January 3, 2020
Project 101.01977.00001

Ms. Kim Wooten
Washington Department of Ecology
3190 – 160th Avenue SE
Bellevue, Washington 98008

Re: Work Plan for Vapor Intrusion Investigation, 501 Denny Way Site, Seattle, Washington, Facility/Site No. 81729752, CSID No. 14831

Dear Ms. Wooten:

On behalf of Mr. Larry Rea and Mrs. Jeanne Rea, the owners of the 501 Denny Way property, SLR International Corporation (SLR) has prepared this work plan to conduct a vapor intrusion investigation at the 501 Denny Way site area. This investigation will be performed in response to your written request, dated December 2, 2019. The objectives of the investigation are: 1) to assess if vapors from the chlorinated solvent-impacted shallow perched groundwater at the site are migrating into nearby buildings, 2) to characterize if trichloroethene (TCE) concentrations from vapor intrusion exceed the short-term indoor air action levels, and 3) to develop recommended remedial actions, if necessary, to reduce the TCE and/or other chlorinated solvent vapor concentrations within and/or near buildings.

PREVIOUS INVESTIGATION RESULTS

Since the scope of work in this work plan is focused on the potential migration of chlorinated solvent vapors into buildings, this summary of the previous investigation results does not include the soil and groundwater sample analytical results for the samples collected at depths below the shallow perched groundwater zone (approximately 40 feet below ground surface [bgs]). A draft version of the Subsurface Investigation Report for the 2018 and 2019 investigation at the 501 Denny Way property and surrounding area, described below, has been prepared, and SLR anticipates that a final version of the report will be submitted to the Washington Department of Ecology (Ecology) by the end of January.

2018 and 2019 Investigation at 501 Denny Way Property and Surrounding Area

From September 2018 through December 2019, SLR conducted a subsurface investigation at the 501 Denny Way property (the subject property) and the surrounding area that consisted of drilling and sampling 17 soil borings (designated SB-1, SB-2, SMW-1 through SMW-10, DMW-1 through DMW-4, and EW 1); completing borings SMW-1 through SMW-10 as shallow perched groundwater monitoring wells, borings DMW-1 through DMW-4 as deep perched groundwater

monitoring wells, and boring EW-1 as a shallow perched groundwater extraction test well; installing and sampling 3 soil vapor points (designated SVP-1, SVP-2, and SVP-3) on the subject property; and conducting 6 quarterly groundwater sampling events, including collecting up to 4 groundwater samples from each monitoring well installed during this investigation (501 Denny Way wells) and from selected shallow perched groundwater monitoring wells previously installed at the neighboring Edwards on 5th site (Edwards on 5th wells), which is located to the southwest, across Fifth Avenue from the 501 Denny Way property. The locations of the borings, wells, and soil vapor points are shown on Figure 1.

The soil sample analytical results showed that at least one of the soil samples collected from all of the borings located on the subject property, except SMW-4 and SMW-8, contained tetrachloroethene (PCE) and/or TCE concentrations (up to 243 and 2.77 milligrams per kilogram [mg/kg], respectively) that exceeded the MTCA Method A cleanup levels (0.05 and 0.03 mg/kg, respectively). The soil samples from all of the borings located off of the subject property, except SMW-7, contained analyte concentrations below the laboratory's method reporting limits (MRLs) or the Method A or Method B cleanup levels. The PCE concentrations in the soil samples collected at depths of less than 40 feet bgs (above and within the shallow perched groundwater zone) are presented on Figure 2.

The groundwater sample analytical results showed that all of the quarterly samples from 501 Denny Way shallow perched groundwater wells SMW-1, SMW-2, SMW-3, SMW-4, and SMW-7, as well as from Edwards on 5th shallow perched groundwater wells MW-12, MW-14, and MW-15 contained PCE, TCE, and vinyl chloride concentrations (up to 104,000, 20,700, and 159 micrograms per liter [µg/L], respectively) that exceeded the MTCA Method A cleanup levels (5, 5, and 0.2 µg/L, respectively) and cis-1,2-DCE concentrations (up to 6,790 µg/L) that exceeded the Method B cleanup level (16 µg/L). The June 2019 groundwater sample from SMW-1 also contained a 1,2,4-trimethylbenzene concentration (126 µg/L) that exceeded the Method B cleanup level (80 µg/L). At least three of the quarterly groundwater samples from 501 Denny Way shallow wells SMW-5, SMW-6, SMW-8, and SMW-9 contained PCE and/or TCE concentrations greater than the Method A cleanup levels. The quarterly groundwater samples from 501 Denny Way shallow well SMW-10 and from Edwards on 5th shallow wells MW-05, MW-11, MW-16, and MW-18 did not contain analyte concentrations greater than the MRLs or the Method A or Method B cleanup levels. The PCE concentrations in the samples from the shallow perched groundwater monitoring wells in March and September 2019 are presented on Figures 3 and 4, respectively.

During the December 2018 and December 2019 groundwater sampling events, SLR personnel checked the bottom of each the shallow wells on the subject property that contained the greatest PCE concentrations (SMW-1, SMW-2, and SMW-3) for the potential presence of dense non-aqueous phase liquids (DNAPL) by using a disposable bailer. In December 2019, SLR also checked the bottom of the shallow perched groundwater extraction test well (EW-1) for the potential presence of DNAPL. The bottom of EW-1 was constructed with a 2-foot-long sump

below the screen, and approximately 13 inches of DNAPL (PCE product) were encountered in the sump. DNAPL was not present in wells SMW 1, SMW-2, and SMW-3 in December 2018 or December 2019. The location of EW-1 is shown on Figure 1.

