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STATE OF WASHINGTON
**DEPARTMENT OF ECOLOGY**
PO Box 47600 • Olympia, Washington 98504-7600 • 360-407-6300

July 11, 2023

Blaine Dempke
Markey Machinery
7266 8th Ave S
Seattle, Washington 98108
bdempke@markeymachinery.com

**Re: No Further Action Likely opinion for the following Site:**

| | |
|---|---|
| **Site Name:** | Markey Machinery 8th Avenue |
| **Site Address:** | 7266 8th Ave S, Seattle, King County, WA 98108 |
| **Cleanup Site ID:** | 14476 |
| **Facility/Site ID:** | 52231 |
| **VCP Project ID:** | NW3187 |

Dear Blaine Dempke:

The Washington State Department of Ecology (Ecology) received your *Groundwater Monitoring Report-Fourth Quarter 2022*, dated May 12, 2023, for the Markey Machinery 8th Avenue Site (Site). This letter provides our opinion regarding the sufficiency of your independent cleanup. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), chapter 70A.305 RCW.[1]

## Opinion

Ecology has determined that no further remedial action is likely necessary at Site.[2]

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").

[1] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305
[2] This opinion pertains to the identified release of petroleum to soil and groundwater at the Property. No opinion is provided herein as to whether other environmental conditions could exist at the Property.
[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

Issuance of a no further action determination is contingent on the recording of an environmental covenant signed by Ecology, and the provisions contained within (see the Post Cleanup Controls section of this letter).

## 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):

- Total Petroleum Hydrocarbons-Diesel Range (TPH-Dx) and Total Petroleum Hydrocarbons Heavy Oil-Range (TPH-HO) into Soil and Groundwater.

**Enclosure A** includes Site description, history, and figures.

Please note that releases from multiple sites can affect a parcel of real property. At this time, Ecology has no information that other sites affect the parcel(s) associated with this Site.

## Basis for the Opinion

Ecology bases this opinion on the information contained in the following documents:

1. GeoTech Consultants, Inc. (GeoTech), *Limited Phase II Environmental Site Assessment*, March 2, 2010.
2. ECI Environmental Services, Inc. (ECI), *Focused Subsurface Investigation*, May 2, 2016.
3. ECI, Interim Cleanup Action Report (ICAR), January 22, 2018.
4. ECI, Groundwater Monitoring Report-Fourth Quarter 2022 and Responses to a January 2019 Further Action Letter, May 12, 2023.

You can request these documents by filing a records request.[4] For help making a request, contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or call 360-407-6040. Before making a request, check whether the documents are available on Ecology's Cleanup Site Search web page.[5]

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

[4] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[5] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=

## Analysis of the Cleanup

Ecology has concluded that no further remedial action is likely 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.

The following characterization activities have commenced on the Site to date. A detailed description of the below-listed characterization activities is included in Enclosure A.

The Site location is depicted on Figure 1 (ECI, January 2023).

#### Characterization Activities

In summary, ECI determined petroleum-contaminated soils (PCS) and petroleum-impacted groundwater is present on-Site above the respective MTCA Cleanup Levels (CULs). Figures 2 and 3 illustrate the estimated extent of petroleum-contaminated soil and groundwater on-Site. A detailed rendition of the following characterization activities is presented in Enclosure A.

#### Site Contaminants

Site contaminants include TPH-Dx and -HO into soil and groundwater. During the above-referenced subsurface investigations, ECI identified three source areas, including a former drywell, former underground storage tank (UST), and a former hydraulic press vault.

#### Groundwater Characterization

Groundwater is impacted with TPH-Dx and -HO above cleanup standards. ECI successfully characterized the extent of groundwater contamination and is exhibited in Figure 3.

#### Soil Characterization

Ecology has concluded that the investigations of soil have sufficiently characterized the nature and extent of contamination for the Site, and no further investigation is warranted (Figure 2).

## Summary of Site Characterization Activities

The following characterization and remedial activities have commenced on-Site to date:

- In July 2002, ECI performed a Phase One Environmental Site Assessment (PHI), which identified several recognized environmental site conditions (RECs) in conjunction with past or current business operations.

- In March 2003, ECI conducted a Phase Two Environmental Site Assessment (PHII), including the advancement of ten soil borings to approximately 12 feet below ground surface (bgs).

- In March 2010, GeoTech performed a Limited PHII, and advanced eight soil borings. Analytical results exhibited a combined TPH-Dx and -HO of 28,700 milligrams per kilogram (mg/kg) and 2,960 micrograms per liter (µg/L).

- In April 2016, ECI advanced six soil borings during a Focused Subsurface Investigation. Free-phase hydrocarbons/light non-aqueous phase liquids (LNAPL), was observed in monitoring well (MW) MW-2. Soil and groundwater exhibited detections of contaminants of concern (CoCs) above their respective CULs.

- In July 2016, ECI advanced an additional four soil borings/MWs. It was determined that the former drywell and a subsurface hydraulic press vault were the two sources of TPH-Dx/-HO into both soil and groundwater.

- In November 2017, ECI attempted to decommission and characterize PCS surrounding a drywell located north of the main on-Site building (ECI, January 2018). An undisclosed amount of free-phase hydrocarbons was pumped out from the drywell and disposed of off-Site. ECI subsequently advanced three test pits surrounding the drywell to characterize PCS and impacted groundwater. ECI stated further excavation and characterization could not commence due to the potential to disrupt Markey Machinery business operations and that further excavation/test pit advancement may compromise the structural integrity of the adjoining structure. Test pits samples exhibited TPH-Dx/-HO concentrations well over the respective MTCA CULs (30,000 mg/kg).

- ECI completed four groundwater monitoring and sampling events in February, May, August, and November 2018. ECI collected groundwater from eight MWs. LNAPL was observed in MW-6 during all four monitoring events and MW-12 during the November 2018 monitoring event. ECI reported the LNAPL thickness was approximately 1-inch during each event.

- In October 2018, ECI conducted a second subsurface investigation to further evaluate the previously identified source areas (drywell and hydraulic press).

