STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

June 6, 2019

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

Re: Opinion on Proposed Cleanup of the following 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 your proposed independent cleanup of 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

Upon completion of the proposed cleanup, will further remedial action likely be necessary to clean up contamination at the Site?

YES. Ecology has determined that, upon completion of your proposed cleanup, further remedial action will likely be 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:

- Gasoline-range total petroleum hydrocarbons (TPH-G), oil-range petroleum hydrocarbons (TPH-O), benzene, ethylbenzene, xylenes, and lead into the Soil.
- Tetrachloroethene (PCE), trichloroethene (TCE), vinyl chloride, TPH-G, diesel-range total petroleum hydrocarbons (TPH-D), TPH-O, and benzene into the Ground Water.
- 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 following documents:

1. Whitman Environmental Sciences. Independent Remedial Action Plan, Proposed Redevelopment Property, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. April 2, 2019.
2. 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).
3. 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.
4. Whitman Environmental Sciences. Additional Off-Site Environmental Site Investigation, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. September 6, 2017.
5. Whitman Environmental Sciences. Phase I & II Environmental Site Assessment, 104-124 12th Avenue & 1209 E. Fir Street, Seattle, Washington. September 1, 2017.
6. Geotech Consultants, Inc. Transmittal Letter – Preliminary Geotechnical Engineering Study, Proposed Mixed-Use Building, 104, 110, and 124 – 12th Avenue, Seattle, Washington. August 2, 2017.

8. 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.

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

10. 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.

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 of the Cleanup

Ecology has concluded that, upon completion of your proposed cleanup, **further remedial action** will likely be 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. The Site is described above and in **Enclosure A.**

a. The lateral extent of contaminated ground water has not been delineated and could be migrating off the property (for example, in the vicinities of MW-3, FB-10, MW-1, MW-5, and WES-13). Ground water contamination near the southwestern corner of the property needs to be delineated to the south towards East Yesler Way. Ground water was not analyzed from the boring in this vicinity during the 2017 *Additional Off-Site Environmental Site Investigation* (boring OS-

4). Also, ground water contamination in the southeastern parking lot area needs to be delineated to the north and east, in order to determine extent and whether the adjacent King County Archives Warehouse property has been impacted.

b. The vertical extent of contaminated soil has not been delineated (for example, in the vicinities of WES-1, WES-2, BN-8, BN-10, BN-11, and AEG B-3). The vertical extent of contamination needs to be delineated in areas where the deepest soil sample that was analyzed exceeded the cleanup level. The lateral extent of lead-contaminated soil also needs to be delineated (for example, in the vicinity of BN-11). Conclusions regarding lateral and vertical extent of contamination should be supported with laboratory data (as opposed to field observations alone).

c. The vertical extent of the vinyl chloride ground water plume has not been delineated. Potential water-bearing zones beneath the vinyl chloride ground water plume should be investigated by installing a deeper monitoring well near historically elevated concentrations of vinyl chloride.

d. No soil or ground water samples collected in areas that had elevated TPH-G concentrations were analyzed for lead. Lead should be analyzed in soil and ground water in the proximity of the highest TPH-G concentrations (see MTCA Table 830-1).

e. Multiple subsurface investigation reports have been completed that contribute to delineating the contamination at the Site. These reports (and future data as noted in this opinion letter) need to be combined into one comprehensive remedial investigation/feasibility study (RI/FS) report.

f. Please reference our Remedial Investigation, Feasibility Study, and Cleanup Action Plan Report Checklists available at https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Cleanup-report-checklists-and-templates. Ecology developed the checklists to provide clarity on our expectations for work plans and reports.

