



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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August 28, 2013

MR. NICHOLAS BAHN
MANOR MARKET
3609 164TH AVENUE SOUTHWEST
LYNNWOOD, WA 98087

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

- **Site Name:** Manor Market Deli
- **Site Address:** 3609 164th Avenue, Lynnwood, WA 98087
- **Facility/Site No.:** 77492944
- **Cleanup Site ID No.:** 11939
- **VCP Project No.:** NW2621

Dear Mr. Bahn:

Thank you for submitting documents regarding your proposed remedial action for the MANOR MARKET DELI 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 releases at the Site:

- Total petroleum hydrocarbons in the gasoline range (TPH-G), benzene, toluene, ethylbenzene and xylenes (BTEX) into the Soil
- Total petroleum hydrocarbons in the gasoline range (TPH-G), benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tert-butyl ether (MTBE) into the 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).

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 actions:

1. Associated Environmental Group, LLC, 2013. *Supplemental Remedial Investigation – 3rd Phase Workplan, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* June 10.
2. Associated Environmental Group, LLC, 2012. *Supplemental Remedial Investigation – 2nd Phase, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* April 5.
3. Associated Environmental Group, LLC, 2011. *Supplemental Site Characterization, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* September 14.
4. Envitech, Llc, 2011. *Phase II Environmental Site Assessment, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* April 26.
5. Envitech, Llc, 2010. *Phase I Environmental Site Assessment, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* November 8.
6. Quest, 1998. *Results of Underground Storage Tank Removal and Site Remediation Program at Manor Market, 3609 164th St. SW, Lynnwood, WA.* February 6.

The reports listed above will be 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 sending an email to nwro_public_request@ecy.wa.gov.

The Site is defined by the extent of contamination caused by the following releases:

- Total petroleum hydrocarbons in the gasoline range (TPH-G), benzene, toluene, ethylbenzene and xylenes (BTEX) into the Soil
- Total petroleum hydrocarbons in the gasoline range (TPH-G), benzene, toluene, ethylbenzene and xylenes (BTEX), methyl tert-butyl ether (MTBE) and lead into the Ground Water

The Site is more particularly described in Enclosure A to this letter, which includes detailed Site diagrams. 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 releases at the Site, Ecology has determined:**

Ecology has reviewed the Supplemental Remedial Investigation Work Plan – 3rd Phase Workplan (workplan) dated June 10, 2013. The investigative activities described in the workplan should help further define the nature and extent of contamination at the Site. Ecology has the following comments:

- Previously, in a boring drilled to install MW-1, benzene contamination in soil above the MTCA Method A cleanup level was found to occur just above and into the water column to a depth of 36 feet below the ground surface, the maximum depth explored. Thus, the vertical extent of contamination in soil has not been delineated at this location. Since the deepest soil samples to be collected (35 to 36.5 feet depth interval) will be used to verify the previous results, it may be necessary to go deeper in this area to determine the vertical extent of contamination.
- Figure 2 of the workplan as well as figures in previous AEG reports incorrectly labels the 'S' series of borings conducted by Envitech in 2011 as having been conducted by AEG. Future maps of the Site should correctly label the Envitech borings.
- There are two undeveloped greenbelts approximately 100 to 200 feet wide that are near the Property that may provide suitable habitat for terrestrial species. These areas need to be described and a determination made as to the size of contiguous undeveloped land within 500 feet of any part of the Site. A terrestrial ecological evaluation may need to be conducted in accordance with WAC 173-340-7490.
- Total lead was detected in ground water (MW-1 in May 2013) at a concentration of 19.9 µg/L which exceeds the MTCA Method A cleanup level of 15 µg/L. Ecology recommends ground water samples to be analyzed for metals also be filtered and analyzed for the dissolved fraction.

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

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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.

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) 649-7064 or e-mail at hvic461@ecy.wa.gov.

