STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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December 8, 2020

Vera Benton
Cherry Street Cleaners
PO Box 145
Grand Coulee, WA 99133

Re: Opinion on Proposed Cleanup of the following Site:

Site Name:	Cherry Street Cleaners
Site Address:	2510 E. Cherry Street, Seattle, Washington
Cleanup Site ID:	4175
Facility/Site ID:	4765174
VCP Project ID:	NW 2009

Dear Vera Benton:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the Cherry Street Cleaners 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?

NO. Ecology has determined that, upon completion of your proposed cleanup, no 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 as follows.

Description of the Site

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

- Tetrachloroethene, trichloroethene, cis 1,2-dichloroethene and vinyl chloride into the soil, groundwater, and 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. 2012 – 2013 Annual Report – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by ECC Horizon and dated June 28, 2013
2. Vapor Intrusion Assessment – Islamic School of Seattle – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by ECC Horizon and dated December 27, 2013
3. Remedial Investigation for Former Cherry Custom Cleaners – 2510 East Cherry Street – Seattle, Washington by ECC Horizon and dated September 2014
4. Commercial Building Vapor Intrusion Assessments at 2516 and 2518 East Cherry Street – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated December 1, 2017
5. Vapor Intrusion Assessment Report – 720 East 25th Avenue – Seattle, Washington – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated December 13, 2017
6. Vapor Intrusion Assessment Report – 720 East 25th Avenue – Seattle, Washington – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated November 7, 2018
7. Commercial Building Vapor Intrusion Assessments at 2516 and 2518 East Cherry Street – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated November 7, 2018
8. Annual Report – Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated June 30, 2019
9. Commercial Building Vapor Intrusion Assessment at 2516 E. Cherry Street and Inspection of 2518 E. Cherry Street – Former Cherry Street Cleaners – 2510 E. Cherry Street – Seattle, Washington by The ELAM Group and dated April 27, 2020
10. Vapor Intrusion Assessment Report – 720 E. 25th Avenue – Seattle, Washington – Former Cherry Cleaners – 2510 E. Cherry Street – Seattle, Washington by The ELAM Group and dated April 29, 2020
11. Feasibility Study - Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated July 9, 2020
12. Cleanup Action Plan - Former Cherry Street Cleaners – 2510 East Cherry Street – Seattle, Washington by The ELAM Group and dated July 9, 2020

A number of these documents are accessible in electronic form from the Site webpage (https://apps. ecology. wa. gov/cleanupsearch/reports/cleanup/all?SiteId=4175). 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 (https://ecology. wa. gov/About-us/Accountability-transparency/Public-records-requests), 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, upon completion of your proposed cleanup, **no 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 sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A.**

   In June of 2007, a soil boring was installed at the site. Two soil samples were collected from the soil boring and analyzed for gasoline, diesel, and oil. Gasoline, diesel, and oil were not detected in either of the soil samples. One grab groundwater sample was collected from the boring and analyzed for gasoline, diesel, oil, tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, carbon tetrachloride, and chloroform. Gasoline, diesel, and oil were not detected in the groundwater sample. Cis 1,2-dichloroethene, carbon tetrachloride, and chloroform were detected at low levels but no MTCA Method A standards for these contaminants were available. Tetrachloroethene and trichloroethene were detected at concentrations above their respective MTCA Method A standards.

   In January of 2008, six additional soil borings and three groundwater monitoring wells were installed on site. Two soil samples were collected from each soil boring and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, trans 1,2-dichloroethene, and vinyl chloride. Trans 1,2-dichloroethene and vinyl chloride were not detected in any of the twelve soil samples. Cis 1,2-dichloroethene was detected in six of twelve soil samples, with all six concentrations below the MTCA Method B standard. Trichloroethene was detected in eight of twelve soil samples, with four of eight concentrations above the MTCA Method A standard. Tetrachloroethene was detected in all twelve soil samples, with all concentrations above the MTCA Method A standard. Seven soil samples were collected from the three groundwater wells and analyzed for

the same analytes. Trichloroethene, cis 1,2-dichloroethene, trans 1,2-dichloroethene, and vinyl chloride were not detected in any of the seven soil samples. Tetrachloroethene was detected in all seven soil samples, with all concentrations below the MTCA Method A standard. One groundwater sample was collected from each of the three groundwater monitoring wells and analyzed for the same analytes. Trans 1,2-dichloroethene and vinyl chloride were not detected in any of the three groundwater samples. Cis 1,2-dichloroethene was detected in one of three groundwater samples, with the concentration below the then MTCA standard. Tetrachloroethene and trichloroethene were detected in all three groundwater samples, with all concentrations above their respective MTCA Method A standards.

