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January 29, 2021

Steve Yoon
Northeast 85th Street Development, LLC
1417 116th Avenue NE, Suite 208
Bellevue, WA 98004
(syoon@MCRTrust.com)

Re: Further Action at the following Site:

- **Site Name:** Modera River Trail
- **Site Address:** 15801 & 15945 NE 85th Street, Redmond, WA 98052
- **Facility/Site No.:** 75292
- **VCP Project No.:** NW3292
- **Cleanup Site No.**: 15281

Dear Steve Yoon:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Modera River Trail facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

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

- Naphthalenes and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) into the Soil.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology. The Site is located on King County tax parcel number 7198900170, with a current address of 15881 NE 85th Street, in Redmond, Washington (Property).

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. TRC Environmental Corporation, *Remedial Investigation, Feasibility Study, and Interim Remedial Action Report, Modera River Trail Property, 15881 Northeast 85th Street, Redmond, Washington,* August 12, 2020.

A number of these documents are accessible in electronic form from the Site webpage[1]. The complete records are stored in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Visit our Public Records Request page[2] to submit a public records request or get more information about the process. If you require assistance with this process, you may contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or 360-407-6040.

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

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action.

[1] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=15281
[2] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests

- Additional contaminant analysis is needed for soil, and potentially for groundwater.
    - The contaminants of concern (COCs) currently identified at the Site are polycyclic aromatic hydrocarbons (PAHs) in soil, including total naphthalenes and cPAHs. The source of the soil contamination is approximately 50 timber piles preserved with creosote. These timber piles are currently located on the northwestern portion of the Property, beneath the newly constructed building.
    - A literature review notes that prior to 1994, wood-preserving creosote could contain up to 20% phenolic compounds[3]. Property use history indicated that these timber piles were installed in or prior to 1991. Therefore, phenolic compounds could be a potential COC in soil, in addition to PAHs.
    - Ecology recommends collecting additional soil samples near the timber piles, and analyzing selected soil samples for phenolic compounds. At a minimum, the analysis should include phenol and methylphenols (cresol).
    - Depending on the soil sampling results, additional analysis may be needed for groundwater.
- Further characterization is needed to define the extent of the PAH-contaminated soil.
    - Ten soil borings DPT-1, DPT-2, and DPT-5 through DPT-12 were advanced to a depth of 25 feet below ground surface (bgs) at the perimeter of a former office building on the northwestern portion of the Property, where the timber piles are located. The soil samples collected from these soil borings contained concentrations of total naphthalenes and cPAHs total Toxic Equivalent Concentration (TEQ) below the MTCA Method A soil cleanup levels. The PAH-contaminated soil did not appear to extend laterally beyond the footprint of the former office building.
    - The timber piles were stacked vertically and extended to a maximum depth of 15 feet bgs. Two samples were collected directly from the timber piles at depths ranging from 3 to 5 feet bgs. Soil samples were collected from immediately adjacent to the two timber piles at depths ranging from 4 to 8 feet bgs, and then at 25 feet bgs. Concentrations of total naphthalenes and cPAHs total TEQ were detected above the MTCA Method A soil cleanup levels in soil samples collected at depths ranging from 4 to 6 feet bgs.

[3] Nicholas P.Cheremisinoff and Paul E.Rosenfeld, *Handbook of Pollution Prevention and Cleaner Production, Best Practices in the Wood and Paper Industries, Chapter 1 – Wood-preserving chemicals*, 2010.

- No samples were collected from the timber piles or soil immediately adjacent to the timber piles between depths of 8 and 25 feet bgs. In particular, the soil condition near the bottom of the timber piles at 15 feet bgs is not clear. Additional soil sampling near selected timber piles is needed to fully define the vertical extent of the PAH-contaminated soil.

- Permanent groundwater monitoring wells and additional groundwater monitoring are needed.

  - One round of groundwater samples were collected from three permanent monitoring wells (B-1, B-2 and B-4) and six temporary monitoring wells (DPT-1 through DPT-6). Except for temporary well DPT-3, all groundwater samples contained concentrations of total naphthalenes and cPAHs total TEQ below the laboratory practical quantitation limit (PQL).

  - The groundwater sample collected from temporary well DPT-3 contained concentrations of total naphthalenes and cPAHs total TEQ above the laboratory PQL but below the MTCA Method A groundwater cleanup levels. Temporary well DPT-3 was located adjacent to a timber pile near the northern Property boundary.

  - Based on a one-time depth-to-groundwater measurement on temporary monitoring wells, Site groundwater is inferred to flow to the west-northwest toward the Sammamish River, which is located approximately 500 west of the Site. City of Redmond water supply Well No. 4 is located approximately 600 feet north of the Site, at an inferred cross-gradient to down-gradient location. This water supply well is screened within the same shallow aquifer in which Site groundwater occurs.

  - Due to the close proximity of a drinking water supply well and surface water, and the fact that Site groundwater was only sampled once and a COC was detected above the PQL, at least three groundwater monitoring wells are needed to evaluate Site groundwater flow direction and quality, and determine the potential impact to the nearby drinking water well and surface water.

  - The elevation of the monitoring wells need to be surveyed using the North American Vertical Datum of 1988 by a Washington-state licensed land surveyor, in accordance with WAC 173-340-840(4)(e). Depths to groundwater need to be measured and elevations need to be contoured to determine the predominant groundwater flow direction at the Site.

  - Multiple rounds of groundwater sampling are needed for the permanent monitoring wells, representative of high and low groundwater conditions. If groundwater is found to be impacted at concentrations exceeding MTCA cleanup levels, at least four consecutive quarters of groundwater data with COC concentrations below the MTCA Method A groundwater cleanup levels will be needed to demonstrate compliance.

- The status of the three previously existing monitoring wells (B-1, B-2, and B-4) are not provided to Ecology.

  - If these monitoring wells were decommissioned or destroyed during Property redevelopment, Ecology should be provided with paperwork that shows the proper decommissioning of these monitoring wells per WAC 173-160-460. Noel Philip (via email noel.philip@ecy.wa.gov, or via telephone at 425-649-7044) is Ecology's contact and resource for questions regarding proper decommissioning monitoring wells.

  - If these monitoring wells remain in place, Ecology recommends surveying and monitoring these wells. These monitoring wells are located at an inferred up-gradient location of the contamination source at the Site, but could still provide additional data points for determination of groundwater flow direction.

- Additional vapor intrusion evaluation is needed for the new building.

  - A vapor barrier has been installed beneath the new building to mitigate the potential vapor intrusion risk. The effectiveness of the vapor barrier is not evaluated. In addition, the vapor barrier does not cover the northwestern edge of the new building.

  - A vapor intrusion evaluation is needed for the new building. The vapor intrusion evaluation could consist of sub-slab soil gas sampling and/or indoor air sampling. Ecology recommends submission of a work plan prior to conducting additional vapor intrusion evaluation. Ecology can provide technical assistance if needed.

- Electronic submittal of all sampling data collected in and post-2005 into Ecology's electronic Environmental Information Management (EIM) database is a requirement in order to receive a final Ecology opinion for this Site. Gaylen Sinclair (email Gaylen.Sinclair@ecy.wa.gov, or via telephone at 360-407-6496) is Ecology's contact and resource on entering data into EIM.

2. Establishment of cleanup standards.

Soil

Cleanup levels. The Site does not meet the MTCA definition of an industrial property; therefore, soil cleanup levels suitable for unrestricted land use are appropriate. For unrestricted land use, the MTCA Method A or Method B cleanup levels (for a COC that is not included on Method A list) are appropriate for soil at the Site. The soil cleanup levels should be based on protection of ground water.

The Method A cleanup levels are provided in WAC 173-340-900, Table 740-1. The Method B cleanup levels are provided in Ecology's *Cleanup Levels and Risk Calculation (CLARC)* database[4].

