STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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January 9, 2020

Michael Pollard
Centric Partners LLC / Seattle Land Use Company
2921 Eastlake Avenue East
Seattle, WA 98102

Re: Opinion pursuant to WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site:

- **Site Name:** TD Auto Body & Repair
- **Site Address:** 1209 East Fir Street, Seattle, WA 98122
- **Facility/Site No.:** 2501
- **Cleanup Site ID No.:** 2666
- **VCP Project No.:** NW3194

Dear Michael Pollard:

The Washington State Department of Ecology (Ecology) received your request for an opinion on the Remedial Investigation at the TD Auto Body & Repair 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

Pursuant to completion of the Site characterization work described in the October 2019 *Remedial Investigation Summary Report* (*RI Report*), is additional work necessary to resolve data gaps?

YES. Ecology has determined that additional Site characterization work is necessary.

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:

- Gasoline-range total petroleum hydrocarbons (TPH-G), oil-range petroleum hydrocarbons (TPH-O), benzene, ethylbenzene, xylenes, lead, cadmium, and

tetrachloroethene (PCE) into the Soil.

- PCE, trichloroethene (TCE), vinyl chloride, cis-1,2-dichloroethene (1,2-DCE), TPH-G, TPH-O, diesel-range total petroleum hydrocarbons (TPH-D), and benzene into the Ground Water.

- Vinyl chloride, naphthalene, bromodichloromethane, and chloroform into the Air.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

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 documents listed in **Enclosure B**. Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by completing a Request for Public Record form (https://www.ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests) and emailing it to PublicRecordsOfficer@ecy.wa.gov, or contacting the Public Records Officer at 360-407-6040. A number of these documents are accessible in electronic form from the Site web page (https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=2666).

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

Analysis and Opinion

Based on a review of the *RI Report*, Ecology has determined:

1. Ecology appreciates your effort in developing a comprehensive remedial investigation report that summarizes the multiple previous subsurface investigations into one report, and for providing detailed tables and figures. These are beneficial in our analysis of the Site characterization and in providing recommendations for a path forward.

2. The *RI Report* concluded that the source of the vinyl chloride ground water plume beneath the southeastern parking lot area of the Site was the adjacent King County Archives Warehouse property. The *RI Report's* reasoning was that vinyl chloride

was not detected upgradient of the King County Archives Warehouse, but was detected downgradient. The *RI Report* indicated that the former dry cleaner on the Site was hydraulically cross gradient of this vinyl chloride plume.

However, vinyl chloride has been found in ground water in the vicinity of the former dry cleaner, as well as other sporadic areas of the Site. Contaminant plume migration can differ from the hydraulic gradient due to potential preferential pathways, so whether the former dry cleaner was located hydraulically upgradient or cross gradient of the vinyl chloride plume does not necessarily determine the precise path of the plume.

For example, sand lenses of perched ground water present beneath the Site could be impacting the path of the plume. Another example would be influence on the flow direction if a sump pump is present beneath the King County Archives Warehouse. Ecology recommends contacting King County to determine if the Archives Warehouse building includes an underdrain and sump pump system.

A few borings between the smaller vinyl chloride plume adjacent to the former dry cleaner location and the larger vinyl chloride plume beneath the southeastern parking lot were found to have non-detectable concentrations of vinyl chloride in ground water. However, it should be noted that the laboratory detection limit of vinyl chloride presented in the *RI Report* is 0.2 micrograms per liter (µg/L), which is also the MTCA Method A groundwater cleanup level. Vinyl chloride detections in Site ground water have ranged from 0.21 to 1.9 µg/L. Therefore, chlorinated solvents and degradation products could be present between these two plumes at low concentrations (for example, monitoring well GEO B-7 has detections of 1,2-DCE and TCE below the MTCA Method A groundwater cleanup level). There could also be discontinuities in the plume as the contaminant mass migrates in groundwater and degrades.