In March and April of 2008, three additional soil borings and four additional groundwater monitoring wells were installed at the site. Seven soil samples were collected from the three soil borings and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, trans 1,2-dichloroethene, and vinyl chloride. Trichloroethene, trans 1,2-dichloroethene, and vinyl chloride were not detected in any of the seven soil samples. Cis 1,2-dichloroethene was detected in three of seven soil samples, all from the same boring, with all concentrations below the MTCA standard. Tetrachloroethene was detected in all seven soil samples, with six of seven concentrations exceeding the MTCA Method A standard. Eight soil samples were collected from the four new groundwater monitoring wells and analyzed for the same analytes. Trans 1,2-dichloroethene and vinyl chloride were not detected in five of the soil samples. Cis 1,2-dichloroethene was detected in one of five soil samples, with a concentration below the MTCA Method B standard. Trichloroethene was detected in one of five soil samples, with a concentration below the MTCA Method A standard. Tetrachloroethene was detected in four of five soil samples, with one of four concentrations exceeding the MTCA Method A standard. Three soil borings were analyzed only for total organic carbon. Groundwater samples were collected from each of the four new wells and analyzed for the same analytes. Trans 1,2-dichloroethene and vinyl chloride were not detected in any of the four groundwater samples. Cis 1,2-dichloroethene was detected in one of four groundwater samples, at a concentration below the MTCA Method B standard. Trichloroethene was detected in three of four groundwater samples, with all concentrations below the MTCA Method A standard. Tetrachloroethene was detected in all four groundwater samples, with three of four concentrations exceeding the MTCA Method A standard.

In September of 2008, four additional groundwater monitoring wells were installed at the site. Four soil samples were collected from three of the groundwater monitoring wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, trans 1,2-dichloroethene, and vinyl chloride. Trans 1,2-dichloroethene and vinyl chloride were not detected in any of the four soil samples. Trichloroethene and cis 1,2-dichloroethene were detected in two of four soil samples, with all concentrations below their respective MTCA Method A or Method B standards. Tetrachloroethene was detected in two of four soil samples, with both concentrations above the MTCA Method A standard. One groundwater sample was collected from each of the four new wells and analyzed for the same analytes. Trans 1,2-dichloroethene and vinyl chloride were not detected in any of

the four groundwater samples. Cis 1,2-dichloroethene was detected in one of four groundwater samples, with a concentration below the MTCA Method B standard. Trichloroethene was detected in two of four groundwater samples, with one of two concentrations above the MTCA Method A standard. Tetrachloroethene was detected in all four groundwater samples, with two of four concentrations exceeding the MTCA Method A standard.

In June of 2010, twenty-six injection wells and one additional groundwater monitoring well were installed at the site. Forty soil samples were collected from the well borings and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, chloroform, and methylene chloride. Vinyl chloride, carbon tetrachloride, and chloroform were not detected in any of the soil samples. Methylene chloride was detected in twelve of forty soil samples, with all concentrations below the MTCA Method B standard. Cis 1,2-dichloroethene was detected in fourteen of forty soil samples, with all concentrations below the MTCA Method B standard. Trichloroethene was detected in six of forty soil samples, with one of six concentrations exceeding the MTCA Method A standard. Tetrachloroethene was detected in thirty-nine of forty soil samples, with thirty-two of thirty-nine concentrations exceeding the MTCA Method A standard. Three soil samples were collected from the new groundwater monitoring well and analyzed for the same analytes. Cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, and chloroform were not detected in any of the three soil samples. Trichloroethene and methylene chloride were both detected in the same one of three soil samples, with both concentrations below the MTCA Method A standard and the MTCA Method B standard, respectively. Tetrachloroethene was detected in all three soil samples, with all three concentrations exceeding the MTCA Method A standard. One groundwater sample was collected from the new groundwater monitoring well and analyzed for the same analytes plus chlorobenzene, dichlorobromomethane, and total 1,2-dichloroethene (as well as cis 1,2-dichloroethene). Vinyl chloride, carbon tetrachloride, chloroform, methylene chloride, chlorobenzene, dichlorobromomethane, and total 1,2-dichloroethene were not detected in the groundwater sample. Cis 1,2-dichloroethene was detected in the groundwater sample, with the concentration below the MTCA Method B standard. Tetrachloroethene and trichloroethene were both detected in the groundwater sample, with both concentrations exceeding their respective MTCA Method A standards.

In November of 2011, a groundwater sample was collected from each of the twelve existing monitoring wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, chloroform, methylene chloride, total 1,2-dichloroethene, chlorobenzene, dichlorobromomethane, acetone, methyl ethyl ketone, and naphthalene. Vinyl chloride, carbon tetrachloride, chlorobenzene, dichlorobromomethane, and naphthalene were not detected in any of the groundwater samples. Chloroform was detected in four of twelve groundwater samples, with all concentrations below the MTCA Method B standard. Acetone and methyl ethyl ketone were detected in the same four of twelve groundwater samples, with all concentrations below the MTCA Method B standard for acetone. No standard was available for methyl

ethyl ketone. Cis 1,2-dichloroethene was detected in two of twelve groundwater samples, with both concentrations below the MTCA Method B standard. Total 1,2-dichloroethenes were detected in three of twelve groundwater samples, with all concentrations below the MTCA Method B standard. Trichloroethene was detected in five of twelve groundwater samples, with two of five concentrations exceeding the MTCA Method A standard. Tetrachloroethene was detected in ten of twelve groundwater samples, with nine of ten concentrations exceeding the MTCA Method A standard.

In February of 2012, eleven additional soil borings were installed on site. Forty-eight soil samples were collected from the eleven soil borings and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene. Total 1,2-dichloroethene, vinyl chloride, methylene chloride, carbon tetrachloride, and naphthalene were not detected in any of the forty-eight soil samples. Other detections included chloroform (one of forty-eight samples), benzene (three of forty-eight samples), ethylbenzene (fourteen of forty-eight samples), toluene (twenty-five of forty-eight samples), xylene (twenty of forty-eight samples), cis 1,2-dichloroethene (one of forty-eight samples), and trichloroethene (seven of forty-eight samples). All detections were below their respective MTCA Method A or Method B standards. Tetrachloroethene was detected in thirty-four soil samples, with thirteen of thirty-four concentrations exceeding the MTCA Method A standard.