Soil cleanup levels protective of terrestrial ecological receptors are not necessary because the Site meets the terrestrial ecological evaluation (TEE) exclusion criteria in accordance with WAC 173-340-7491(1)(c). There are less than 1.5 acres of contiguous undeveloped land on or within 500 feet of the Site. A TEE form has been submitted to Ecology in the *Remedial Investigation, Feasibility Study, and Interim Remedial Action Report),* dated August 12, 2020 (*August 2020 RI/FS).*

Points of compliance. For soil cleanup levels based on the protection of ground water, the point of compliance is defined as Site-wide throughout the soil profile and may extend below the water table. This is the appropriate point of compliance for the Site.

Ground Water

Cleanup levels. Cleanup levels were set for ground water based on its potential use as a drinking water source. The MTCA Method A cleanup levels are appropriate for this purpose, and were selected as the cleanup levels for ground water at the Site. These Method A ground water cleanup levels are available in WAC 173-340-900, Table 720-1.

Points of compliance. The standard point of compliance for ground water is throughout the Site, from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected. This is the appropriate point of compliance for the Site.

Air

[4] Data tables - Washington State Department of Ecology

Cleanup levels. The MTCA Method B sub-slab soil gas screening levels are appropriate for the sub-slab soil gas samples collected at the Site. The standard MTCA Method B indoor air cleanup levels are appropriate for potential future indoor and ambient air samples collected at the Site. These Method B levels are available in Ecology's *CLARC* database[4].

Points of compliance. The standard point of compliance for air is in the ambient air throughout the Site. This is the appropriate point of compliance for the Site.

3. Selection of cleanup action.

Ecology has determined that the incomplete Site characterization does not allow a determination whether the cleanup action you selected for the Site meets the substantive requirements of MTCA.

A Feasibility Study (FS) and a Disproportionate Cost Analysis (DCA) has been submitted to Ecology in the *August 2020 RI/FS).* Alternative 1, which includes institutional controls, was selected as the cleanup action. However, due to the insufficient Site characterization data, Ecology does not recognize the current FS/DCA.

- The vertical extent of contaminated soil is not fully defined. Therefore, the cost associated with contaminated soil removal should be re-estimated based on further soil characterization.

- The potential impact to groundwater is not fully evaluated. The protectiveness, permanence, and effectiveness of each cleanup action alternative should be re-evaluated after further characterization.

- A vapor barrier was installed beneath the current new building to mitigate potential vapor intrusion risk, which is an interim action. However, the effectiveness of the vapor barrier is not determined.

- Table 6, 7, and 8 of the *August 2020 RI/FS* provided cost estimates of each cleanup action alternative. Ecology notices that some cost estimates are not accurate. For example, the cost of "*Excavate and Stockpile Clean Overburden On-Site"* is different in Alternative 2 than in Alternative 3; the cost of "*Cleanup Action Reports*" is calculated twice in Alternative 2; the cost of "*Excavate, Load, and Transport Timber Piles Off-Site*" is not included in Alternative 3.

An appropriate cleanup action can be selected only after the Site is fully characterized. The FS/DCA should be updated based on further Site characterization. The cost

estimates of each cleanup action alternative should be accurate. The cleanup action selected must meet the minimum requirements in WAC 173-340-360(2).

4. Cleanup.

Ecology has determined the cleanup you performed to date does not meet any cleanup standards at the Site. After the Site is fully characterized and the FS/DCA is updated, Ecology may consider the feasibility of using institutional controls as part of the cleanup action.

Limitations of the Opinion

1. 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 70.105D.040(4).

2. 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 70.105D.080 and WAC 173-340-545.

3. 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 70.105D.180.

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After

you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (425) 649-7109 or email at jing.song@ecy.wa.gov.

Sincerely,

Jing Song
Site Manager
NWRO Toxics Cleanup Program

Enclosures (1): A – Description and Diagrams of the Site

cc: Eric Koltes, TRC Environmental Corporation, (EKoltes@trccompanies.com)
Sonia Fernandez, VCP Coordinator, Ecology, (sonia.fernandez@ecy.wa.gov)

Enclosure A

Description and Diagrams of the Site

Site Description

This enclosure provides Ecology's understanding and interpretation of Site conditions and forms the basis for the opinions expressed in the letter.

Site: The Site is defined as naphthalenes and cPAHs released to soil. The Site, on 1.5-acre King County parcel number 7198900170, is located on the southeastern corner of the intersection of NE 85th Street and 158th Avenue NE in Redmond, Washington (Property, **Figure 1**). The current street address associated with the Property is 15881 NE 85th Street; the former street addresses were 15801 and 15945 NE 85th Street.

Area and Property Description: The Property is located in the City of Redmond Downtown neighborhood, in an area zoned as the Sammamish Trail Zone (SMT). The SMT allows for residential and office land uses.

The Property was previously occupied by two office buildings, and is currently being redeveloped as a lot-line to lot-line mixed-used building. The Property is bounded to the north by NE 85th Street, with a library building and its parking lot beyond. The Property is bounded to the south by multi-family residential buildings. The Property is bounded to the east by a two-story dental office building, with another two-story office building beyond. The Property is bounded to the west by 158th Avenue NE, with a seven-story mixed-use building beyond. The Sammamish River and King County Sammamish River Trail are located further west beyond the mixed-use building.

Property History and Current Use: The Property was initially developed in the 1970s with a dental office building located on the southeastern portion of the Property. The address associated with the dental office building was 15945 NE 85th Street. Other portions of the Property remained largely undeveloped. In 1991, a second office building was constructed on the northwestern portion of the Property, with an address 15801 NE 85th Street. Historical operations at the Property included the dental office and other commercial office uses. **Figure 2** depicts the former Property layout, including locations of the two former office buildings.

A six-story mixed use building is being constructed on the Property. The building will consist of retail shops, parking, and six residential units on the ground floor, and residential units on the upper floors. The new structure layout is depicted on **Figure 3**.

Sources of Contamination: Based on Site investigations conducted in 2019, COCs identified at the Site included total naphthalenes and cPAHs in soil. The soil contamination is associated with a total of approximately 50 timber piles that were discovered lying vertically beneath the former office building on the northwestern portion of the Property. These timber piles are approximately 15 feet in length and 8 inches in diameter. The timber piles were preserved with creosote.

According to published literatures, creosote generally consists of 75% to 90% of PAHs[1,2]. Prior to 1994, creosote could contain up to 20% of phenolic compounds[2]. Based on the construction time of the former office building (1991), the creosote used to preserve the timber piles at the Site may contain up to 20% of phenolic compounds.

Soil and groundwater samples collected at the Site were only analyzed for total naphthalenes and cPAHs. Ecology recommends also analyzing representative samples for phenolic compounds.

Physiographic Setting: The Site is situated at an elevation of approximately 35 feet above mean sea level. The land surface in the vicinity of the Property is relatively flat, likely due to the floodplain setting.

Surface/Storm Water System: The nearest surface water body is Sammamish River located approximately 500 feet west of the Site (**Figure 1**). The Sammamish River flows north-northwesterly, draining Lake Sammamish located approximately 2 miles south of the Site.

Storm water runoff on and in the vicinity of the Property disperses via sheet flow to catch basins connected to the City of Redmond storm water system located on NE 85th Street north of the Property.

Ecological Setting: The Site is located in a mixed-use area. The surface on the Property and nearby properties are paved with asphalt or concrete, with small landscaped areas.

Geology: The Site is located within the Puget Sound Lowland Physiographic Province, a north-south trending structural and topographic depression that is bordered on its west side by the Olympic Mountains, and to the east by the Cascade Mountain foothills. The Puget Sound Lowland is underlain by Tertiary volcanic and sedimentary bedrock, and has been filled to the present day land surface with Pleistocene-aged glacial and non-glacial sediments.

