Method B VI screening levels for groundwater are appropriate to assess the VI and air exposure pathways.

Points of Compliance

Soil

The point of compliance for soil at the Site for protection of groundwater is soils throughout the Site.

Groundwater

The point of compliance for groundwater is throughout the Site, from the uppermost level of the saturated zone extending vertically and horizontally to the lowest depth that could potentially be affected.

Air

The point of compliance for air is ambient air throughout the Site.

Selecting the cleanup action

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA. The cleanup consisted of the following elements:

- Removal of underground storage tanks (USTs);
- Excavation and off-Site disposal of contaminated soil;
- Collection of confirmation soil samples from excavations to document compliance with cleanup levels;
- Extraction of contaminated groundwater with off-Site treatment;
- In-situ treatment of contaminated groundwater; and
- Collection of confirmation groundwater samples to document compliance with cleanup levels.

Implementing the cleanup action

Ecology has determined your cleanup meets the standards set for the Site. The Site cleanup included the following activities:

- Removal of a 1,000-gallon gasoline UST in December 1998;
- Removal of a second UST of unknown size and contents at some time in the past, as confirmed by a ground-penetrating radar survey in 2004;
- Removal of approximately 2,300 tons of contaminated soil from four remedial excavations in 2005, with off-Site disposal at a permitted facility;

- Removal of approximately 225 cubic yards of contaminated soil in 2010, with off-Site disposal at a permitted facility;
- Extraction of approximately 4,000 gallons of contaminated groundwater during four events in February and March 2018;
- Injection of approximately 800 pounds of PetroFix™ chemical solution into shallow injection points in October and December 2020, to treat contaminated groundwater in the vicinity of monitoring well MW-2;
- Intermittent use of a down-well oxygen-release compound packet in monitoring well MW-2, to encourage breakdown of residual petroleum hydrocarbons; and
- Collection of confirmation groundwater samples from monitoring well MW-2 to document compliance with MTCA cleanup levels.

The Site cleanup meets the requirement for Groundwater Model Remedy 1, in accordance with [*Model Remedies for Sites with Petroleum Impacts to Groundwater, Ecology Publication No. 16-09-057, Revised December 2017*](#)⁷. Therefore, a Feasibility Study and Disproportionate Cost Analysis are not required to document the remedy selection. The requirements of Groundwater Model Remedy 1 are:

- A release of petroleum has been confirmed and Ecology notification of the release has been completed.
- Petroleum hydrocarbons consisting of gasoline, middle distillates/oils, or heavy fuels/oils and their constituents are the only contaminants present in soil and groundwater.
- An adequate Site characterization has been completed to confirm surface water or sediments have not been impacted by the petroleum release.
- Emergency or interim actions are not required due to the lower risk nature of the Site.
- The Site meets the criteria for a TEE exclusion.
- The primary remedy consists of source removal, including contaminated soil, to the greatest extent practicable.
- The Site has not caused impacts above the practical quantitation limit (PQL) to any water supply well used for drinking water purposes.
- Soil and groundwater meet Method A cleanup levels throughout the Site.
- Conditional points of compliance are not used at the Site.
- An empirical demonstration is not used at the Site.
- An environmental covenant is not needed on the Property.

⁷ <https://apps.ecology.wa.gov/publications/SummaryPages/1609057.html>

Resource protection wells

You must decommission [resource protection wells](#)⁸ installed as part of the remedial action that are not needed for any other purpose at the Site. Wells must be decommissioned in accordance with [WAC 173-160-460](#).⁹

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from the Contaminated Sites List and the Leaking Underground Storage Tank (LUST) list. The Site will be added to the No Further Action sites list.

Limitations of the Opinion

Opinion does not settle liability with the state

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion does not:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under [RCW 70A.305.040\(4\)](#).¹⁰

Opinion does not constitute a determination of substantial equivalence

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine if the action you performed is substantially equivalent. Courts make that determination. See [RCW 70A.305.080](#)¹¹ and [WAC 173-340-545](#).¹²

State is immune from liability

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See [RCW 70A.305.170\(6\)](#).¹³

Termination of Agreement

Thank you for cleaning up the Site under the VCP. This opinion terminates the VCP Agreement governing VCP Project No. NW3033.

⁸ <https://app.leg.wa.gov/WAC/default.aspx?cite=173-160-410>

⁹ <https://app.leg.wa.gov/WAC/default.aspx?cite=173-160-460>

¹⁰ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.040>

¹¹ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.080>

¹² <https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545>

¹³ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.170>

Questions

If you have any questions about this opinion or the termination of the Agreement, please contact me at 425-324-1892 or michael.warfel@ecy.wa.gov.

Sincerely,



Michael R. Warfel,
VCP Site Manager
Toxics Cleanup Program, NWRO

Enclosures (2): A – Site Description, History, and Diagrams
 B – Basis for the Opinion: List of Documents

cc: Katy Ataktürk, GeoEngineers, Inc. (katakturk@geoengineers.com)
 VCP Fiscal (ecyrevcp@ecy.wa.gov)
 NWRO VCP Coordinator (vcp-nwro@ecy.wa.gov)

Enclosure A

Site Description, History, and Diagrams

Site Description

Site: The Site is defined as TPH-G, TPH-D, TPH-O, and BTEX in soil, and TPH-D, TPH-O, heptachlor epoxide, and highly alkaline pH to groundwater. The Site is located in the White Center area of unincorporated King County, at the intersection of 8th Avenue SW and SW 100th Street (Figure 1). The Site is located on King County tax parcel numbers 2895800960, 2895800180, and 2895800160 (the Property) and covers approximately 1.7 acres of total 1.97-acre area of the three parcels (Figure 2). The Property street address of record is 9800 8th Avenue SW, Seattle, Washington; however, the Property also includes the following addresses on 8th Avenue SE: 9825, 9905, 9910, 9915, 9923, 9929, and 9934.

Area and Property Description: The Property is located in the White Center area of unincorporated King County, between West Seattle to the north and Burien to the south. The following streets bound the Property: 8th Avenue SW, SW 100th Street, and 7th Avenue SW (Figure 3). One two-story apartment building is located on Parcel 2895800180 and six two-story apartment buildings are located on parcel 2895800190. The Property also includes associated parking and open space.

Site History and Current Use: The area in White Center that includes the Site was developed in 1943 as a temporary housing complex known as White Center Heights, and consisted of 569 units for workers building warplanes at the nearby Boeing plant in Seattle. The World War II-era units were removed by the King County Housing Authority (KCHA) in 1963 during construction of the Park Lake Homes affordable housing project that included 1,025 units on a 100-acre tract that included the Site.

Maintenance buildings were constructed during the housing complex renovation (Figure 4). The housing units and associated maintenance buildings were demolished by KCHA in 2005 to construct the present housing development known as Greenbridge, which consists of 165 units in 71 residential buildings. The Site is located within the Greenbridge development.

Sources of Contamination: The 2003 Phase I Environmental Site Assessment (ESA) identified the following potential former sources of contamination at the Site (Figure 3):

- Multiple shops within the maintenance building, with floor drains and dry wells, for the following functions:
 - Sheet metal fabrication,
 - Carpentry,
 - Painting,
 - Plumbing, and
 - Electrical work;

- A 1,000-gallon underground storage tank (UST) with a fuel dispenser that stored gasoline for vehicles, lawn mowers, and other maintenance equipment, reportedly installed in 1984 and removed in 1998;
- An older UST of unknown size and contents, reportedly removed by KCHA;
- A shallow, unlined trench over which vehicle oil changes were performed;
- A sub-slab hydraulic hoist with associated fluid cylinders and piping; and
- Hazardous materials and oil drum storage.