g. Sub-slab soil gas sampling was conducted in three locations within one of the three buildings on the Site. Naphthalene, bromodichloromethane, and chloroform had concentrations exceeding the vapor intrusion Method B sub-slab soil gas screening levels. The soil gas samples did not appear to have been collected in the most contaminated areas of the Site, which had ground water concentrations of vinyl chloride, TCE, and benzene exceeding the vapor intrusion Method B ground water screening levels. Additional vapor intrusion investigation is likely necessary given the limited extent of soil gas sampling that was conducted. The

two other buildings on the Site, as well as buildings on the adjacent King County Archives Warehouse property, should be evaluated for potential impacts and receptors.

h. Also, further clarification of the vapor intrusion assessment is needed with regards to the methodology; conceptual site model; sources of contamination; data evaluation; and recommendations for future investigations, cleanup actions, and/or redevelopment considerations. Vapor intrusion evaluations must be conducted in accordance with Ecology's 2009 *Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (Revised April 2018) and Ecology's 2016 *Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion* (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Vapor-intrusion-overview). Information and data must be organized, evaluated, and presented according to the methods outlined in the guidance, in order to show whether or not vapor intrusion poses an unacceptable threat to indoor air quality for existing and future buildings. Include figures as appropriate with your discussion.

i. Table 4 in the 2017 *Phase I & II Environmental Site Assessment* has missing data for multiple samples. Include all detected contaminants on your data tables, even if there is no cleanup level or screening level available. Also, ensure the correct units are noted on your tables.

j. Table 2 in the 2017 *Phase I & II Environmental Site Assessment* does not include sample dates. Include sample dates for all data on all tables.

k. Figure 5 in the 2017 *Phase I & II Environmental Site Assessment* includes inaccurate or missing concentrations of TPH-G, vinyl chloride, and/or TCE for sample locations AEG B-3, AEG B-4, MW-03, and MW-05. Update this information in your figures.

l. The 2017 *Additional Off-Site Environmental Site Investigation* is missing boring logs. Provide all boring logs.

m. Ground water levels were not provided for all ground water monitoring well sampling events (for example, spring and summer 2017). Provide all available ground water levels.

n. Ground water figures and tables should clearly distinguish between permanent monitoring wells and borings / temporary monitoring wells.

o. The use of a photoionization detector (PID) during remedial investigation and remedial action field work is the industry standard to identify relative concentrations of volatile organic compounds (VOCs), such as PCE, benzene, etc. It is recommended that you utilize a PID during future field activities.

2. Establishment of cleanup standards.

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

a. MTCA Method A cleanup levels were selected for PCE, TCE, TPH-G, TPH-D, TPH-O, benzene, ethylbenzene, xylenes, and lead in soil and ground water. The standard MTCA Method B cleanup level was selected for vinyl chloride in soil. These cleanup levels are based on unrestricted land use. The points of compliance are standard.

b. Soil cleanup levels protective of terrestrial ecological receptors are not necessary because the Site meets the initial Terrestrial Ecological Evaluation (TEE) exclusion criteria (MTCA WAC 173-340-7491(1)(c)). Per the TEE exclusion documentation provided with the VCP Application, there are less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any part of the Site, all contaminated soil is or will be covered by physical barriers that prevent exposure, and all contaminated soil is or will be at least 15 feet below the surface.

3. Selection of cleanup action.

As stated previously in this opinion letter, the characterization of the Site is not sufficient and a RI/FS has not been completed. Therefore, it is unknown whether the cleanup action you proposed for the Site meets the substantive requirements of MTCA.

a. The 2019 *Independent Remedial Action Plan* indicates that contaminated soil will be remediated via excavation and off-site disposal during the planned redevelopment. The proposed cleanup action for ground water contaminated with chlorinated solvents is in-situ treatment, including injections of activated carbon and a chemical reduction agent.

b. The 2019 *Independent Remedial Action Plan* indicates that ground water is not expected to be a significant factor in the proposed excavation, and no large-scale disposal of ground water is anticipated. However, the cross sections depict that perched ground water zones will likely be encountered at the proposed excavation depths, and the perched ground water zones are in close proximity to the bottom

elevations of existing buildings. Provide more detail and discuss your contingency plan for excavation dewatering and ground water treatment.