In July of 2012, six additional groundwater monitoring wells were installed at the site. Twenty-two soil samples were collected from the six groundwater wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene. There were no detections of any analyte in any soil sample except for naphthalene (one detection in twenty-two samples) and tetrachloroethene (one detection in twenty-two samples). Both concentrations were below their respective MTCA Method A or Method B standards. Groundwater samples were collected from eighteen new and existing wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, chloroform, total 1,2-dichloroethene, chlorobenzene, dibromochloromethane, acetone, methyl ethyl ketone, and naphthalene. Vinyl chloride, carbon tetrachloride, chlorobenzene, dibromochloromethane, and naphthalene were not detected in any of the eighteen groundwater samples. Acetone and methyl ethyl ketone were detected in four of eighteen groundwater samples, with all concentrations below the MTCA Method B standard (acetone). No standard has been published for methyl ethyl ketone. Chloroform was detected in six of eighteen groundwater samples, with all concentrations below the MTCA Method B standard. Cis 1,2-dichloroethene was detected in four of eighteen samples, with all concentrations below the MTCA Method B standard. Total 1,2-dichloroethene was detected in four of eighteen samples, with all concentrations below the MTCA Method B standard. Trichloroethene was detected in six of eighteen groundwater samples, with three of six concentrations exceeding the MTCA Method A

standard. Tetrachloroethene was detected in twelve of eighteen groundwater samples, with all twelve concentrations exceeding the MTCA Method A standard.

From October to December 2012, vapor intrusion studies were conducted on-site and at nine off-site locations. Sub-slab soil vapor samples were collected at nine of the ten locations, including the site. Indoor air samples were collected at six locations, including the site. The samples were analyzed for volatile organic compounds. The analytical results for soil gas showed four of nine locations, including the site, had tetrachloroethene and/or trichloroethene concentrations exceeding the respective MTCA Method B soil gas screening levels. Of the four locations, only the site had indoor air concentrations of tetrachloroethene and trichloroethene exceeding the MTCA Method B carcinogenic indoor air screening levels.

In November of 2012 and in February and June of 2013, three additional rounds of groundwater sampling were conducted. A total of fifty-four groundwater samples were collected and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, total 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, and dibromochloromethane. Dibromochloromethane and total 1,2-dichloroethene were not detected in any of the fifty-four groundwater samples. Vinyl chloride and carbon tetrachloride were detected in one of fifty-four groundwater samples (separate samples), with the concentration of carbon tetrachloride below the MTCA Method B standard and the concentration of vinyl chloride in excess of the MTCA Method A standard. Cis 1,2-dichloroethene was detected in six samples from two wells and one sample from a third well. All concentrations were below the MTCA Method B standard except for one of three detections in one well. Trichloroethene was detected in eighteen of fifty-four groundwater samples, with ten of eighteen concentrations exceeding the MTCA Method A standard. Tetrachloroethene was detected in thirty-six groundwater samples, with thirty-three of thirty-six concentrations exceeding the MTCA Method A standard.

In September and October of 2013, six additional groundwater monitoring wells were installed on site. Fifteen soil samples were collected from the monitoring wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene. There were no detections of any analyte except for two detections of tetrachorethene and one detections of trichloroethene. All three detections were in the same well, with the concentration of trichloroethene below the MTCA Method A standard and both concentrations of tetrachloethene exceeding the MTCA Method A standard. In November of 2013, groundwater samples were collected from the six new wells and three existing wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, chloroform, total 1,2-dichloroethene, chlorobenzene, dibromochloromethane, acetone, methyl ethyl ketone, and naphthalene. Carbon tetrachloride, chlorobenzene, chloroform, dibromochloromethane, and naphthalene were not detected in any of the groundwater samples. Total 1,2-dichloroethene was detected

in one of ten groundwater samples, with a concentration below the MTCA Method B standard. Acetone and methyl ethyl ketone were detected in one of ten groundwater samples (the same sample), with a concentration below the MTCA Method B standard for acetone. No standard has been published for methyl ethyl ketone. Vinyl chloride was detected in one of ten groundwater samples, with a concentration exceeding the MTCA Method A standard. Cis 1,2-dichloroethene was detected in one of ten groundwater samples, with a concentration below the MTCA Method B standard. Trichloroethene was detected in three of ten groundwater samples, with one of three concentrations exceeding the MTCA Method A standard. Tetrachloroethene was detected in four of ten groundwater samples (all older wells), with three of four concentrations exceeding the MTCA Method A standard.