Physiographic Setting: The Site is situated at an elevation of approximately 400 feet above mean sea level, on a regional upland ridge that slopes to the west towards Puget Sound and to the east towards the Duwamish River.

Surface/Stormwater System: Stormwater on the Site is collected in catch basins, grassy swales (with and without underdrains), retention ponds, and rain gardens. The ground surface is relatively flat with a gentle slope to the southwest. The nearest surface water bodies are four small lakes located 1,000 to 1,500 feet southwest and south of the Site.

Ecological Setting: The Site is located in a developed area and is surrounded by residential land uses. The land surface is primarily covered with housing units and paving, with interspersed landscaping and open spaces. The White Center Pond Natural Area is located 1,000 feet west of the Site.

Geology: Borings drilled on the Site encountered sandy silt and silty sand, with varying amounts of gravel and cobbles to a maximum depth of 15 feet below ground surface (bgs) (Figure 5). This material is interpreted as fill and weathered glacial till. Dense unweathered glacial till is present below to the total explored depth of 21 feet bgs. Prior to development of the Property, a southward-sloping valley (eroded into the till) was reportedly present beneath the Site and was subsequently filled during construction of the original housing units in 1943. Locations of Site monitoring wells and borings are shown on Figures 2 and 3.

Groundwater: Groundwater was encountered in borings drilled at the Site at depths of 4 to 10 feet bgs, and groundwater seepage was observed in remedial excavations at a depth of 12 to 13 feet bgs. This shallow groundwater appears to be perched on top of the underlying dense glacial till. The likely groundwater flow direction is to the south, based on the historic topography (Figure 6).

Water Supply: Drinking water is supplied to the Site by Seattle Public Utilities. The water sources are located in the Cedar and Tolt River basins on the west slope of the Cascade Mountains. According to the King County iMap database, there are no water supply wells located within a 0.5-mile radius of the Site.

Release, Extent of Contamination, and Cleanup: A report of a release from the 1,000-gallon UST fuel system on the Site was received by Ecology on December 23, 1998. The removed UST

(installed in 1984) was observed to be in good condition and the documented soil contamination was attributed to fuel spills and overfills around the UST fill pipe.

A subsurface investigation was conducted at the Site in 2004 prior to redevelopment of the Property and included 15 direct-push borings (Figure 3). Soil samples from four borings showed concentrations of TPH-G, TPH-D, and TPH-O above MTCA Method A soil cleanup levels for unrestricted land use. Groundwater was encountered between depths of 4 and 10 feet bgs during drilling; however, groundwater samples were not collected.

Four excavations ranging in depth from 4.5 to 18 feet bgs were completed at the Site in 2005 (Figure 7). Confirmation soil samples tested for TPH-G, TPH-D, TPH-O, and BTEX showed concentrations below Method A soil cleanup levels for unrestricted land use. Approximately 2,300 tons of petroleum-contaminated soil were removed for off-Site disposal. Moderate groundwater seepage was observed in two of the four excavations at depths of 12 to 13 feet bgs. An additional 225 cubic yards of petroleum-contaminated soil identified northeast of the former maintenance building near 7th Avenue SW were excavated and disposed off-Site in 2010 (Figure 8).

Seven direct-push borings were drilled at the Site in 2015 (Figure 8). Groundwater samples were collected from temporary monitoring wells in three of these borings. None of the tested chemical parameters (TPH-G, TPH-D, TPH-O, and volatile organic chemicals) were present in concentrations above MTCA groundwater cleanup levels. However, based on the likely southerly shallow groundwater flow direction, these temporary monitoring wells appeared to be located cross-gradient of former potential contamination sources at the Site.

Two monitoring wells (MW-1 and MW-2) were installed at the Site in July 2017 (Figure 3). Groundwater samples were collected from these wells in August 2017, December 2017, April 2018, and July 2018. None of the results for groundwater samples from MW-1 were above MTCA cleanup levels.

Concentrations of TPH-D and TPH-O in MW-2 were above MTCA Method A cleanup levels for all four sampling events. The pesticide heptachlor epoxide was above the MTCA Method B cleanup level in MW-2 during two of the sampling events. The pH of groundwater from MW-2 ranged from 12.6 to 12.8 (above the characteristic dangerous waste corrosive threshold of 12.5); therefore, pH was added as a water quality parameter of concern at the Site. The elevated pH is likely due to concrete demolition debris from former housing facilities that was buried at the Site during multiple stages of redevelopment.

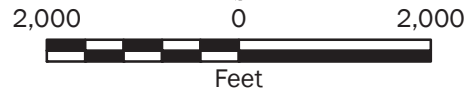
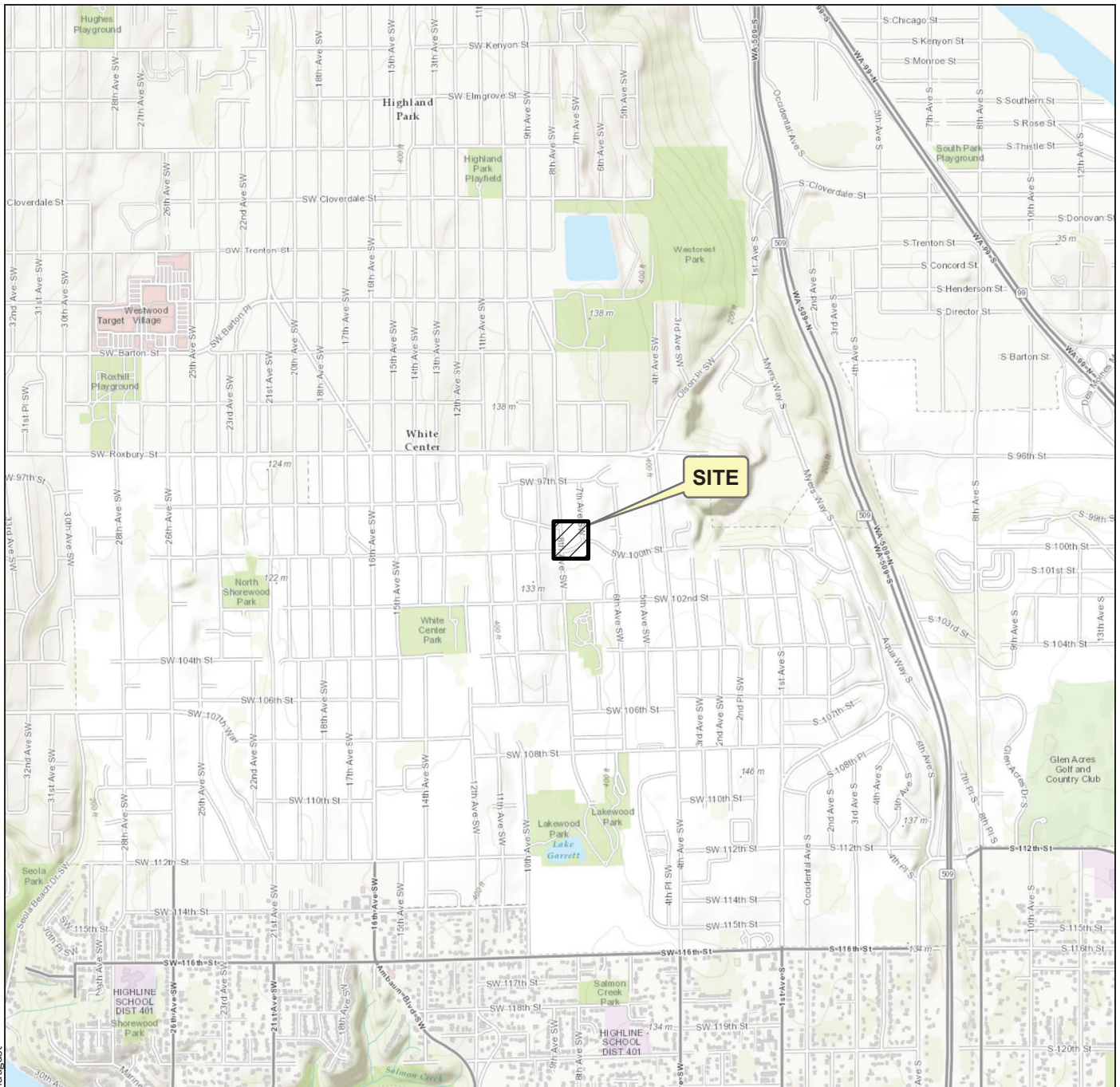
Four 1-day ground water extraction events were completed in monitoring well MW-2 during alternating weeks in February and March 2018. Each event consisted of pumping 900 to 1,000 gallons of groundwater from the well with a vacuor truck. The collected discharge was disposed at a permitted off-Site facility.