Discuss your monitoring approach for potential unintended effects of dewatering, such as ground water level changes and the potential for off-site contaminants to migrate onto the Site during pumping. Evaluate whether there are footing drains and sump systems in the existing buildings on the Site or in the adjacent King County Archives warehouse (the building in the vicinity of the chlorinated solvents plume) that could be impacting ground water flow and contaminant migration at the Site.

c. Many of the following comments pertain to elements of the 2019 *Independent Remedial Action Plan* that relate to delineating the nature and extent of contamination at the Site, and therefore should be incorporated into an updated RI as well.

i. Figure 6 depicts the estimated extent of contamination, but does not include any supporting analytical data, and as previously mentioned, there are data gaps in the southwestern and southeastern areas of the property. Figures should illustrate where contamination was and was not identified, supported by historical analytical data.

Include all historical analytical data in your figures and data tables, including the 2014 and 2016 data by Farallon Consulting and Associated Environmental Group, LLC. Build upon existing figures by highlighting (via colors and/or symbols) samples that are above vs. below cleanup levels and, at minimum, include concentrations that have exceeded cleanup levels at any point in the past. Include ground water sample dates and soil sample depths, as applicable, in order to establish nature and extent of contamination.

ii. Figure 6, which depicts estimated extent of contaminated soil and ground water, does not highlight all the areas of petroleum contaminated ground water (for example, WES-4 and WES-10). Figure 6 also does not highlight all the areas of vinyl chloride-contaminated ground water (for example, MW-3, FB-10, and HA-N). Clearly depict all contaminated areas on your figure (based on all historical data), including petroleum and vinyl chloride-contaminated ground water and comingled plumes of both.

iii. Figure 2 depicts some of the historical uses and features that could be sources of contamination. Also include on the figure the locations of the former gasoline station building, former or suspected underground storage tanks

(USTs), former remedial excavations, existing and former automotive repair facilities, former fertilizer manufacturer, former screen printing shop, oil/water separators, hoists, sumps, and any other potential sources.

iv. Figures 5A and 5C depict ground water at MW-3 and soil at AEG B-6 as below the cleanup levels, but historical data shows that they are above cleanup levels. Update this information on the cross sections.

v. Table 2 provides the maximum detected soil and ground water concentrations for each contaminant of concern. However, the concentrations provided in the table for TPH-G, TPH-D, TPH-O, and benzene in ground water, and TPH-G in soil, were lower than the actual maximum historical concentrations (some of which were detected in 2014 or 2016 by previous consultants). Also, the maximum PCE ground water concentration of 12 micrograms per liter (µg/L) is above the cleanup level, not below the cleanup level as noted on the table. Please update the table.

vi. The *Independent Remedial Action Plan* does not discuss all contaminated areas (for example, chlorinated solvents have been identified throughout the Site, not exclusively in the southeastern parking lot), and does not discuss potential chlorinated solvent sources. The former dry cleaner on the Site should be discussed as a suspected source of chlorinated solvents. Also, it should be noted that there are areas of the Site with comingled plumes of petroleum products and chlorinated solvents that may be from different sources.

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 proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. Opinion is limited to proposed cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

4. 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 your Property under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may resubmit your proposal for our review. 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 (1): A – Description and Diagrams of the Site

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 (see Figures in Enclosure A). The Site consists of four King County tax parcels: 8061000035, 8061000025, 8061000015, and 8061000005.

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. King County Archive's warehouses are located on the east-adjoining properties. A school is located to the south across East Yesler Way.

Property History and Current Use: All of the buildings on the property are used for commercial purposes. They are currently occupied by an auto repair shop, restaurant, and curtain manufacturer. Some of the spaces within the buildings are currently vacant. The Site 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 lead. The media affected includes soil, ground water, and (potentially) air. Multiple potential sources have been identified, including a former service station, former auto repair, former dry cleaner, floor sump, and potential dumping or impacted fill on the vegetated slope.