In March of 2014, twenty-five additional soil borings were installed at the site. Seventy-three soil samples were collected from the soil borings and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene. Methylene chloride, carbon tetrachloride, benzene, and vinyl chloride were not detected in any of the soil samples. Xylene was detected in one of seventy-three soil samples, with a concentration below the MTCA Method A standard. Toluene was detected in one of seventy-three soil samples, with a concentration below the MTCA Method A standard. Naphthalene was detected in four of seventy-three soil samples, with all concentrations below the MTCA Method B standard. Ethylbenzene was detected in two of seventy-three soil samples, with both concentrations below the MTCA Method A standard. Chloroform was detected in two of seventy-three soil samples, with both concentrations below the MTCA Method B standard. Total 1,2-dichloroethene was detected in twenty-four of seventy-three soil samples, with all concentrations below the MTCA Method B standard. Cis 1,2-dichloroethene was detected in twenty-five of seventy-three soil samples, with all concentrations below the MTCA Method B standard. Trichloroethene was detected in forty-six soil samples, with one of forty-six concentrations exceeding the MTCA Method A standard. Tetrachloroethene was detected in fifty-seven soil samples, with fifty-three of fifty-seven concentrations exceeding the MTCA Method A standard.

In May of 2014, one new monitoring well was installed at the site. Two soil samples were collected from the well and three deep soil samples were collected from an existing shallow well. The five soil samples were analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene. None of the analytes were detected in any of the soil samples. Groundwater samples were collected from the new monitoring well and twenty-three existing wells and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, chloroform, total 1,2-dichloroethene, chlorobenzene, dibromochloromethane, and naphthalene. Naphthalene, dibromochloromethane, and chlorobenzene were not detected in any of the groundwater samples. Total 1,2-dichloroethene was detected in four of twenty-four groundwater samples, with all

concentrations below the MTCA Method B standard. Chloroform was detected in eleven of twenty-four groundwater samples, with all concentrations below the MTCA Method B standard. Carbon tetrachloride was detected in seven of twenty-four groundwater samples, with two of seven concentrations exceeding the MTCA Method B standard. Cis 1,2-dichloroethene was detected in four of twenty-four groundwater samples, with all four concentrations below the MTCA Method B standard. Trichloroethene was detected in nine of twenty-four groundwater samples, with four of nine concentrations exceeding the MTCA Method A standard. Tetrachloroethene was detected in all twenty-four groundwater samples, with nine of twenty-four concentrations exceeding the MTCA Method A standard.

In July of 2014, one additional groundwater monitoring well was installed at the site. Five soil samples were collected from the well and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene. Cis 1,2-dichloroethene, vinyl chloride, benzene, ethyl benzene, toluene, xylene, carbon tetrachloride, chloroform, methylene chloride, naphthalene, and total 1,2-dichloroethene were not detected in any of the five soil samples. Trichloroethene was detected in two of five soil samples, with both concentrations below the MTCA Method A standard. Tetrachloroethene was detected in four of five soil samples, with one of four concentrations above the MTCA Method A standard. One groundwater sample was collected from the well and analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, carbon tetrachloride, chloroform, total 1,2-dichloroethene, chlorobenzene, dibromochloromethane, and naphthalene. Naphthalene, chlorobenzene, and vinyl chloride were not detected in the sample. Cis 1,2-dichloroethene, total 1,2-dichloroethene, dibromochloromethane, chloroform, and carbon tetrachloride were detected in the sample, with all concentrations below their respective MTCA Method A or Method B standards. Tetrachloroethene and trichloroethene were detected in the groundwater sample, with both concentrations above their respective MTCA Method A standards.

In 2017, 2018, and 2020, vapor intrusion studies were conducted at three off-site locations. For 2516 and 2518 E. Cherry Street for 2017, 2018 and 2020, all contaminants of concern were below the MTCA Method B commercial indoor air screening levels although sub-slab soil gas concentrations exceeded the MTCA Method B soil gas screening levels. In 2020, the building at 2518 E. Cherry Street was vacant and no vapor intrusion measurements were made. For 720 E. 25th Avenue, in 2017, samples from the north and central portions of the building for soil gas and indoor air were below the MTCA Method B soil gas screening levels and indoor air screening levels. However, the south-central part of the building had detections of tetrachloroethene above the MTCA Method B soil gas screening level and indoor air measurements on the second floor of the building had concentrations of tetrachloroethene and trichloroethene in above the MTCA Method B indoor air cleanup level. In 2018, only the south-central and southern portions of the building were sampled. The results for the south-central portion of the building had a concentration of

tetrachloroethene above the MTCA Method B soil gas screening level. The southern portion of the building had a concentration of trichloroethene above the MTCA Method B soil gas screening level. In both cases, the indoor air concentrations were below their respective MTCA Method B indoor air cleanup levels. In 2020, only the south-central portion of the building had a sub-slab tetrachloroethene concentration that exceeded the MTCA Method B soil gas screening level. All other soil gas concentrations were below the MTCA Method B soil gas screening level. All indoor air concentrations were below the MTCA Method B indoor air screening level. The contaminants whose concentrations are referenced above are tetrachloroethene and daughter products.

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.

   Soil

   Tetrachloroethene – 0. 05 mg/Kg (MTCA Method A)

   Trichloroethene – 0. 03 mg/Kg (MTCA Method A)

   Cis-1,2-dichloroethene – 160 mg/Kg (MTCA Method B – non-cancer)

   Trans-1,2-dichloroethene – 1,600 mg/Kg (MTCA Method B – non-cancer)

   Vinyl Chloride – 0. 67 mg/Kg (MTCA Method B – cancer)

   Groundwater

   Tetrachloroethene – 5 µg/l (MTCA Method A)

   Trichloroethene – 5 µg/l (MTCA Method A)

   Cis – 1,2-dichloroethene – 16 µg/l (MTCA Method B – non-cancer)

   Trans 1,2-dichloroethene – 160 µg/l (MTCA Method B – non-cancer)

   Vinyl Chloride – 0. 2 µg/l (MTCA Method A)

Air

Tetrachloroethene – 9. 6 µg/m^3 (MTCA Method B – cancer)

Trichloroethene – 0. 37 µg/m^3 (MTCA Method B – cancer)

Vinyl Chloride – 0. 28 µg/m^3 (MTCA Method B – cancer)

A standard horizontal point of compliance, the property boundary, was used for soil contamination.

