STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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March 17, 2016

Mr. Michael Chun
Associated Environmental Group LLC
605 11th Ave SE
Suite 201
Olympia, WA 98501-2363

Re: Further Action at the following Site:

- **Site Name:** Holt's Quik Chek Market
- **Site Address:** 400 N Pacific Ave., Kelso, WA 98626
- **Facility/Site No.:** 87376683
- **VCP Project No.:** SW1445

Dear Mr. Chun:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Holt's Quik Chek Market 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?

YES. Ecology has determined that 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:

- Gasoline range total petroleum hydrocarbons (TPH-G) into the Soil and Groundwater.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) constituents into the Soil and Groundwater.

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. Associated Environmental Group, LLC (AEG), Request for No Further Action, January 7, 2016.
2. AEG, Subsurface Investigation, July 31, 2015.
3. AEG, Work Plan for Final Closure, July 31, 2015.
4. AEG, October 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report, November 5, 2015
5. AEG, April 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report, May 19, 2015
6. AEG, January 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report, February 4, 2015
7. AEG, Holt's Quik Chek Quarterly Groundwater Sampling results Summary, December 3, 2014.
8. State of Washington Department of Ecology (Ecology), Site Hazard Assessment, March 26, 2014.
9. AEG, Proposed Supplemental Remedial Investigation Work Plan, July 15, 2011.
10. State of Washington Department of Ecology (Ecology), Further Action Determination, June 18, 2007.
11. Farallon Consulting, LLC (Farallon), Final Quarter of Groundwater Monitoring, May 24, 2007.
12. Farallon, Site Closure Report, Holt's Quik Chek Site, March 9, 2007
13. EMCON, Phase I Environmental Site Assessment Report, December 5, 1997.

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6365.

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 **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site **is not** sufficient to establish cleanup standards and select a cleanup action. The Site is described below and in **Enclosure A**.

The contamination at the Site is not vertically and horizontally delineated in soil. AEGs 2015 investigation did not sufficiently delineate the extents of TPH-G, BTEX, and lead at the Site, and no additional constituents of concern have been analyzed. AEGs investigations show that;

- TPH-G is present in soil above the MTCA Method A cleanup level (CUL). Some of the MTCA Method A CUL exceedances are at depths shallower than 15 ft. below ground surface (bgs).
- Ethylbenzene and xylenes are present in soil above the MTCA Method A CUL. Some of the MTCA Method A CUL exceedances are at depths shallower than 15 ft. bgs.
- The full list of analytes listed in MTCA Table 830-1 were not analyzed for. Specifically, 1-2 dibromoethane (EDB), 1-2 dichloroethane (EDC), methyl tertiary-butyl ether (MTBE), and naphthalenes.

Historical investigations show that;

- TPH-G is present in soil above the MTCA Method A CUL. Some of the MTCA Method A CUL exceedances are at depths shallower that 15 ft. bgs.
- Ethylbenzene and xylenes are present in soil above the MTCA Method A CUL. Some of the MTCA Method A CUL exceedances are at depths shallower that 15 ft. bgs.

- Soil borings SB-5 and SB-6 and soil samples taken from monitoring wells MW-1 through MW-4 show no detectible lead. The locations of SB-5 and SB-6 are unknown. This makes it difficult to determine if lead has been delineated.

- The full list of analytes listed in MTCA Table 830-1 were not analyzed for. Specifically, EDB, EDC, MTBE, and naphthalenes.

The contamination at the Site has not been horizontally delineated in groundwater. Site investigations did not sufficiently delineate the extents of groundwater contamination at the Site. A down gradient well had been requested by Ecology to determine if contamination has moved off Site. Although an additional well was installed, this well was not placed in a down gradient location.

- With the exception of monitoring well MW-6, BTEX and TPH-G have dropped below MTCA Method A CULs.

- MW-6 is potentially an up gradient well and may be affected by an off-site source further up gradient.

- The full list of analytes listed in MTCA Table 830-1 were not analyzed for. Specifically, EDB, EDC, MTBE, and naphthalenes.

Exposure Pathways

Soil-Direct Contact:
Potentially Incomplete with asphalt and concrete used as institutional controls. Residual contamination remains on Site at depths less than 15 ft. bgs.

Soil-Leaching:
Potentially incomplete if groundwater contamination in well MW-6 is from a different source. The TPH in B-1, B-2, B-3 grab samples may not be truly representative of groundwater conditions. Adjacent well MW-2 and nearby well MW-4 are both below MTCA Method A CULs.