- In December 2018, ECI conducted a third focused subsurface investigation. ECI advanced an additional six soil borings in the vicinity of a former diesel UST located adjacent to the "assembly building." Soil samples exhibited detections below the respective CULs. Diesel detections in groundwater were above the CULs, as such it was determined the diesel impacts to the Site are likely derived from the former UST.

- ECI completed an additional four rounds of groundwater monitoring and sampling in November 2018, and in March, June and October 2019, as well as in in April 2020. LNAPL was observed in MW-6/Sump 2 and MW-12 during all monitoring events, except for the October 2019 monitoring and sampling event.

- In June 2020, ECI sampled groundwater following dewatering events. LNAPL was still observed at MW-6. ECI recommended the installation of a more robust automatic groundwater recovery system.

- ECI conducted quarterly groundwater monitoring and sampling in March, June, September, and December 2022. LNAPL was reportedly not observed following the operation of the automatic groundwater recovery system (see Cleanup Actions below). CULs were exceeded at MW-11, -12, and Sump 2, however, a statistical regression analysis indicated steadily decreasing concentration trends.

## Setting Cleanup Standards

Ecology has determined the cleanup levels and points of compliance you set for the Site meet the substantive requirements of MTCA. The following CULs have been selected for the Site:

The Groundwater MTCA Method A CULs are:

| | |
|---|---|
| TPH-Dx | 500 µg/L |
| TPH-HO | 500 µg/L |

The Soil MTCA Method A CULs are:

| | |
|---|---|
| TPH-Dx | 2,000 mg/kg |
| TPH-HO | 2,000 mg/kg |

Ecology determined the following standard points of compliance (PoCs) apply to the Site:

- **Soil-Direct Contact:** Based on human exposure via direct contact, the point of compliance is: *"…throughout the Site from ground surface to 15 feet below the ground surface.*"

- **Soil - Leaching:** For sites where soil cleanup levels are based on the protection of groundwater: "*…the point of compliance is throughout the Site."*

- **Groundwater:** For groundwater, the standard point of compliance as established under WAC 173-340-720(8) is: "*…throughout the site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site.*"

**Terrestrial Ecological Evaluation (TEE)**

The Site is located in a highly urbanized setting with limited open space in the vicinity. No open space is located within 500 feet of the Site. Additionally, the Site surface is either paved or covered with structures. Also, an environmental covenant (EC) will be recorded, preventing exposure to residual contamination. As such, no Terrestrial Ecological Evaluation (TEE) is needed for the Site.

## Cleanup Actions

Ecology has determined the cleanup actions selected for the Site meet the substantive requirements of MTCA. The following cleanup actions have commenced on-Site:

- In October and November 2017, ECI reportedly excavated approximately 356.52-tons of PCS from the hydraulic press interior vault source area to depths of 6- to 10-feet bgs, as well as in the drywell source area. Confirmation sampling determined the majority of PCS was removed, although residual PCS remains underneath the northern extent of the excavations. These areas could not be excavated due to the potential to compromise the structural integrity of the adjoining structure. PCS was disposed of at Waste Management Columbia Ridge Landfill, in Arlington, OR (ECI, May 2023).

- Also in November 2017, approximately five cubic yards were excavated and disposed of off-Site during the decommissioning/excavation of the former on-Site drywell (ECI, January 2018).

- In March 2019, ECI further excavated the drywell source area and installed a groundwater sump (Sump no.2; replacing MW-6), to collect mobile LNAPL and impacted groundwater. The amount of additional PCS excavated was not disclosed.

- From February 2019 to May 2020, ECI performed a total of eight dewatering events. Groundwater was reportedly extracted from MW-6/Sump 2, MW-12, and Sump 1. ECI reportedly removed the LNAPL using automated skimmers and manual removal. Approximately 2,205-gallons of impacted groundwater and LNAPL were reportedly removed.

- ECI installed an automatic groundwater recovery system which operated from February 2021 to December 2021. A total of 54,690-gallons of impacted groundwater (41,810-gallons removed from Sump 2; 880-gallons removed from Sump 3/former MW-6), and LNAPL were recovered and disposed of into the sanitary sewer under permit issued by King County, WA. Two weeks after system shutdown, ECI did not detect LNAPL in Sumps nos. 1, 2, or 3 (ECI, May 2023).

## Implementing the Cleanup Action

Ecology has determined your cleanup meets the standards set for the Site. This determination depends on the continued performance and effectiveness of the post-cleanup institutional controls and monitoring specified in this letter.

Ecology considers an EC as needed to prevent exposure to residual PCS and contaminated groundwater. Some cleanup level exceedances remain in groundwater following the cleanup activities that have taken place. However, those cleanup level exceedances are within a localized area of the Property, and the contaminant plume is believed to be receding. Ecology notes that the petroleum in groundwater is expected to be naturally attenuating, hence contaminant concentrations are expected to continue to decline.

## Post-Cleanup Controls

Post-cleanup institutional controls are necessary to ensure compliance with cleanup standards. Ecology is issuing this No Further Action Likely opinion based on post-cleanup groundwater sampling and institutional controls that prevent exposure to residual PCS and contaminated groundwater at the Site. These provisions will be set forth in a recorded EC and are outlined below.

Ecology may rescind this opinion or the subsequent No Further Action opinion if these remedial actions are not performed or do not effectively maintain the cleanup standards.

## Compliance with institutional controls

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to contamination. The following Site-specific institutional controls are needed at the Site:

- Ecology notification before any activities that could result in exposure to residual PCS, such as structural demolition or new construction on the Site.
- Prohibition of drinking water wells on the Site.
- Maintenance and inspection of the Site-wide impermeable cap (foundations and paved areas).
- Groundwater monitoring and sampling:
    - Develop a groundwater monitoring plan (GWMP) for Ecology approval, listing the wells to be sampled, frequency, as well as the MWs used to collect depth-to-water measurements. This information is to be included as an exhibit to the recorded EC.
    - MWs should be sampled and gauged on a semi-annual basis for three years, followed by annual sampling for two years after which particular wells can be petitioned for removal from the sampling protocol based on the data and associated trends.
    - Prepare and submit a groundwater monitoring report. Submit the report prior to the five-year review, which will be in Summer 2028.
    - Collect depth-to-water measurements to develop an accurate potentiometric surface during each monitoring event.
    - Assess the geochemical conditions during each monitoring event at each well sampled or monitored (e.g., pH, conductivity, turbidity, temperature, ORP, and dissolved oxygen).