The soil vapor sample analytical results showed that the samples from all three soil vapor points (SVP-1, SVP-2, and SVP-3) contained PCE and TCE concentrations (up to 21,400 and 17,200 micrograms per cubic meter [$\mu g/m^3$], respectively) that exceeded the Method B sub-slab soil gas screening levels (321 and 12.3 $\mu g/m^3$, respectively), and chloroform concentrations (up to 143 $\mu g/m^3$) greater than the Method B sub-slab soil gas screening level (3.62 $\mu g/m^3$). The samples from SVP-1 and SVP-2 also contained benzene and naphthalene concentrations (up to 77.1 and 5.55 $\mu g/m^3$, respectively) that exceeded the Method B sub-slab soil gas screening levels (10.7 and 2.45 $\mu g/m^3$, respectively), and the samples from SVP-2 and SVP-3 also contained vinyl chloride concentrations (up to 52 $\mu g/m^3$) that exceeded the Method B sub-slab soil gas screening level (9.33 $\mu g/m^3$). The PCE and TCE concentrations in the soil vapor samples are presented on Figure 5.

Based on the geologic conditions encountered during this investigation, the shallow soil beneath the subject property area primarily consists of dense sand to gravelly sand to depths ranging from approximately 23 to 39 feet bgs. This sand to gravelly sand unit contains laterally discontinuous sand with silt, silty sand, or sandy silt lenses that are up to 6 feet thick. The sand to gravelly sand is underlain by a sandy silt unit that is up to 7 feet thick, where present, or by a silty sand unit that is up to 4 feet thick. Shallow perched groundwater occurs in the sand and gravelly sand unit, and the depth of the shallow perched groundwater beneath the subject property ranges from approximately 18 to 22 feet bgs. The shallow perched groundwater table deepens as the groundwater migrates to the northwest, and is at approximately 34 feet bgs at hydraulically downgradient well SMW-5 (at the northwest corner of the intersection of Fifth Avenue and Denny Way; see Figure 4).

Edwards on 5th Building Site

The Edwards on 5th building is located along the south side of Fifth Avenue, to the southwest of the subject property (see Figure 5). Since 1994, there have been numerous investigation and remediation activities to assess and cleanup petroleum hydrocarbon-impacted soil, groundwater, and soil vapors that were reportedly due to a leaking heating oil UST. The UST, which was removed in 1995, was located near the west-center of the Edwards on 5th building property.

Environmental Partners, Inc. (EPI) conducted several vapor intrusion assessments that included indoor air sampling in the basement of the Edwards on 5th building, crawlspace air sampling beneath the adjacent building to the northwest, and the installation and sampling of four sub-slab soil vapor points (designated VP-1, VP-2, VP-3, and VP-4) near the neighboring building to the northwest (SLR has designated this building as the “coffee shop building”). The locations of

the soil vapor points are shown on Figure 5. Naphthalene concentrations were detected in indoor air and crawlspace samples at concentrations exceeding applicable cleanup levels; however, the naphthalene concentrations in the soil vapor samples were below the sub-slab soil gas screening level (EPI, 2017). In March 2018, soil vapor samples were collected from points VP-2 and VP-3, and the samples were analyzed for halogenated volatile organic compounds (HVOCs). The sample analytical results showed that chlorinated solvents (including PCE, TCE, cis-1,2-DCE, and vinyl chloride) were not detected in either sample at concentrations above the MRLs (EPI, 2018). Since chlorinated solvent-impacted shallow perched groundwater is present beneath points VP-2 and VP-3 (see Figure 5), the soil vapor sampling results indicate that vapors from the solvent-impacted groundwater are not migrating up to the ground surface.

To prevent additional naphthalene vapors from entering the Edwards on 5th building, EPI installed a vapor intrusion mitigation system in the basement of the building in December 2015 that maintains a continuous positive pressure within the basement relative to the pressure within the surrounding soil vapor (EPI, 2017). In addition, EPI installed a vapor intrusion mitigation system in the crawlspace beneath the adjacent building to the northwest (EPI, 2018). Both of the vapor intrusion mitigation systems are still operating.

EVALUATION OF POTENTIAL INDOOR AIR RECEPTORS

Based on the groundwater sample analytical results, the estimated areas of TCE concentrations in the shallow perched groundwater that exceed the residential and non-residential short-term vapor intrusion screening levels (8 and 31 µg/L, respectively) are shown on Figure 5. To identify potential indoor air receptors of solvent vapors, SLR reviewed King County and City of Seattle records to obtain information about the construction of the subsurface portion of each building located within 100 feet of the areas of TCE concentrations in the shallow perched groundwater that exceed the residential and non-residential short-term vapor intrusion screening levels. There are 6 buildings located within 100 feet of the TCE-impacted shallow perched groundwater that have basements, and 1 of the buildings (the Edwards on 5th building) contains an active vapor intrusion mitigation system in the basement (see Figure 5). The locations and the basement depths of the five buildings that do not contain a vapor intrusion mitigation system, as well as the distances from the TCE-impacted groundwater, are discussed below.

- An auto repair garage building located at the northeast corner of the intersection of Fifth Avenue and Denny Way has a basement that is 10 feet deep. The building is occupied by law offices and an auto repair garage. TCE concentrations in the shallow perched groundwater that exceed the non-residential short-term vapor intrusion screening level occur less than 5 feet from the building.
- The Century apartment building, which is located at the northwest corner of the intersection of Denny Way and Taylor Avenue North, has a two-level underground parking garage that is 21 feet deep. In addition to residential apartments, there is a

large vacant space located on the ground floor that is leased by a school. TCE concentrations in the shallow perched groundwater that exceed the residential short-term vapor intrusion screening level occur adjacent to the building, and the depth of the perched groundwater table is less than one foot below the underground parking garage.