Sincerely,



Heather Vick, LHg
NWRO Toxics Cleanup Program

Enclosures (1): A – Description and Diagrams of the Site

cc: Michael Chun, Associated Environmental Group, LLC
Sonia Fernandez, VCP Coordinator, 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 total petroleum hydrocarbons in the gasoline range (TPH-G), benzene, toluene, ethylbenzene and xylenes (BTEX) in soil and ground water at 3609 164th Street SW in Lynnwood, Washington (Property). In addition, the Site is defined as methyl-tert-butyl-ether (MTBE) in ground water. The rectangular-shaped Property, which corresponds to Snohomish County parcel number 00372900300502, is approximately 0.75 acre in size. Manor Market Deli is a convenience store that sells gasoline located at the eastern end of a strip retail building on the Property that also includes a restaurant, salon and dry cleaner.

Area and Property Description: The Property is located approximately 0.25 mile west of Interstate 405 at the northwest corner of the intersection of 164th Street SW and 36th Avenue West. The Property is located in north Lynnwood in an area consisting of primarily residential land uses with some commercial uses in the immediate vicinity of the Property.

Property History and Current Use: The Property was used as farmland until the current improvements were constructed in 1982. The Property is currently occupied by a one-story, multi-tenant retail building that occupies approximately 7,000 square feet. Manor Market is a deli store that includes retail gasoline sales using three gasoline pump islands with twin dispensers under one canopy in the southeast part of the Property. Besides Manor Market, located in the easternmost space, other businesses include Zen Salon, Tokyo Teriyaki and Crystal Cleaners. A portable espresso stand, Java Hut, also operates on the Property.

Sources of Contamination: Potential contaminant sources on the Site consist of three 12,000-gallon, single-walled, underground storage tanks (USTs) that were installed in 1982. The USTs, two dispensers and associated piping and equipment were removed in 1998 when the existing UST system was installed. Soil contaminated with petroleum hydrocarbons was found beneath the Property during the upgrade. The former USTs were replaced with two 8,000-gallon double-walled tanks and new dispensers, piping and other ancillary equipment.

A former dry cleaning operation, Crystal Cleaners, was located in the westernmost tenant space (Unit D) beginning in 1991. In 1998, prior to the sale of the Property, a subsurface investigation was conducted that determined the presence of soils impacted by tetrachloroethene (PCE), a dry cleaning solvent. Crystal Cleaners was enrolled in the VCP as Site NW0179. Because the contamination was not found at elevated levels below a depth of 4.5 feet below the ground surface (bgs), a No Further Action (NFA) determination was issued by Ecology that included a Restrictive Covenant dated January 12, 1999. However, no ground water investigation was conducted at the time because it was thought that the first water bearing zone on the Property occurred at a depth of greater than 100 feet below the ground surface.

Physiographic Setting: The Site is located within the Puget Sound lowland in south Snohomish County. The Puget Sound lowland is an elongated (north-south) basin situated

between the Cascade Mountains on the east and the Olympic Mountains and Willapa Hills on the west. The lowland is blanketed by materials deposited during several glacial periods. The elevation of the Site is approximately 597 feet above mean sea level.

Surface/Storm Water System: The nearest surface water body to the Site is Lake Serene which is located 0.75 mile to the north.

Ecological Setting: The Property is primarily surrounded by residential and commercial land uses however there are two undeveloped greenbelts approximately 100 to 200 feet wide that are within 500 feet of the Property and may provide habitat for terrestrial species.

Geology: The Site area is mapped as Vashon glacial till. Shallow soil beneath the Site consists of very dense silt mixed with very fine sand and clay. At depths of approximately 25 to 30 feet bgs, fine to coarse sand and gravel were encountered which may be Advance outwash deposits.

Ground Water: In January 1998, no ground water was encountered to a depth of 12 feet bgs however, water was observed in the UST excavation basin immediately following UST removal. After approximately 2,800 gallons of water were pumped out, no additional water entered the excavation even after several days. Based on this, it is concluded that the water entering the excavation was surface water stored in the permeable UST backfill materials rather than ground water.

Site investigation activities conducted in 2012 encountered a perched ground water layer in all three monitoring wells that ranged in depth from 24.63 to 28.30 feet bgs. The direction of flow in March 2012 was determined to be to the northeast which is consistent with topographic contours in the Site vicinity.

Water Supply: The Site area is supplied with water from the Alderwood Water and Wastewater District. The Alderwood Water and Wastewater District receives treated and filtered water from the City of Everett. Everett's raw water supply originates from Spada Reservoir created by Culmback Dam on the Sultan River approximately 25 miles east of Everett. According to Ecology's well log database, no water supply wells are located within 0.25 mile of the Property.