## Periodic review of post-cleanup conditions

Ecology will conduct periodic reviews of post-cleanup conditions at the Site to evaluate whether they remain protective of human health and the environment. Periodic reviews are anticipated to occur on a five-year basis. Based on a periodic review, if Ecology determines the Site needs further remedial action, Ecology will rescind this opinion. The first periodic review is anticipated to be conducted by Ecology in Summer 2028.

## 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).[6]

### 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 whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70A.305.080[7] and WAC 173-340-545.[8]

### 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).[9]

[6] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.040
[7] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.080
[8] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545
[9] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.170

## Questions

If you have any questions about this opinion, please contact me at 360-763-2777 or jason.cook@ecy.wa.gov.

Sincerely,

JG Cook, LG, RG
Cleanup Site Manager
Headquarters Section

JGC/TAM

cc by email: Kaden Reed, EcoCon, Inc., kaden@alleci.com

Enclosures (1): A – Site Description, History, and Diagrams
B – Environmental Covenant Reference Information

# Enclosure A

Site Description, History, and Diagrams

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## Site Description

### Site

The Site currently consists of a single King County parcel no. 2136200210, totaling 1.31-acre, located at 7266 8th Avenue South, Seattle.

The Site, identified as *Markey Machinery 8th Avenue*, is located at the southeast corner of the intersection of East G Street and Puyallup Avenue, and is currently improved with four single-story commercial and light-industrial structures, totaling approximately 35,000 square-feet.

On-Site soil and groundwater are impacted with Total Petroleum Hydrocarbons-Diesel Range (TPH-Dx) and Total Petroleum Hydrocarbons Heavy Oil-Range (TPH-HO) above the respective MTCA Method A cleanup levels (CULs). Light non-aqueous phase liquids (LNAPL)/free product has historically been observed in multiple monitoring wells, specifically, MW-6, -12/Sump nos. 1 and 2.

### Site Historical and Current Use

The Site is currently utilized for light-industrial/manufacturing purposes. The Site is improved with four commercial and light-industrial structures, totaling approximately 35,000 square-feet. Two of the buildings were constructed in 1941, and the other two buildings were constructed on-Site in 2009 and 2010 (King County Department of Assessments, May 2023).

Markey Machinery has manufactured and fabricated marine vessel and dock equipment for over 110-years. The Site has been in light-industrial use since the late-1900s (ECI, January 2018).

### Surface/Storm Water System

No surface water features are located on or adjoining the Site. The Duwamish River is located approximately 700 feet to the northeast of the Site. Ecology considers impacts to the Duwamish River from the contamination release at the Site to be unlikely.

It is assumed stormwater is conveyed to the municipal separate storm sewer system operated and maintained under the NPDES Phase One Municipal Stormwater Permit issued to the City of Seattle.

### Soils and Geology

The Site and much of the Puget Sound Region is underlain by alluvial Quaternary sediments deposited during multiple glacial episodes. The sediments consist of interlayered alluvial clays, silts, sands, and gravels as well as intermittent peat layers. These alluvial sediments are typically situated over glacial till, primarily comprised of consolidated silts, sands and gravels.

Soils encountered at the Site generally consist of a fine- to medium-grained sand extending to approximately 11-feet below ground surface (bgs), which is underlain by a silt to the maximum depth explored of 12-feet bgs. ECI asserts this silt layer has likely acted as an aquitard, impeding down-profile migration of contaminants (ECI, January 2018 and March 2023).

## Groundwater

Groundwater at the Site is encountered at approximately 8-feet bgs. The groundwater gradient is estimated to conform with topography and likely flows towards the south to south-southeast (ECI, March 2023).

## Source of Contamination and Contamination Extent

The source of contamination reportedly originates from past and current business operations directly related to the Markey Machinery facility. The primary point-sources on the Site include a former hydraulic press vault containing hydraulic fluids, a former UST, and a three-foot diameter drywell, which reportedly received petroleum-leaden water from a nearby leaking air compressor (ECI, January 2018).

In July 2002, Environmental Associates, Inc. (EAI) conducted a Phase One Environmental Site Assessment (PHI) to identify any recognized environmental conditions (RECs) associated with the current or past use of the Site. RECs identified included the current and past usage of the Site as a light-industrial facility since the 1910s (EAI, July 2002).

In March 2003, EAI performed a Phase Two Environmental Site Assessment (PHII), including the advancement of ten soil borings in the areas of potential concern previously identified in the PHI (EAI, March 2003). The PHII identified impacted soils in two locations between 7- to 8-feet bgs, which is the same location of the seasonal water table elevation.

In March 2010, Geotech Consultants Inc., (Geotech) conducted a Limited PHII. Geotech advanced eight soil borings. TPH-Dx and -HO were detected well above the respective soil and groundwater CULs. Maximum soil TPH concentrations (combined TPH-Dx and - HO) was 28,700 milligrams per kilogram (mg/kg) and 2,960 micrograms per liter (µg/L).

In April 2016, EcoCon, Inc. (ECI) advanced six soil borings on the Site to further delineate impacted soil and groundwater. Soil and groundwater concentrations exceeded the applicable MTCA CULs for TPH-Dx and -HO. ECI reportedly observed free-phase product in MW-2. Soil and groundwater were additionally analyzed for metals and polychlorinated biphenols (PCBs).

In July 2016, ECI advanced an additional four soil borings. ECI identified two areas of concern, including the dormer drywell and a subsurface hydraulic press reservoir. Upon initial inspection of the drywell, ECI reportedly observed free-phase hydrocarbons (ECI, January 2018 and March 2023).