Locally, the Site is located in the Sammamish River Valley. A geologic map indicates the near surface soil in this area is alluvium deposit, which consists of relatively fine-grained sand, silt, clay and organic matter. Underneath the alluvium deposit is a glacial outwash layer[3]. Both layers are permeable.

Subsurface investigations indicate that the soil at the Site consists of one to nine feet of silty sand with gravel, followed by a silt layer with varying percentages of organic material to approximately 8 to 13 feet bgs. This layer is interpreted as alluvium. Underneath the silt layer is a layer of poorly-graded sand and gravel to the maximum depth of exploration of 25 feet bgs, which appears to be glacial outwash.

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[1] U.S. Department of Agriculture, Forest Service, Forest Products Laboratory, *The Characterization of Wood-Preserving Creosote by Physical and Chemical Methods of Analysis*, 1974.

[2] Nicholas P.Cheremisinoff and Paul E.Rosenfeld, *Handbook of Pollution Prevention and Cleaner Production, Best Practices in the Wood and Paper Industries, Chapter 1 – Wood-preserving chemicals*, 2010.

[3] City of Redmond Department of Public Works, *Wellhead Protection Report*, October 30, 1997.

Groundwater: Shallow groundwater is present at the Site at depths ranging from approximately 6.5 to 13 feet bgs in the permeable sand and gravel layer (glacial outwash) or the lower portion of alluvium deposit. Based on a one-time measurement of depths to groundwater in six temporary wells installed in direct-push soil borings, shallow groundwater is inferred to flow to the west-northwest toward the Sammamish River. This inferred groundwater flow direction appears to be consistent with the regional shallow groundwater flow and local topography[3]. The hydraulic gradient was determined to be relatively flat. A groundwater elevation contour map is depicted on **Figure 4**.

Three monitoring wells (B-1, B-2, and B-4) were previously installed as part of a geotechnical investigation. The construction details and current status of these three monitoring wells are not known to Ecology. Twelve temporary monitoring wells (DPT-1 through DPT-12) were installed for the groundwater investigation. These temporary wells were removed after one round of groundwater samples were collected.

Water Supply: Drinking water for the area is supplied by the City of Redmond, which obtains 60% of its water from the Tolt River watershed, located approximately 15 miles east of Redmond. The other 40% of Redmond's water supply is provided by five municipal water supply wells. The area where the Site is located obtains its water from the municipal water supply wells[4].

The Site is located within the 6-month wellhead protection zone of drinking water supply Well No. 4, and the one-year wellhead protection zone of drinking water supply Wells No.1, 2, and 3. Water supply Well No.4 is located approximately 600 feet north of the Site; Wells No.1 and 2 are located approximately 0.7 miles southeast of the Site; Well No.3 is located approximately 1.5 miles northeast of the Site. **Figure 5** depicts the locations of water supply Wells No. 1, 2, and 4.

All these water supply wells are screened across the same shallow sand and gravel aquifer in which Site groundwater occurs. The static water levels in these water supply wells are reportedly at depths ranging from 15 to 20 feet bgs[3].

Release and Extent of Contamination: Environmental assessments were conducted at the Site in 2019. The soil sampling locations and results are depicted on **Figure 2**. The groundwater sampling locations and results are depicted on **Figure 6**. The soil vapor sampling locations and results are depicted on **Figure 7**.

In May 2019, three groundwater samples were collected from three existing monitoring wells (B-1, B-2, and B-4), and analyzed for cPAHs. These monitoring wells are located at an inferred up-gradient location of the timber piles. Concentrations of cPAHs were below the laboratory PQL in all three groundwater samples.

In November 2019, after timber piles were discovered during the former office building demolition, two wood-material samples (Pile-1 and Pile-2) were collected directly from the

[4] City of Redmond, *Water Quality Report*, Summer 2020.

timber piles at depths ranging from 3 feet to 5 feet bgs. Nine soil samples (SS-1 through SS-9) were also collected at depths ranging from 4 feet to 6 feet bgs near the timber piles. These wood and soil samples were analyzed for naphthalenes and cPAHs. The two wood samples and three of the soil samples (SS-1, SS-2, and SS-6) contained concentrations of total naphthalenes and cPAHs total TEQ above the MTCA Method A soil cleanup levels.

In December 2019, twelve soil borings (DPT-1 through DPT-12) were advanced to a total depth of 25 feet bgs. Two soil samples were collected from each soil boring at depths ranging from 1 foot to 25 feet bgs. These soil samples were analyzed for naphthalenes and cPAHs. The soil sample collected at 5 feet bgs from soil boring DPT-3 contained a cPAH total TEQ above the MTCA Method A soil cleanup level. All other concentrations were below the MTCA Method A soil cleanup levels.

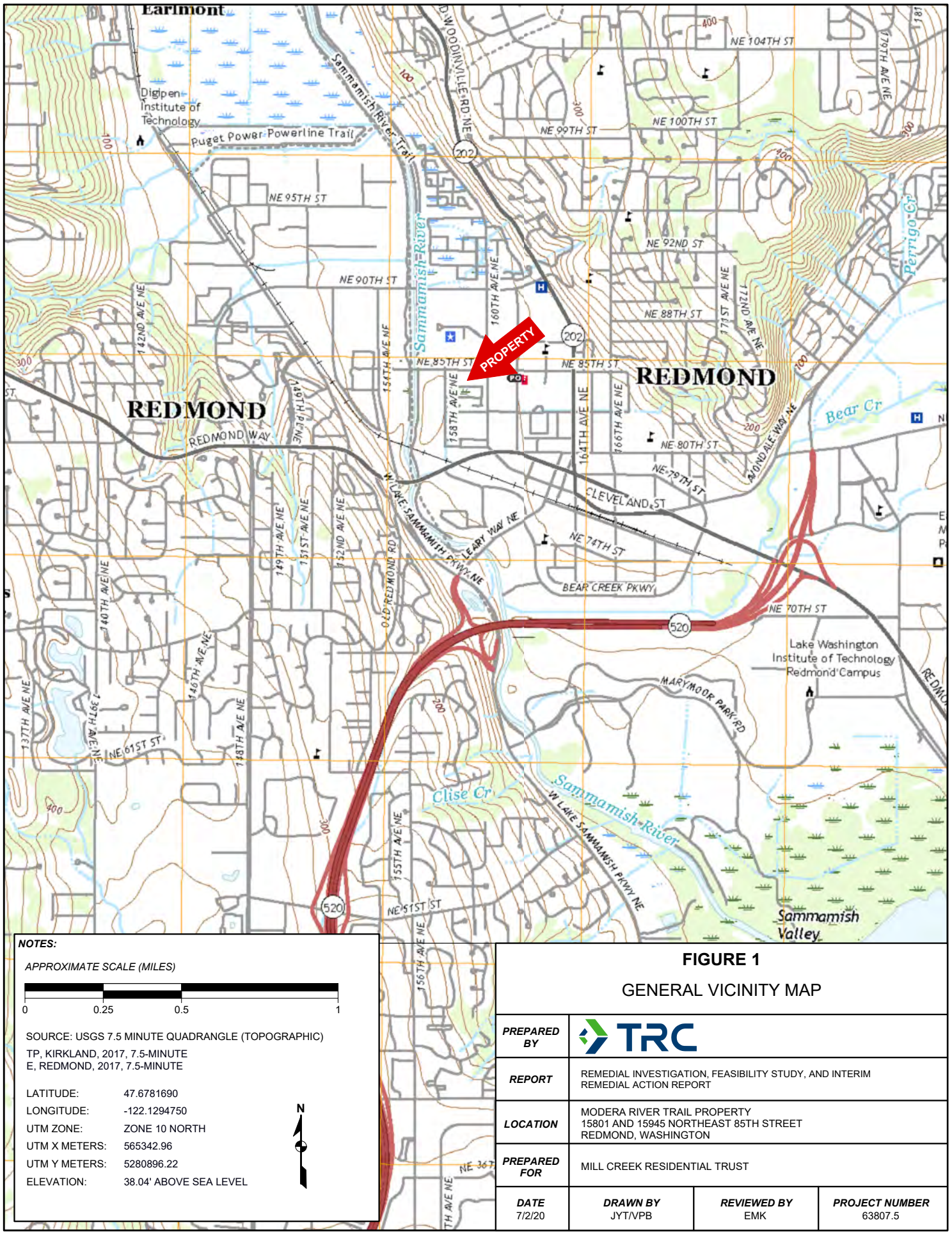
Temporary well screens were installed in soil borings DPT-1 through DPT-6 from 5 to 15 feet bgs. The temporary wells were surveyed referenced to an arbitrary benchmark. Groundwater samples were collected from these six temporary wells and analyzed for naphthalenes and cPAHs. All concentrations were below the MTCA Method A groundwater cleanup levels.

