



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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August 18, 2015

Stewart Mhyre
Executive Director, Business & Operations
Edmonds School District No. 15
20420 68th Avenue West
Lynnwood, WA 98036

COPY

Re: No Further Action at the following Site:

- **Site Name:** Old Lynnwood High School
- **Site Address:** 3001 184th St. SW, Lynnwood, WA
- **Facility/Site No.:** 47469829
- **VCP Project No.:** NW2418
- **Cleanup Site ID No.:** 11606

Dear Mr. Mhyre:

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

Issue Presented and Opinion

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

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

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

Description of the Site

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



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- Total Petroleum Hydrocarbons (TPH) into the Soil and Ground Water.
- Polycyclic aromatic hydrocarbons (PAHs) into the Soil.

Enclosure A includes a detailed description and diagrams 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 parcels 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. Associated Earth Sciences, Inc., Independent Remedial Action Report Old Lynnwood High School, December 5, 2014.
2. Ecology, Likely No Further Action Opinion on Proposed Cleanup, April 13, 2012.
3. Associated Earth Sciences, Inc., Draft Cleanup Action Plan VCP Project No. NW2418 Old Lynnwood High School, August 23, 2011.
4. Associated Earth Sciences, Inc., Phase II Environmental Site Assessment Addendum March 2011 Soil Sampling and Testing Results Lynnwood High School, April 20, 2011.
5. Associated Earth Sciences, Inc., Phase II Environmental Site Assessment Lynnwood High School, Jan. 28, 2011.
6. Shockey Brent, Inc., Environmental Site Assessment Phase I Audit Cypress Lynnwood, LLC Property, March 2008.
7. Shannon & Wilson, Inc., Summary Report, Lynnwood Senior High School Preliminary Hydrogeologic and Geotechnical Engineering Evaluation, June 22, 2000.
8. Landau Associates, Inc., Hydrogeologic Investigation, Lynnwood High School, March 27, 1998.

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 calling the NWRO resource contact at (425) 649-7235 or by e-mail to nwro_public_request@ecy.wa.gov.

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 **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

I. 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**.

A Phase I Environmental Site Assessment done on the former high school Property identified three conditions of potential concern: a leaking hydraulic fluid line used in operations of an elevator, a 10,000-gallon heating oil underground storage tank (UST), and a small UST outside a former auto shop class. Another condition of concern (an oily seep through cracks in the concrete floor slab of a former building) was later identified during demolition work.

The elevator shaft, heating oil UST, and oily seep were proximate in one area of the Property, which was mostly covered by the concrete slab. The area was characterized by excavating 16 exploration test pits mostly 5 to 9 feet deep, and advancing three deeper push-probe borings 11 to 20 feet below ground surface (bgs). Soil samples (23 total) were acquired from the pits and borings at optimal locations based on field screening. The soil samples were analyzed for TPHs: gasoline, diesel, and oil range (TPII-G, TPH-D, TPH-O), benzene, toluene, ethyl benzene and xylenes (BTEX), and PAHs. Cresols were tested for in two soil samples (because creosote-like material was found). A sample of water seeping from beneath the concrete slab was acquired and analyzed for TPH-D and TPII-O. Two borings 15 to 20 feet deep were installed to test ground water. A sample from one boring was analyzed for TPIIs and BTEX (the other boring was dry).

This work identified a subsurface area typified by: fill material containing abundant wood debris with minor concrete/construction debris, hydrocarbon/creosote odors, and shallow water seeps into the pits from beneath the floor slab – some with sheen and minor free product. Concentrations in excess of Method A screening levels for TPH-G, TPH-D, naphthalene, and carcinogenic PAHs (cPAHs) were found in soil in the identified area. The concentrations of cPAHs were determined as per the toxicity equivalency factor (TEF) method. Cresols were not detected. The shallow seep water contained highly elevated levels of TPH-D and TPH-O. Deeper ground water contained levels of TPIIs below Method A as per the one deep boring.

The Site characterization was adequate to determine the media of concern (soil and perched near-surface ground water), the contaminants of concern: TPIIs and PAHs; and probable sources: former leaking elevator hydraulic line and the fill material.

There was no contamination found above Method A associated with the heating oil UST in the Site characterization sampling (or when it was subsequently removed during the cleanup action). The small auto shop UST was not found during subsequent grading activities, and apparently had been removed.