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 Site.

Geology: Soil conditions consist of a layer of relatively unconsolidated fill containing organic material and debris, overlying brown to grayish clayey sand and gravel 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.

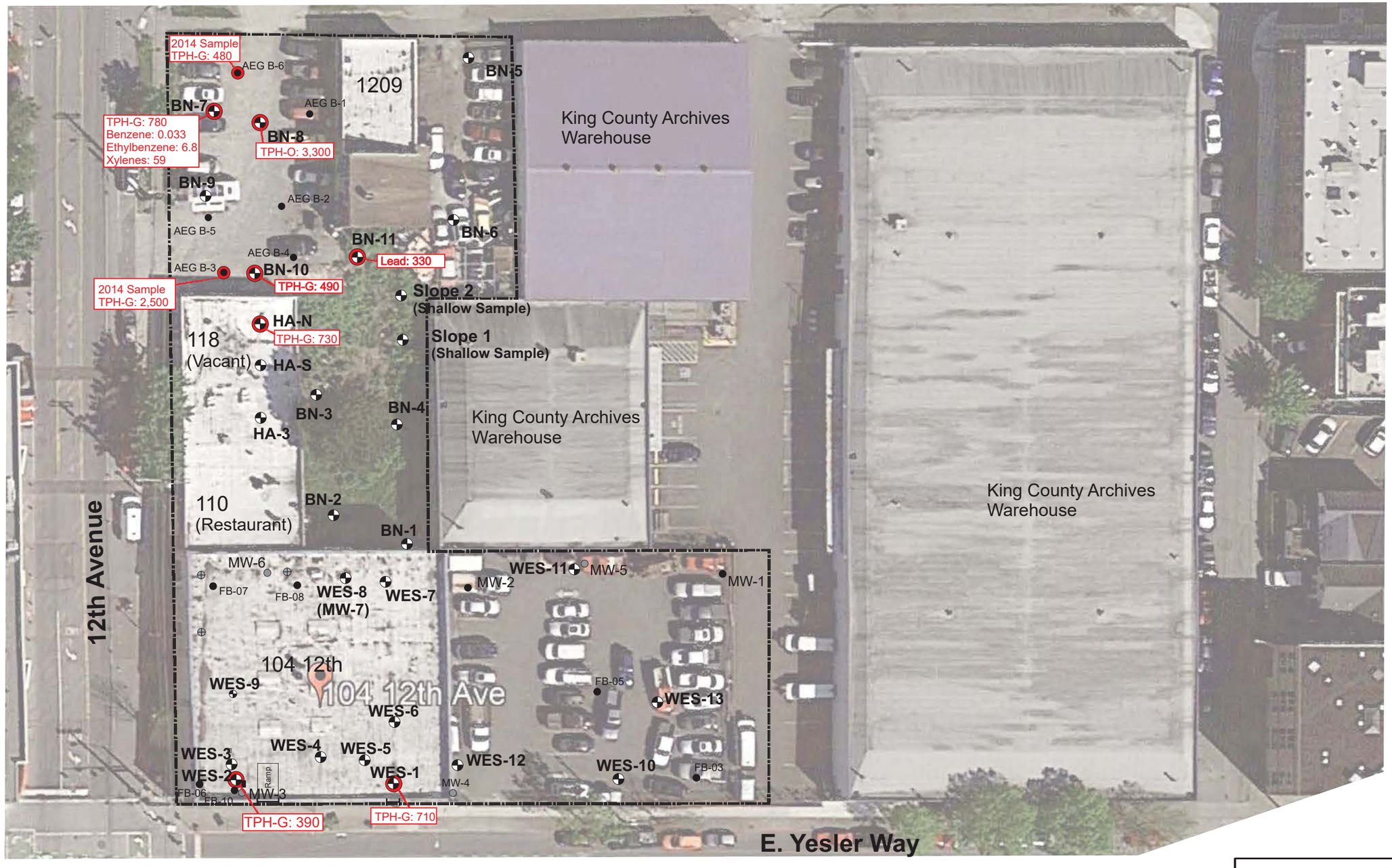
Ground Water: Perched ground water was encountered in sandier zones ranging from thin fine sand zones laminated with silt to thicker water-bearing zones up to four feet in thickness. These sandy zones are reportedly only partially continuous across the property. Depth to perched ground water ranges from 6 to 10 feet below ground surface (bgs) in the southeastern parking lot