In December 2019, five soil vapor samples were collected from five soil vapor probes (SG-1 through SG-5) located on the northwestern portion of the Property. All soil vapor probes were installed to a depth of 5 feet bgs. The soil vapor samples were analyzed for naphthalenes. The naphthalene concentrations at SG-3 and SG-4 exceeded the MTCA Method B sub-slab soil gas screening level.

To mitigate the potential vapor intrusion risk to the new building, a vapor barrier was installed underneath the new building. The extent of the vapor barrier is depicted on **Figure 8**.

Site Diagrams

Enclosure A: Figure 1



NOTES:

APPROXIMATE SCALE (MILES)

0 0.25 0.5 1

SOURCE: USGS 7.5 MINUTE QUADRANGLE (TOPOGRAPHIC)
TP, KIRKLAND, 2017, 7.5-MINUTE
E, REDMOND, 2017, 7.5-MINUTE

LATITUDE:	47.6781690
LONGITUDE:	-122.1294750
UTM ZONE:	ZONE 10 NORTH
UTM X METERS:	565342.96
UTM Y METERS:	5280896.22
ELEVATION:	38.04' ABOVE SEA LEVEL

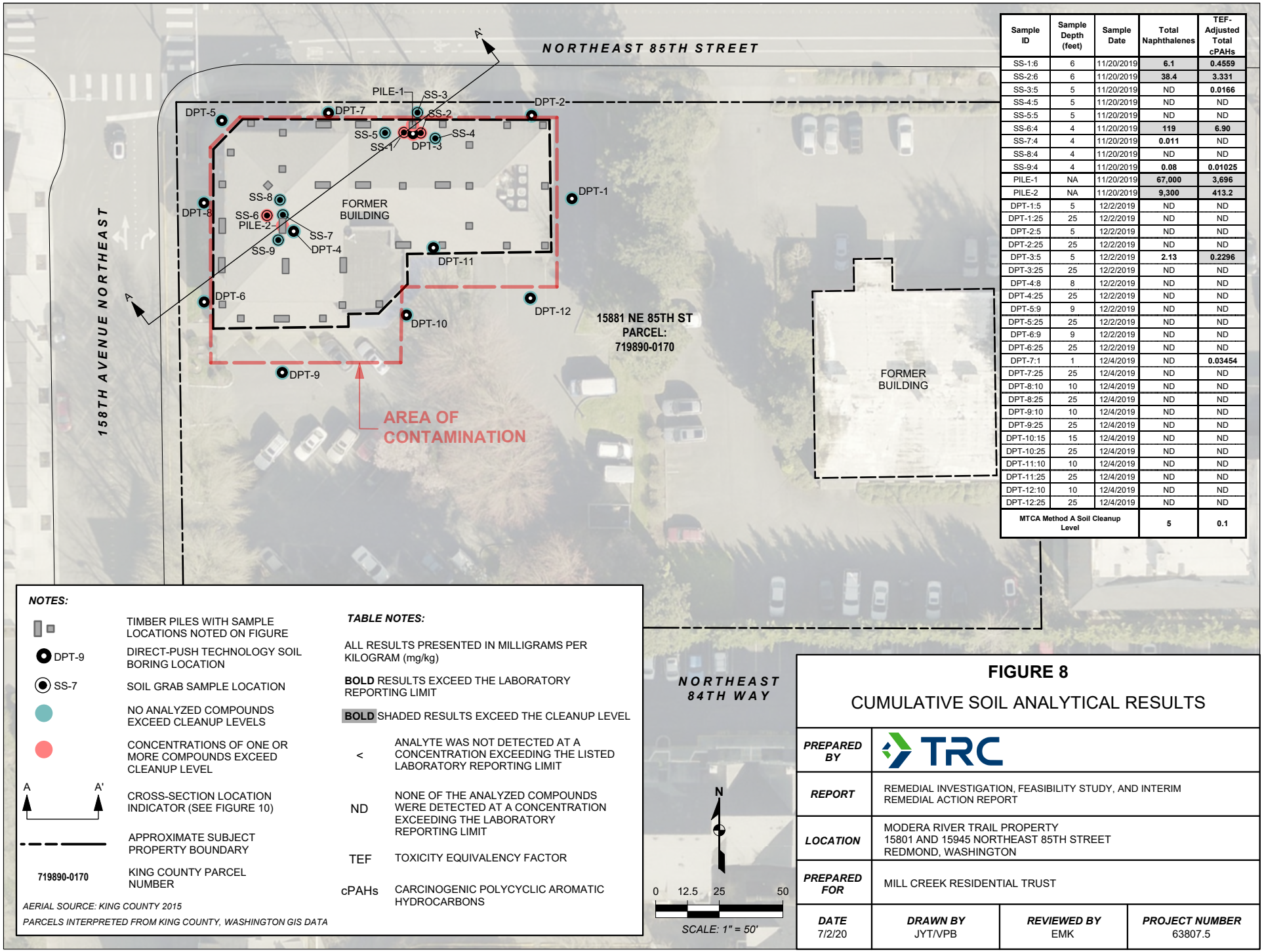
N

FIGURE 1

GENERAL VICINITY MAP

PREPARED BY	TRC		
REPORT	REMEDIAL INVESTIGATION, FEASIBILITY STUDY, AND INTERIM REMEDIAL ACTION REPORT		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 7/2/20	***DRAWN BY*** JYT/VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5

Enclosure A: Figure 2



Sample ID	Sample Depth (feet)	Sample Date	Total Naphthalenes	TEF-Adjusted Total cPAHs
SS-1:6	6	11/20/2019	**6.1**	**0.4559**
SS-2:6	6	11/20/2019	**38.4**	**3.331**
SS-3:5	5	11/20/2019	ND	**0.0166**
SS-4:5	5	11/20/2019	ND	ND
SS-5:5	5	11/20/2019	ND	ND
SS-6:4	4	11/20/2019	**119**	**6.90**
SS-7:4	4	11/20/2019	**0.011**	ND
SS-8:4	4	11/20/2019	ND	ND
SS-9:4	4	11/20/2019	**0.08**	**0.01025**
PILE-1	NA	11/20/2019	**67,000**	**3,696**
PILE-2	NA	11/20/2019	**9,300**	**413.2**
DPT-1:5	5	12/2/2019	ND	ND
DPT-1:25	25	12/2/2019	ND	ND
DPT-2:5	5	12/2/2019	ND	ND
DPT-2:25	25	12/2/2019	ND	ND
DPT-3:5	5	12/2/2019	**2.13**	**0.2296**
DPT-3:25	25	12/2/2019	ND	ND
DPT-4:8	8	12/2/2019	ND	ND
DPT-4:25	25	12/2/2019	ND	ND
DPT-5:9	9	12/2/2019	ND	ND
DPT-5:25	25	12/2/2019	ND	ND
DPT-6:9	9	12/2/2019	ND	ND
DPT-6:25	25	12/2/2019	ND	ND
DPT-7:1	1	12/4/2019	ND	**0.03454**
DPT-7:25	25	12/4/2019	ND	ND
DPT-8:10	10	12/4/2019	ND	ND
DPT-8:25	25	12/4/2019	ND	ND
DPT-9:10	10	12/4/2019	ND	ND
DPT-9:25	25	12/4/2019	ND	ND
DPT-10:15	15	12/4/2019	ND	ND
DPT-10:25	25	12/4/2019	ND	ND
DPT-11:10	10	12/4/2019	ND	ND
DPT-11:25	25	12/4/2019	ND	ND
DPT-12:10	10	12/4/2019	ND	ND
DPT-12:25	25	12/4/2019	ND	ND
MTCA Method A Soil Cleanup Level			5	0.1