It should also be noted that some of the "locations of environmental borings with no parameter exceeding MTCA groundwater cleanup levels" noted on Figure 7 of the *RI Report* do not actually have ground water data, only soil data (e.g. Slope-1, Slope-2, and BN-13). So they cannot be used to evaluate whether or not vinyl chloride is present in ground water in those areas.

The King County Archives Warehouse has historically stored archived records and voting machines. Prior to the construction of the warehouse in the early 1950s, row houses of a post-World War II public housing project occupied parts of the Site and all of the adjacent parcel to the east (formerly the King County Records Center; now owned by the Seattle Housing Authority). The Archives Warehouse property history

does not support the conclusion that the property is the source of the vinyl chloride plume beneath the southeast area of the Site.

The former dry cleaner on the Site is a more likely source, based on the typical use of chlorinated solvents by dry cleaning facilities, the vinyl chloride detections in ground water in the vicinity of the former dry cleaner, and the hydraulically upgradient or cross gradient location relative to the larger vinyl chloride plume in the southeastern parking lot. A potential source of the contamination could also have been dumping of chlorinated solvents in the vacant green space behind the former dry cleaner, or the dry cleaner using the unfinished daylight basement (with dirt floor) for storage.

3. Based on the evidence outlined above, the Site characterization must include the adjacent King County Archives Warehouse and Seattle Housing Authority (former King County Records Center) properties in order for Ecology to consider a Site No Further Action (NFA) opinion in the future. The characterization should include soils, soil vapor, and ground water beneath the King County Archives Warehouse building and the adjacent King County parking lot (north and northwest of the larger vinyl chloride plume), as well as east of monitoring well MW-1Shallow (on the parcel owned by the Seattle Housing Authority). The property owners should be contacted to request access.

4. The remedial investigation should include the next tier of a vapor intrusion investigation and evaluation for the King County Archives Warehouse and the former King County Records Center, based on their proximity to the contamination (refer to Ecology's 2009 *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action*, Revised April 2018). Vapor intrusion screening levels were exceeded at the following locations (see **Enclosure A, Figure 7**):

    - Vinyl chloride and naphthalene exceeded deep soil gas screening levels at locations DSVP-1 and DSVP-2, respectively, adjacent to the south wall of the Archives Warehouse.

    - Benzene exceeded the ground water screening level for vapor intrusion in borings AEG B-4 and BN-10 (MW-9), approximately 60 feet from the west wall of the Archives Warehouse.

    - Vinyl chloride exceeded the ground water screening level for vapor intrusion at locations WES-11, MW-5, and GEO B-9, adjacent to the south wall of the Archives Warehouse.

- Vinyl chloride exceeded the ground water screening level for vapor intrusion at locations MW-1 and MW-1 Shallow, approximately 50 feet from the west wall of the former King County Records Center.

The potential vapor intrusion risks to the Archives Warehouse and former Records Center are unknown based on the unknown extent of contamination in the vicinity.

5. The following additional information should be added to the remedial investigation:

   - A comprehensive summary table of all Site borings and monitoring wells, including date drilled, drilling method, total depth, monitoring well screened interval, date decommissioned, log available (yes or no), land surface elevation, and report reference.

   - Time-series plots for chemicals of concern in ground water in all permanent monitoring wells, to evaluate changes in contaminants of concern over time.

   - A new west to east cross section from OS-6 and the western property line to MW-1 Deep and the eastern property line.

   - Inclusion of concentrations of all chemicals of concern (soil, soil gas, and ground water) on cross sections, with notations of exceedances of cleanup levels.

   - Identification on cross sections of the highest and lowest ground water levels measured in temporary and permanent monitoring wells.

6. Once the remedial investigation is completed, a Feasibility Study (FS) will need to be prepared to evaluate and propose cleanup options. A Disproportionate Cost Analysis (DCA) will also need to be prepared if contamination remains on the Site. Please reference our Feasibility Study Checklist available at https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Cleanup-report-checklists-and-templates.