A standard vertical point of compliance, fifteen feet, for soils was established in the soils throughout the site from the ground surface to fifteen feet below the ground surface. Fifteen feet is protective for direct contact with the contaminated soil.

A standard vertical point of compliance, from the uppermost level of the saturated zone to the lowest depth that could potentially be affected, was used for groundwater contamination.

3. **Selection of cleanup action.**

Ecology has determined the cleanup action you proposed for the Site meets the substantive requirements of MTCA.

The proposed cleanup action includes the following steps:

1. Removal of one underground storage tank

2. Grading of a maximum of 300 cubic yards of soil from the surface of the Facility for off-site disposal (maximum depth: 2 feet below current grade)

3. Application of a chemical oxidation solution, concurrently with a soil stabilization amendment, to soil located between 2 and 10 feet below current grade via mechanical soil mixing

4. Collection of soil confirmation samples. Depending on the results obtained for the soil confirmation and/or groundwater confirmation samples, an institutional control may be necessary to prevent potential exposure to residual chlorinated volatile organic compounds

5. Grading of a maximum of 75 cubic yards of clean backfill material to restore surface grade to original grade

6. Application of hydroseeding to stabilize clean backfill material

7. Installation and operation of an ozone-generating treatment system, which will be used to inject ozone into the deep vadose zone soil and saturated soil for the purpose of oxidizing chlorinated volatile organic compounds and emulsified oil substrate

8. Collection of groundwater confirmation samples for eight consecutive quarters following completion of ozone injection

The methods selected above meets the minimum requirements for cleanup actions by providing a permanent solution, immediate restoration time frame, provides for confirmation monitoring, and protects human health and the environment.

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 Voluntary Cleanup Program (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. 180.

Contact Information

Thank you for choosing to clean up the Site under the VCP. As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our webpage [1]. If you have any questions about this opinion, please contact me by phone at 360-407-7223 or e-mail at christopher.maurer@ecy. wa. gov.