to about 15 feet bgs in the northwestern portion of the property. Based on monitoring well measurements, ground water appears to be flowing towards the southeast.

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 (at least).

Release and Extent of Soil and Ground Water Contamination: Petroleum contaminated soil and ground water has been encountered in the northwestern portion of the Site in the vicinity of a former service station and existing auto repair facility. A limited remedial action was conducted in this area in 1991 after petroleum contaminated soil was discovered in the vicinity of the former USTs. Petroleum contaminated soil and ground water has also been encountered in pockets in the southwestern portion of the Site in the vicinity of a former auto repair facility and floor sump. Lead contaminated soil was encountered on the vegetated slope in the northwestern portion of the Site.

Ground water contaminated with chlorinated solvents, primarily vinyl chloride, has been encountered in pockets throughout the Site. Ground water contaminated with PCE and TCE appears to be relatively isolated in extent. Vinyl chloride contaminated ground water has been encountered in the vicinity of the former dry cleaner in the northwestern portion of the Site, in the vicinity of the former auto repair in the southwestern portion of the Site, and in the southeastern parking lot.



Legend

- Approximate Location of Current Soil Boring or Monitoring Well
- Approximate Location of Previously Drilled Soil Boring or Monitoring Well (2014-16)
- Investigation location where soil sample was not obtained or data not available
- Location with Soil Concentrations Above MTCA Method A Cleanup Level
- TPH-G: XXX / TPH-D: XXX — Parameter and concentration listed in mg/kg
- Approximate Property Boundary

0 40’

Scale 1" = Approx. 40 feet

North

Figure 4 - Sol Sample Locations

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

Project No.	WES - 1591
Date	Aug 15, 2017
File ID.	1591F4

WHITMAN
Environmental Sciences

Legend

- Approximate Location of Current Soil Boring or Monitoring Well
- Approximate Location of Previously Drilled Soil Boring or Monitoring Well (2014-16)
- Investigation location where groundwater sample was not obtained
- Location with Groundwater Concentrations of Above MTCA Method A Cleanup Level
- TPH-G: XXX / TPH-D: XXX — Parameter and concentration listed in ug/l
- Approximate Property Boundary

North

0 40’

