



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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May 4, 2016

Ms. Mary Logue  
Kelly Moore Paint Co.  
301 West Hurst Drive  
Hurst, TX 76053

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

- **Name:** Kelly Moore Paint Co.
- **Address:** 5410 Airport Way S., Seattle, WA 98108
- **Facility/Site No.:** 2163
- **VCP No.:** NW2305
- **Cleanup Site ID No.:** 5064

Dear Ms. Logue:

Thank you for submitting documents regarding your proposed remedial action for the Kelly Moore Paint Co facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site:

- Gasoline, diesel, and heavy oil range petroleum hydrocarbons (TPH-G, TPH-D and TPH-O), naphthalene, carcinogenic polyaromatic hydrocarbons (cPAHs), benzene, toluene, ethylbenzene, xylenes (BTEX), arsenic, mercury, and lead in soil;
- TPH-G, volatile organic compounds (VOCs) including chlorinated solvents, polychlorinated biphenyls (PCBs), cPAHs, BTEX, arsenic, copper, and lead in ground water.

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).



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This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial action(s):

1. Amec Foster Wheeler Environment and Infrastructure, Inc.; Revised Remedial Investigation Former Kelly Moore Manufacturing Facility; January 2016.
2. AMEC Geomatrix, Inc, Site Characterization Report and Data Gaps Work Plan, December 2010.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7235 or sending an email to: [nwro\\_public\\_request@ecy.wa.gov](mailto:nwro_public_request@ecy.wa.gov). The Site is defined by the extent of contamination caused by the following release(s):

- TPH-G, TPH-D and TPH-O, naphthalene, cPAHs, BTEX, arsenic, mercury, and lead in soil;
- TPH-G, VOCs, PCBs, cPAHs, BTEX, arsenic, copper, and lead in ground water.

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has determined that the remedial investigation at the Site is not complete and additional characterization is needed to understand the current Site conditions. In addition, data should be presented in format that includes adequate interpretation of the results. Specific comments are listed below.**

- The extent of contamination is not defined:

While several remedial investigations (RI) have been conducted, none has fully delineated the vertical and horizontal extent of soil and ground water contamination.

- Vertical delineation in soil is not complete in multiple areas, including the excavated areas KM-19, KM-30, KM-39, and KM-41 and other areas where cPAH concentrations were above MTCA, including KM-25, KM-10 and B7 trench.
  - Confirmation soil samples showing that the excavation reached limits below MTCA were not collected in several areas including KM-10, B7, and Tank 2 area.
  - Please indicate in the text which sample shows that all PCBs above MTCA were excavated from the KM-41 area.
  - The rationale for selecting which analyses to conduct in each sample or area is not provided. Why were areas KM-19, KM-30, KM-39, KM-40 and KM-41 not analyzed for TPH-D and TPH-O? Why were VOCs and PAHs not analyzed for in samples from the B7 piping area and VOCs in KM-39?
  - The suspected sources in each of the areas of contamination are not explained.
  - Many of the detection limits were above the screening levels selected, therefore some of the data is not adequate to “screen-out” some of the contaminants including benzene, MTBE, and chlorinated solvents. Results with detection limits above the applicable screening level should be marked in the tables as exceeding the screening level.
  - Ground water results shown in Tables 5-7 through 5-12 should be clearly identified as grab samples or monitoring well samples.
  - An interpretation of the ground water geochemical parameters (Table 5-8) should be included.
  - Table 5-12 shows PCB detection levels higher than the screening levels therefore concentrations should be marked as potentially exceeding the screening level.
- Historical soil samples:

The RI report submitted refers to previous tank removals and soil sampling conducted prior to Kelly Moore’s ownership of the Property. However, specific locations of those tanks, sampling results and extent of the contamination removed and remaining are not shown in the figures and/or tables. Please include this information as part of the RI.
  - Cleanup levels:

No cleanup levels are developed or established in the RI report. The screening levels used in the report are based on industrial use of the Property. While the current land use



is industrial and the zoning is listed as industrial (IG2), other uses such as daycare centers, parks, etc. are allowed under this zoning. Ecology has therefore determined the Property does not meet the definition of an industrial property. WAC 173-340-745 lists the characteristics of an industrial property, if the Property meets the characteristics listed and *“the cleanup action provides for appropriate institutional controls implemented in accordance with WAC 173-340-440 to limit potential exposure to residual hazardous substances”*, the use of cleanup levels for industrial scenarios may be proposed as part of the final cleanup. However, that determination is premature at this time, therefore Method B cleanup levels protective of the leaching pathway are considered applicable.