Sincerely,

Christopher Maurer

Christopher Maurer, P. E.
HQ - Toxics Cleanup Program

Enclosure: A – Site Description and Diagrams

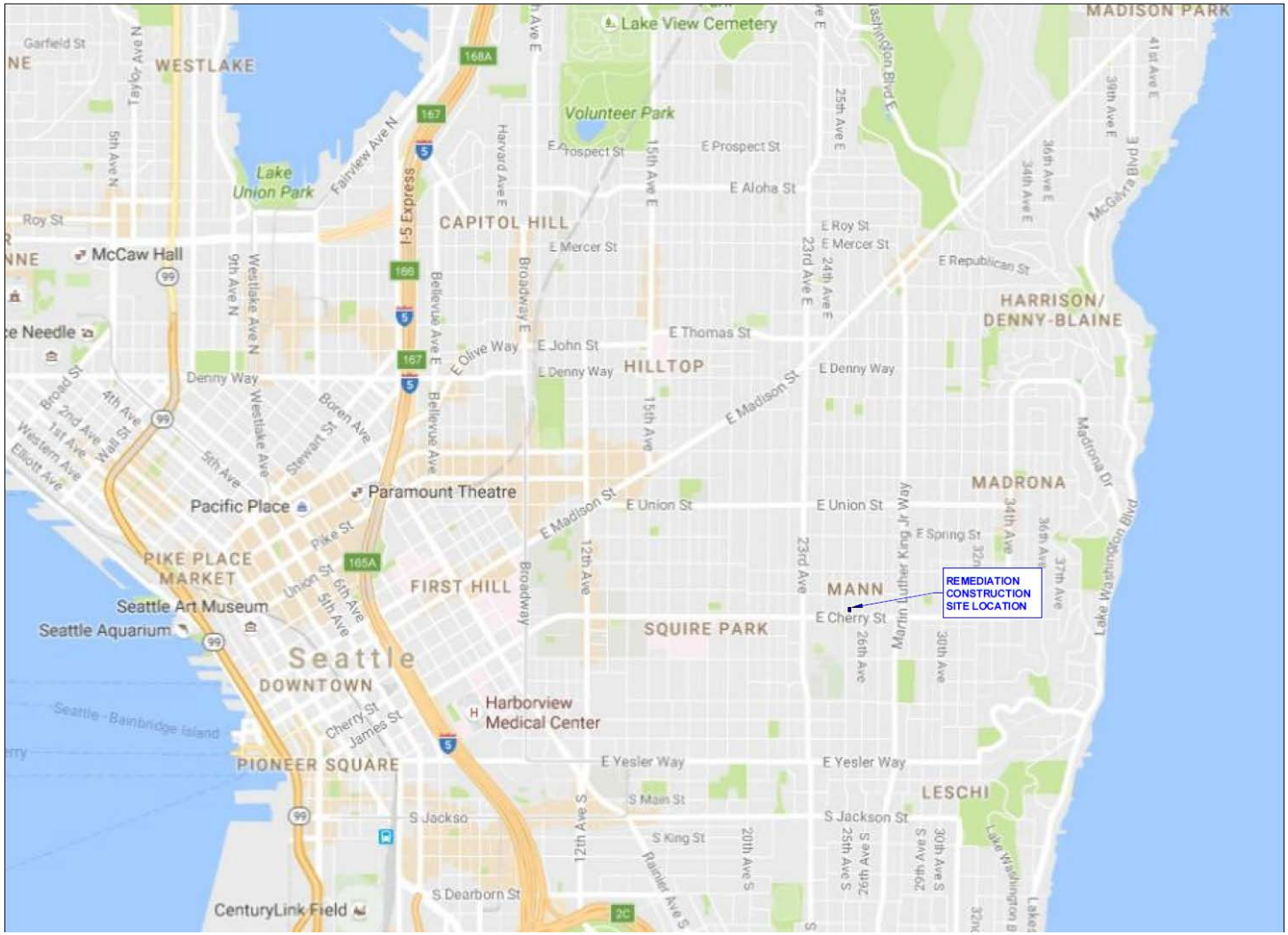
cc: James Hogan, ELAM

[1] https://www. ecy. wa. gov/vcp

Enclosure A

Description and Diagrams of the Site

PONCIN GAMMA ADD
Plat Block: **6**
Plat Lot: **7**


REMEDIATION CONSTRUCTION SITE LOCATION
Lake View Cemetery
MADISON PARK
WESTLAKE
Volunteer Park
Lake Union Park
CAPITOL HILL
McCaw Hall
HARRISON/ DENNY-BLAINE
HILLTOP
MADRONA
Pacific Place
Paramount Theatre
PIKE PLACE MARKET
FIRST HILL
MANN
SQUIRE PARK
Seattle Art Museum
Seattle Aquarium
Seattle
DOWNTOWN
Harborview Medical Center
PIONEER SQUARE
LESCHI
CenturyLink Field
I-5 Express
E Madison St
E Union St
E Cherry St
E Yesler Way
S Jackson St
E Denny Way
E Olive Way
E John St
E Thomas St
E Prospect St
E Aloha St
E Roy St
E Mercer St
E Republican St
Denny Way
Broadway
Broadway E
Pike St
Union St
Cherry St
James St
S Main St
S King St
S Dearborn St
Seattle - Bainbridge Island
Space Needle

TheELAMGroup

LEGEND

- Monitoring Well
- Soil Boring
- Injection Well
- Soil Vapor Extraction Well
- Vapor Monitoring Point
- Underground Sanitary Sewer Line
- Underground Water Line
- Underground Natural Gas Line
- Overhead Electric Line
- Utility Pole
- Tree
- Former Building Location
- Vapor Intrusion Assessment Location

Notes:

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N

0 30 60

Figure No: 2
Title: Site Plan
Scale: 1" = 30'
Project No: WAKS2510C
Report: CAP
Drawn by: The ELAM Group
Date: 06/11/2020

TheELAMGroup

LEGEND

- Monitoring Well
- Underground Sanitary Sewer Line
- Underground Water Line
- Underground Natural Gas Line
- Overhead Electric Line
- Utility Pole
- Tree
- Former Building Location
- Vapor Intrusion Assessment Location

Notes:

- A COC Concentration exceeds MTCA Method A.

JAMES PATRICK HOGAN

0 30 60

Figure No: 3	
Title:	Groundwater COC Plume Extent
Scale: 1" = 30'	
Project No: WAKS2510C	
Report: CAP	
Drawn by: The ELAM Group	
Date: 07/09/2020	