7. The cross sections in the *RI Report* depict that ground water zones are expected to be encountered at the proposed excavation depths. Provide detail in the FS regarding the contingency plan for excavation dewatering and ground water treatment during redevelopment. The plan should include checking monitoring wells for changes in contaminant concentrations during excavation and potential dewatering during the redevelopment.

8. If a Property NFA is pursued for the four parcels planned for redevelopment (if determined to be appropriate after the completion of the RI/FS), the proposed cleanup alternative would need to incorporate an engineered control to prevent recontamination of ground water beneath the southeastern parcel by the upgradient portion of the plume present beneath the King County Archives Warehouse property. An example engineered control would be a slurry wall along the northern boundary of the southeastern parcel that extends to a sufficient depth below the seasonal high ground water level, such that migration of the plume onto the Property is prevented. See *Guidelines for Property Cleanups Under the Voluntary Cleanup Program*, Ecology Publication No. 08-09-044, Revised July 2015.

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.030(1)(i).

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 remedial action. 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 425-649-7023 or e-mail at tawe461@ecy.wa.gov.

Sincerely,

Tamara Welty, LG, LHG
NWRO Toxics Cleanup Program

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

cc: Daniel Whitman, Whitman Environmental Sciences

Enclosure A

Description and Diagrams of the Site

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinion expressed in the body of the letter.

Site: The TD Auto Body & Repair Site is located at 1209 East Fir Street and 104, 110, and 124 12th Avenue **(Figure 2)**. The Site includes the Property, which consists of four King County tax parcels: 8061000035, 8061000025, 8061000015, and 8061000005. The Site may also include the adjacent tax parcels 8061000040 (1215 East Fir Street) and/or 8061000045 (1217 East Fir Street) that are occupied by the King County Archives Warehouse (owned by King County) and the former King County Records Center (owned by Seattle Housing Authority), respectively.

Area Description: The surrounding area consists of commercial and residential properties. The property is bounded by East Fir Street to the north, 12th Avenue to the west, and East Yesler Way to the south. The King County Archives Warehouse and the former King County Records Center are located on the north and the east-adjoining parcels, respectively (**Figure 2**). A school is located to the south across East Yesler Way.

Property History and Current Use: All of the buildings on the Property were used for commercial purposes. The buildings are currently vacant. They were most recently occupied by an auto repair shop, restaurant, and curtain manufacturer. The Property is planned for redevelopment as a six-story, mixed-use building. The remedial action will be coordinated with the redevelopment.

Sources of Contamination: The hazardous substances released at the Site include petroleum hydrocarbons, chlorinated solvents, and metals. The media affected include soil, ground water, and air (potentially via soil vapor migration). Multiple potential sources have been identified, including the following former activities: service station (including underground tanks), two auto repairs, dry cleaner, and potential dumping or impacted fill on the vegetated slope in the central area of the Site (**Figures 6 and 7**).

Physiographic Setting: The Property is located within the Puget Sound Lowland physiographic province, a north-south oriented topographic depression. The area slopes towards the southeast. The surface elevation at the Property ranges from approximately 200 to 220 feet above mean sea level (amsl).

Surface/Storm Water: The Property and surrounding area is largely covered by asphalt and buildings. Surface runoff is collected by the City storm water system. The closest surface water body to the Property is Elliott Bay, which is located approximately 1 mile west of the Property.

Geology: Soil conditions consist of a layer of relatively unconsolidated fill containing organic material and debris, overlying brown to grayish clayey sand and gravel that is interpreted to be glacial till or weathered till-derived sediments. The extent of fill appears to be greatest in the northwestern part of the property, where depths of up to 20 feet have been encountered. The

glacial till includes intermittent layers of sand and extends to the deepest depth explored of 49 feet bgs.

Ground Water: Ground water was encountered in borings and monitoring wells at depths from 5 to 16 feet bgs. The water levels in individual monitoring wells vary by as much as 3.15 feet over the period of record (2017 through 2019). Based on monitoring well measurements, ground water flow is consistently towards the southeast (**Figure 7**).