- Figures:
  - In order for the figures to effectively demonstrate Site conditions less information should be presented, the figure symbols and font should be larger and the areas of contamination should be separated to allow sampling locations to be seen.
  - Ground water data should be shown with each sampling event in a separate figure.
  - Only current data from monitoring wells, not from grab samples, should be used for ground water plume delineation.
  - Figures showing the current contaminant plume extent as well as areas of remaining soil contamination should be included.
  - Include an interpretation of Figure 5-12 in the text.
- Tables:
  - There are too many tables and most of the data cells show concentrations below detection limits or compounds not analyzed for. Information presented in the tables should be summarized to include detections and specific areas of remaining contamination.
  - A summary and interpretation of the information included in the tables should be included in the text. Samples that exceed the cleanup levels should be highlighted. Analyses in which the detection limit was at or above the screening level should also be indicated in the tables.
  - All sampling data available from the permanent monitoring wells should be included as a separate table.
- Simplified Terrestrial Ecological Evaluation (TEE):
  - The habitat rating completed as part of the simplified TEE must be completed by an experienced field biologist. Please indicate the qualifications of the person that



evaluated habitat quality, otherwise use the conservative score of 1 for questions 3 and 4 in Table 749-1.

- Please explain why the Site does not qualify for an exclusion from conducting a TEE.
- Overall, the report lacks:
  - Sampling rationale
  - Excavation rationale
  - Confirmation at all excavated locations showing that contamination above MTCA was removed
  - Ground water plume delineation
  - Interpretation of results
  - Summary of current conditions showing remaining areas of soil and ground water contamination
  - Concise tables
  - Concise figures
  - Summary of data gaps in soil and ground water
  - Historical data
- Under Washington State law (Chapters 18.43 and 18.220 RCW), hydrogeologic and engineering work must be conducted by, or under the supervision of a licensed geologist, hydrogeologist or professional engineer qualified to conduct the work. Any Site investigation/cleanup document containing geologic or engineering work must be submitted under the seal of such an appropriately licensed professional. The submitted report is not signed and stamped by a licensed professional.
- Electronic submittal of all sampling data into Ecology's Electronic Environmental Information Management (EIM) database is a requirement in order to receive a final Ecology opinion for this Site. Jenna Durkee (email [jedu461@ecy.wa.gov](mailto:jedu461@ecy.wa.gov)), or via telephone at 509-454-7865) is Ecology's contact and resource on entering data into EIM.

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**This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action.** To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-7058 or email at [tamara.cardonamarek@ecy.wa.gov](mailto:tamara.cardonamarek@ecy.wa.gov).

Sincerely,



Tamara Cardona, PhD  
Toxics Cleanup Program

Enclosure: (A) Description and Diagrams of the Site

cc: Sonia Fernandez, Ecology

## **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 opinions expressed in the body of the letter.*

**Site:** The Site is defined as gasoline, diesel, and heavy oil range petroleum hydrocarbons (TPH-G, TPH-D and TPH-O), naphthalene, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), benzene, toluene, ethylbenzene, xylenes (BTEX), polychlorinated biphenyls (PCBs), arsenic, mercury, and lead in soil and TPH-G, volatile organic compounds (VOCs) including chlorinated solvents, PCBs, cPAHs, BTEX, arsenic, copper, and lead in ground water at 5410 and 5510 Airport Way South in Seattle, WA (Property). The Property corresponds to contiguous King County tax parcel numbers 386840-0270 and -386840-0271, which are 1.26 and 1.49 acres in size respectively, for a total of 2.75 acres.