In October and December 2020, shallow injection points were used to apply approximately 800 pounds of PetroFix™ solution at locations around monitoring well MW-2. Chemical treatment also included intermittent use of a down-well oxygen-release packet in monitoring well MW-2. Groundwater compliance monitoring samples collected from July 2022 through January 2024 confirmed decreasing TPH-D+O contaminant concentrations and compliance with Method A cleanup levels (Figures 9 and 10), in accordance with [Guidance for Silica Gel Cleanup in Washington State, Ecology Publication No. 22-09-059, November 2023](#)¹⁴. Documentation that other Site chemicals of concern were below MTCA cleanup levels was demonstrated as follows:

- TPH-G: six sampling events in 2017 and 2018;
- pH: seven sampling events in 2022 and 2023; and
- Heptachlor epoxide: five sampling events in 2019 and 2020.

¹⁴ <https://apps.ecology.wa.gov/publications/SummaryPages/2209059.html>

Site Diagrams



Vicinity Map

Former Park Lake Homes Maintenance Center
Seattle, Washington



Figure 1

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, 2015

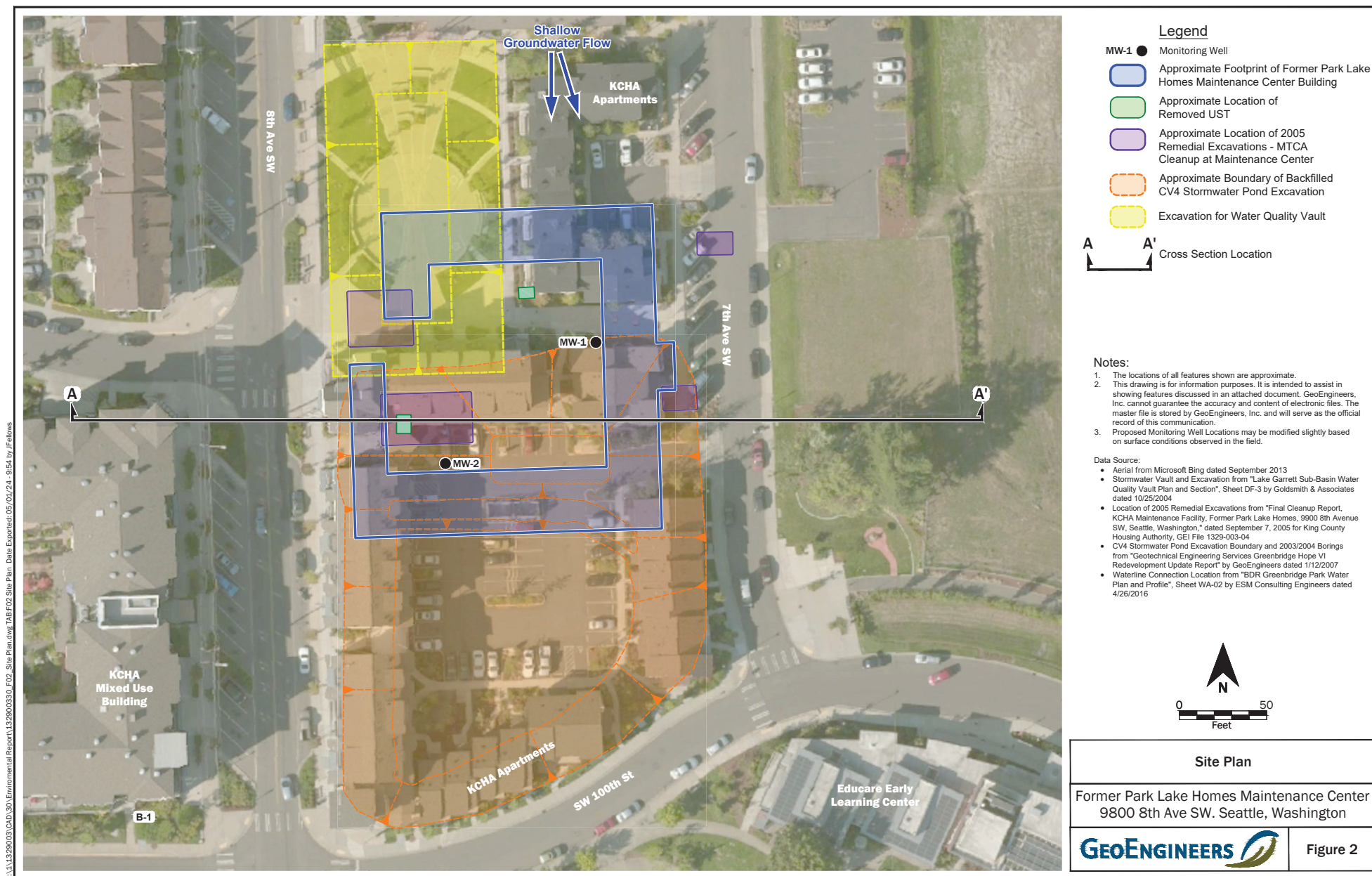
Projection: NAD 1983 UTM Zone 10N

Enclosure A, Figure 1

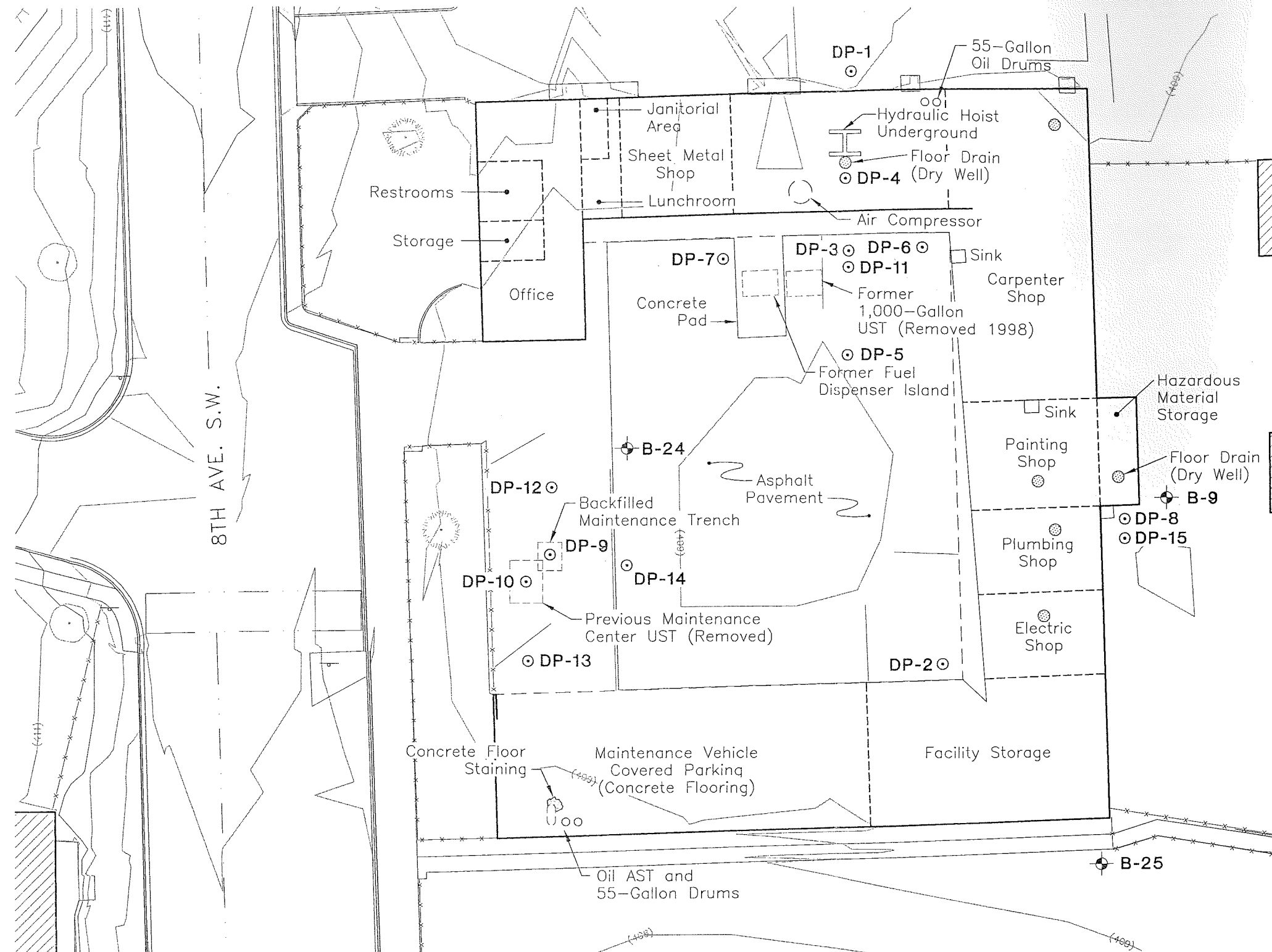