The approximate aerial and vertical extent of the soil contamination was determined during the initial characterization work. The cleanup action subsequently selected for this Site was a remedial excavation, and during the implementation of this action the full extent of the contamination was enlarged and more precisely defined.

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.

Method A cleanup levels were selected for soil and ground water for the contaminants of concern. Soil cleanup levels based on a terrestrial ecological evaluation (TEE) exceed the Method A cleanup levels for the contaminants of concern at this Site. The point of compliance is throughout the Site (standard point of compliance). The cleanup standards established are acceptable and appropriate for this Site

3. Selection of cleanup action.

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

The cleanup action selected was a remedial excavation. All soil with chemical concentrations in excess of Method A cleanup levels would be excavated and removed from the Property to an approved facility for treatment and disposal. Confirmation sampling as outlined in a Sampling and Analysis Plan would ensure that excavation would remove contaminated soil to the cleanup levels. Contaminated water that could enter the excavation would be continually pumped to a storage tank. The water would be transported off-Property or pumped to the sanitary sewer as determined by testing. Ground water monitoring could be appropriate if determined during the cleanup action.

This selected cleanup action removes the contaminated media from the Property. It is protective of human health and the environment and permanent to the maximum extent.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

The remedial excavation was located primarily within the footprint of the former Building B of the high school. As the digging progressed, it was discovered that the building had been built upon numerous treated timber pilings. The pilings were considered contaminated media and were removed along with the contaminated soil. Most of the pilings were 8 to 12 feet in length, with some up to 20 feet long. An estimated 106 pilings were discovered and removed from the remedial excavation.

A total of 78 soil samples were acquired throughout the excavation in the areas of pilings removal and contaminated soil removal to demonstrate compliance with soil cleanup levels. All of the samples were analyzed for naphthalene and cPAHs. A select set of 23 samples scattered throughout the excavation were also analyzed for TPHs and lead. Compliance with the Method A cleanup level for cPAHs was determined using the TEF method. All sample results were below Method A cleanup levels for all contaminants except in six samples, which exceeded Method A for naphthalene and/or cPAHs. Additional soil was over-excavated in the areas of five of these samples. Soil remained in place at one sample acquired next to a piling 15 feet bgs on at the northwest edge of the excavation. Approximately 6,962 tons of contaminated soil were removed and disposed at the CEMEX landfill facility in Everett.

Water entered the excavation as work progressed, and dewatering was intermittently required. The water consisted of a combination of surface run off and seepage of near surface ground water. The water was sampled early during the project as digging progressed for disposal at three locations within the excavation and analyzed for TPH-D, TPH-O, BTEX, naphthalene, and cPAHs. The excavation water exceeded the Method A ground water cleanup level (0.1 ppb) for cPAHs at two locations (0.51 ppb and 0.29 ppb). A total of 99,010 gallons of water was removed from the excavation by vacuum truck for disposal. Discharge permits were later acquired, and an unknown amount of excavation water was also discharged into the storm drain system at the Site.

The remedial actions described above were adequate to achieve a permanent cleanup of the Site. The contaminated soil and treated timber pilings were excavated and removed from the Property. A significant volume of ground water was removed in the process and the actual area of impacted near-surface ground water was eliminated. The established cleanup standards for the Site were achieved except at one singular location below the compliance depth of 15 feet bgs.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

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

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).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#NW2418).

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 or the termination of the Agreement, please contact me by phone at (425) 649-7251 or e-mail at rnye461@ecy.wa.gov.

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Sincerely,



Roger K. Nye
NWRO Toxics Cleanup Program

Enclosure: A – Description and Diagrams of the Site

By Certified Mail: [9171 9690 0935 0107 0032 84]

cc: Jon Sondergaard, Associated Earth Sciences Inc.
Sonia Fernandez, VCP Coordinator, Ecology
Dolores Mitchell, VCP Financial Manager, Ecology

Enclosure A: Site Description and Diagrams

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 Site is an area of soil and near-surface ground water contaminated with TPIIs. The soil in this area is also impacted with PAHs. Treated wood debris and timber pilings (considered to be contaminated media) found in this same area are also a component of the Site.