**Area and Property Description:** The Property is currently used for industrial purposes and is located in an industrial area. A building is located on the southern parcel and a new warehouse-type building has recently been constructed on the northern parcel. The neighboring properties to the north and east are active rail lines areas. Interstate 5 parallels the Property's eastern border at approximately 350 feet. The western side of the Property is bordered by Airport Way South. Both parcels are covered with asphalt, concrete and/or buildings.

**Property History and Current Use:** The Property was used for industrial purposes since the early 1900s. The southern part of the Property was used as an auto garage, wrecking yard and service station from the 1920s through the 1940s. It was then used as a machinist union hall until the 1990s. The northern part of the Property was used by Pacific Coast Coal Company in the 1940s and by the Preservative Paints Factory and Asphaltum Products Roofs and Mineral Paints dating back to 1920. Between the 1920s and 1950s the Property was used for industrial purposes and the presence of underground storage tanks (USTs) is documented.

Kelly Moore acquired the Property in 1994. Portions of the Property were then used as a paint manufacturing plant that blended paints and pigments until 2008. By 2010, Kelly Moore had vacated the Property and leased the northern half of the Property to a third party. In 2011, the southern portion of the Property was sold and in 2014, the southern portion was also sold.

The southern portion of the Property consists of a large warehouse building built in 1998 that is currently used for beer manufacturing. A new warehouse type building built in 2015 currently occupies the northern portion of the Property and is also expected to be occupied by the Elysian brewery. The buildings are not open to the public.

**Sources of Contamination:** Specific sources of contamination throughout the Property include a series of USTs and their associated piping, used to store paint manufacturing components and removed in 2009 and 2015. Potential leaks via sumps or catch basins may have also served as sources, however it is unknown when the Property was fully paved and the sumps and catch basins covered. Imported fill material is also believed to be a source of contamination as various fill materials have been noted during Site activities. Wood, coal, asphalt pieces and other unidentified fill materials have been observed at the Site in soil borings and excavations. Air

deposition is also suspected to be a source of contamination as the Site is located in a heavily industrial area and, between an interstate freeway, a major city arterial, and an active railyard. Activities by any of the former Property occupants may have also contributed to the contamination at the Site.

**Physiographic Setting:** The Property is located immediately west of Beacon Hill and along the eastern boundary of the Duwamish Valley floor. The Duwamish Valley contains the floodplain of the formerly meandering Duwamish River, which historically has been partially filled to prevent and control flooding and channelize the Duwamish Waterway.

**Surface/Storm Water System:** The surface water body closest to the Site is the Duwamish River approximately 0.9 miles west of the Property. Surface water runoff in the area is captured in municipal storm drains and transported to the nearest surface water drainage.

**Ecological Setting:** The surface of the Property is covered by two buildings and concrete or asphalt. Other surrounding areas in the Site vicinity are covered with asphalt or buildings. Georgetown Playfield, a 5.13-acre city park, is located approximately 300 feet southwest of the Property and contains grassy areas that could attract wildlife.

**Geology:** Soils encountered at the Site consist of mostly poorly-graded sand, silt and occasional gravel fill. Other historical fill materials encountered contained some brick and wood fragments, blackened or burned materials and crushed concrete. The maximum depth explored was 14.5 feet below ground surface (bgs).

**Ground Water:** Ground water occurs in a poorly graded sand and silt layer throughout the Site. Ground water flows to the west and was generally encountered between depths of 5.5 and 11.5 feet bgs.

**Water Supply:** The Property's drinking water is supplied by Seattle Public Utilities (SPU). Water provided by SPU is obtained from the Cedar and Tolt River watersheds.

**Release and Extent of Soil and Ground Water Contamination:** Due to the number of industrial activities that occurred at the Property, multiple USTs have been installed and removed over time and several remedial investigation activities have been completed. A record of every tank removal and a summary of the specific findings has not been provided to Ecology. The bullets below summarize the major remedial activities known to Ecology that have taken place at the Property:

- In 1985, six USTs used to store paint manufacturing components by a previous operator were removed.
- In 1987 and 1989, three additional USTs used to store diesel and Bunker C heating oil were removed from the Property.
- In 1997, a 300-gallon UST was found during demolition of an office building. No contamination was reportedly detected within the excavation boundaries.