Parcel Map

Enclosure A, Figure 2



Enclosure A, Figure 3



EXPLANATION:

● FLOOR DRAIN

AST ABOVEGROUND STORAGE TANK

UST UNDERGROUND STORAGE TANK

DP-1 ● DIRECT-PUSH BORING

B-9 ● GEOTECHNICAL BORING

Notes: 1. The locations of all features shown are approximate.

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 master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

Reference: Drawing entitled "Cover Sheet King County Housing Authority Vic. SW Roxbury & 8th Ave SW" Sheet 1 of 28 by Bush, Roed & Hitchings, Inc., dated August 2002.

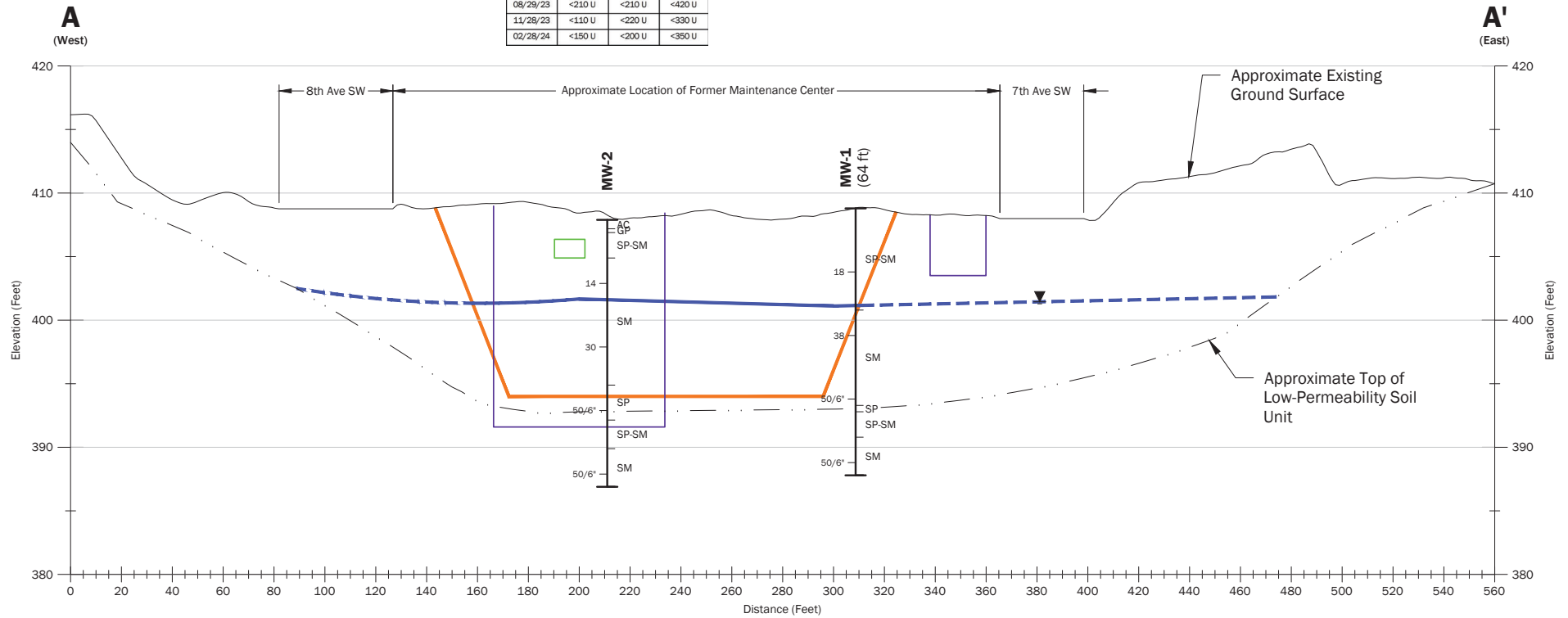
Enclosure A, Figure 4

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2004 SITE PLAN, KCHA
MAINTENANCE FACILITY, FORMER PARK LAKE HOMES

FIGURE 2

MW-2 Groundwater Analytical Results (NWTPH-Dx with SGC, µg/L)			
Date	Diesel-Range (DRPH)	Oil-Range (ORPH)	TPH Sum (DRPH + ORPH)
05/25/23	<200 U	<200 U	<400 U
08/29/23	<210 U	<210 U	<420 U
11/28/23	<110 U	<220 U	<330 U
02/28/24	<150 U	<200 U	<350 U



Enclosure A, Figure 5

Note(s):

- The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.

Source(s):

- Topographic survey from Washington LIDAR Portal's 2021 DTM Hillshade map.

Datum: NAVD88

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.