Soil-Vapor:
Potentially complete. No analysis has been done, and VOCs are present in both soil and groundwater. Some soil VOCs do exceed MTCA Method A CULs.

Groundwater:
Potentially incomplete if groundwater contamination in well MW-6 is from a different source.

Ecological:
Incomplete with asphalt and concrete used as institutional controls. AEG completed a Terrestrial Ecological Evaluation, and has determined that the Site is excluded from further evaluation on the bases that all contaminated soil, is or will be covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wild life, and institutional controls are used to manage remaining contamination.

AEG did not sufficiently characterized the extents of contamination from petroleum hydrocarbons and related constituents for the Site in soil, groundwater, and soil vapor. Additional efforts necessary are detailed below.
Based on a review of the available information, Ecology has the following comments:

1. Please determine the presence and extents of the constituents listed in MTCA Table 830-1 that are indicated for Gasoline Range Organics for the Site for all media. Assure that the laboratory method detection limits capture the CULs for all analytes. For example, Ecology recommends you incorporate the use of the EPA method 8011 for 1-2 dibromoethane (EDB) in water to assure the laboratory report level is at or below the CUL.

2. To vertically delineate the extents of contamination in soil at the Site:

    - Provide cross sectional figures depicting the vertical extents of contamination at the Site using all available data.
    - Additional sampling may be necessary to determine the upper and lower bounds of contamination at the Site.

3. To horizontally delineate the extents of contamination in soil at the Site:

    - Provide plane view maps depicting the horizontal extents of the contamination at the Site using all available data.
    - Additional sampling may be necessary to determine the full extent of contamination at the Site.

4. To show the relationship of potential off Site contamination sources, please provide a figure showing the former locations of the Cowlitz County Motor Pool (FSID 1692365) and the Union & Mobil gas station in relation the Site. The Sites boring locations and monitoring wells should also be included on this figure.

5. Ecology still requires a down gradient monitoring well. Because you have determined that the groundwater flow direction is north-northwest and not the previously assumed west word direction, monitoring well MW-7 is no longer a suitable down gradient well.

   Please install a monitoring well located down gradient from the USTs. Any soil samples taken during the installation of the down gradient monitoring well should be sampled for the constituents listed in MTCA Table 830-1. Groundwater from the down gradient well should be sampled for the constituents listed in MTCA Table 830-1.

6. Please include the locations of soil borings SB-5 and SB-6 along with monitoring wells MW-1 through MW-4 to help determine if there is no lead above MTCA Method A CUL for soil in the vicinity of the USTs or if additional sampling for lead in soil will be necessary. Any other lead in soil analysis from the Site should also be included.

7. Once the full nature and extent of contamination at the Site has been defined, cleanup alternatives can be identified. Please provide a complete Disproportionate Cost Analysis (DCA) that explores all the appropriate and feasible clean-up options for the Site, and examines actual costs versus benefits. A fully examined and supported DCA will be required before an Environmental Covenant can be applied to the Site.

8. In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated for Independent Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website http://www.ecy.wa.gov/eim. Be advised that according to the policy, any reports containing sampling data that are submitted for Ecology review are considered incomplete until the electronic data has been entered. Please ensure that data generated during on-Site activities is submitted pursuant to this policy. **Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination.** Please be sure to submit all soil and groundwater data collected to date, as well as any future data, in this format. Data collected prior to August 2005 (effective date of this policy) is not required to be submitted; however, you are encouraged to do so if it is available. Be advised that Ecology requires up to two weeks to process the data once it is received.

9. Submission of complete reports is a key aspect to achieving a No Further Action (NFA) on voluntary cleanup projects. Incomplete reports slow down the process and incur additional costs. Ecology recommends including the following items in further report submissions:

- When discussing the Site history, the source of the contamination and any source removal or mitigation activities should be included.
- Figures should be included that show the extent and source or sources of contamination.
- Cross sections should also include geologic layering that is in agreement with the boring logs and well logs used to construct the cross section.
- Cross sections should include source location and extents of contamination.
- All associated boring logs and well logs used in constructing a cross sections should be included with the cross sections.
- Time series maps presenting spatial/location relationships of laboratory data should be included.
    a. At least one map showing all available soil sample locations and results should be presented.
    b. At least one map showing all available groundwater sample locations and results should be presented.
    c. This data can also be broken out into time series maps or other groupings to avoid cluttered figures.
- Groundwater elevation contour maps from all 2014 and 2015 sampling events should be included to show any seasonal variances in groundwater flow direction. Please include post data in addition to elevation contour lines.
- Tables should also include relevant summary statistics for all datasets (soil, groundwater, and air). Relevant statistics may include minimum, maximum, mean, median, standard deviation, and number of samples in each set. For time-series data provide statistics for each sample location. Also provide site-wide summary of all data for each contaminated medium.
- A discussion of how sampling was conducted should be included. Please explain the methods used to determine sample locations and depths as well as methods for acquiring the samples and observations to be made in the field.
- When discussing the sampling conducted for the Site, tables of contaminants, with their sampling and analytical methods should be included.

- Field sampling logs relevant to the activities discussed should be included.
- Surveying data should be included. This is particularly important when trying to establish a new groundwater flow direction.
- Complete laboratory analytical reports relevant to the data being presented should be included.
- All data must be loaded into the Ecology Environmental Information Management (EIM) system upon submission of each report to Ecology.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site **do not** meet the substantive requirements of MTCA.

The Site has yet to be fully defined. As such, cleanup standards cannot yet be established. Currently, MTCA Method A soil and groundwater CULs for unrestricted land use are being used for the Site. Additionally, only the presence of TPH-G and BTEX have been explored throughout the Site. MTCA Table 830-1 list the constituents of concern that should be included in any sampling plan.
Standard points of compliance are currently being used for the Site. The point of compliance for protection of groundwater is established in the soils throughout the Site. For soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance is established in the soils throughout the Site from the ground surface to 15 feet below ground surface (bgs). In addition, the point of compliance for the groundwater is established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth that could potentially be affected by the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site **does not** meet the substantive requirements of MTCA.

Characterization of the Site will need to be completed before a final cleanup action can be identified.

4. Cleanup.

Ecology has determined the cleanup you performed does not meet any cleanup standards at the Site.

Cleanup actions at the Site to date have included biosparging (2003 to 2005) fallowed by a one-time application of an in-situ chemical oxidation remediation using activated sodium persulfate.

Compliance with Site cleanup standards within the Property cannot be determined because Site characterization is not sufficient to establish the Site cleanup standards. Site characterization will need to be completed before a cleanup option and Site cleanup standards can be established.

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

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (360) 407-6437 or e-mail at afie461@ecy.wa.gov.

Sincerely,

Aaren Fiedler
SWRO Toxics Cleanup Program

AF: ANF

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

By Certified Mail: 91 7108 2133 3939 7039 4297

cc: Han Kim
Matthew Alexander, Ecology
Nicholas Acklam, Ecology

Enclosure A

Description and Diagrams of the Site

Site Description

The subject property is located at the northeast corner of the intersection of North Pacific Avenue and Cowlitz Way at 400 North Pacific Avenue in Kelso, Washington. The property is approximately 0.22 acres and comprised of one building, two fuel pump islands, and an asphalt parking lot. The building is a 3,075 square-foot convenience store and deli. The area surrounding the subject property is comprised of a mix of commercial and residential development. Located immediately north of and adjacent to the property is Thomas Automatic Transmissions. To the east is a parking lot and across Third Avenue is the Dahl Rosemary Funeral home. Located to the west across North pacific Avenue is commercial office space and residential properties. To the south across Cowlitz Way is the First United Methodist Church. The property lies approximately 700 feet east of the Cowlitz River.

To date, the source of the releases has not been clearly stated and has not been clearly identified in any figures. Subsurface investigations conducted at the Site indicate the presence of petroleum contamination in both soils and groundwater, and no soil vapor investigations have been conducted. Although no effort to delineate the horizontal and vertical extent of the contamination, the horizontal extents appear to be located around the areas of the fuel dispensers, USTs, and extending to the west underneath N Pacific Ave. The vertical extents of the contamination have not been fully delineated.

Subsurface geology at the Site consists of silts and sands with an underlying siltstone layer. Sandy silt was encountered to a depth of approximately 13 ft. bgs.. Silty sand was encountered from approximately 13 ft. bgs. to approximately 22 ft. bgs.. Sand was encountered below 22 ft. bgs. The siltstone was encountered at 19 ft. bgs. at well MW-6 and 29.5 ft. bgs. at well MW-5. Although the groundwater flow direction was initially assumed to be to the west, a recent survey of all monitoring well top of casings has changed the groundwater flow direction to a north-northwest direction.