In October and November 2017, ECI conducted on-Site removal of petroleum-contaminated soils (PCS) from the hydraulic press location, as well as PCS in the vicinity of the drywell.

During interior vault excavation, ECI removed a total of 349.02-tons of PCS. ECI collected a total of 38 confirmation soil samples from the excavation limits. PCS is remains on-Site along the northern perimeter of the excavation. PCS could not allegedly be removed, since removal from this area may compromise the structural integrity of adjoining structures (ECI, January 2018 and March 2023).

ECI discovered a drywell on-Site, located along the northern perimeter of the main building. ECI indicated the drywell was 3 feet in diameter, a depth of approximately 8 feet and lined with railroad ballast. ECI reportedly observed free-phase TPH in the drywell cavity. ECI subsequently removed the free-phase liquid from the drywell and excavated test pits on three sides of the drywell to characterize soil PCS originating from the drywell. A test pit could not be excavated due to the potential to compromise the structural integrity of an adjoining structure. Test pits indicated the presence of PCS in the vicinity of the drywell. Further excavation could not be conducted, citing structural integrity of an adjoining structure and the potential to disrupt Markey Machinery business operations. A total of 5-cubic yards of PCS was reportedly removed from the dry well area (ECI, January 2018 and March 2023).

In February, May, August, and November 2018, ECI conducted groundwater monitoring at nine locations (MW-1, -5, and -7 to -13). Approximately 1-inch of LNAPL was observed during each monitoring event at MW-6 (ECI, March 2023). LNAPL was additionally observed at MW-12 during the November 2018 monitoring event.

In October 2018, ECI advanced an additional eight soil borings (B-21 to B-28), to further evaluate soil and groundwater conditions in the two source areas (drywell area and interior vault area). ECI determined that groundwater was impacted in the vicinity of the hydraulic press along the northern building exterior (ECI, March 2023).

In December 2018, ECI advanced an additional six soil borings (B-29 to B-34) in the vicinity of the former diesel UST. Analytical results indicated groundwater impacts above the respective MTCA CULs; however, soil samples did not exhibit detections above the laboratory MDL or CULs.

In March 2019, ECI installed Sumps 1 and 2, to collect mobile LNAPL. In addition, ECI installed an additional three MWs (MW-15, -16, and -17).

ECI subsequently monitored and sampled groundwater in March, June, October, and December 2019, as well as April 2020. LNAPL was observed at MW-6 (except during the October 2019 monitoring event), and at MW-12, (except during the October and December 2019, and the April 2020 monitoring events). ECI additionally observed LNAPL at Sump no. 2 during the December 2019 and April 2020 monitoring events. LNAPL was not observed Site-wide during the October 2019 monitoring event (ECI, March 2023).

From February 2019 to May 2020, ECI performed a total of eight dewatering events at MW-6, -12, and Sumps 1 and 2. ECI reportedly "evacuated" 2,205-gallons of contaminated groundwater (ECI, March 2023). It is unknown the methods of removal or disposal, as it was not disclosed in the most recent document. ECI indicated groundwater was removed from Sumps 1 and 2 and on select events from MW-6 and -12. ECI indicated the sumps were "purged dry." Contaminated groundwater was reportedly collected in a weir tank and subsequently discharged to the sanitary sewer under a permit issued by King County (ECI, May 2023).

Following the above-referenced dewatering efforts, ECI conducted a groundwater sampling and monitoring event. ECI reportedly observed LNAPL in MW-6, and groundwater collected from MW-11, -12 and Sumps 1 and 2 were above the respective MTCA Method A CULs.

In a continued effort to remove LNAPL and dissolved contaminants of concern (CoCs) in groundwater, ECI installed an automated groundwater recovery system. The groundwater removal system operated from February 2021 to December 2021, and was installed at Sumps 2 and 3 (ECI, March 2023). A total of 54,690-gallons (41,810-gallons from Sump 2; 12,880-gallons from Sump 3), were extracted and discharged to the sanitary sewer under permit (ECI, May 2023).

ECI conducted subsequent groundwater monitoring and sampling from nine to twelve MWs and three sumps. Sampling commenced in March, June, September, and December 2022. ECI reportedly did not observe LNAPL during any of the 2022 monitoring and sampling events. MW-11 and -12, and Sumps 1 and 2 exhibited detections above the respective MTCA Method A CULs. ECI conducted a statistical analysis, demonstrating decreasing trends in TPH-Dx and -HO concentrations over time (ECI, March 2023).

In summary, through sample location regression analysis, aeiral demonstration of plume stability, and excavation to maximum extent practicable qualifies the Site for an Environmental Covenant, restricting land uses that may expose potential receptors to residual contamination.