Legend

Boring

Soil Classification

Groundwater Measured in Monitoring Well (February 2024)
(Dashed Where Inferred)
Blow Count



Approximate Location of Removed UST



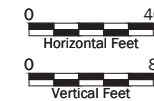
Approximate Location of 2005 Remedial Excavations - MTCA Cleanup at Maintenance Center



Approximate Boundary of Backfilled CV4 Stormwater Pond Excavation



Approximate Top of Low-Permeability Soil Unit



Vertical Exaggeration = 5X

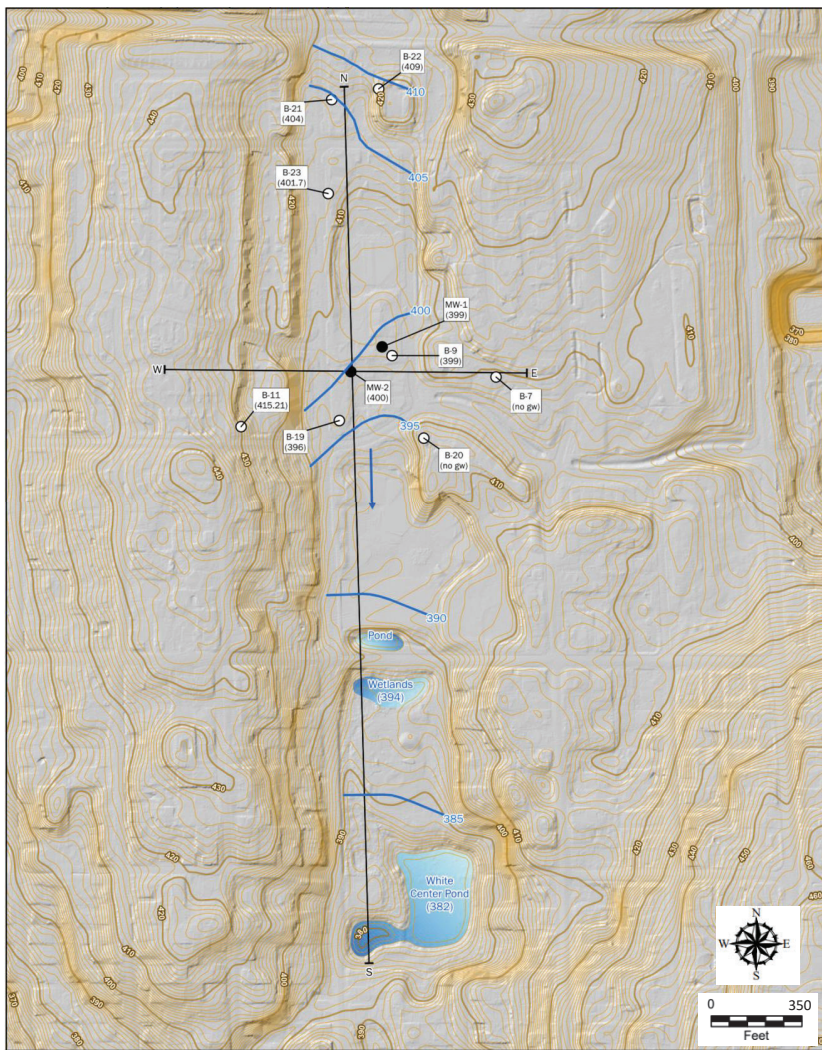
CSM Cross Section A to A'

Former Park Lake Homes Maintenance Center
Seattle, Washington

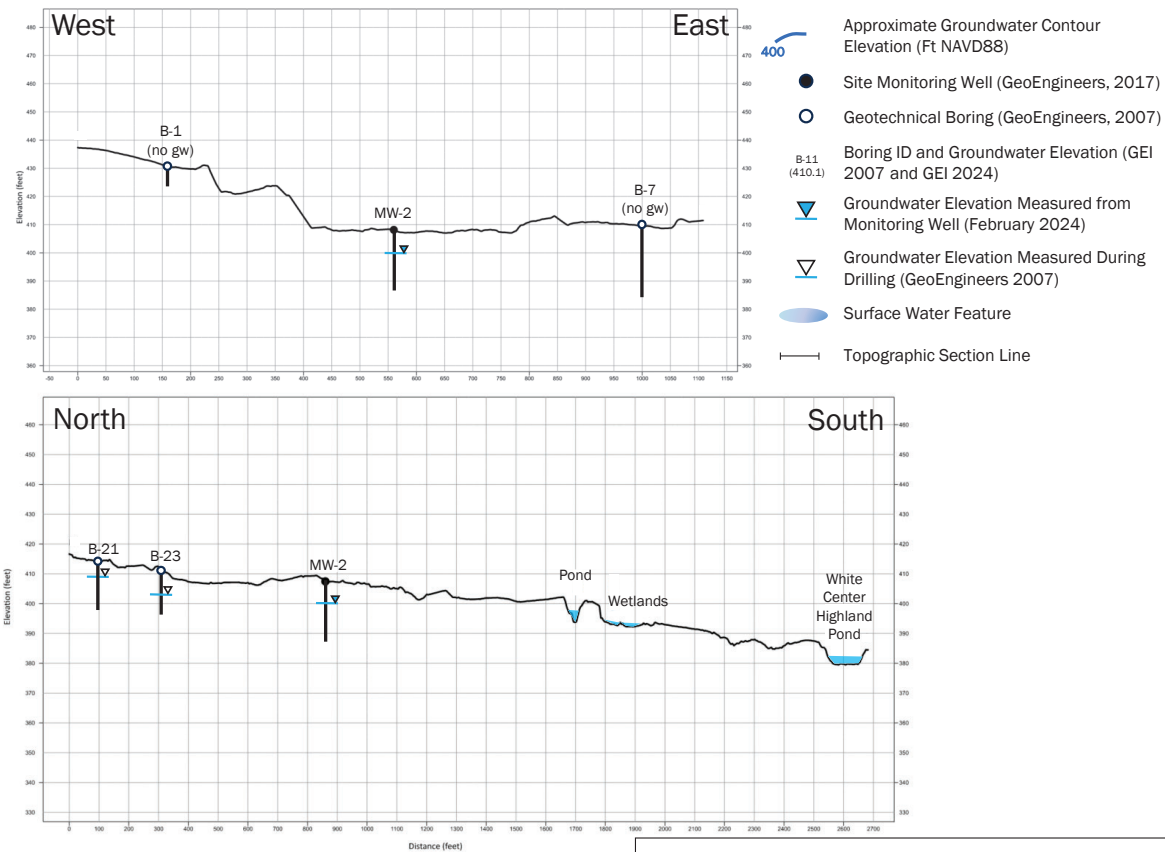


Figure 4

Groundwater Contour Map



Topographic Profiles



Notes:

1. Data Source: LiDAR - North Puget 2017. Groundwater elevations are in NAVD88 vertical datum, and Boring data is from GeoEngineers 2007 and GeoEngineers 2019 reports.
2. Topographic profiles are approximately 10x vertically exaggerated.
3. This plot 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.