Property and Area Description: The Site is within a 40-acre Property owned by the Edmonds School District located at 3001 184th Street SW in Lynnwood, Washington. Specifically the Site is located toward the center of Snohomish County parcel number 27041500103900, which is a 15.4-acre area of the 40-acre Property. The Property is situated west of Alderwood Parkway, north of 184th Street SW and south of Maple Road. Land use near the Property in all directions (except to the north and northeast) is commercial development and dense residential housing. Paved surfaces are widespread (Alderwood Mall is adjacent to the Property to the south). There are areas of undeveloped land adjacent to the Property to the north and to the northeast.

Property History and Current Use: Lynnwood High School occupied the 40-acre Property encompassing the Site from approximately 1970 until 2011. The Property was mostly undeveloped prior to construction of the high school. Heating fuel was stored in an 8,200-gallon UST, and a small UST was used by an auto shop. At the time of the RI and cleanup of the Site, the Property was vacant with paved parking areas, former sports fields, and foundations and floor slabs of former buildings. The Property is currently being developed as a Costco store facility.

Sources of Contamination: Probable long-term leakage of hydraulic fluid from an elevator hoist, treated timber pilings, and the fill material (which contained abundant wood debris). There was no significant contamination found associated with the USTs.

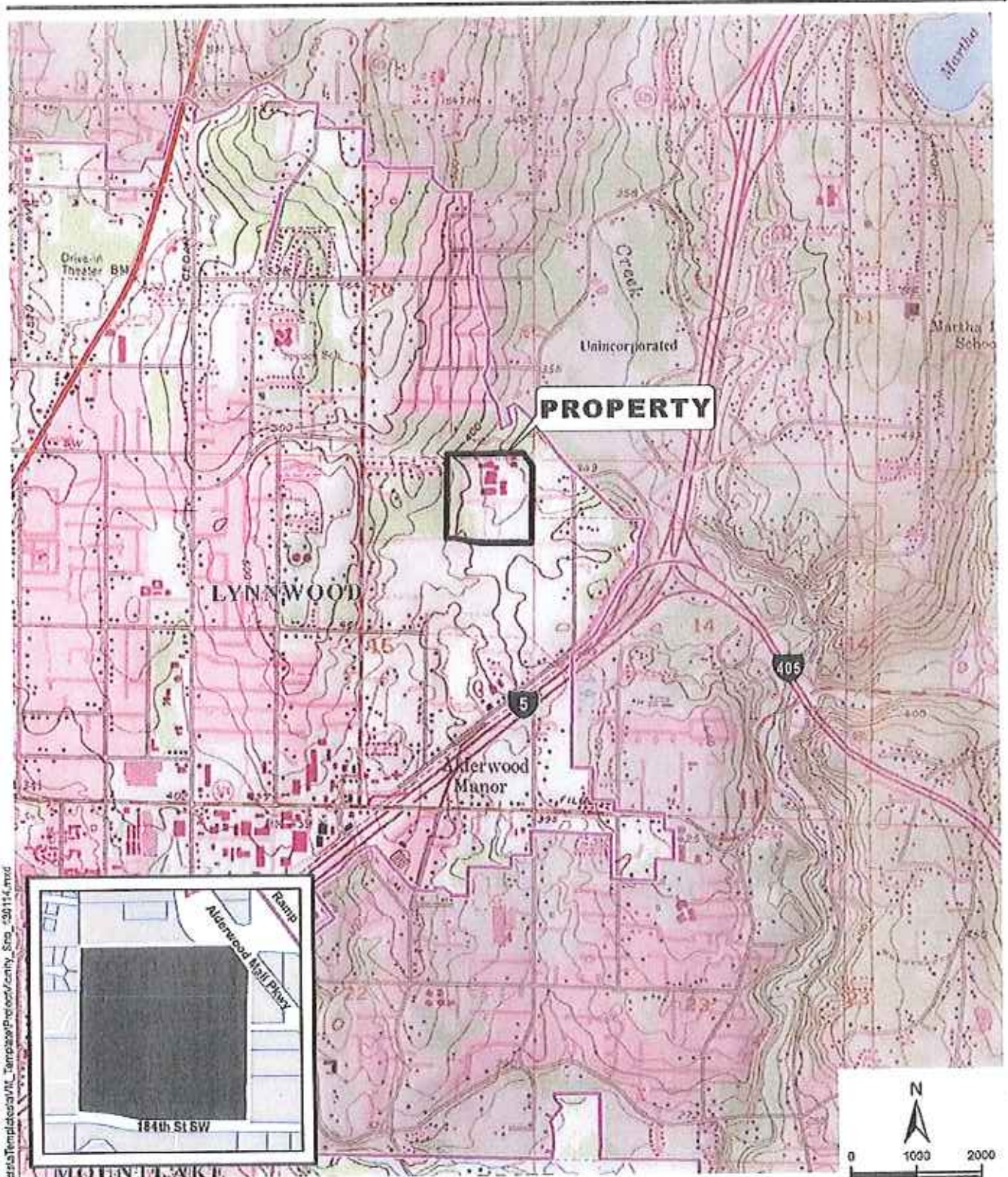
Physiographic Setting: The elevation of the Site is approximately 370 feet above mean sea level, and the land slopes gently down to the northeast. There are small ponds on land north of the Site, the nearest being ~250 feet to the north. A small marshy area is ~500 feet northeast of the Site, and extensive wetlands associated with Swamp Creek are ~1,500 feet to the northeast.