## Site Diagrams

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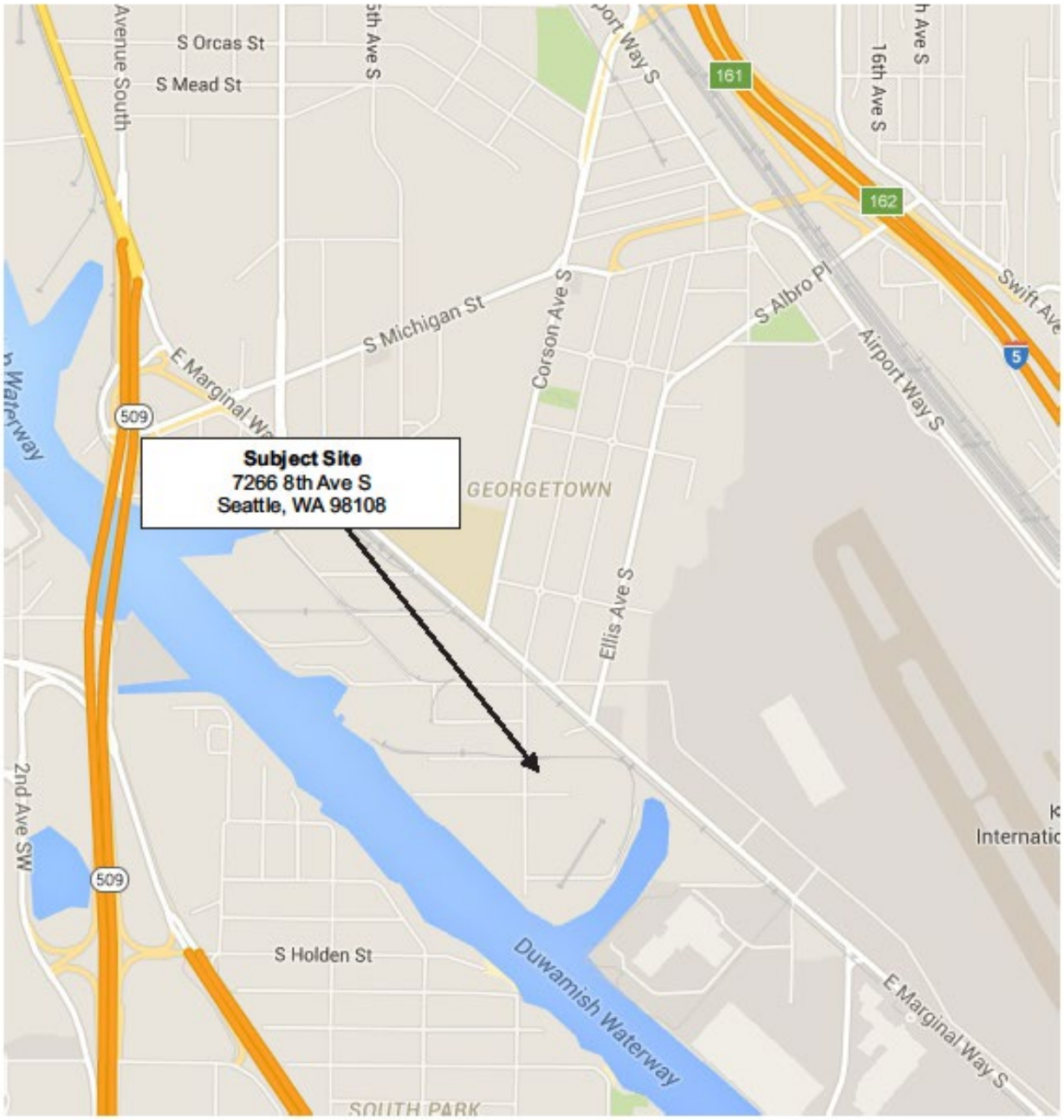


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Not To Scale

Site Location Map
Quarterly Groundwater Monitoring December 2022
7266 8th Ave S
Seattle, WA 98108

| | |
|---|---|
| Date: | January 20, 2023 |
| Completed By: | C.Long |
| Reviewed By:: | S. Spencer |
| Version: | ECI-001 |
| Project No.: | 0605-01-05 |

Figure No.: 01
Sheet 01 of 05

eci Environmental Services

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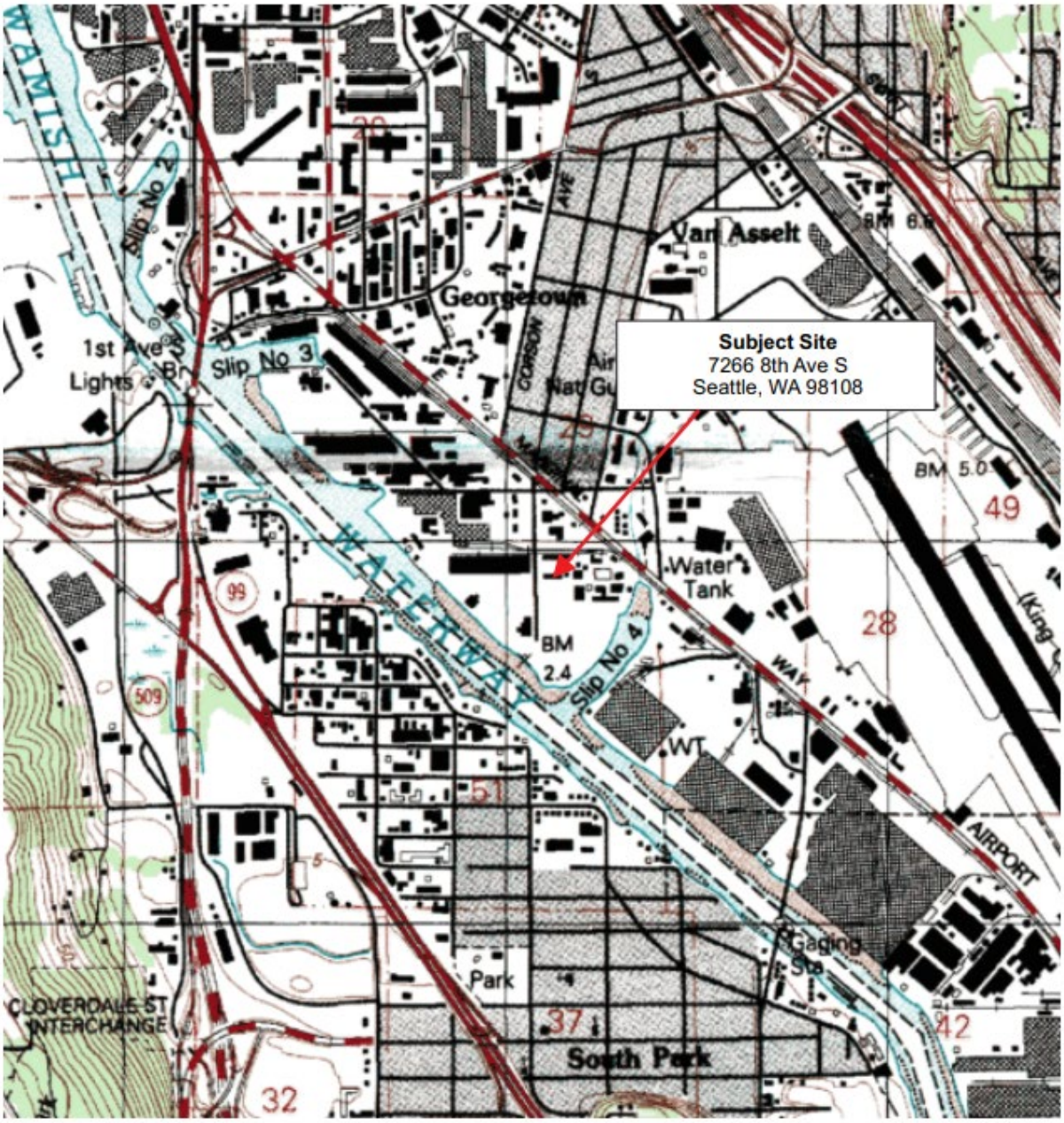