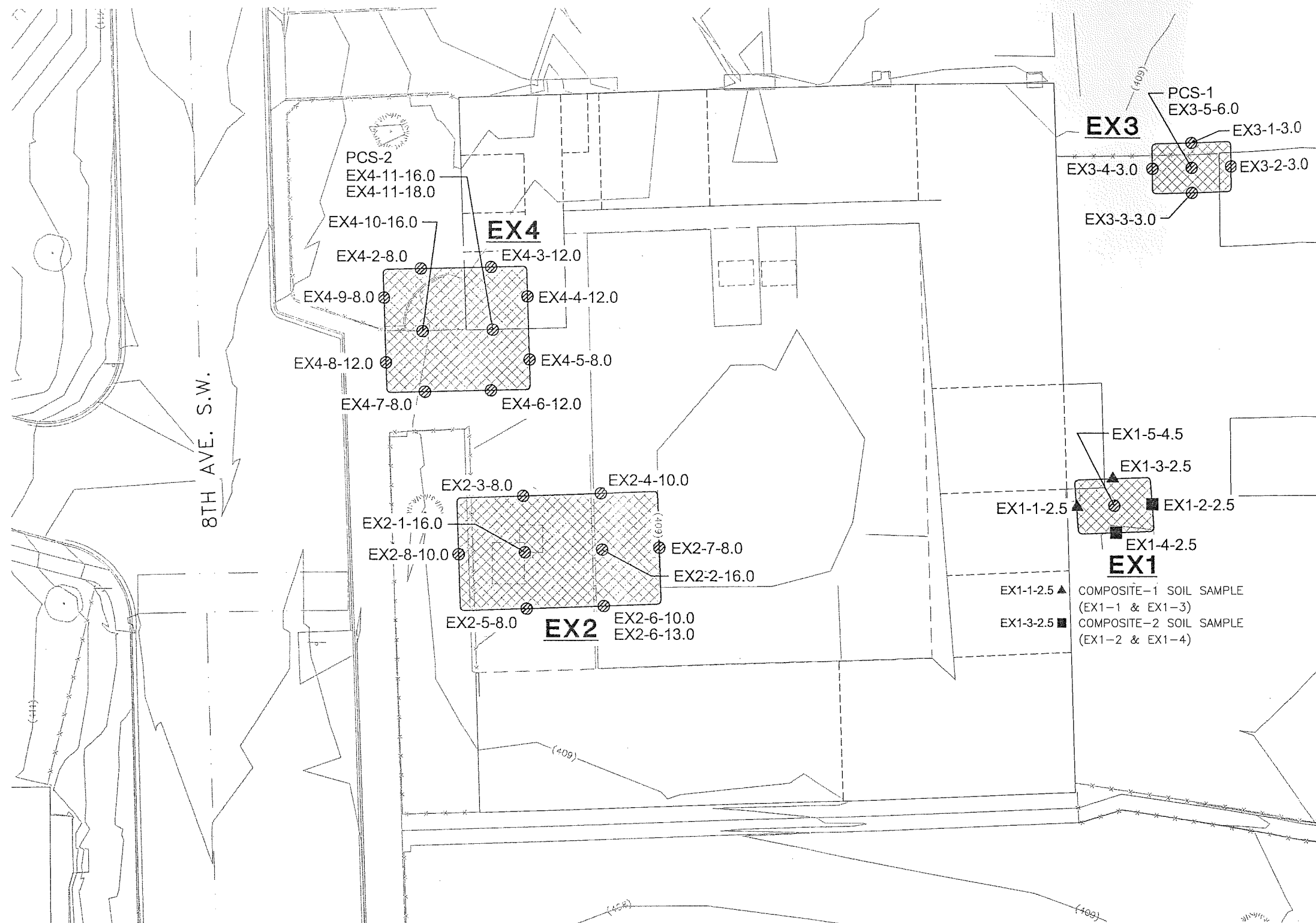
Groundwater Contour Map and Topographic Sections

Former Park Place Homes Maintenance Center
Seattle, Washington



Figure 3

Enclosure A, Figure 6



Notes: 1. The locations of all features shown are approximate.
 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 master hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.
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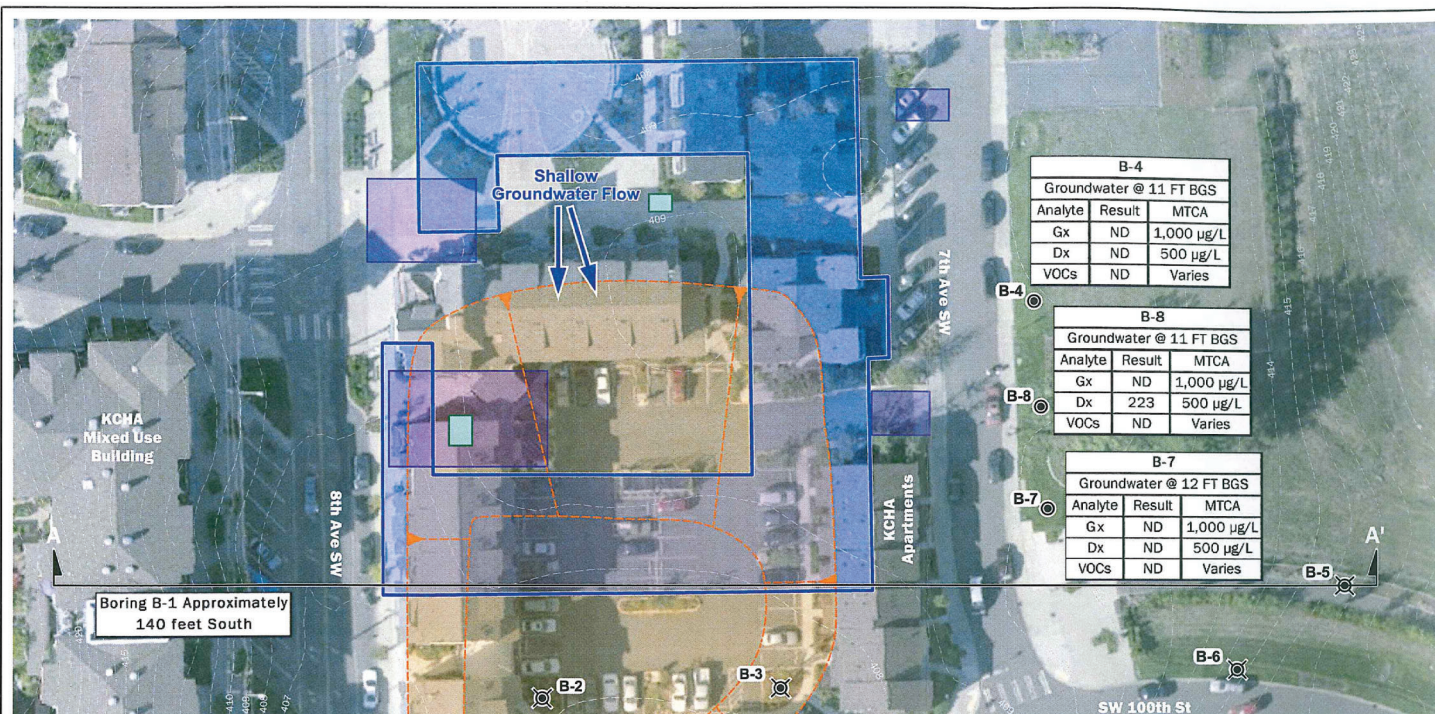
Enclosure A, Figure 7

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EXCAVATION AND SAMPLE LOCATIONS, KCHA
 MAINTENANCE FACILITY, FORMER PARK LAKE HOMES

FIGURE 3

P:\11329003\20 CAD\1329003_20_Fig 3 (Section A) Fig 3 Section A.dwg T&B Figure 3 Sec A Date Exported: 10/23/15 - 11:23 by cscdcl