- The Taylor 28 apartment building, which is located at the northeast corner of the intersection of Denny Way and Taylor Avenue North, has a two-level underground parking garage that is 24 feet deep. In addition to residential apartments, there are commercial businesses located on the ground floor. The Taylor 28 apartment building is located approximately 100 feet to the northeast of the TCE-impacted shallow perched groundwater.
- Across Fifth Avenue from the subject property, a wellness center building has a basement that is 8 feet deep. The building is located adjacent to the southeastern side of the Edwards on 5th building, and the wellness center is the only occupant of the building. TCE concentrations in the shallow perched groundwater that exceed the non-residential short-term vapor intrusion screening level occur approximately 40 feet to the northwest of the building.
- The Davenport apartment building, which is located at the western corner of the intersection of Vine Street and Fifth Avenue, has a basement that is 7 feet deep. There are only residential apartments in the building. TCE concentrations in the shallow perched groundwater that exceed the residential short-term vapor intrusion screening level occur approximately 38 feet to the northwest of the building.

There are 3 buildings located within 100 feet of the TCE-impacted shallow perched groundwater that do not have any subsurface structures and one of those buildings (the coffee shop building) has an active vapor intrusion mitigation system in the crawlspace beneath the structure (see Figure 5). The locations of the two buildings that do not have basements and do not contain a vapor intrusion mitigation system, as well as the distances from the TCE-impacted groundwater, are described below.

- The dry cleaner building at the subject property does not have a basement, and there are chlorinated solvent concentrations in the soil vapors beneath the building that exceed the Method B sub-slab soil gas screening levels. The elevated soil vapor concentrations are primarily due to residual impacted soil near the source area(s) (the western former dry cleaning machine and/or the associated floor drain pipe, as well as possibly the eastern former dry cleaning machine; see Figure 2). As part of an interim remedial action, the property owner plans to demolish the building in 2020 and remediate the soil vapors and shallow soil and perched groundwater beneath the subject property.
- The building located at the southwest corner of the intersection of Denny Way and Fifth Avenue does not have a basement. A Zeek's Pizza restaurant is located on the ground floor and there are commercial offices on the second and third floors of the building.

The building is located approximately 75 feet west of the TCE-impacted groundwater (based on non-residential screening levels; see Figure 5).

PLANNED INVESTIGATION ACTIVITIES

Based on the location of the TCE-impacted groundwater relative to buildings, the planned vapor intrusion investigation will assess the soil vapor conditions near the auto repair garage building, the wellness center building, and the Davenport apartment building. The bottom of the Century apartment building is less than one foot above the shallow perched groundwater table, which is too close to the groundwater table to allow for collection of a soil vapor sample at a depth below the building. Therefore, the vapor intrusion investigation will include indoor air sampling within the underground parking garage of that building. The indoor air sampling results at the Century apartment building will be used to evaluate if vapor intrusion investigation activities are needed at the Taylor 28 apartment building, which also has a deep underground parking garage, but is located approximately 100 feet further away from the TCE-impacted groundwater.

SLR believes that vapor intrusion investigation is not needed near the buildings that have active vapor intrusion mitigation systems (the Edwards on 5th building and the coffee shop building). Based on the results of the 2018 soil vapor sampling near the coffee shop building, soil vapors from the solvent-impacted perched groundwater are not migrating up to the ground surface. Therefore, we do not believe that vapor intrusion investigation activities are necessary near the building that contains the Zeek's Pizza restaurant. This vapor intrusion investigation also does not include the subject property because the building is actively used as a dry cleaner, and it will be demolished in 2020 as part of an interim remedial action at the property.

The planned investigation activities described below are designed to meet the objectives listed in the opening paragraph of this work plan.

Install and Sample Soil Vapor Points

To assess the potential for vapor intrusion into the auto repair garage building, the wellness center building, and the Davenport apartment building, SLR plans to install and sample a soil vapor point in the sidewalk in front of the auto repair garage building and a soil vapor point in the sidewalk in front of the wellness center building (15 feet from the Davenport building). The planned locations of the soil vapor points are shown on Figure 5. Since the wellness center building is located closer to the TCE-impacted groundwater than the adjacent Davenport building, the sample analytical results from the soil vapor point in front of the wellness center building can be used to evaluate the vapor intrusion risks into the Davenport building.

Prior to conducting any fieldwork, SLR will apply for and obtain Utility Permits from the City of Seattle (City) to drill and install the two soil vapor points on city property. The permit applications will include a traffic control plan for each drilling area. Prior to installing the soil vapor points, private and public utility locates will be conducted to identify and mark any underground utilities near the location of each soil vapor point. To minimize the potential for encountering any underground utilities, Cascade Drilling, Inc. (Cascade) of Woodinville, Washington, will use a hand auger to remove the soil at each drilling location to a depth of approximately 5 feet below ground surface (bgs).

Cascade will conduct the drilling activities by using hydraulic push-probe methods. Each boring will be advanced to a depth of approximately 1 foot below the depth of the nearby basement (approximately 9 feet bgs in front of the wellness center building and approximately 11 feet bgs in front of the auto repair garage). The drilling activities will be conducted under the direction of SLR personnel.