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|---|---|---|---|
| N<br>Not To Scale | Site Topographic Map<br>Quarterly Groundwater Monitoring December 2022<br>7266 8th Ave S<br>Seattle, WA 98108 | Date: January 20, 2023<br>Completed By: C.Long<br>Reviewed By.: S. Spencer<br>Version: ECI-001<br>Project No.: 0605-01-05 | Figure No.: 02<br>Sheet 02 of 04 |

eci Environmental Services

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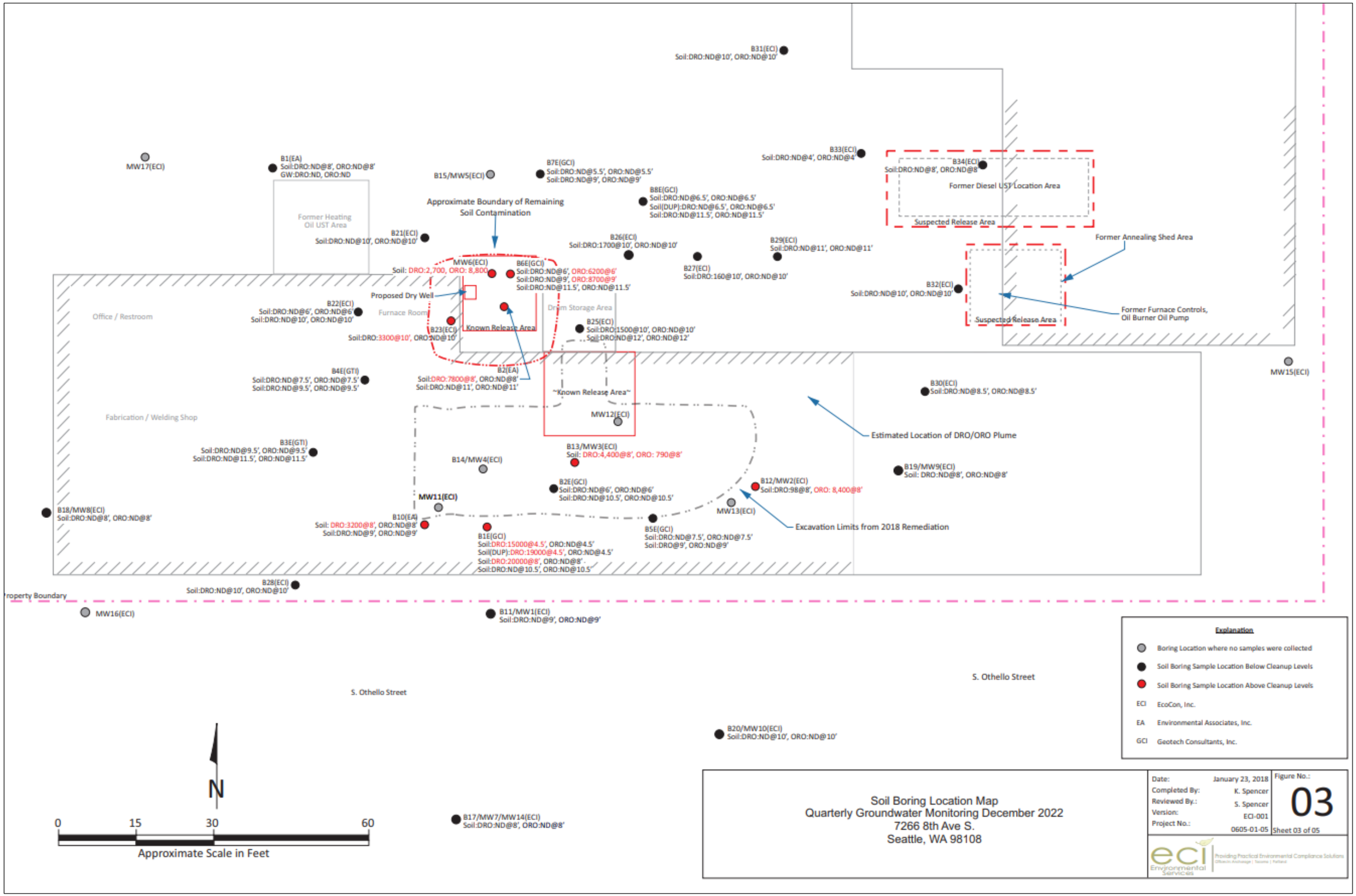


Soil Boring Location Map
Quarterly Groundwater Monitoring December 2022
7266 8th Ave S.
Seattle, WA 98108

| | |
|---|---|
| Date: | January 23, 2018 |
| Completed By: | K. Spencer |
| Reviewed By.: | S. Spencer |
| Version: | ECI-001 |
| Project No.: | 0605-01-05 |

Figure No.: 03
Sheet 03 of 05

eci Environmental Services — Providing Practical Environmental Compliance Solutions
Offices in Anchorage | Tacoma | Portland