B-4		
Groundwater @ 11 FT BGS		
Analyte	Result	MTCA
Gx	ND	1,000 µg/L
Dx	ND	500 µg/L
VOCs	ND	Varies

B-8		
Groundwater @ 11 FT BGS		
Analyte	Result	MTCA
Gx	ND	1,000 µg/L
Dx	223	500 µg/L
VOCs	ND	Varies

B-7		
Groundwater @ 12 FT BGS		
Analyte	Result	MTCA
Gx	ND	1,000 µg/L
Dx	ND	500 µg/L
VOCs	ND	Varies

Legend

- Direct Push Boring
- No Groundwater Encountered (GeoEngineers, 2015)
- Direct Push Temporary Groundwater Monitoring Well (GeoEngineers, 2015)

- Cross-Section Location
- Approximate Footprint of Former Park Lake Homes Maintenance Center Building
- Approximate Location of Removed UST
- Approximate Location of 2005 Remedial Excavations - MTCA Cleanup at Maintenance Center
- Approximate July 2007 Soil Excavation Location
- Approximate Boundary of Backfilled CV4 Stormwater Pond Excavation

- Section
- Soil Sample with No Field Screening Evidence of Petroleum
- Well Screen
- Groundwater Sample, No Petroleum or VOC Concentrate Detected
- Groundwater Sample, Petroleum Concentrations Detected Less Than MTCA Method A Cleanup Levels

- Data Boxes
- BGS Below Ground Surface
- ND Non Detect
- VOCs Volatile Organic Compounds
- Gx Gasoline/BTEX
- Dx Diesel/Heavy Oil

- Notes:
- Borings locations and elevations shown in cross-section are offset from the section line per approximate distances shown in the plan.
 - There is an apparent depression at the top of the low permeability soil unit in the area between 8th Ave SW and 7th Ave SW.
 - The locations of all features shown are approximate.
 - 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.

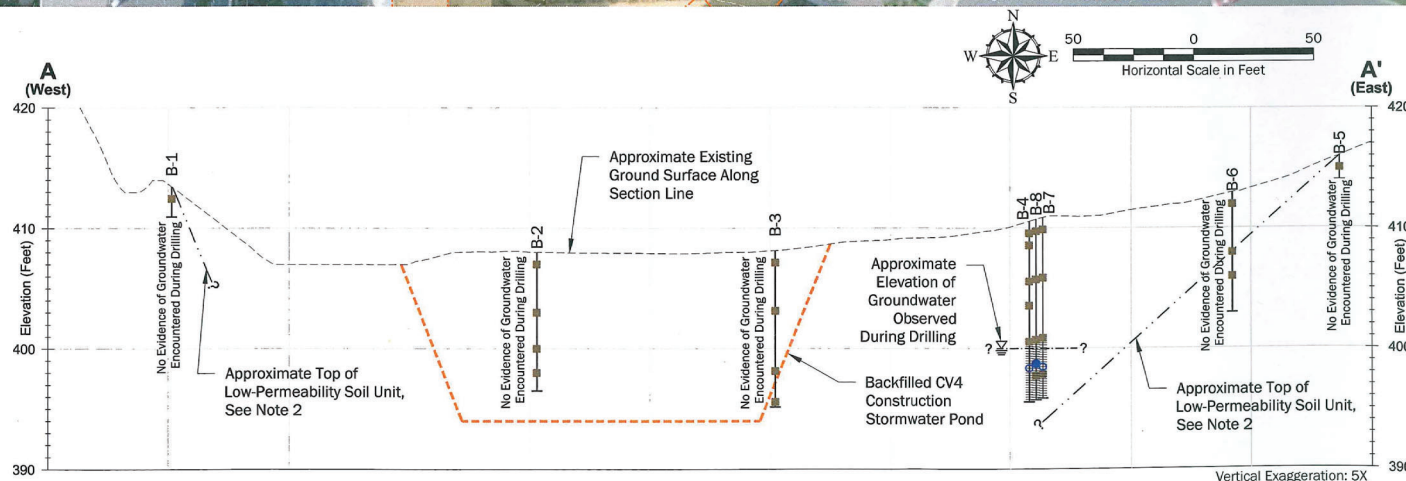
Data Source:
Imagery: Microsoft Bing September 2013
Topography: Puget Sound Lidar Consortium
Projection:
Horizontal: NAD 1983 State Plane Washington North
Vertical: NAVD88

Cross-Section A-A'