Each soil vapor point will be constructed with ¼-inch-diameter Teflon™ tubing and a 6-inch-long, ¼-inch-diameter, stainless steel mesh screen. The screen will be installed at the bottom of the boring. A filter pack of Colorado™ 10x20 silica sand will be installed from the bottom of the boring to approximately 6 inches above the top of the screen. Hydrated bentonite will be installed from the top of the filter pack to approximately 6 inches bgs, and concrete will be installed from the top of the bentonite seal to the ground surface. An eight-inch-diameter steel monument will be installed flush with the ground surface to protect the soil vapor point. A decontaminated three-way manifold with two valves for purging and sampling will be installed at the upper end of the tubing of each soil vapor point.

At least eight hours after the installation of the soil vapor points, after the hydrated bentonite and concrete seal has set and the soil vapors in the subsurface have equilibrated, SLR personnel will collect a soil gas sample from each point in accordance with Ecology's *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action,* dated October 2009; and EPA's *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air,* dated June 2015. Prior to sampling, the soil vapors in each point will be purged for a minimum of five minutes. A peristaltic pump with new tubing will be connected to the purging port on the three-way manifold, and will be used to extract soil vapors from the point. While purging, each soil vapor point will be tested for leaks by using a tracer gas box placed over each point. Helium will be introduced into the tracer gas box and maintained at a concentration of at least 75 percent while the helium concentrations in the purged soil vapors are monitored. A calibrated helium detector with a range of 0 parts per million to 100 percent will monitor the helium concentration within the box and in the purged air. After purging, a one-liter Summa canister (certified as decontaminated by the laboratory) with a dedicated flow regulator will be attached to the sample valve on each manifold. The purging valve on the manifold will be closed, the peristaltic pump turned off, and then the sample valve and dedicated flow regulator will be opened to

allow the Summa canister to extract a sample from the soil vapor point over a period of approximately 5 minutes. The valve on the canister will be closed before the vacuum reaches zero. The filled Summa canisters will be submitted to Fremont Analytical, Inc. (Fremont Analytical) in Seattle, Washington, for analysis of PCE, TCE, vinyl chloride, and 1,2,4-trimethylbenzene by EPA Method TO-15 (low levels). PCE, TCE, vinyl chloride, and 1,2,4-trimethylbenzene are the volatile organic compounds (VOCs) at the 501 Denny Way site that have been detected in at least one groundwater sample at concentrations greater than their respective MTCA Method A or Method B cleanup levels, and that have indoor air cleanup levels.

The soil generated by the drilling activities, and wastewater generated during the decontamination of the drilling equipment will be temporarily stored at the subject property in properly labeled 55-gallon drums, pending off-site disposal as hazardous waste at an Ecology-approved facility.

Conduct Indoor Air Sampling

To determine if TCE-impacted soil gas is entering the Century apartment building, SLR proposes to collect two indoor air samples (one sample and one duplicate sample) over an eight-hour period at a location near the southern end of the bottom level of the underground parking garage (see Figure 5). Prior to conducting the indoor air sampling, SLR will prepare and negotiate an access agreement with the owner of the building. We will also meet with building personnel to make sure that cleaning products are not stored in the underground parking garage, and to identify the exact indoor air sample locations. The samples will be submitted to Fremont Analytical for analysis of PCE, TCE, vinyl chloride, and 1,2,4-trimethylbenzene by EPA Method TO-15 (low levels).

Prepare Report

After receiving the soil vapor and indoor air sample analytical results, SLR will evaluate the risks associated with any contamination in the soil vapor and indoor air samples, and prepare a Vapor Intrusion Investigation Report that describes the field activities, presents the sample analytical results, and discusses the potential risks to indoor air within the buildings. If the sample analytical results indicate that remediation is necessary to prevent vapor intrusion into one or more of the buildings, the report will present SLR's recommended remedial action(s) to reduce the TCE concentrations within and/or near the buildings. The report will be submitted to Ecology.

SCHEDULE

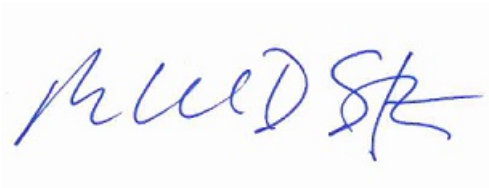
The Utility Permit applications will be submitted to the City during the week of January 6th. It is our understanding that the City is currently taking 8 to 10 weeks to issue Utility Permits. While we are waiting for the City, SLR will prepare and negotiate an access agreement with the owner

of the Century building. The indoor air sampling will be conducted within one week after receiving the signed access agreement, and the installation and sampling of the soil vapor points will be completed within two weeks after receiving both Utility Permits. The Vapor Intrusion Investigation Report will be submitted to Ecology within six weeks after receiving all of the final laboratory reports.

If you have any questions, please call Mike Staton at (425) 471-0479.