Release and Extent of Soil and Ground Water Contamination:

Soil: Prior to the UST removal in 1998, a subsurface investigation was conducted in March 1997 to assess potential contamination in soil adjacent to the former tank pad. The investigation consisted of 7 soil borings advanced at locations immediately adjacent to the USTs and dispensers to a maximum depth of 12 feet below the ground surface with soil

samples collected and analyzed for TPH-G. No TPH-G was detected in any of the samples.

The three former USTs and related dispensing equipment were decommissioned in 1998 when petroleum-contaminated soil (PCS) was found during the removal. Approximately 1,000 tons of PCS were excavated and 2,800 gallons of water were removed from the excavation pit. Confirmation samples were collected from within the UST and dispenser areas. Five soil samples were collected from the UST excavation area, one sample from the along the fuel lines and two samples from under the dispenser area. Two soil samples from within the UST excavation area (one bottom and one sidewall) contained benzene at 0.1 mg/kg, above the MTCA Method A cleanup level of 0.03 mg/kg. None of the samples from the dispenser area/piping contained detectable hydrocarbons.

A Phase II Environmental Site Assessment conducted in April 2011 focused on the UST system, specifically the UST pad and fuel dispenser islands. Five soil borings were advanced using a direct push drill rig to a maximum depth of 16 feet bgs although refusal was encountered in three of the borings at 9 to 10 feet bgs. Soil samples south of the UST pad in boring S-2 and north of the northeast pump island in boring S-4 contained benzene at concentrations of 0.21 and 0.23 mg/kg respectively which is above the MTCA Method A cleanup level of 0.03 mg/kg.

In August 2011, four soil borings were advanced to further assess the subsurface. Borings B-1 and B-4 were advanced adjacent to the present day and former tank pad and borings B-2 and B-3 were advanced adjacent to the fuel dispensers. Soil analytical results indicated the presence of petroleum contaminated soil at two locations including B-1 south of the previous/current fuel tanks and B-3, adjacent to the northeast pump island.

Soil samples were collected from soil borings drilled for monitoring wells in February 2012. Soil samples for the boring drilled for MW-1 contained contamination exceeding Method A cleanup levels to a depth of 36.5 feet bgs, the maximum depth explored. At boring MW-3 (northeast of former LUSTs on the eastern side of the Site), benzene was detected at concentrations exceeding the Method A cleanup level at depths of 7 and 24.5 feet bgs.

Ground Water: In the 2011 investigation using four borings, ground water was only encountered in the deepest boring, B-1, at 23 to 24 feet bgs. A ground water sample collected from this boring contained TPH-G at 2,100 µg/L and benzene at 170 µg/L which both exceeded MTCA Method A cleanup levels. This sample was also analyzed for VOCs with none detected.

Three monitoring wells (MW-1 through MW-3) were installed in February 2012 to assess whether contamination was present in ground water across the Site. The wells were installed to straddle the water table encountered during drilling with screened intervals of 20

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to 25 feet. Only the ground water sample from MW-1 contained detectable hydrocarbons consisting of 9.9 µg/L of benzene which exceeds the Method A cleanup level.