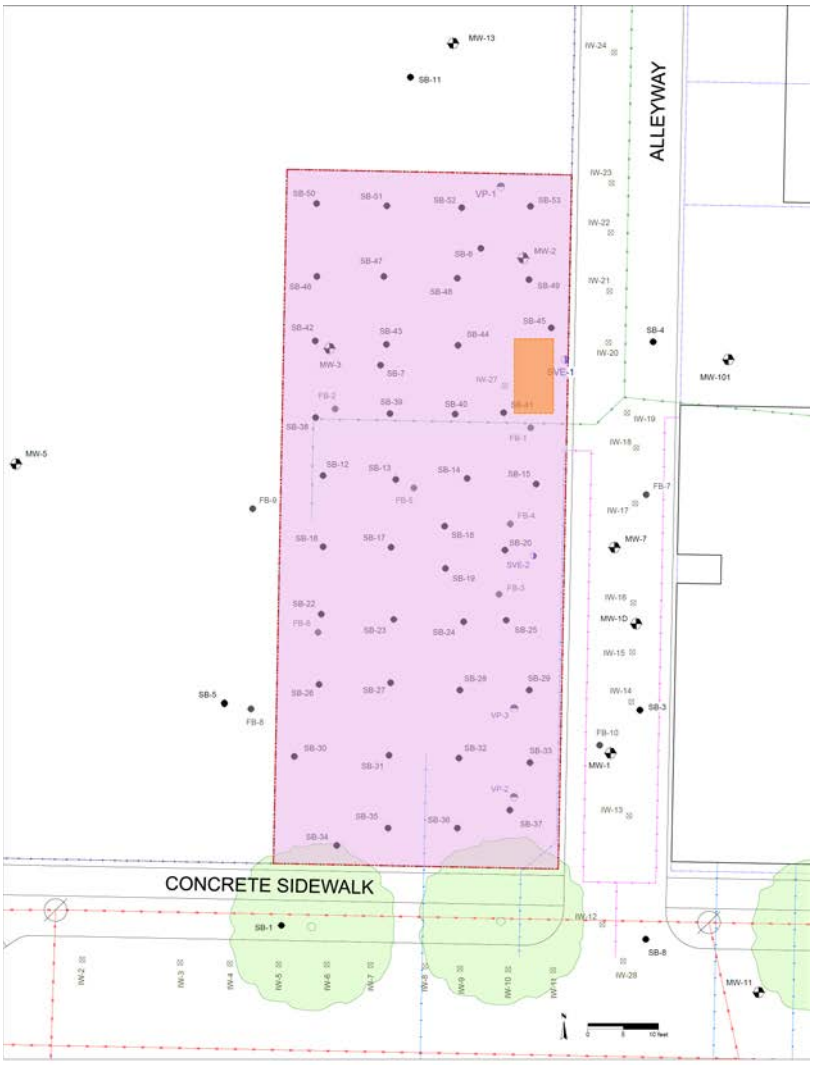

Figure No: 4	
Title: UST Removal and Soil Mixing/Grading	
Scale: 1 in = 5 ft	
Project No: WAKS2510C	
Report: Cleanup Action Plan	
Drawn by: The ELAM Group	
Date: 07/27/2020	

LEGEND

- Monitoring Well
- Vapor Point
- Soil Boring
- Injection Well
- Soil Vapor Extraction Well
- Tree
- Underground Sanitary Sewer Line
- Underground Water Line
- Underground Natural Gas Line
- Overhead Electric Line
- Utility Pole
- Property Boundary

Notes:

- Soil mixing and grading area; 1:1 slope in-cards at area edges
- Heating Oil Tank (HOT) excavation area