Water Supply: Drinking water for the area is provided by Seattle Public Utilities and is derived from the Cedar and South Fork Tolt River watersheds. There are no groundwater recharge areas or wellhead protection zones within 1 mile of the Property.

Release and Extent of Soil and Ground Water Contamination:

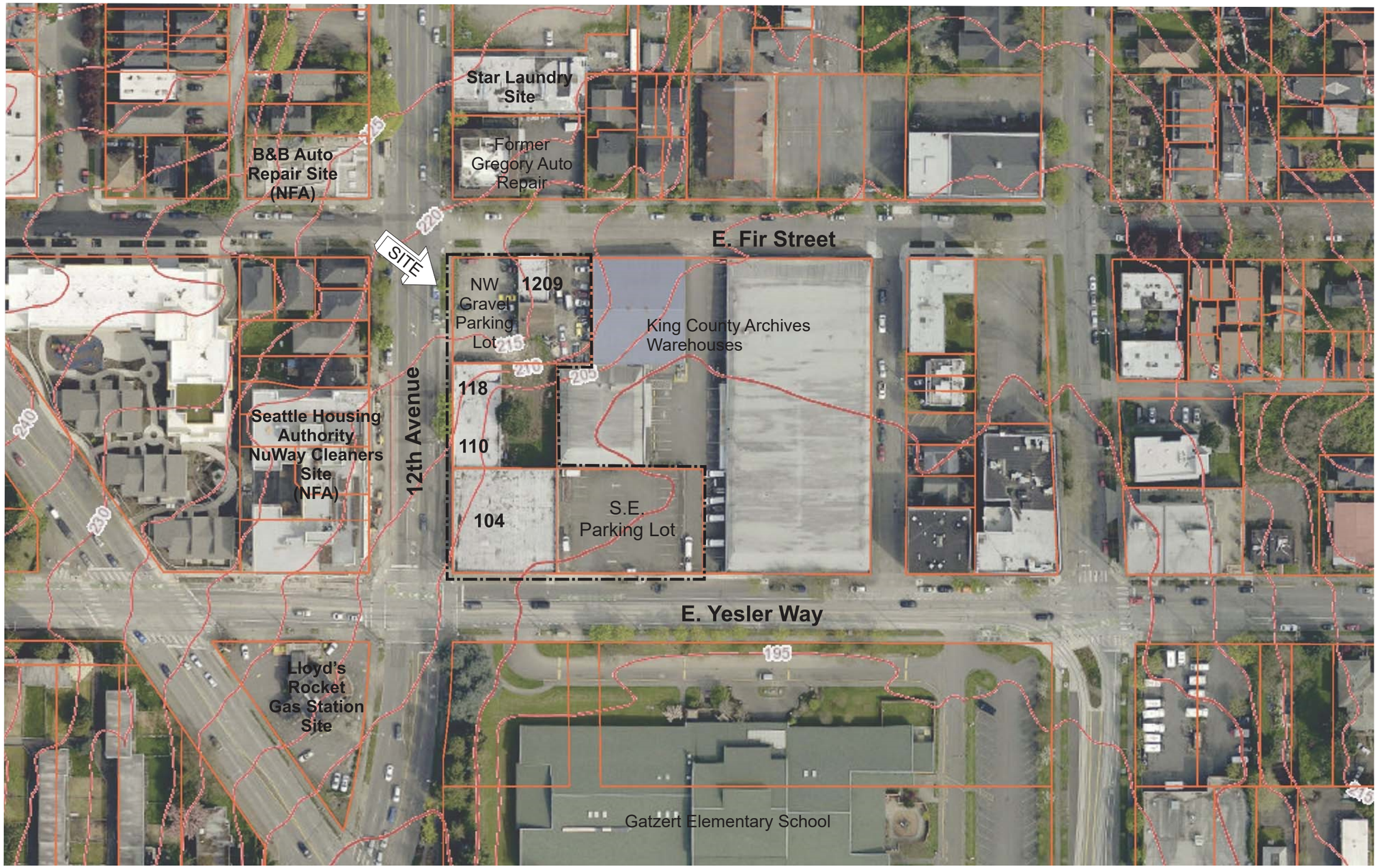
Petroleum contaminated soil and ground water has been encountered in the northwestern portion of the Property in the vicinity of a former service station. A limited remedial action was conducted in this area in 1991 after petroleum contaminated soil was discovered in the vicinity of the former underground tanks.