Ecological Setting: There is minor habitat available to terrestrial receptors near the Site via the adjacent undeveloped land to the north, and also a heavily wooded embankment along the west edge of the Property. However, the protective levels of listed contaminants of ecological concern for this Site (diesel range organics and benzo(a)pyrene) are above the Method A cleanup levels achieved at the Site - and therefore the Method A levels are considered more protective.

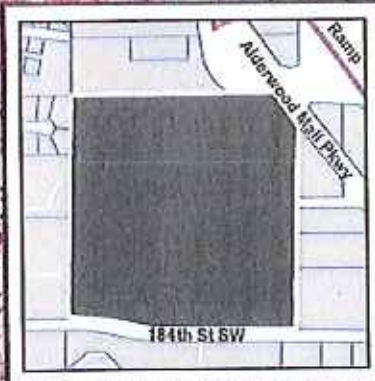
Geology: Man-placed fill material 5 to 10 feet thick overlies the Site. The fill consists of silty sand with minor gravel, and contains abundant wood debris with some construction debris. Native material beneath the fill to the maximum depth of exploration (20 feet bgs) is a complex assemblage of lacustrine sediments and glacial depositional material. Dense (till) material is typically encountered 15 to 20 feet bgs.

Groundwater: Water directly seeps onto the Property from the base of an embankment to the west resulting in ground water at very shallow depth within the Property. The former high school was plagued by ongoing surface seeps and seeps into buildings. This near-surface ground water occurs discontinuously. The ground becomes more consistently saturated 8 to 15 feet bgs as a perched zone above the dense (till) material 15 to 20 feet bgs. The shallow ground water regime moves to the east northeast.

Extent of Soil and Ground water Contamination: The remedial excavation covered an irregular area of approximately 14,000 square feet and extended to depths that varied between 4 to 18 feet bgs. Soil was removed 8 to 18 feet throughout approximately the northern half of the excavation.

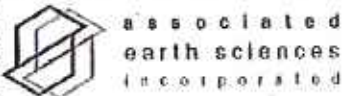


Document Path: H:\GIS\Projects\Templates\Map_Template\Project\County_Sig_030114.mxd



REFERENCE: USGS, SKOHOMISH CO

NOTE: BLACK AND WHITE REPRODUCTION OF THIS COLOR ORIGINAL MAY REDUCE ITS EFFECTIVENESS AND LEAD TO INCORRECT INTERPRETATION.