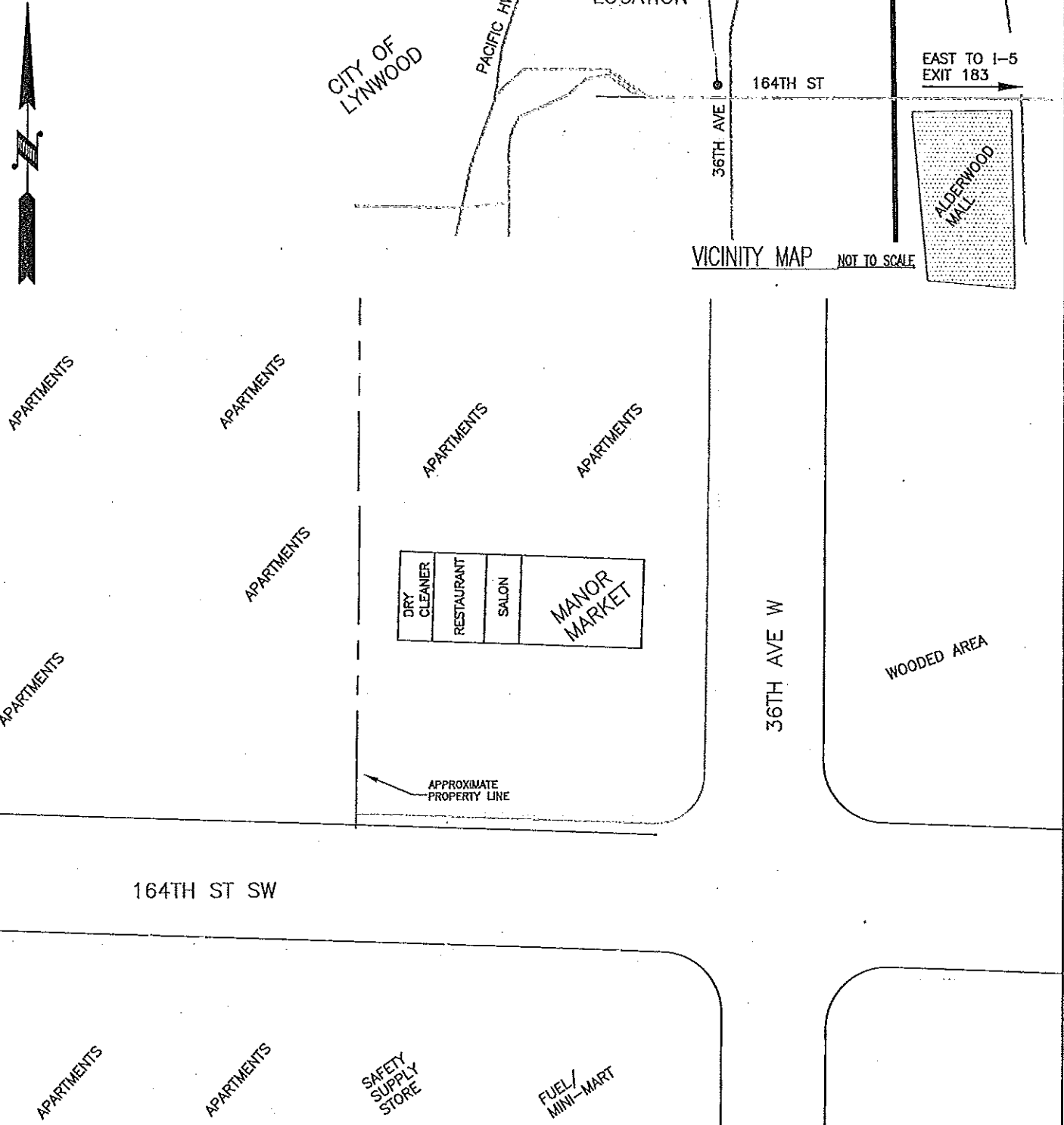
Soil Remediation: In 1998, following the former UST removal, approximately 777 tons of soil containing petroleum hydrocarbons were excavated from the former UST basin and approximately 159 tons of PCS were removed from the former dispenser and piping area.

Site Diagrams

Notes:

- (1) The locations of all features shown are approximate.
- (2) This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document.

Reference: Drawing created from surveyor's drawing by PACIFIC GEOMATIC SERVICES, Inc and notes provided by AEG, LLC



ASSOCIATED ENVIRONMENTAL GROUP, LLC

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FIGURE 1
SITE &
VICINITY MAP