Petroleum contaminated soil and ground water has also been encountered in pockets in the southwestern portion of the Property in the vicinity of a former auto repair facility and floor sump.

Lead contaminated soil has been encountered on the vegetated slope in the central portion of the Property. This is suspected to be associated with dumping from a second auto repair facility, formerly located in the northeastern corner of the Property.

The most extensive area of ground water contaminated with chlorinated solvents (PCE, TCE, and vinyl chloride) was detected as a contaminant plume located in the southeast area of the Property. This plume is presumed to extend beneath the adjacent King County Archives Warehouse. Chlorinated solvent contaminated ground water (primarily vinyl chloride) has been encountered in the vicinity of the former dry cleaner in the western portion of the Property and in the vicinity of the former auto repair facility in the southwestern portion of the Property.

Areas of soil contamination are shown on Figure 6. Areas of groundwater contamination are shown on Figure 7.



Legend

Approximate Property Line

Ground Surface Contours
(Elevations Noted)

Base Photo from King County IMap

North

0 100'

Scale 1" = Approx. 100 feet

Figure 2 - Site and Vicinity Plan

104-124 12th Avenue & 1209 E. Fir Street
Seattle, Washington 98122

Project No.	WES - 1591
Date	June 17, 2017
File ID.	1591F2

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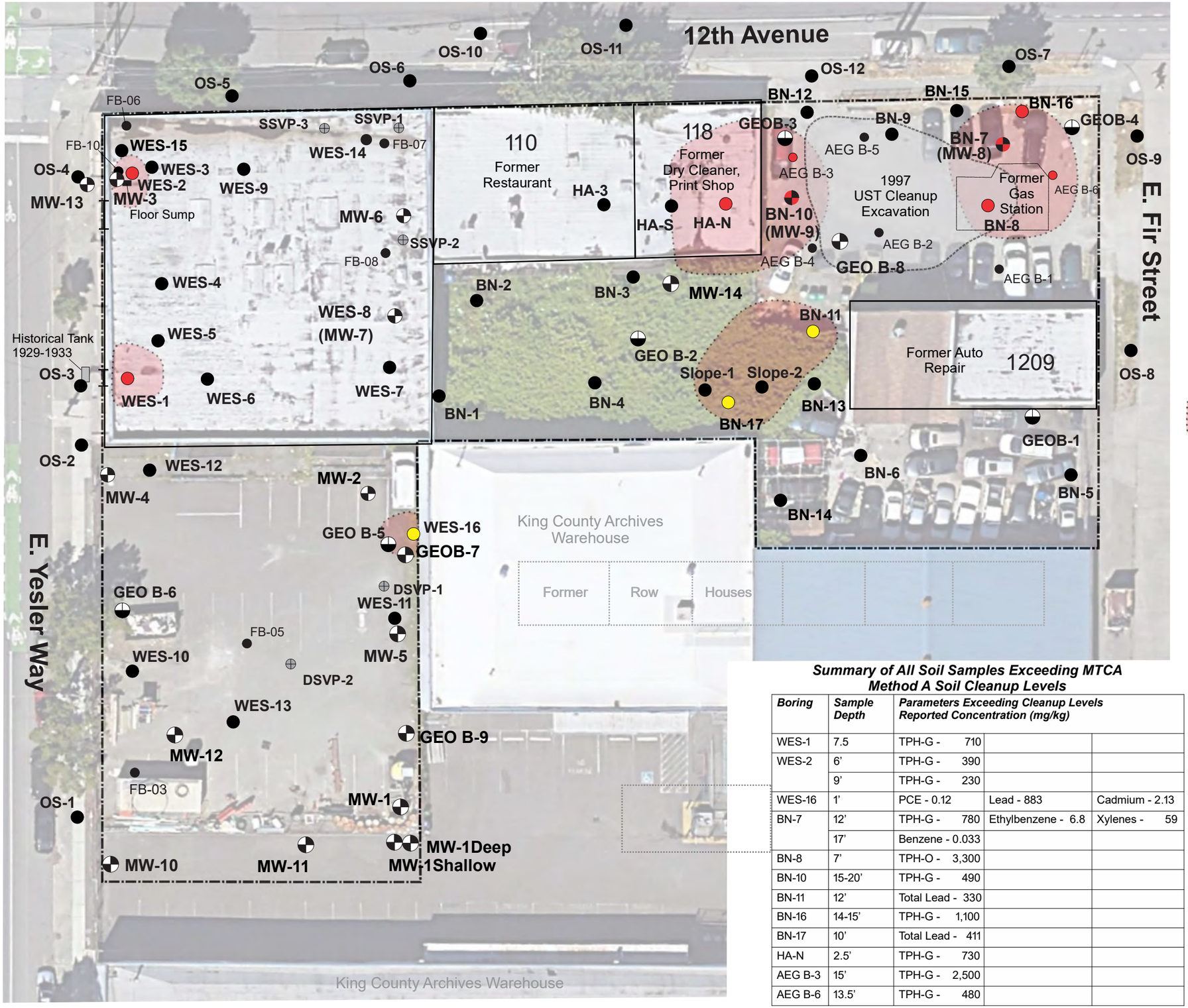