Sincerely,

SLR International Corporation



Michael D. Staton, L.G.
Managing Principal

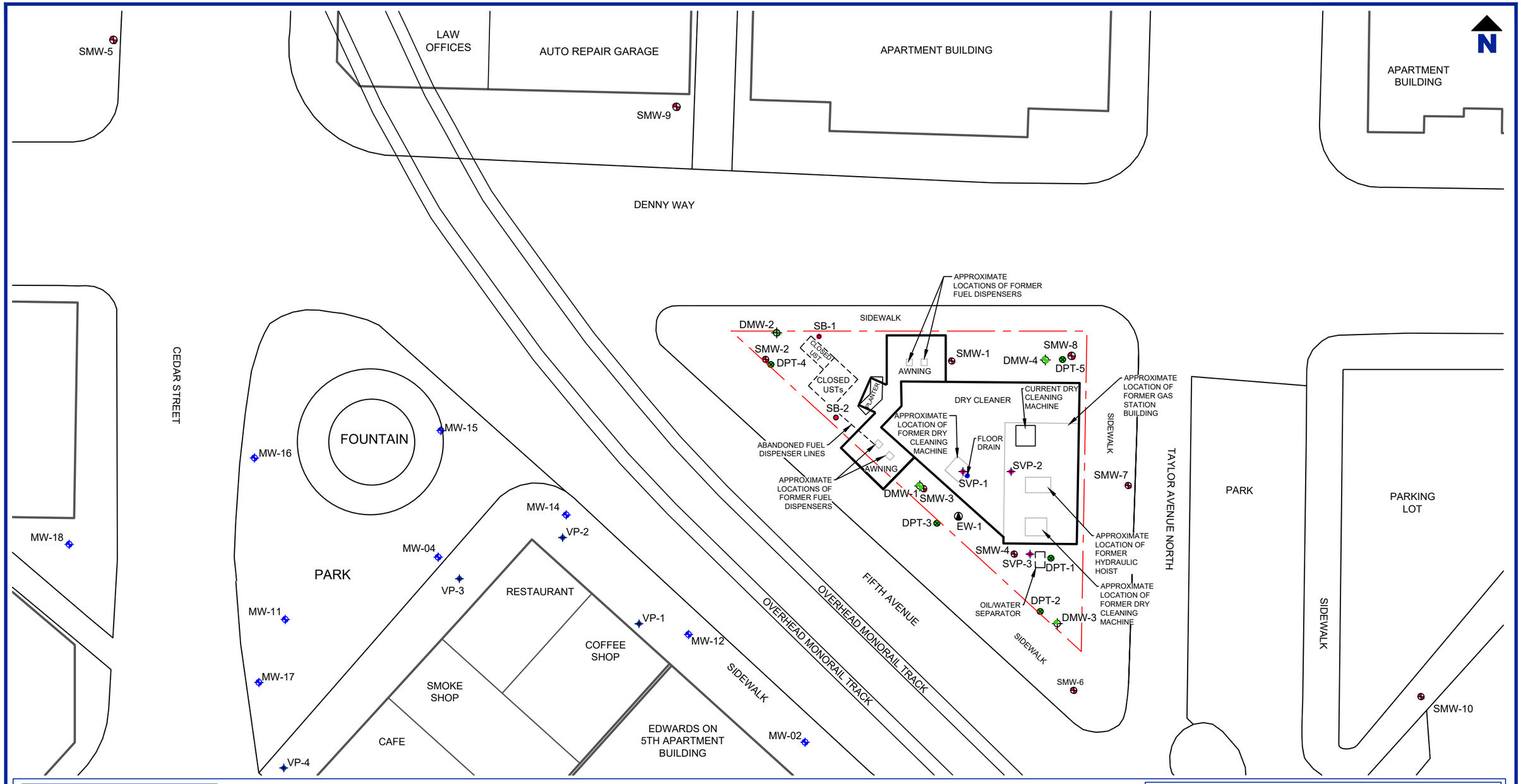
cc: Larry, Jeanne, and Keith Rea
Mark Myers, Williams Kastner
Scott Osmus, The Hartford

Attachments: References
Figures 1 through 5

REFERENCES

Environmental Partners, Inc. 2017. *Remedial Investigation Report, Edwards on 5th Site, 2619 5th Avenue, Seattle, Washington 98121.* June 26.

Environmental Partners, Inc. 2018. *Remedial Investigation Report Addendum, Edwards on 5th Site, 2619 5th Avenue, Seattle, Washington 98121.* May 9.



LEGEND

- FORMER FEATURES
- SUBJECT PROPERTY BOUNDARY
- FLOOR DRAIN
- SMW-1 — 501 DENNY WAY SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- DMW-1 — 501 DENNY WAY DEEP MONITORING WELL LOCATION AND DESIGNATION
- EW-1 — 501 DENNY WAY EXTRACTION TEST WELL LOCATION AND DESIGNATION
- SB-1 — 2018 SLR SOIL BORING LOCATION AND DESIGNATION
- DPT-3 — 2016 EPI SOIL BORING LOCATION AND DESIGNATION
- MW-12 — EDWARDS ON 5TH MONITORING WELL LOCATION AND DESIGNATION
- SVP-1 — 501 DENNY WAY SUB-SLAB SOIL VAPOR POINT LOCATION AND DESIGNATION
- VP-1 — EDWARDS ON 5TH SUB-SLAB SOIL VAPOR POINT LOCATION AND DESIGNATION

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE.