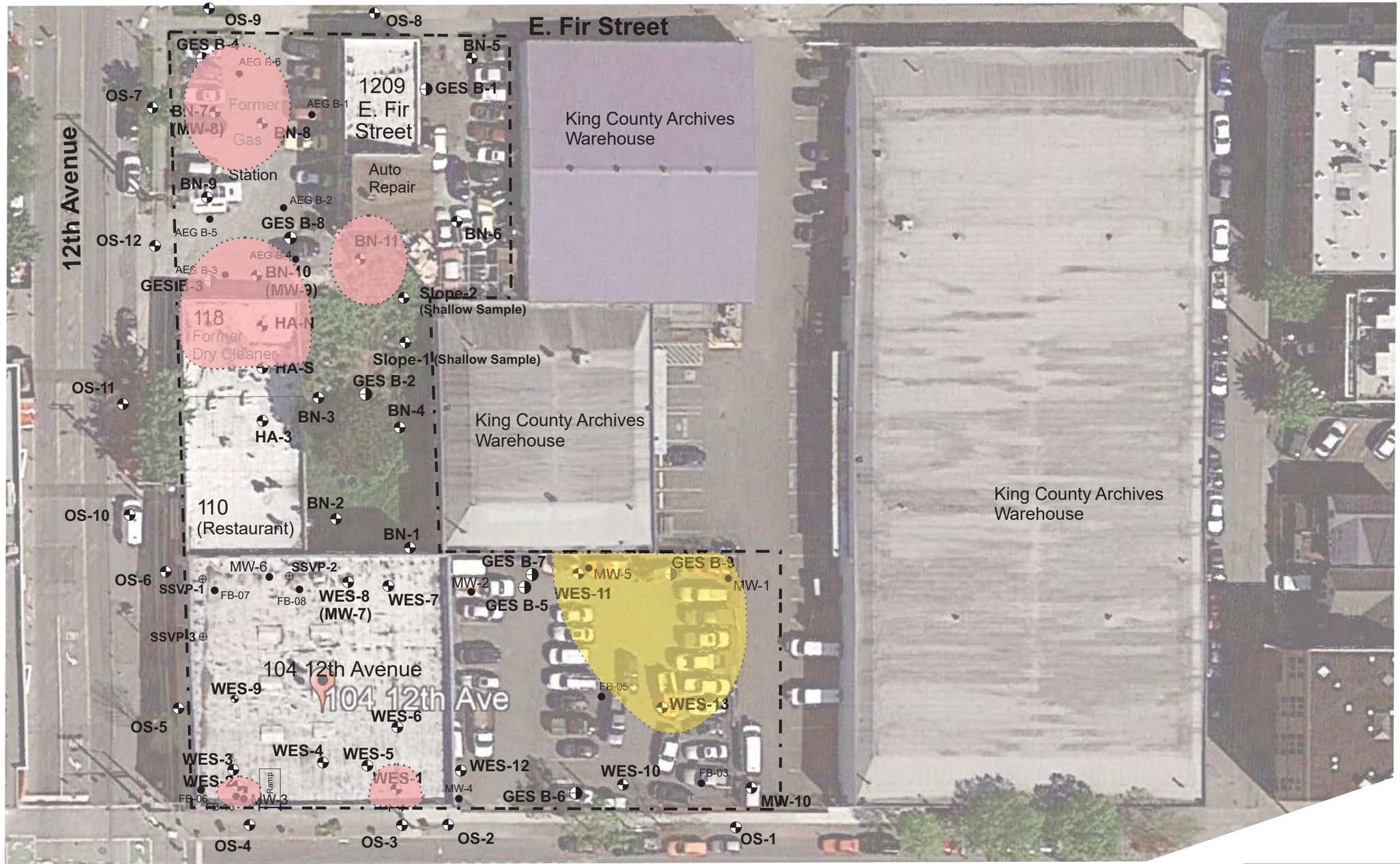
Scale 1" = Approx. 40 feet

Figure 5 - Groundwater Sample Locations

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

Project No.	WES - 1591
Date	Aug 15, 2017
File ID.	1591F5

WHITMAN
Environmental Sciences



Legend

- Approximate Location of Current Environmental Soil Boring or Monitoring Well
- Approximate Location of Current Geotechnical Soil Boring (Limited Data)
- Approximate Location of Sub-Slab Soil Vapor Sample
- Approximate Location of Previously Drilled Soil Boring or Monitoring Well (2014-16, Limited Data)
- Estimated Areas of Petroleum Contaminated Soil
- Estimated Areas of Chlorinated Solvent in Groundwater

0 40’

Scale 1" = Approx. 40 feet

North

Figure 6 - Estimated Extent of Contaminated Soil and Groundwater

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

Project No.	WES - 1591A
Date	Feb 15, 2019
File ID.	1591AF6

WHITMAN
Environmental Sciences