Legend

- Location of Monitoring Well with no parameter exceeding MTCA Soil Cleanup Level in any sample.
- Location of Environmental Soil Boring with no parameter exceeding MTCA Soil Cleanup Level in any soil sample
- Approximate Location of Geotechnical Soil Boring (Limited Data)
- Prior Soil Boring (2014 - 2016, Limited or No Data)
- Approximate Location of Sub-slab or Deep Soil Vapor Sample
- Soil Boring or Monitoring Well where one or more petroleum related parameter exceeded MTCA Soil Cleanup Level in at least one sample.
- Soil Boring where total lead exceeded MTCA Soil Cleanup Level in one sample.
- Estimated extent of soil exceeding MTCA Soil Cleanup Levels.

North

0 30’

Scale 1" = Approx. 30 feet

Summary of All Soil Samples Exceeding MTCA Method A Soil Cleanup Levels

Boring	*Sample Depth*	*Parameters Exceeding Cleanup Levels Reported Concentration (mg/kg)*		
WES-1	7.5	TPH-G - 710		
WES-2	6’	TPH-G - 390		
	9’	TPH-G - 230		
WES-16	1’	PCE - 0.12	Lead - 883	Cadmium - 2.13
BN-7	12’	TPH-G - 780	Ethylbenzene - 6.8	Xylenes - 59
	17’	Benzene - 0.033		
BN-8	7’	TPH-O - 3,300		
BN-10	15-20’	TPH-G - 490		
BN-11	12’	Total Lead - 330		
BN-16	14-15’	TPH-G - 1,100		
BN-17	10’	Total Lead - 411		
HA-N	2.5’	TPH-G - 730		
AEG B-3	15’	TPH-G - 2,500		
AEG B-6	13.5’	TPH-G - 480		

Figure 6 - Soil Sample Locations Exceeding MTCA Cleanup Levels

Proposed Redevelopment Property
104-124 12th Avenue & 1209 E. Fir Street
Seattle, WA