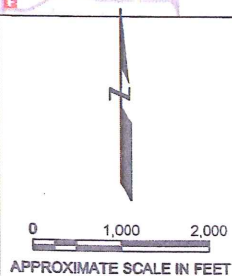
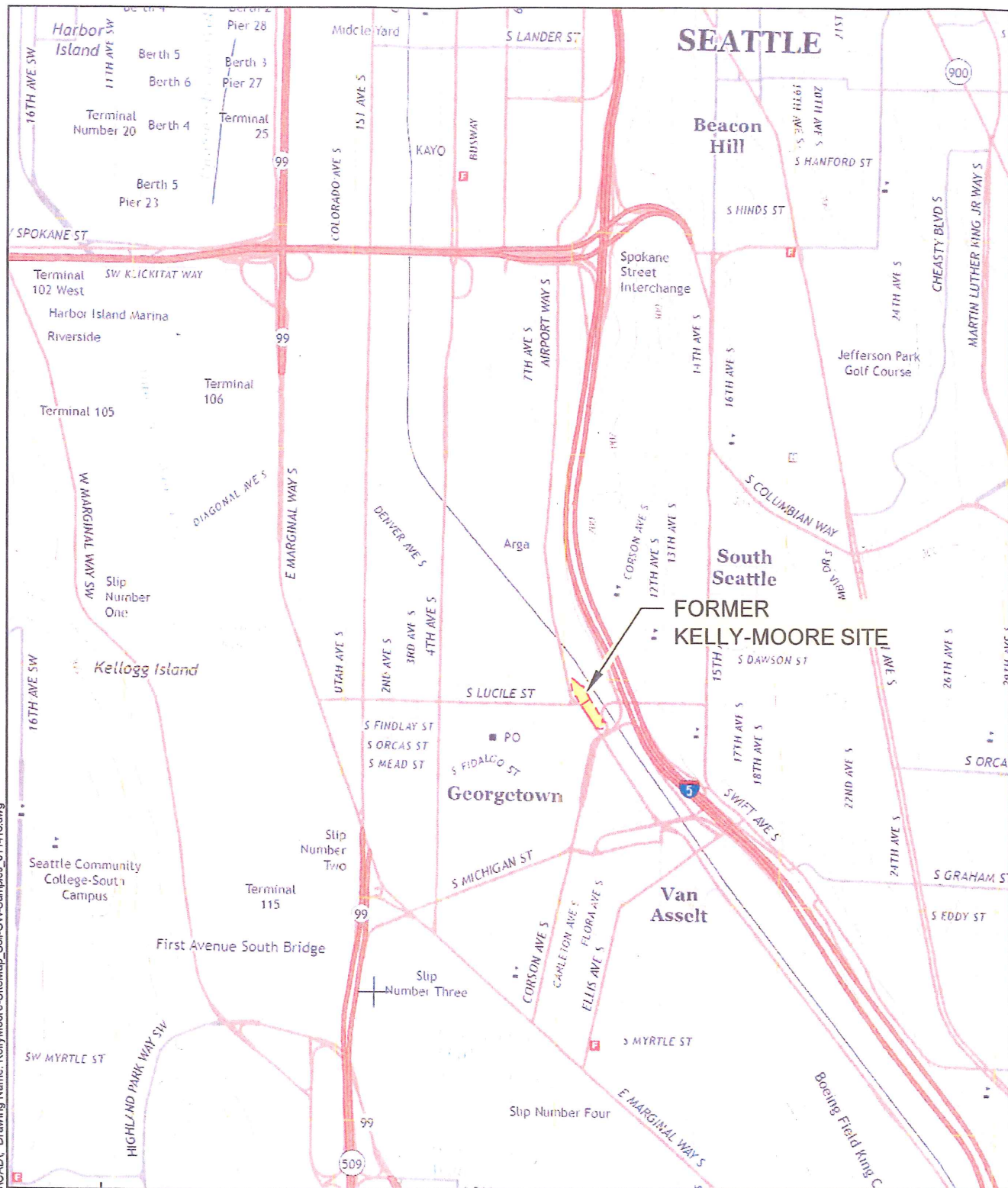