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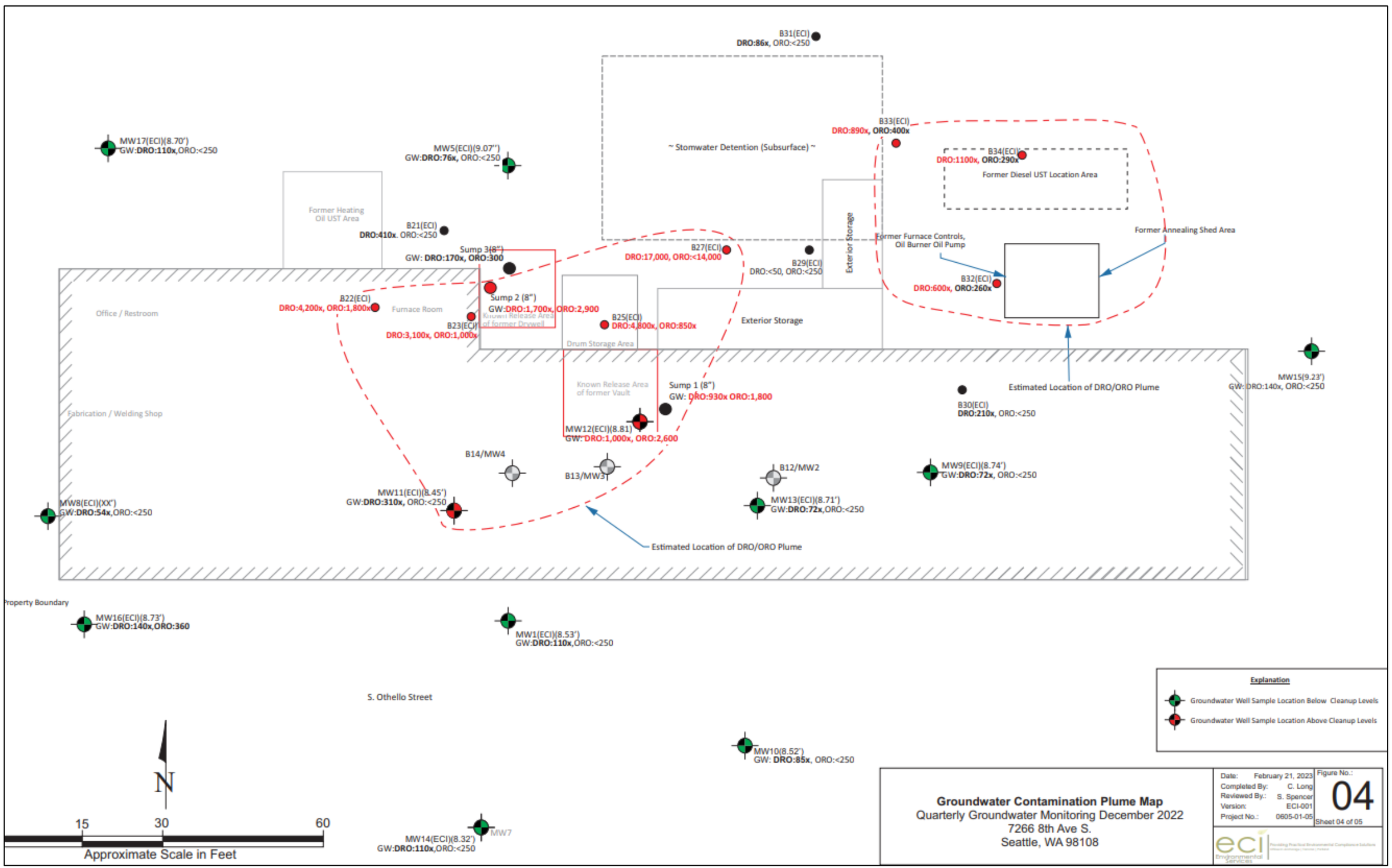
B31(ECI)
DRO:86x, ORO:<250
MW17(ECI)(8.70')
GW:DRO:110x,ORO:<250
MW5(ECI)(9.07")
GW:DRO:76x, ORO:<250
~ Stormwater Detention (Subsurface) ~
B33(ECI)
DRO:890x, ORO:400x
B34(ECI)
DRO:1100x, ORO:290x
Former Diesel UST Location Area
Former Heating Oil UST Area
B21(ECI)
DRO:410x, ORO:<250
Exterior Storage
Former Furnace Controls, Oil Burner Oil Pump
Former Annealing Shed Area
Sump 3(8")
GW: DRO:170x, ORO:300
B27(ECI)
DRO:17,000, ORO:<14,000
B29(ECI)
DRO:<50, ORO:<250
B32(ECI)
DRO:600x, ORO:260x
B22(ECI)
DRO:4,200x, ORO:1,800x
Sump 2 (8")
GW:DRO:1,700x, ORO:2,900
Office / Restroom
Furnace Room
Known Release Area of former Drywell
B25(ECI)
DRO:4,800x, ORO:850x
B23(ECI)
DRO:3,100x, ORO:1,000x
Exterior Storage
Drum Storage Area
MW15(9.23')
GW: DRO:140x, ORO:<250
Known Release Area of former Vault
Sump 1 (8")
GW: DRO:930x ORO:1,800
Estimated Location of DRO/ORO Plume
B30(ECI)
DRO:210x, ORO:<250
Fabrication / Welding Shop
MW12(ECI)(8.81)
GW: DRO:1,000x, ORO:2,600
B14/MW4
B13/MW3
B12/MW2
MW9(ECI)(8.74')
GW:DRO:72x, ORO:<250
MW11(ECI)(8.45')
GW:DRO:310x, ORO:<250
MW13(ECI)(8.71')
GW:DRO:72x,ORO:<250
MW8(ECI)(XX")
GW:DRO:54x,ORO:<250
Estimated Location of DRO/ORO Plume
Property Boundary
MW16(ECI)(8.73')
GW:DRO:140x,ORO:360
MW1(ECI)(8.53')
GW:DRO:110x,ORO:<250
S. Othello Street
MW10(8.52')
GW: DRO:85x, ORO:<250
MW14(ECI)(8.32')
GW:DRO:110x,ORO:<250
MW7
N
15
30
60
Approximate Scale in Feet
Explanation
Groundwater Well Sample Location Below Cleanup Levels
Groundwater Well Sample Location Above Cleanup Levels
Groundwater Contamination Plume Map
Quarterly Groundwater Monitoring December 2022
7266 8th Ave S.
Seattle, WA 98108
Date: February 21, 2023
Completed By: C. Long
Reviewed By.: S. Spencer
Version: ECI-001
Project No.: 0605-01-05
Figure No.: 04
Sheet 04 of 05
eci Environmental Services