Former Park Lake Homes Maintenance Center
Seattle, Washington

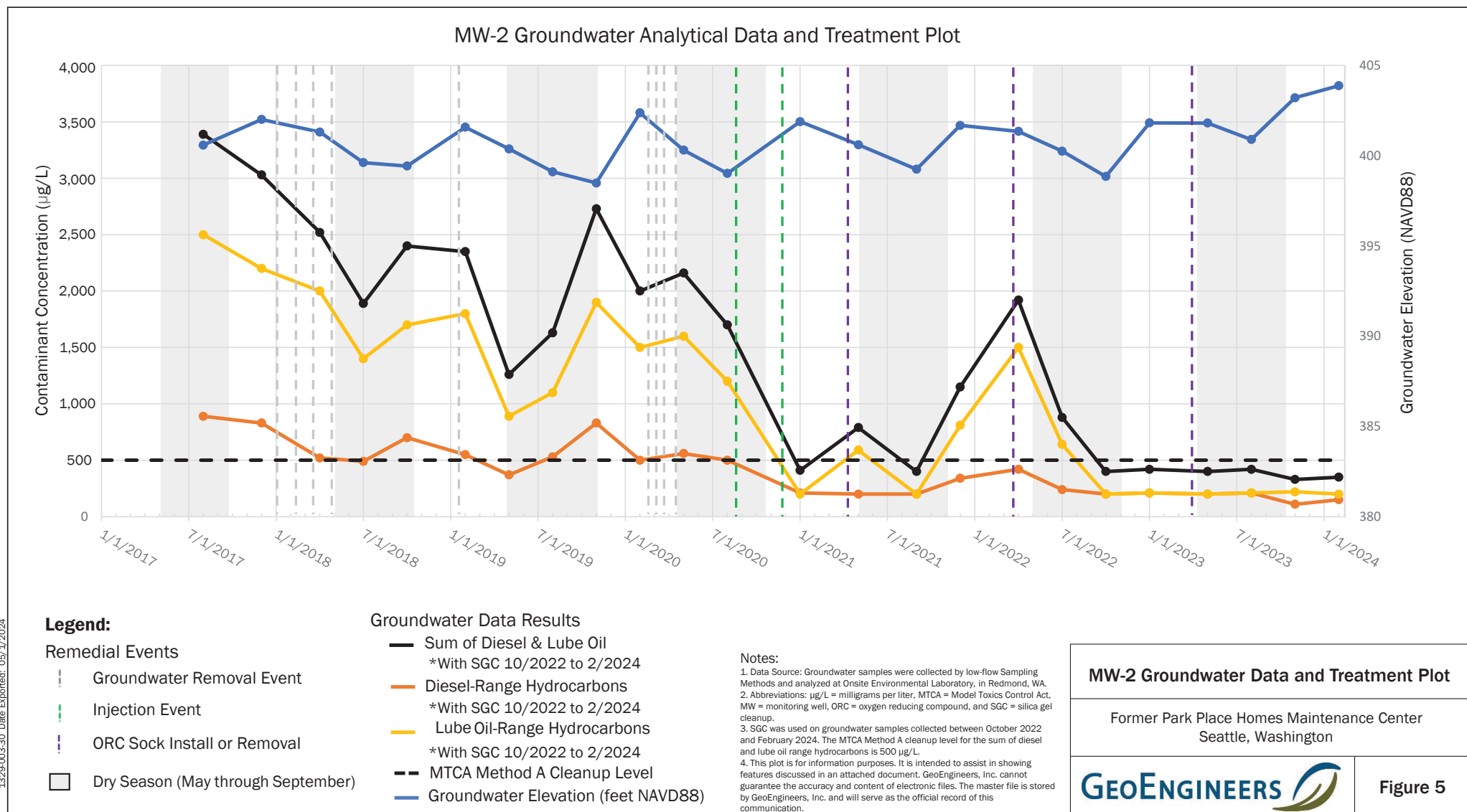
GEOENGINEERS

Figure 3



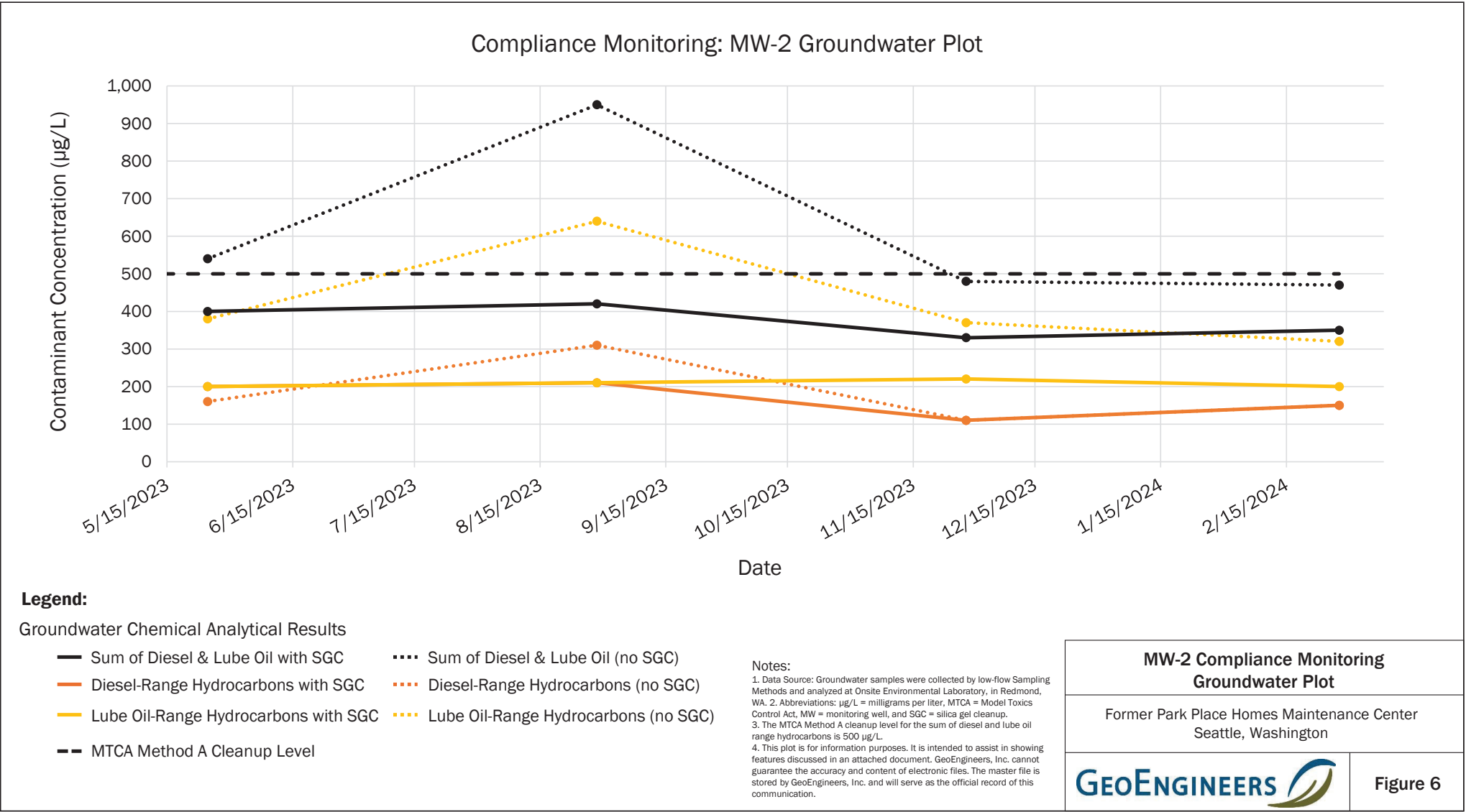
Enclosure A, Figure 8

1329-0033-30 Date Exported: 05/1/2024



Enclosure A, Figure 9

1329-003-30 Date Exported: 05/1/2024



Enclosure A, Figure 10

Enclosure B

Basis for the Opinion: List of Documents

1. Emery Bayley. *Site Check/Site Assessment Report, Removal of Underground Storage Tank at Park Lake Homes Maintenance Shop, 9900 8th Ave. SW, Seattle, Washington.* January 7, 1999.
2. GeoEngineers. *Maintenance Center Environmental Soil Sampling, Former Park Lake Homes, 9900 8th Avenue Southwest, Seattle, Washington.* April 14, 2004.
3. GeoEngineers. *Final Cleanup Report, KCHA Maintenance Facility, Former Park Lake Homes.* September 7, 2005.
4. GeoEngineers. *Post-Cleanup Groundwater Confirmation Sampling Event, King County Housing Authority Former Park Lake Homes Maintenance Center.* October 27, 2015.
5. Department of Ecology (Ecology). *Further Action Opinion, Park Lakes Home Maintenance Shop, VCP NW3033.* June 6, 2016.
6. GeoEngineers. *Park Lake Homes Maintenance Shop, KCHA Response to Ecology's June 2016 Further Action Letter.* November 21, 2016.
7. GeoEngineers. *Supplemental Groundwater Characterization and Request for Opinion, KCHA Former Park Lake Homes Maintenance Center Site.* December 20, 2018.
8. Ecology. *Opinion on Remedial Action, Park Lake Homes Maintenance Shop, VCP NW3033.* March 19, 2019.
9. GeoEngineers. *Park Lake Homes Maintenance Shop, KCHA Response to Ecology's March 2019 Opinion Letter.* May 21, 2019.
10. GeoEngineers. *Annual Groundwater Monitoring Report 2019, KCHA Former Park Lake Homes Maintenance Center Site.* January 15, 2020.
11. GeoEngineers. *Groundwater Monitoring and Independent Cleanup Report, KCHA Former Park Lake Homes Maintenance Center site.* February 5, 2021.
12. GeoEngineers. *Annual Groundwater Monitoring Report 2021, KCHA Former Park Lake Home Maintenance Center Site.* April 1, 2022.
13. Ecology. *Technical Assistance Regarding Quarterly Groundwater Monitoring, Park Lake Homes Maintenance Shop, VCP NW3033.* May 31, 2022.
14. GeoEngineers. *Annual Groundwater Monitoring Report, April 2022 – January 2023, KCHA Former Park Lake Home Maintenance Center Site.* March 22, 2023.
15. GeoEngineers. *Groundwater Compliance Monitoring Report, May 2023 – February 2024, KCHA Former Park Lake Home Maintenance Center Site.* May 8, 2024.
16. GeoEngineers. *Report Addendum No. 1, Site TEE Exemption, Former Park Lake Homes Maintenance Center.* June 20, 2024.