NOTES:

- TIMBER PILES WITH SAMPLE LOCATIONS NOTED ON FIGURE
- DPT-9 — DIRECT-PUSH TECHNOLOGY SOIL BORING LOCATION
- SS-7 — SOIL GRAB SAMPLE LOCATION
- NO ANALYZED COMPOUNDS EXCEED CLEANUP LEVELS
- CONCENTRATIONS OF ONE OR MORE COMPOUNDS EXCEED CLEANUP LEVEL
- A — A' — CROSS-SECTION LOCATION INDICATOR (SEE FIGURE 10)
- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- 719890-0170 — KING COUNTY PARCEL NUMBER

AERIAL SOURCE: KING COUNTY 2015

PARCELS INTERPRETED FROM KING COUNTY, WASHINGTON GIS DATA

TABLE NOTES:

ALL RESULTS PRESENTED IN MILLIGRAMS PER KILOGRAM (mg/kg)

BOLD RESULTS EXCEED THE LABORATORY REPORTING LIMIT

BOLD SHADED RESULTS EXCEED THE CLEANUP LEVEL

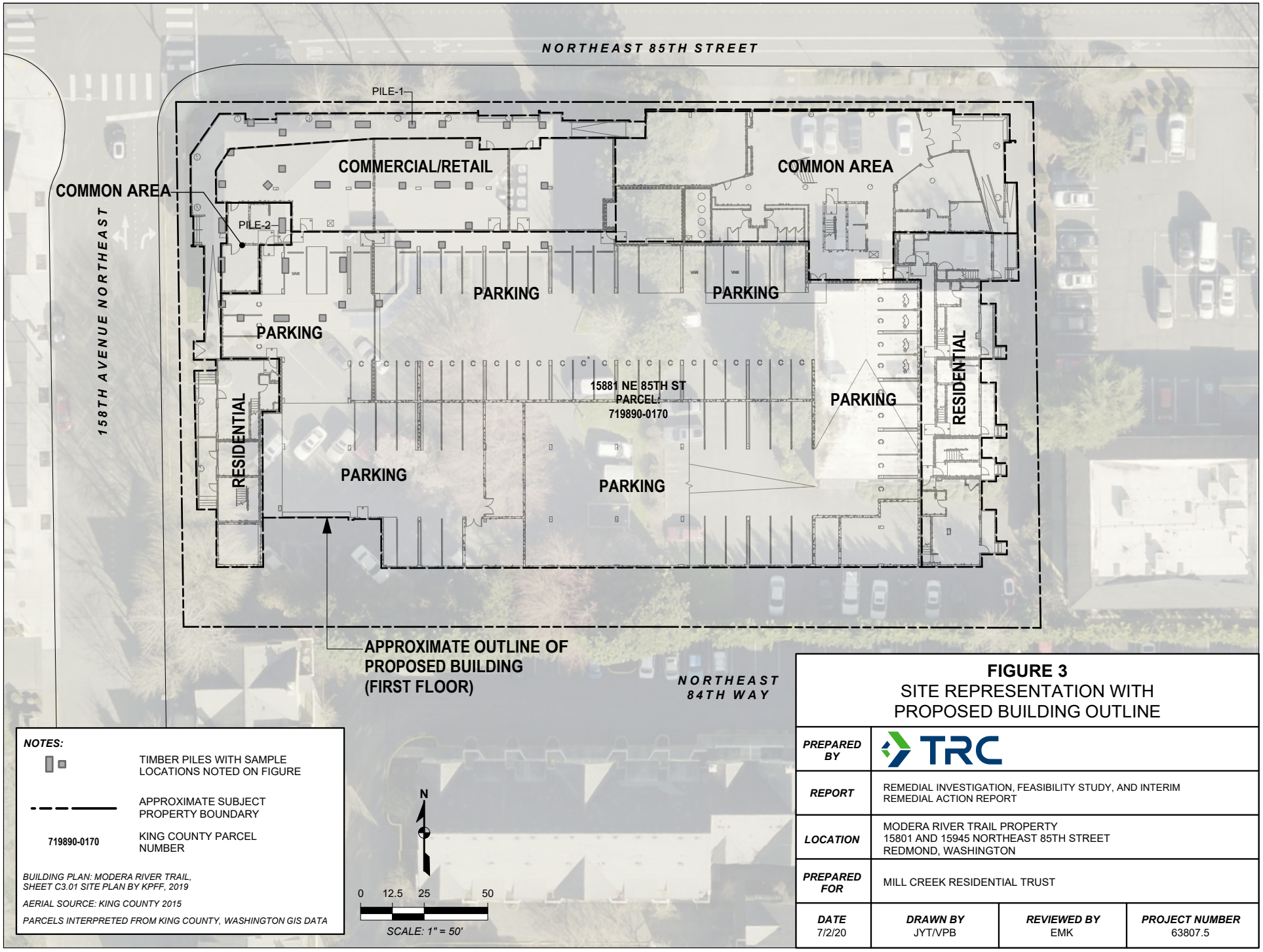
- < — ANALYTE WAS NOT DETECTED AT A CONCENTRATION EXCEEDING THE LISTED LABORATORY REPORTING LIMIT
- ND — NONE OF THE ANALYZED COMPOUNDS WERE DETECTED AT A CONCENTRATION EXCEEDING THE LABORATORY REPORTING LIMIT
- TEF — TOXICITY EQUIVALENCY FACTOR
- cPAHs — CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS

FIGURE 8

CUMULATIVE SOIL ANALYTICAL RESULTS

PREPARED BY	TRC		
REPORT	REMEDIAL INVESTIGATION, FEASIBILITY STUDY, AND INTERIM REMEDIAL ACTION REPORT		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 7/2/20	***DRAWN BY*** JYT/VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5

Enclosure A: Figure 3



NOTES:

- TIMBER PILES WITH SAMPLE LOCATIONS NOTED ON FIGURE
- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- 719890-0170 — KING COUNTY PARCEL NUMBER