- An additional 14 USTs used to store paint manufacturing components were removed in 1997 and 1998. Soil sampling collected at the base and perimeter of the excavations reportedly indicated that several contaminants including VOCs and TPH as mineral spirits were detected at concentrations above the screening levels. No information on what the screening levels or the concentrations detected were provided. At this time 1,000 tons of contaminated soil were reportedly excavated and disposed off-Site. However, the excavation did not extend below the water table.
- As part of the facility closing in 2008, an evaluation for the presence of PCBs was completed. The results of the evaluation resulted in removal of PCB contaminated concrete debris from the buildings that were removed from the site. Two soil samples from the former scale pits located in Building 8 contained PCBs at concentrations of up to 100 milligrams per kilogram (mg/kg) which is above MTCA cleanup levels. No other soil samples were found with PCB concentrations above MTCA. In 2015, a final removal of PCB impacted materials was completed following guidance and oversight from the U.S. Environmental Protection Agency.
- In 2009, removal of nine additional USTs and associated piping was completed. Seven of the tanks had been installed in 1997 and contained products used in the paint manufacturing process. Two additional containment tanks were used for fire water and spill overflow. No obvious evidence of spills or leaks was observed. However, several sets of older piping were identified that were not associated to the USTs being removed, thus indicating that other USTs had been in that location previously. Soil was excavated at this location to a depth of 9.5 to 10.5 feet bgs. Following excavation, soil samples were collected from the sidewalls and the bottoms of the excavations. The analytical results of the samples indicated that some of the contamination remaining exceeded the screening levels for TPH-G, TPH-D and PAHs.
- Between 2009 and 2010, several sampling events were completed to provide an evaluation of soil and ground water conditions at the Site. Fourteen direct-push soil borings were advanced throughout the Site, ground water sampling was conducted in the northern part of the Property and an evaluation of the conditions beneath the building located in the southern portion of the Property were completed. Multiple detections of petroleum hydrocarbon constituents, cPAHs, lead, and vinyl chloride were observed in soil and ground water in different areas throughout the Property at concentrations above the screening levels.
- In 2011, additional soil and ground water sampling was conducted with the installation of monitoring wells KMW-01 through KMW-05. RI and Feasibility Study reports were submitted to Ecology in 2011, however, the proposed remedial actions were not completed as plans for the Property changed.
- In 2013, ground water sampling was conducted and a plan for monitored natural attenuation was submitted to Ecology. Ecology did not support the use of a monitored natural attenuation approach at the time and the unknown lateral extent of the ground water plume was brought up as a major data gap.

- In 2015, ground water samples were collected from 9 direct-push soil borings to evaluate current conditions. During the same year, after demolition of the existing buildings on the northern part of the Property, another UST was encountered and removed. Contamination on a sidewall and bottom of the excavation exceeded the screening levels for TPH-G, TPH-D, benzene, xylenes and/or naphthalene.

Hot spot soil excavations were completed in areas KM-19, KM-30, KM-32, KM-39 and KM-41. Samples were collected post excavation from the boundaries of the excavation, several contaminants were found to remain above the preliminary screening levels in all excavations including PAHs, TPH-D, and TPH-G.

An understanding of the areas of remaining soil and ground water contamination is not possible with the information provided in the report. Data gaps regarding the extent of the contamination in soil and ground water remain at this time.



**PROJECT LOCATION**  
Kelly-Moore Paint Company  
Seattle, Washington

By: APS	Date: 01/21/16	Project No. 14697
Amec Foster Wheeler Environment & Infrastructure, Inc.		Figure <b>2-1</b>

Plot Date: 01/21/16 - 12:40pm, Plotted by: adam.stenberg  
Drawing Path: S:\14697\014\_2015-RIF-SCAD, Drawing Name: Kelly-Moore-SiteMap\_Sol-GW-Samples\_011416.dwg