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# Enclosure B

Environmental Covenant Reference Information

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## Environmental Covenant Reference Information

**Draft Covenant:** Ecology will need a draft covenant memorializing proposed institutional and engineered controls for all impacted properties. Also provide the environmental covenant in electronic word-processing-compatible format.[10] Include the following information with the draft covenant:

1. **Plan View Maps and Geologic Cross Sections:** Include delineated concentration (1) isopleth plan view maps and (2) geologic cross sections showing the extents of remaining contamination at the Site. Include the boundaries of the MTCA facility, the affected Properties, and the location of any rights-of-way or easements. Indicate where insufficient data are available to delineate to natural background concentrations. These maps will be used to indicate where contamination remains at the Site after closure. For consistency with other sites in our program, Ecology prefers that data for these maps are provided in units of milligrams per kilogram (mg/kg) for soil, micrograms per liter (µg/L) for groundwater, and microgram per meter cubed (µg/$m^3$).

2. **Title Search:** Provide a complete title search as part of Exhibit A, legal description.

3. **Land Survey:** Provide a land survey of impacted properties and rights-of-way, including platting and dedications.

4. **Review the Title Search and Land Survey to Determine if Existing Easements Include any Area of Proposed Engineered or Institutional Controls:**

    **a.** Develop a plan view map or sketch of the locations of existing easements sufficient for Ecology to concur with your evaluation of whether any easements include the areas of proposed engineered or institutional controls.

    **b.** For each easement that intersects proposed controls at the Site, provide either of the following:

        **i.** A signed subordination agreement.

        **ii.** Sufficient evaluation of specific easement terms for Ecology to concur that the easement will not impact the integrity of the cleanup.

[10] See the word processing formatted document at: https://apps.ecology.wa.gov/publications/SummaryPages/1509054.html

Ecology recommends contacting easement owners prior to completing a draft environmental covenant. When reviewing easements, Ecology assumes that Property boundaries extend to the centerline of the adjacent rights of way.

5. **Local Government Notification Requirements:** Please document how the local government notification requirements of WAC 173-340-440(10) are completed. Ecology suggests providing the draft covenant and enclosure package to the local land use planning authority for review and comment. If comments are provided, update the draft covenant based on comments, and provide Ecology the correspondence, local government comments, and how those comments were addressed. If no response is received, include sufficient information for Ecology to concur that the correct local government agency was notified, the date they were notified, and that comments were sought. At this Site, Ecology believes that the appropriate local land use planning authority is likely the King County Department of Development and Environmental Services.

6. **Long-Term Groundwater Monitoring and Cap Monitoring Plan:** Ecology will need long-term monitoring of the existing groundwater monitoring well network to ensure the remedy is effective. A long-term groundwater and cap monitoring and reporting plan will be needed. That plan needs to also include contingency planning, if the remedy is not effective.

   **Groundwater:** Ecology suggests proposing a fifteen-month confirmation groundwater monitoring frequency for the first five years of post-closure monitoring, so that four quarters of seasonal groundwater results are obtained over the five years prior to Ecology's first required regular review.

   **Cap:** Reporting on the cap condition may be conducted at the same time as long-term monitoring and should be detailed in the monitoring plan. An initial inspection with photographs and description of the cap to be monitored should be included with the plan.

   The plan should also include provisions to ensure that all environmental data is provided in accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840[11] (Data Submittal Requirements).

[11] https://apps.ecology.wa.gov/publications/SummaryPages/1609050.html

8. **Contingency Plan:** A long-term groundwater plan is required. That plan should describe those actions that will be conducted if long-term monitoring results exceed predetermined levels, or if cap maintenance or other maintenance is needed, such as repairing groundwater monitoring wells, or what to do if the cap is damaged.
   The contingency plan may be triggered during regular inspection of the cap and monitoring well integrity, or by exceedances of cleanup levels at a point of compliance during long-term monitoring. A simple and adequate contingency plan would include and detail, as applicable, that when specific levels are detected during long-term monitoring, additional confirmation sampling would be performed within 30 days of the initial receipt of results. If the cap were damaged, indoor air sampling and analysis would be conducted and the cap repaired.

   Additional follow-up groundwater sampling would include all required testing for detected hazardous substances and related compounds. The contingency plan should include proposed analytes for contingency sampling in an analytical schedule. Results of performance and confirmation sampling for a contingency plan would be provided to Ecology within 90 days of the laboratory result date if no exceedances of criteria are detected, or within 30 days of the laboratory report result date if exceedances are detected, or for follow-up confirmation sampling.

   If confirmation sampling reveals the continued presence of contaminants above predetermined levels, the contingency plan should include that a work plan to further evaluate conditions beneath the Site would be submitted to Ecology within 60 days of receipt of results of confirmation sampling.

9. **Rights-of-Way:** If contamination is proposed to be left in rights-of-way exceeding cleanup standards, or exceeding soil vapor cleanup screening levels where an engineered control such as a sidewalk is needed to reduce human exposure to contaminated soil vapor, a subordination agreement with the right-of-way holder would be required for implementing an environmental covenant. Grantor and/or subordinate agreements may be required with adjacent Property owners or right-of-way holders, determined by the extents of the Site. Alternately, consider a property-specific no further action approach excluding rights-of-way. Ecology recommends contacting rights-of-way holders (and adjacent property owners) prior to completing a draft environmental covenant.