VICINITY MAP
 LYNNWOOD HIGH SCHOOL REMEDIATION
 LYNNWOOD, WASHINGTON

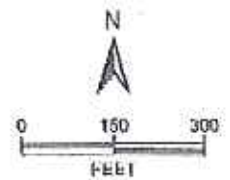
FIGURE 1
 DATE 12/14
 PROJ. NO. KV130114A



Project: 130114 Lynnwood Place\30114 Property Plan '2-1-23\11.dwg

REFERENCE: BING

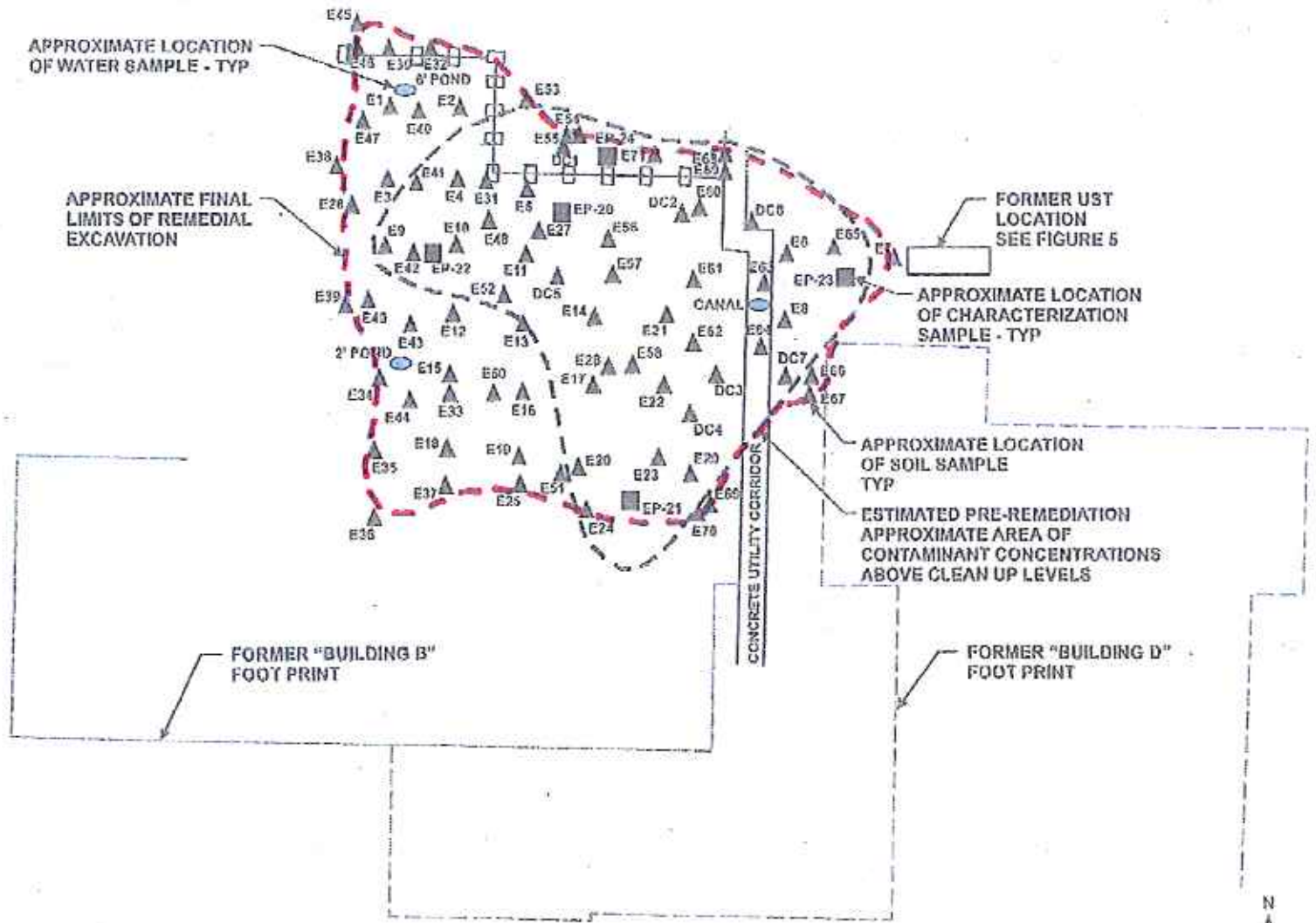
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PROPERTY PLAN
LYNNWOOD PLACE
LYNNWOOD, WASHINGTON

FIGURE 2
DATE 12/14
PROJ. NO. KV130114A



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IMPACT ITS EFFECTIVENESS AND LEAD TO INACCURATE INTERPRETATION.

SOIL SAMPLE LOCATION MAP
LYNNWOOD PLACE
LYNNWOOD, WASHINGTON