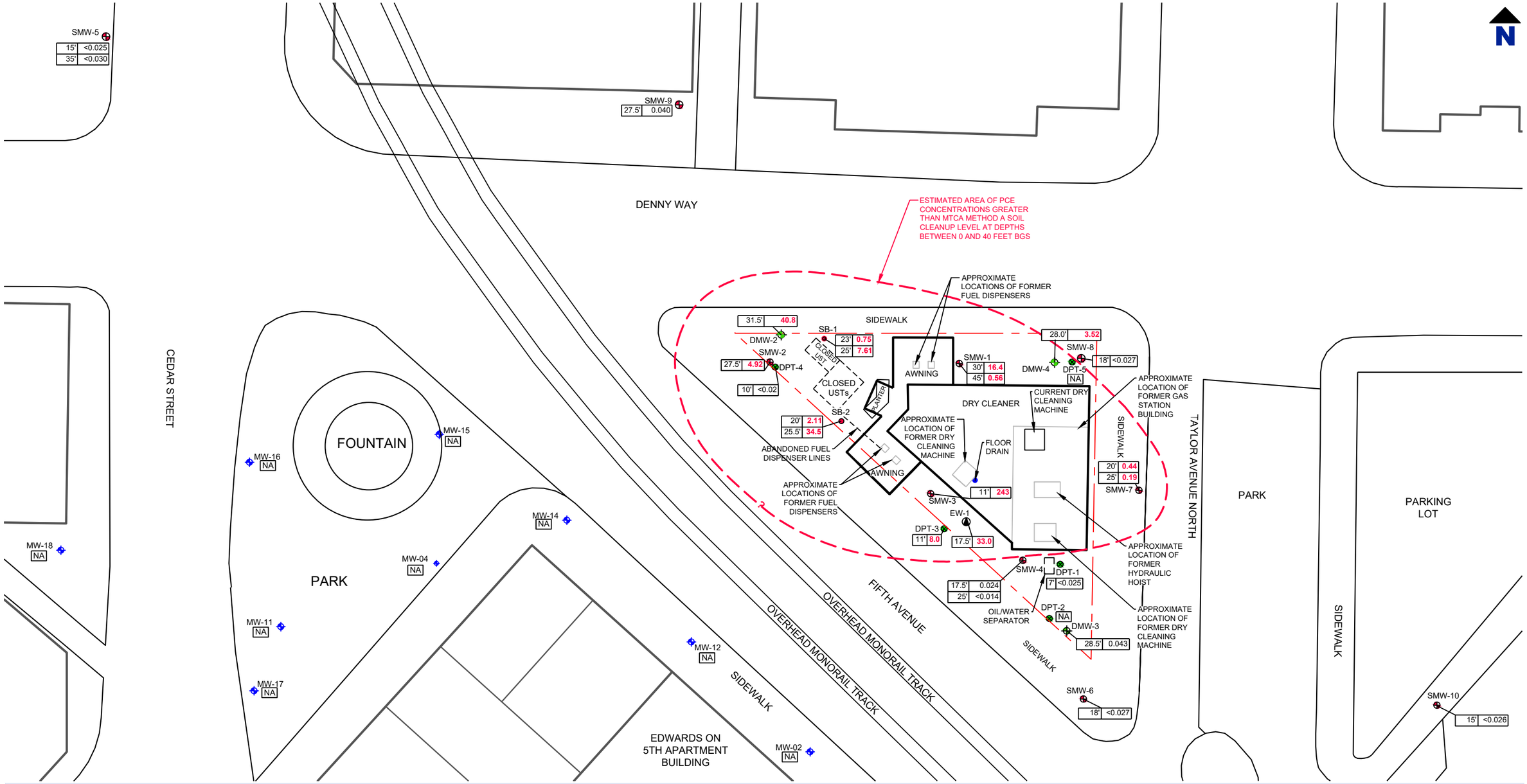
SCALE: 1" = 30'
WHEN PLOTTED AT 11 x 17 PAGE SIZE
0 30 60 90

501 DENNY WAY PROPERTY AREA
SEATTLE, WASHINGTON

Drawing: INVESTIGATION LOCATIONS

Date: December 9, 2019 | Scale: AS SHOWN | Fig. No. 1
File Name: 01-01.dwg | Project No. 101.01977.00001

SLR
22118 20th AVE SE
BLDG. G, SUITE 202
BOTHELL, WA 98021
T: 425-402-8800
F: 425-402-8488



LEGEND

- FORMER FEATURES
- SUBJECT PROPERTY BOUNDARY
- FLOOR DRAIN
- SMW-1 — 501 DENNY WAY SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- DMW-1 — 501 DENNY WAY DEEP MONITORING WELL LOCATION AND DESIGNATION
- EW-1 — 501 DENNY WAY EXTRACTION TEST WELL LOCATION AND DESIGNATION
- SB-1 — 2018 SLR SOIL BORING LOCATION AND DESIGNATION
- DPT-3 — 2016 EPI SOIL BORING LOCATION AND DESIGNATION
- MW-12 — EDWARDS ON FIFTH MONITORING WELL LOCATION AND DESIGNATION

TOP OF SAMPLE DEPTH (IN FEET) — TETRACHLOROETHENE (PCE) CONCENTRATION IN SOIL SAMPLE [IN MILLIGRAMS PER KILOGRAM (MG/KG)]

20' 2.11
25.5' 34.5

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE.
2. PCE CONCENTRATIONS IN BOLD AND RED EXCEED THE MTCA METHOD A SOIL CLEANUP LEVEL (0.05 MG/KG).
3. NA = SOIL SAMPLES NOT COLLECTED OR NOT ANALYZED FOR VOLATILE ORGANIC COMPOUNDS.
4. BGS = BELOW GROUND SURFACE.

SCALE: 1" = 30'
WHEN PLOTTED AT 11 x 17 PAGE SIZE
0 30 60 90

501 DENNY WAY PROPERTY AREA
SEATTLE, WASHINGTON

Drawing
PCE CONCENTRATIONS IN SOIL SAMPLES COLLECTED BETWEEN 0 AND 40 FEET BGS

Date	December 17, 2019	Scale	AS SHOWN
File Name	01-02.dwg	Project No.	101.01977.00001

Fig. No. 2

SLR
22118 20th AVE SE
BLDG. G, SUITE 202
BOTHELL, WA 98021
T: 425-402-8800
F: 425-402-8488

N

FIFTH AVENUE NORTH

ESTIMATED AREA OF PCE CONCENTRATIONS GREATER THAN MTCA METHOD A CLEANUP LEVEL IN SHALLOW GROUNDWATER

SMW-5 (7.91)

SMW-9 (41.8)