Project No.	WES - 1591A
Date	Oct 15, 2019
File ID.	1591F6

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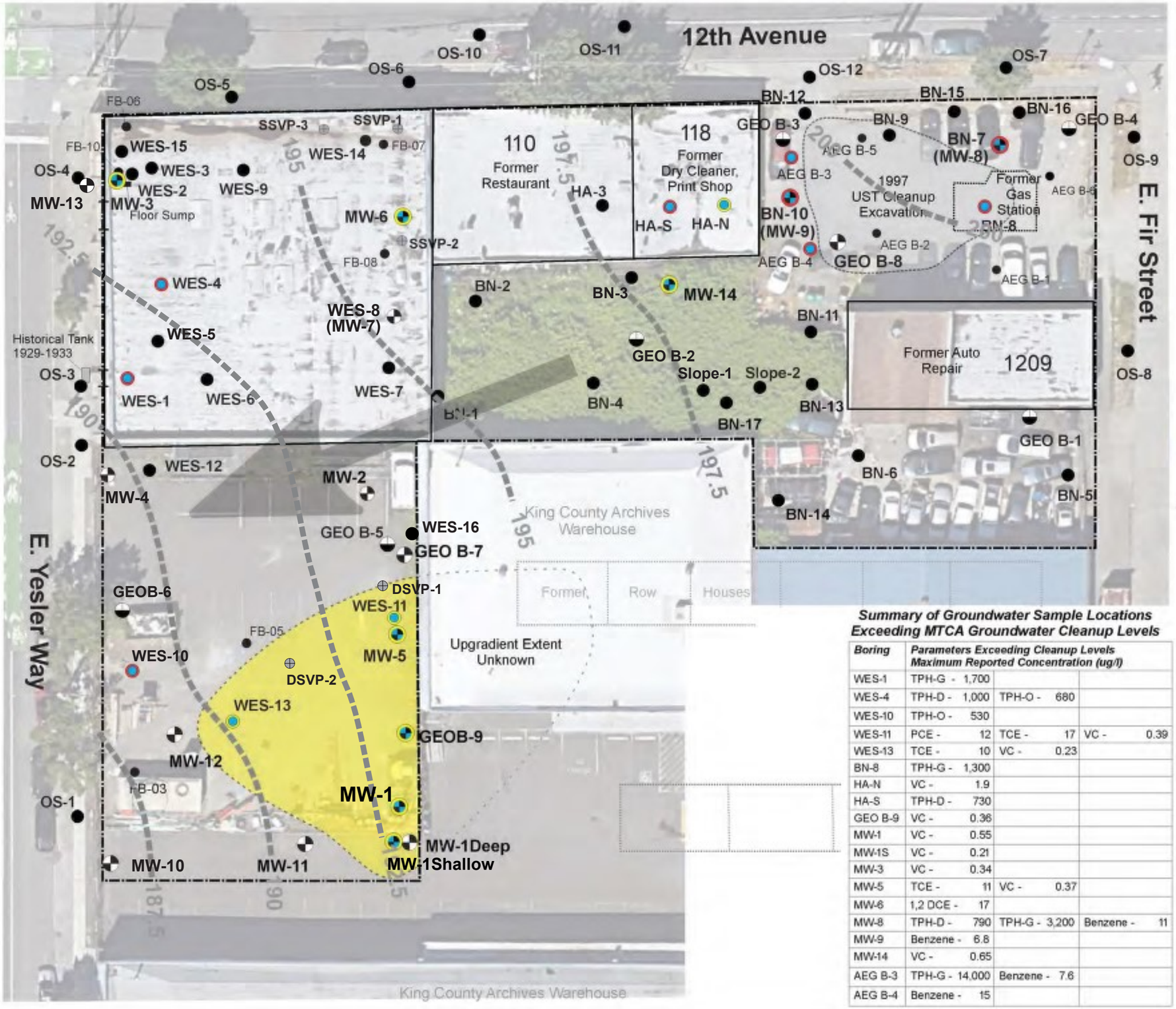

Legend

- Location of Monitoring Well with no parameter exceeding MTCA Groundwater Cleanup Level in any sample.
- Location of Environmental Boring with no parameter exceeding MTCA Groundwater Cleanup Level in reconnaissance sample
- Approximate Location of Geotechnical Soil Boring (Limited Data)
- Prior Soil Boring (2016, Limited or No Data)
- Approximate Location of Sub-slab or Deep Soil Vapor Sample
- Petroleum-related Compounds exceeding MTCA Groundwater Cleanup Levels
- Chlorinated VOCs exceeding MTCA Groundwater Cleanup Levels
- Estimated Extent of Chlorinated Solvent Plume
- Direction of Groundwater Migration