MANOR MARKET

3609 164TH ST SW
LYNNWOOD, WA

Project# 11-124

Date: 9/08/2011

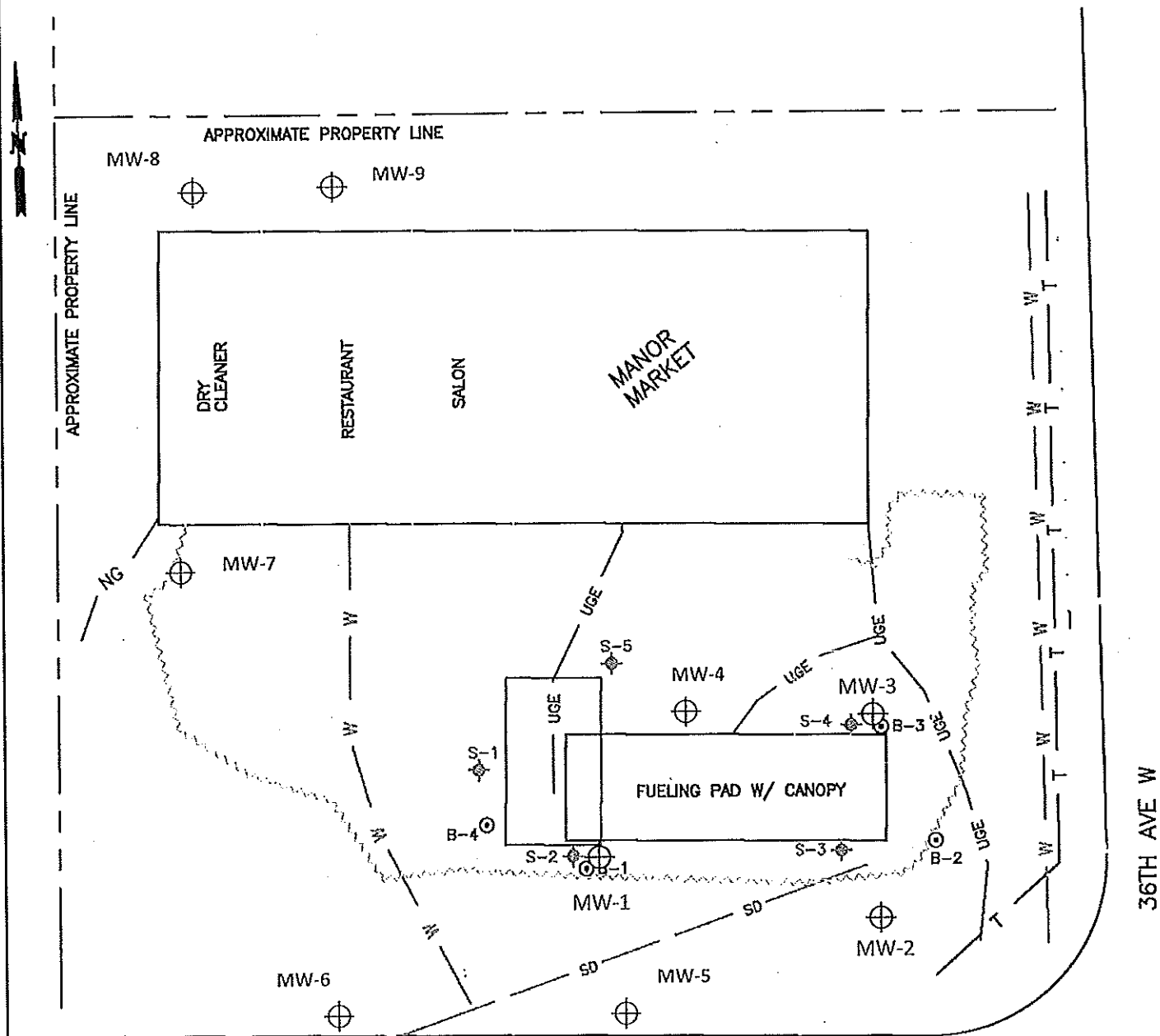
File:

Sheet 1 OF 2

Notes:

- (1) The locations of all features shown are approximate.
- (2) This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document.

Reference: Drawing created from notes provided by AEG, LLC.



Groundwater
Monitoring Well

Proposed Groundwater
Monitoring Well

LEGEND

- | | | | |
|---------|-------------------------|---------|------------------------|
| ⊕ S-1 | SAMPLES BY AEG | — W — | WATER LINE |
| ⊕ B-1 | BORINGS BY AEG | — UGE — | BURIED ELECTRICAL LINE |
| — BNG — | BURIED NATURAL GAS LINE | — T — | BURIED TELEPHONE LINE |
| — SD — | STORMWATER DRAIN LINE | | |

DRAWING SCALE: 1" = 30'

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**FIGURE 2
SITE PLAN**

MANOR MARKET
3609 164TH ST SW
LYNNWOOD, WA

Project# 11-124	Date: 9/09/2011
File:	Sheet 2 OF 2