BUILDING PLAN: MODERA RIVER TRAIL, SHEET C3.01 SITE PLAN BY KPFF, 2019

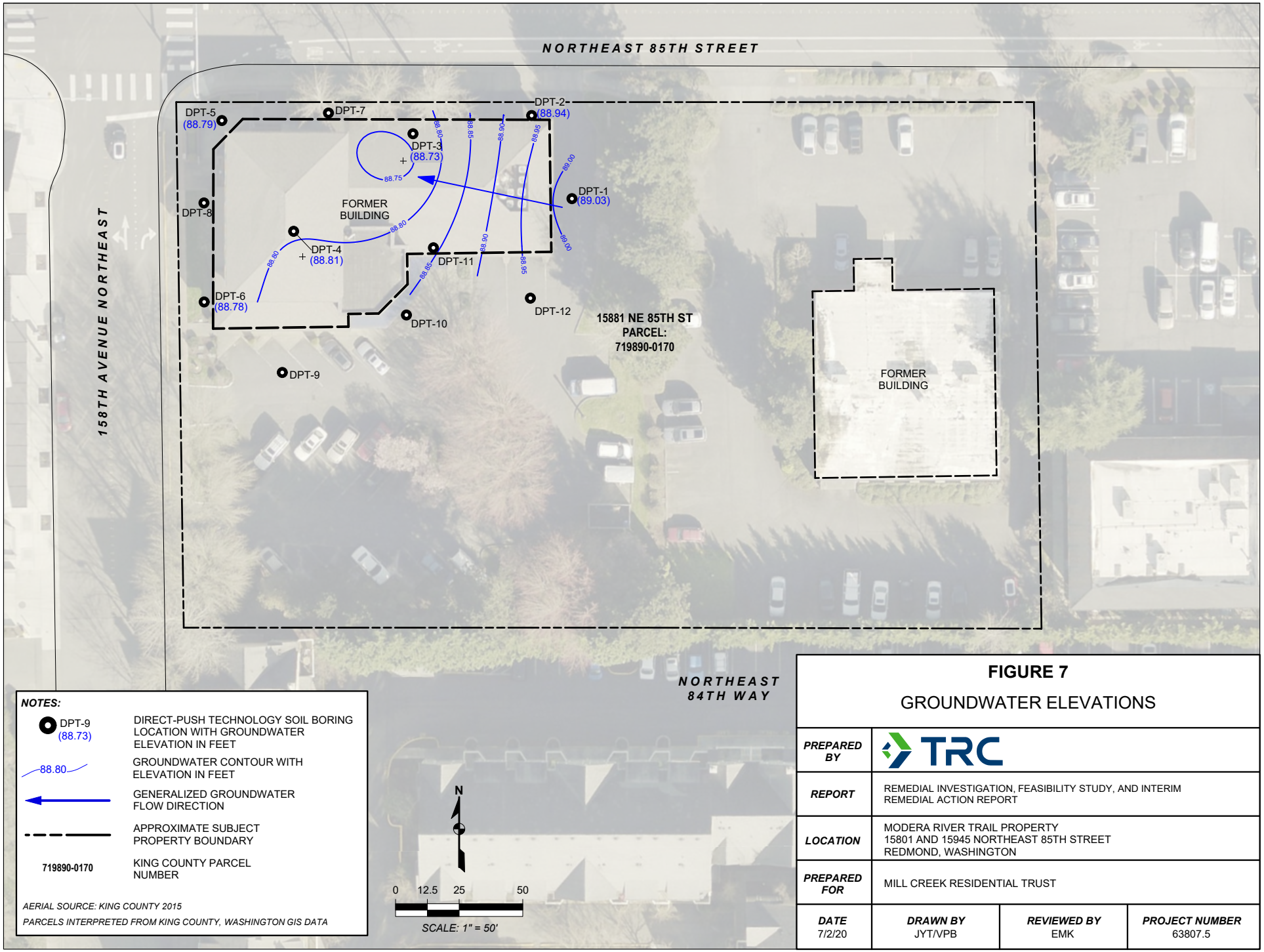
AERIAL SOURCE: KING COUNTY 2015

PARCELS INTERPRETED FROM KING COUNTY, WASHINGTON GIS DATA

FIGURE 3
SITE REPRESENTATION WITH PROPOSED BUILDING OUTLINE

PREPARED BY	TRC		
REPORT	REMEDIAL INVESTIGATION, FEASIBILITY STUDY, AND INTERIM REMEDIAL ACTION REPORT		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 7/2/20	***DRAWN BY*** JYT/VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5

Enclosure A: Figure 4



NOTES:

- DPT-9 (88.73) — DIRECT-PUSH TECHNOLOGY SOIL BORING LOCATION WITH GROUNDWATER ELEVATION IN FEET
- 88.80 — GROUNDWATER CONTOUR WITH ELEVATION IN FEET
- GENERALIZED GROUNDWATER FLOW DIRECTION
- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- 719890-0170 — KING COUNTY PARCEL NUMBER