Summary of Groundwater Sample Locations Exceeding MTCA Groundwater Cleanup Levels

Boring	*Parameters Exceeding Cleanup Levels Maximum Reported Concentration (ug/l)*					
WES-1	TPH-G -	1,700				
WES-4	TPH-D -	1,000	TPH-O -	680		
WES-10	TPH-O -	530				
WES-11	PCE -	12	TCE -	17	VC -	0.39
WES-13	TCE -	10	VC -	0.23		
BN-8	TPH-G -	1,300				
HA-N	VC -	1.9				
HA-S	TPH-D -	730				
GEO B-9	VC -	0.36				
MW-1	VC -	0.55				
MW-1S	VC -	0.21				
MW-3	VC -	0.34				
MW-5	TCE -	11	VC -	0.37		
MW-6	1,2 DCE -	17				
MW-8	TPH-D -	790	TPH-G -	3,200	Benzene -	11
MW-9	Benzene -	6.8				
MW-14	VC -	0.65				
AEG B-3	TPH-G -	14,000	Benzene -	7.6		
AEG B-4	Benzene -	15				

North

0 30

Scale 1" = Approx. 30 feet

Figure 7 - Groundwater Sample Locations Exceeding MTCA Cleanup Levels

Proposed Redevelopment Property
104-124 12th Avenue & 1209 E. Fir Street
Seattle, WA

Project No.	WES - 1591A
Date	Oct 15, 2019
File ID.	1591AF7

WHITMAN
Environmental Sciences

Enclosure B

Basis for the Opinion:
List of Documents

1. Whitman Environmental Sciences. Remedial Investigation Summary Report, Potential Redevelopment Property, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. October 26, 2019.

2. Department of Ecology. Opinion on Proposed Cleanup, TD Auto Body & Repair, 1209 East Fir Street, Seattle, WA, VCP NW3194. June 6, 2019.

3. Whitman Environmental Sciences. Independent Remedial Action Plan, Proposed Redevelopment Property, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. April 2, 2019.

4. Whitman Environmental Sciences. June-July 2018 Groundwater Monitoring Results, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. August 22, 2018 (Amended February 20, 2019).

5. Department of Ecology. Request for Additional Information to Provide Opinion on the Investigation and Cleanup under the VCP for the following Contaminated Site: TD Auto Body & Repair, 1209 East Fir Street, Seattle, WA 98122. July 24, 2018.

6. Whitman Environmental Sciences. Additional Off-Site Environmental Site Investigation, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. September 6, 2017.

7. Whitman Environmental Sciences. Phase I & II Environmental Site Assessment, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. September 1, 2017.

8. Geotech Consultants, Inc. Transmittal Letter – Preliminary Geotechnical Engineering Study, Proposed Mixed-Use Building, 104, 110, and 124 – 12th Avenue, Seattle, Washington. August 2, 2017.

9. Amec Foster Wheeler Environment & Infrastructure, Inc. Phase II Environmental Site Assessment, 1215 East First Street, Seattle, Washington. July 2017.

10. Farallon Consulting. Phase I Environmental Site Assessment, 12th and Yesler Property, 104 through 10812th Avenue and 1206 East Yesler Way, Seattle, Washington. January 4, 2016.

11. Associated Environmental Group, LLC. Phase II Environmental Site Assessment, 12th Avenue Parking Lot, 110 & 124 12th Ave, Seattle, Washington. November 14, 2014.

12. RZA-AGRA (Rittenhouse-Zeman & Associates, Inc.) Engineering & Environmental Services. Level III Site Remediation Report, Sturves Addition, Lots 1 and 2, 12th Avenue and Fir Street, Seattle, Washington. November 6, 1991.