DENNY WAY

CEDAR STREET

SIDEWALK

SMW-2 (32,900)

SMW-1 (17,500)

DRY CLEANER

TAYLOR AVENUE NORTH

FOUNTAIN

MW-15 (1,200)

MW-16 (<0.40)

SMW-3 (84,500)

SMW-7 (1,590)

OVERHEAD MONORAIL TRACK

SIDEWALK

FIFTH AVENUE

MW-14 (7,880)

MW-04 (NS)

SMW-4 (1,040)

SIDEWALK

MW-11 (<0.40)

MW-12 (3,420)

SIDEWALK

SMW-6 (14.8)

MW-02 (DRY)

EDWARDS ON 5TH BUILDING

MW-05 (<0.40)

LEGEND

- FORMER FEATURES
- SUBJECT PROPERTY BOUNDARY
- SMW-1 — 501 DENNY WAY SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- MW-12 — EDWARDS ON 5TH MONITORING WELL LOCATION AND DESIGNATION
- (3,420) — TETRACHLOROETHENE (PCE) CONCENTRATION [IN MICROGRAMS PER LITER (µg/L)]
- (DRY) — WELL WAS DRY AT TIME OF SAMPLING
- GENERAL GROUNDWATER FLOW DIRECTION ON MARCH 25, 2019

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE.
2. PCE CONCENTRATIONS IN BOLD AND **RED** EXCEED THE MTCA METHOD A GROUNDWATER CLEANUP LEVEL (5µg/L).
3. NS = WELL WAS NOT SAMPLED DUE TO THE PRESENCE OF PETROLEUM FREE PRODUCT.
4. THIS FIGURE ONLY INCLUDES THE SHALLOW WELLS THAT WERE INCLUDED IN SLR's GROUNDWATER SAMPLING PROGRAM IN MARCH 2019.

SCALE: 1" = 40'
WHEN PLOTTED AT 11 x 17 PAGE SIZE
0 40 80 120

501 DENNY WAY PROPERTY AREA
SEATTLE, WASHINGTON

Drawing
PCE CONCENTRATIONS IN SHALLOW PERCHED GROUNDWATER SAMPLES - MARCH 2019

Date	December 31, 2019	Scale	AS SHOWN
File Name	01-03.dwg	Project No.	101.01977.00001

Fig. No. 3

SLR
22118 20th AVE SE
BLDG. G, SUITE 202
BOTHELL, WA 98021
T: 425-402-8800
F: 425-402-8488

N:\Bothell\1 PROJECTS\501 Denny Way Property\Figures\Figures for Work Plan\01-03.dwg

N

KOMO PLAZA

SMW-5 (8.33)

?

LAW OFFICES

AUTO REPAIR GARAGE

THE CENTURY APARTMENT BUILDING

SMW-9 (386)

ESTIMATED AREA OF PCE CONCENTRATIONS GREATER THAN MTCA METHOD A CLEANUP LEVEL IN SHALLOW GROUNDWATER IN SEPTEMBER 2019

DENNY WAY

ZEEK'S PIZZA RESTAURANT

CEDAR STREET

SIDEWALK

SMW-2 (NS)

AWNING

SMW-1 (NS)

SMW-8 (172)

DRY CLEANER

SIDEWALK

AWNING

SMW-3 (NS)

SMW-7 (4,320)

SMW-4 (NS)

TAYLOR AVENUE NORTH

PARKING LOT

SIDEWALK

MW-16 (NS)

FOUNTAIN

MW-15 (NS)

OVERHEAD MONORAIL TRACK

MW-14 (NS)

MW-18 (NS)

MW-04 (NS*)

PARK

MW-11 (NS)

RESTAURANT

MW-12

OVERHEAD MONORAIL TRACK

FIFTH AVENUE

SMW-6 (11.0)

PARK

SMW-10 (<0.40)

NAIL SALON

SMOKE SHOP

COFFEE SHOP

CAFE

EDWARDS ON 5TH APARTMENT BUILDING

MW-02 (DRY)

FEDEX

WELLNESS CENTER

MW-05 (NS)

SIDEWALK

THE DAVENPORT APARTMENT BUILDING

LEGEND

- FORMER FEATURES
- SUBJECT PROPERTY BOUNDARY
- SMW-1 — 501 DENNY WAY SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- EW-1 — 501 DENNY WAY EXTRACTION TEST WELL LOCATION AND DESIGNATION
- MW-12 — EDWARDS ON FIFTH MONITORING WELL LOCATION AND DESIGNATION
- (11.0) — TETRACHLOROETHENE (PCE) CONCENTRATION [IN MICROGRAMS PER LITER (µg/L)]
- (NS) — WELL WAS NOT SAMPLED DURING SEPTEMBER 2019 SAMPLING EVENT
- (DRY) — WELL WAS DRY AT TIME OF SAMPLING
- GENERAL GROUNDWATER FLOW DIRECTION ON SEPTEMBER 9, 2019

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE.
2. PCE CONCENTRATIONS IN BOLD AND **RED** EXCEED THE MTCA METHOD A GROUNDWATER CLEANUP LEVEL (5 µg/L).
3. NS = NOT SAMPLED
4. * = WELL WAS NOT SAMPLED DUE TO THE PRESENCE OF PETROLEUM FREE PRODUCT.
5. THIS FIGURE ONLY INCLUDES THE SHALLOW WELLS THAT WERE INCLUDED IN SLR's GROUNDWATER SAMPLING PROGRAM.