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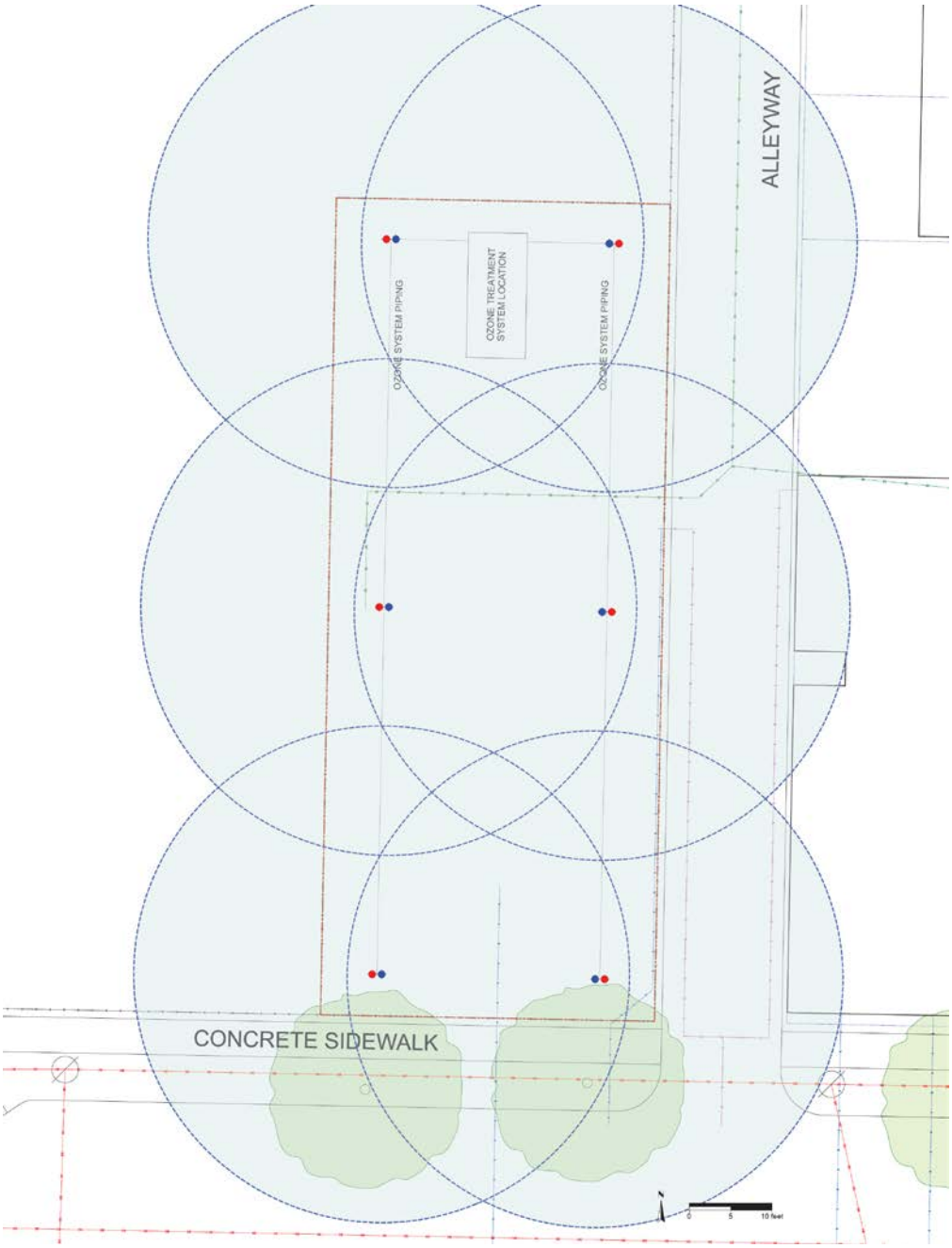
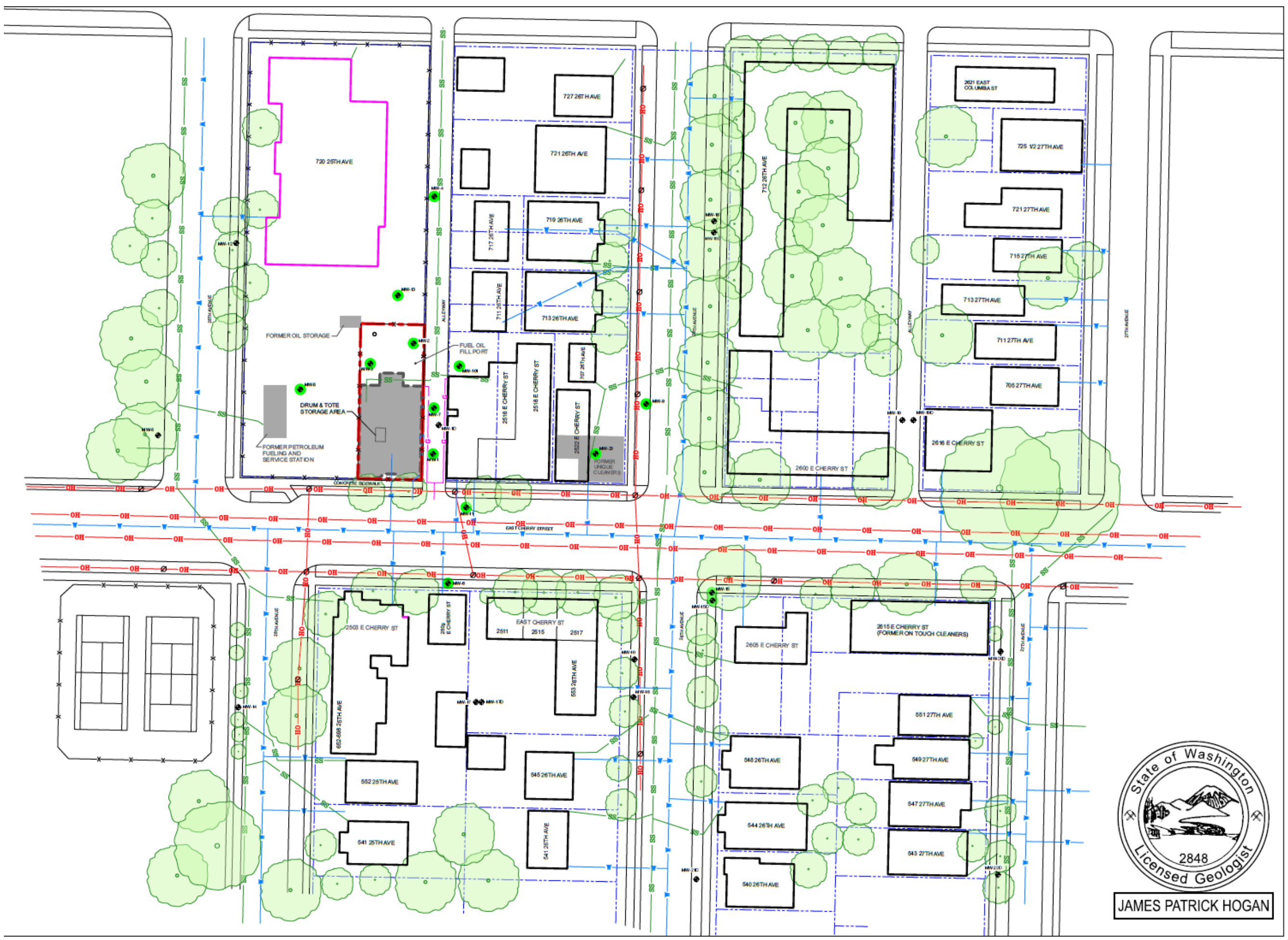

ALLEYWAY
OZONE SYSTEM PIPING
OZONE TREATMENT SYSTEM LOCATION
OZONE SYSTEM PIPING
CONCRETE SIDEWALK
0
5
10 feet



The ELAM Group

LEGEND

- Monitoring Well
- Soil Boring
- Injection Well / Soil Vapor Extraction Well
- Underground Sanitary Sewer Line
- Underground Water Line
- Underground Natural Gas Line
- Overhead Electric Line
- Utility Pole
- Tree

Notes:

Monitoring wells to be included in scheduled sampling events.

N

0 30 60

Figure No: 6

Title: Updated Monitoring Well Network

Scale: 1" = 60'

Project No: WAKS2510C

Report: CAP

Drawn by: The ELAM Group

Date: 07/30/2020