AERIAL SOURCE: KING COUNTY 2015

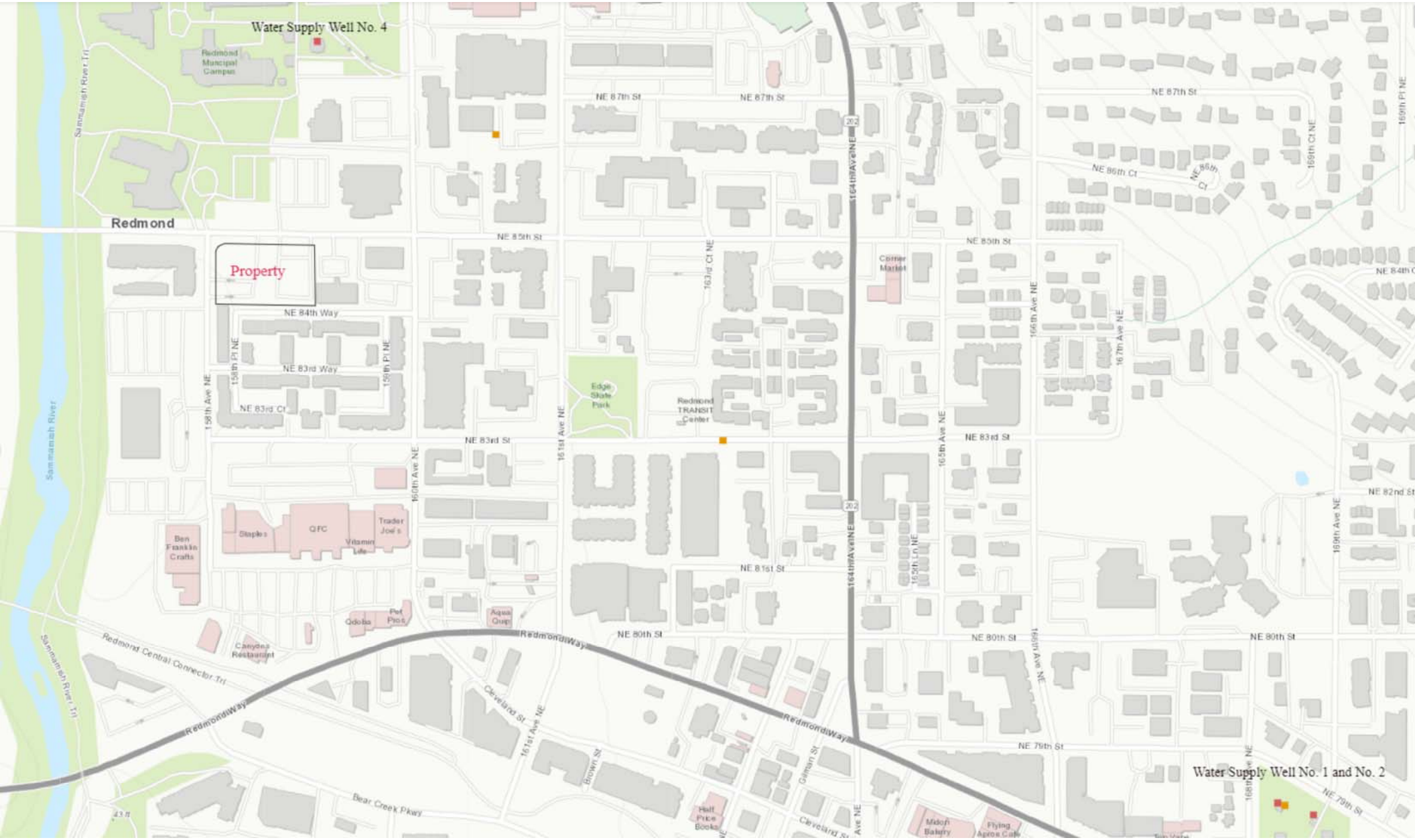
PARCELS INTERPRETED FROM KING COUNTY, WASHINGTON GIS DATA

FIGURE 7

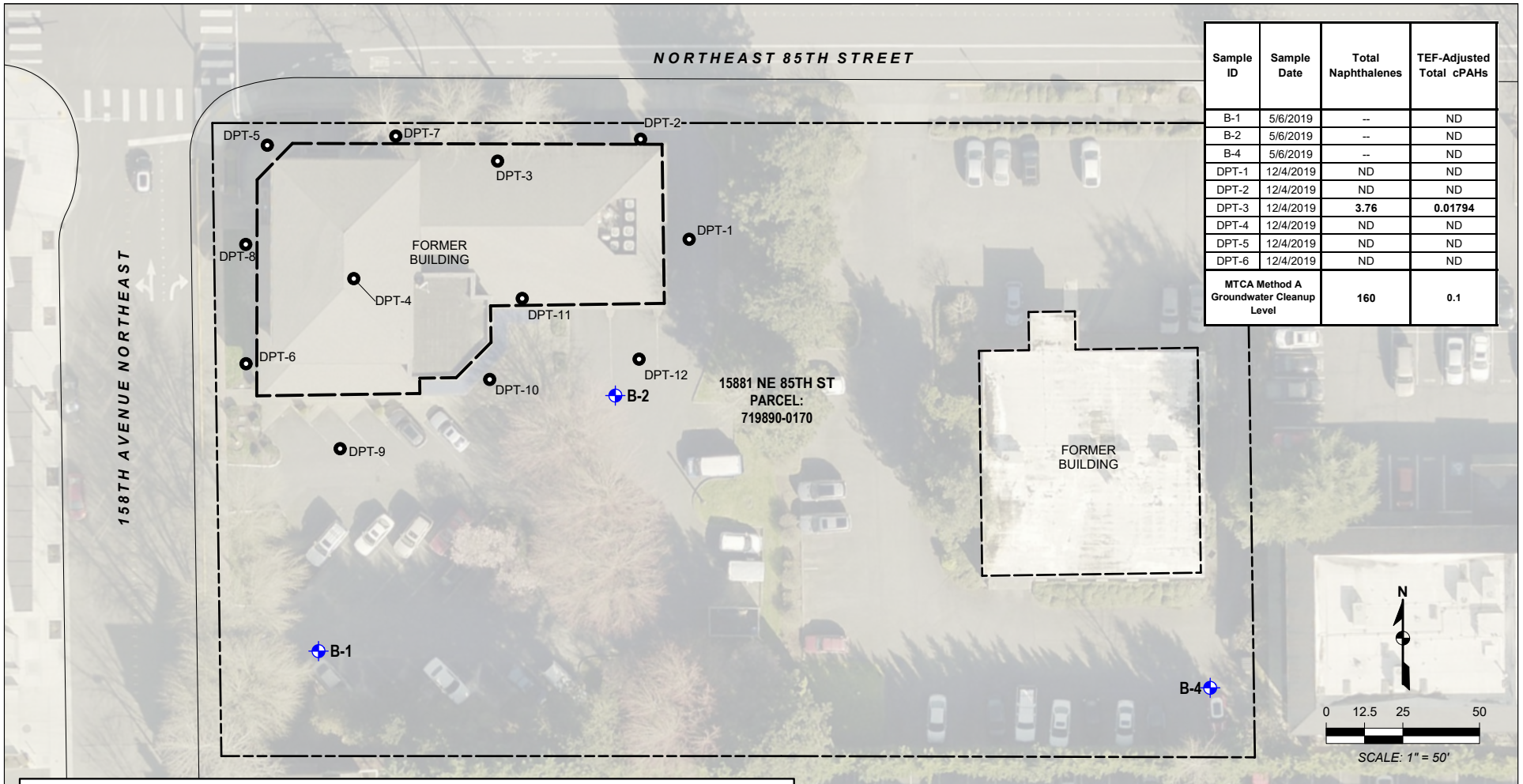
GROUNDWATER ELEVATIONS

PREPARED BY	TRC		
REPORT	REMEDIAL INVESTIGATION, FEASIBILITY STUDY, AND INTERIM REMEDIAL ACTION REPORT		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 7/2/20	***DRAWN BY*** JYT/VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5

Enclosure A: Figure 5



Enclosure A: Figure 6



Sample ID	Sample Date	Total Naphthalenes	TEF-Adjusted Total cPAHs
B-1	5/6/2019	--	ND
B-2	5/6/2019	--	ND
B-4	5/6/2019	--	ND
DPT-1	12/4/2019	ND	ND
DPT-2	12/4/2019	ND	ND
DPT-3	12/4/2019	**3.76**	**0.01794**
DPT-4	12/4/2019	ND	ND
DPT-5	12/4/2019	ND	ND
DPT-6	12/4/2019	ND	ND
MTCA Method A Groundwater Cleanup Level		**160**	**0.1**

NOTES:

DPT-9 — DIRECT-PUSH TECHNOLOGY SOIL BORING LOCATION WITH GROUNDWATER SAMPLE

B-1 — MONITORING WELL LOCATION

APPROXIMATE SUBJECT PROPERTY BOUNDARY

719890-0170 — KING COUNTY PARCEL NUMBER

AERIAL SOURCE: KING COUNTY 2015

PARCELS INTERPRETED FROM KING COUNTY, WASHINGTON GIS DATA

TABLE NOTES:

ALL RESULTS PRESENTED IN MICROGRAMS PER LITER (µg/L)

BOLD RESULTS EXCEED THE LABORATORY REPORTING LIMIT

< — ANALYTE WAS NOT DETECTED AT A CONCENTRATION EXCEEDING THE LISTED LABORATORY REPORTING LIMIT

ND — NONE OF THE ANALYZED COMPOUNDS WERE DETECTED AT A CONCENTRATION EXCEEDING THE LABORATORY REPORTING LIMIT

TEF — TOXICITY EQUIVALENCY FACTOR

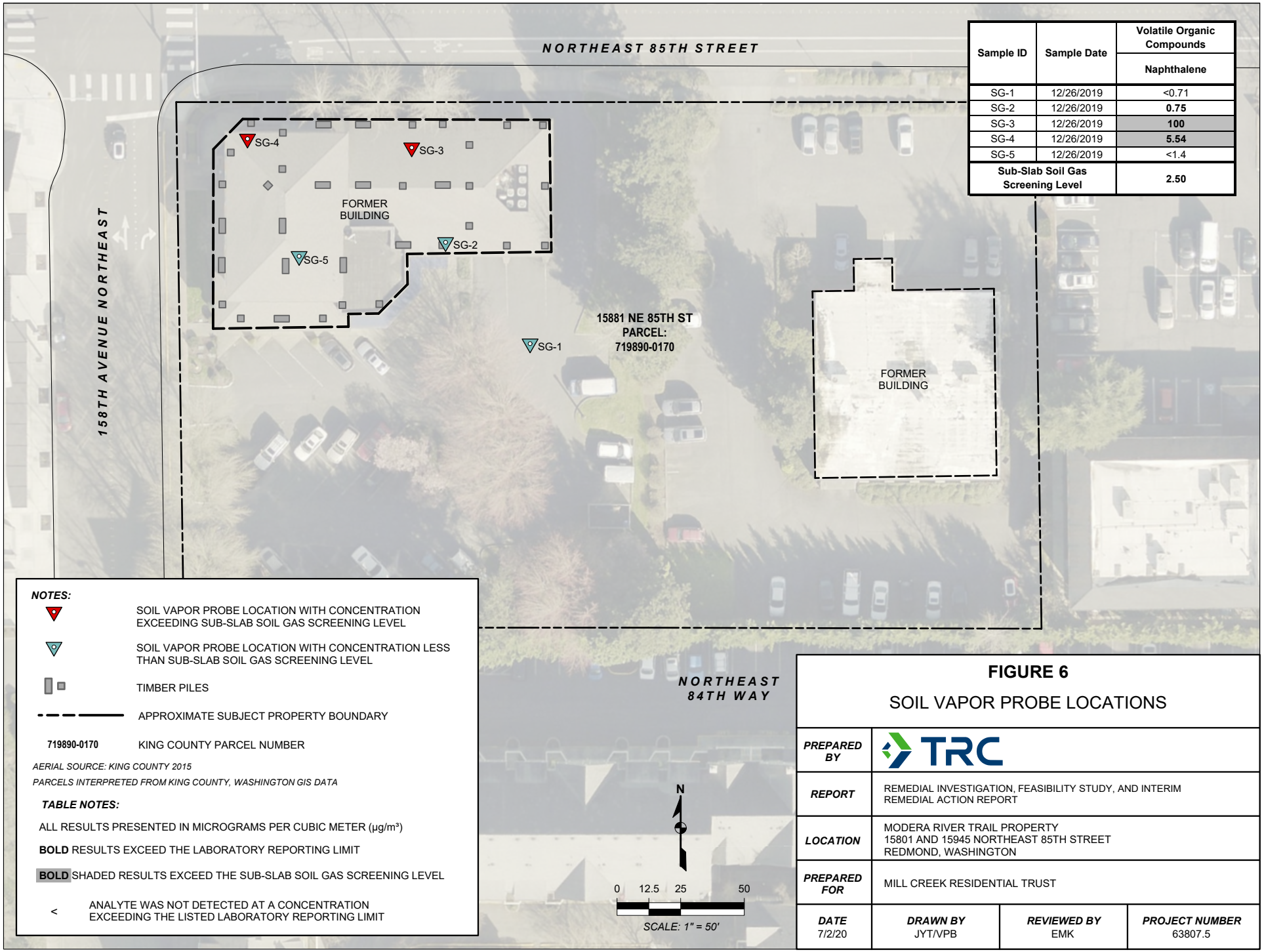
cPAHs — CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS

FIGURE 9

GROUNDWATER ANALYTICAL RESULTS

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	REMEDIAL INVESTIGATION, FEASIBILITY STUDY, AND INTERIM REMEDIAL ACTION REPORT		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 7/2/20	***DRAWN BY*** JYT/VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5

Enclosure A: Figure 7



Sample ID	Sample Date	Volatile Organic Compounds
		Naphthalene
SG-1	12/26/2019	<0.71
SG-2	12/26/2019	**0.75**
SG-3	12/26/2019	**100**
SG-4	12/26/2019	**5.54**
SG-5	12/26/2019	<1.4
Sub-Slab Soil Gas Screening Level		**2.50**

NOTES:

SOIL VAPOR PROBE LOCATION WITH CONCENTRATION EXCEEDING SUB-SLAB SOIL GAS SCREENING LEVEL

SOIL VAPOR PROBE LOCATION WITH CONCENTRATION LESS THAN SUB-SLAB SOIL GAS SCREENING LEVEL

TIMBER PILES

APPROXIMATE SUBJECT PROPERTY BOUNDARY

719890-0170 KING COUNTY PARCEL NUMBER

AERIAL SOURCE: KING COUNTY 2015

PARCELS INTERPRETED FROM KING COUNTY, WASHINGTON GIS DATA

TABLE NOTES:

ALL RESULTS PRESENTED IN MICROGRAMS PER CUBIC METER (µg/m³)

BOLD RESULTS EXCEED THE LABORATORY REPORTING LIMIT

BOLD SHADED RESULTS EXCEED THE SUB-SLAB SOIL GAS SCREENING LEVEL

< ANALYTE WAS NOT DETECTED AT A CONCENTRATION EXCEEDING THE LISTED LABORATORY REPORTING LIMIT

FIGURE 6

SOIL VAPOR PROBE LOCATIONS

PREPARED BY	TRC		
REPORT	REMEDIAL INVESTIGATION, FEASIBILITY STUDY, AND INTERIM REMEDIAL ACTION REPORT		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 7/2/20	***DRAWN BY*** JYT/VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5

Enclosure A: Figure 8

VAPOR BARRIER EXTENT
SECURE TO THE PERIMETER CONTINUOUS FOOTING PER MANUFACTURER STANDARD DETAIL

AREA OF CONTAMINATION

ELEVATOR PIT
SEE FIGURE 2, DETAIL A

VAPOR BARRIER TRANSITION
TRANSITIONS TO NORMALLY PLANNED MOISTURE BARRIER, TO BE OVERLAPPED 6-INCHES OR GREATER ONTO VAPOR BARRIER AND TAPE WELDED.

VAPOR BARRIER EXTENT
SECURE TO THE PERIMETER CONTINUOUS FOOTING PER MANUFACTURER STANDARD DETAIL

VAPOR BARRIER EXTENT
LIMIT OF ECOLOGY-APPROVED VAPOR BARRIER PRODUCT. ALL SEAMS AND INTERIOR UTILITY PERFORATIONS TO BE TAPE WELDED. TO BE INSTALLED BY A QUALIFIED INSTALLATION SUBCONTRACTOR. INSTALLATION TO BE OBSERVED BY EPI FOR DOCUMENTATION PURPOSES. CONTACT MR. ERIC KOLTES WITH SCHEDULE AT 425-922-5666. SCHEDULE PRECONSTRUCTION MEETING WITH EPI PRIOR TO INSTALLATION OF VAPOR BARRIER.

NE 85TH ST
S88°10'31"E 687.96'

15801 NE 85TH ST
PARCEL:
719890-0170

30'-0"
30'-0"
30'-0"

ROW DEDICATION
0.5' PUBLIC SIDEWALK & UTILITY EASEMENT
4.5' PUBLIC SIDEWALK & UTILITY EASEMENT
5.0' WATER VAULT EASEMENT FROM EDGE OF VAULT

SLOPES FOR CUTS AND FILLS ALONG RIGHT OF WAY MARGIN REC. NO. 6596208

PROPERTY CORNERY
N=250160.20
E=1321294.97

8.75-FT PSE EASEMENT

TRUCK TURNAROUND AREA (1,2 / C3.30)

TRASH

158TH

12"CP SS

UTILITY EASEMENT REC. NO. 8810250684

EX RETAINING WALL

TAX LOT 719890-0110
SOBRATO DEVELOPMENT CO #792

CITY OF REDMOND LOT LINE ADJUSTMENT
NO. LLR 95-004
REC. NO. 9508159001

LOT
6-FT FRONTIER EASEMENT
6-FT PEDESTRIAN EASEMENT
TAX LOT 71
HIGHLANDER
6-FT FIRE ACCESS EASEMENT
6-FT PSE EASEMENT

UTILITY EASEMENT PER PLAT(FOR PSE AND FRONTIER) VOL. 95, PG. 94

NOTES:

- AREA OF CONTAMINATION
- VAPOR BARRIER EXTENT
- APPROXIMATE SUBJECT PROPERTY BOUNDARY
- 719890-0170 — KING COUNTY PARCEL NUMBER

BASEMAP: MODERA RIVER TRAIL SITE PLAN (KPFF, 3/29/19)
PARCELS INTERPRETED FROM KING COUNTY, WASHINGTON GIS DATA

N

0 7.5 15 30
SCALE: 1" = 30'

FIGURE 1
SITE REPRESENTATION SHOWING PROPOSED SITE DEVELOPMENT WITH EXPLORATION LOCATIONS AND EXISTING TIMBER PILING

PREPARED BY	ENVIRONMENTAL PARTNERS INC		
REPORT	INTERIM DELIVERABLE		
LOCATION	MODERA RIVER TRAIL PROPERTY 15801 AND 15945 NORTHEAST 85TH STREET REDMOND, WASHINGTON		
PREPARED FOR	MILL CREEK RESIDENTIAL TRUST		
DATE 2/6/20	***DRAWN BY*** VPB	***REVIEWED BY*** EMK	***PROJECT NUMBER*** 63807.5