SCALE: 1" = 50'
WHEN PLOTTED AT 11 x 17 PAGE SIZE
0 50 100 150

501 DENNY WAY PROPERTY AREA
SEATTLE, WASHINGTON

Drawing
PCE CONCENTRATIONS IN SHALLOW GROUNDWATER SAMPLES - SEPTEMBER 2019

Date	December 31, 2019	Scale	AS SHOWN
File Name	01-04.dwg	Project No.	101.01977.00001

Fig. No. 4

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KOMO PLAZA

FIFTH AVENUE

LAW OFFICE BUILDING

AUTO REPAIR GARAGE

(10' DEEP BASEMENT)

THE CENTURY APARTMENT BUILDING
(21' DEEP PARKING GARAGE)

TAYLOR AVENUE NORTH

TAYLOR 28 APARTMENT BUILDING
(24' DEEP PARKING GARAGE)

N

SMW-5

SMW-9

SVP

ESTIMATED AREA OF TCE CONCENTRATIONS IN PERCHED GROUNDWATER GREATER THAN NON-RESIDENTIAL SHORT TERM VAPOR INTRUSION SCREENING LEVEL

ESTIMATED AREA OF TCE CONCENTRATIONS GREATER THAN MTCA METHOD A SOIL CLEANUP LEVEL IN SHALLOW SOIL (LESS THAN 20 FEET DEEP)

ESTIMATED AREA OF TCE CONCENTRATIONS IN PERCHED GROUNDWATER GREATER THAN RESIDENTIAL SHORT-TERM VAPOR INRUSION SCREENING LEVEL

DENNY WAY

ZEEK'S PIZZA RESTAURANT (NO BASEMENT)

CEDAR STREET

SIDEWALK

AWNING

SMW-1

SMW-8

CURRENT DRY CLEANING MACHINE

SMW-2

DRY CLEANER

PCE	16,600
TCE	12,600

SIDEWALK

AWNING

SVP-2

PCE	21,400
TCE	17,200

FLOOR DRAIN

SMW-3

SVP-1

SMW-7

TAYLOR AVENUE NORTH

PARKING LOT

SIDEWALK

MW-15

FOUNTAIN

MW-16

MW-14

VP-2

PCE	< 3.4
TCE	< 2.7

OVERHEAD MONORAIL TRACK

APPROXIMATE LOCATION OF FORMER DRY CLEANING MACHINE

SMW-4

SVP-3

PCE	15,500
TCE	15,500

PARK

MW-18

MW-04

PARK

VP-3

PCE	< 3.4
TCE	< 2.7

APPROXIMATE LOCATION OF FORMER DRY CLEANING MACHINE

OIL/WATER SEPARATOR

MW-11

RESTAURANT

VP-1

NS

MW-12

OVERHEAD MONORAIL TRACK

FIFTH AVENUE

SMW-6

VINE STREET

SMW-10

MW-17

NAIL SALON

SMOKE SHOP

COFFEE SHOP

(NO BASEMENT; ACTIVE VAPOR INTRUSION MITIGATION SYSTEM IN CRAWL SPACE)

EDWARDS ON 5TH APARTMENT BUILDING
(9' DEEP BASEMENT WITH ACTIVE VAPOR INTRUSION MITIGATION SYSTEM)

MW-02

VP-4

NS

FEDEX

CAFE

SVP

WELLNESS CENTER
(8' DEEP BASEMENT)

B-7

MW-05

MW-06

B-11

MW-09

SIDEWALK

THE DAVENPORT APARTMENT BUILDING
(7' DEEP BASEMENT)

MW-10

MW-07

MW-08

LEGEND

- FORMER FEATURES
- SUBJECT PROPERTY BOUNDARY
- SVP — PLANNED SUB-SLAB SOIL VAPOR POINT LOCATION
- APPROXIMATE LOCATION OF PLANNED INDOOR AIR SAMPLING
- SVP-1 — 501 DENNY WAY SUB-SLAB SOIL VAPOR POINT LOCATION AND DESIGNATION
- VP-1 — EDWARDS ON 5TH SUB-SLAB SOIL VAPOR POINT LOCATION AND DESIGNATION
- SMW-1 — 501 DENNY WAY SHALLOW MONITORING WELL LOCATION AND DESIGNATION
- MW-12 — EDWARDS ON FIFTH MONITORING WELL LOCATION AND DESIGNATION

PCE	16,600
TCE	12,600

- TETRACHLOROETHENE (PCE) CONCENTRATION IN SOIL VAPOR SAMPLE IN MICROGRAMS PER CUBIC METER ($\mu g/m^3$)
- TRICHLOROETHENE (TCE) CONCENTRATION IN SOIL VAPOR SAMPLE ($\mu g/m^3$)

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE.
2. CONCENTRATIONS IN BOLD AND RED EXCEED THE MTCA METHOD C SUB-SLAB SOIL GAS SCREENING LEVELS.
3. NS = NOT SAMPLED FOR HALOGENATED VOLATILE ORGANIC COMPOUNDS.
4. SLR COLLECTED THE SOIL VAPOR SAMPLES FROM SVP-1, SVP-2, AND SVP-3 IN SEPTEMBER 2018.
5. EPI COLLECTED THE SOIL VAPOR SAMPLES FROM VP-2 AND VP-3 IN MARCH 2018 (EPI, 2018).

SCALE: 1" = 40'
WHEN PLOTTED AT 11 x 17 PAGE SIZE
0 40 80 120

501 DENNY WAY SITE
SEATTLE, WASHINGTON

Drawing
PLANNED SOIL VAPOR SAMPLING AND INDOOR AIR LOCATIONS

Date December 18, 2019	Scale AS SHOWN	Fig. No. 5
File Name 07-05.dwg	Project No. 101.01977.00001	

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