Contamination at the Site was initially discovered in 1997 during a Phase I Environmental Site Assessment (December 1997) where petroleum hydrocarbons were determined to be present above MTCA Method A CULs in both soil and groundwater. A Phase II Site Investigation Report (September 1997) was conducted in which the monitoring wells MW-1 through MW-4 were installed. Soil samples taken from the wells indicated the presence of TPH-G, TPH-D, benzene, ethylbenzene, and xylenes in exceedance of MTCA Method A CULs. Groundwater samples taken from the wells indicated the presence of TPH-G, benzene, ethylbenzene, xylenes, and total lead in exceedance of MTCA Method A CULs. This was followed by an Additional Phase II Site Investigation (November 1997) where groundwater samples were similar to those found in the previous Phase II except that lead levels had fallen below MTCA Method A CULs. In the spring of 2003, a biosparging system was installed that consisted of eight sparge wells with air sparged into the subsurface water at about 0.1 cubic foot per minute. The biosparge system was operated until September 2005. Following the biosparging, an in-situ chemical oxidation remediation using activated sodium persulfate was conducted.

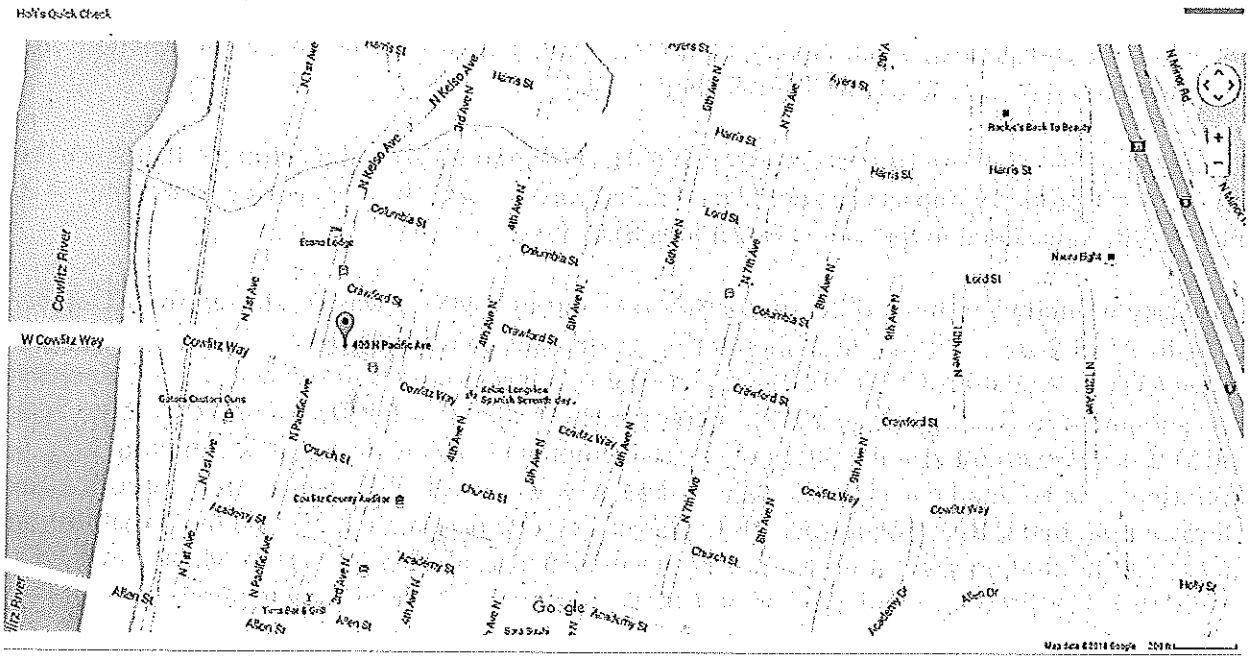
After these remediation activities were completed, a Site Closure Report (March 2007) was submitted to Ecology. Ecology issued a Further Action Determination letter (June 2007) in which it was recommended that a down gradient well be installed, that the potential of an Environmental Covenant be explored, and that a feasibility study with a DCA should have been conducted prior to any remedial activities. Ecology had also determined that the characterization of the Site did not meet the substantive requirements of MTCA and that it was not apparent whether soil contamination remained above MTCA Method A CULs.

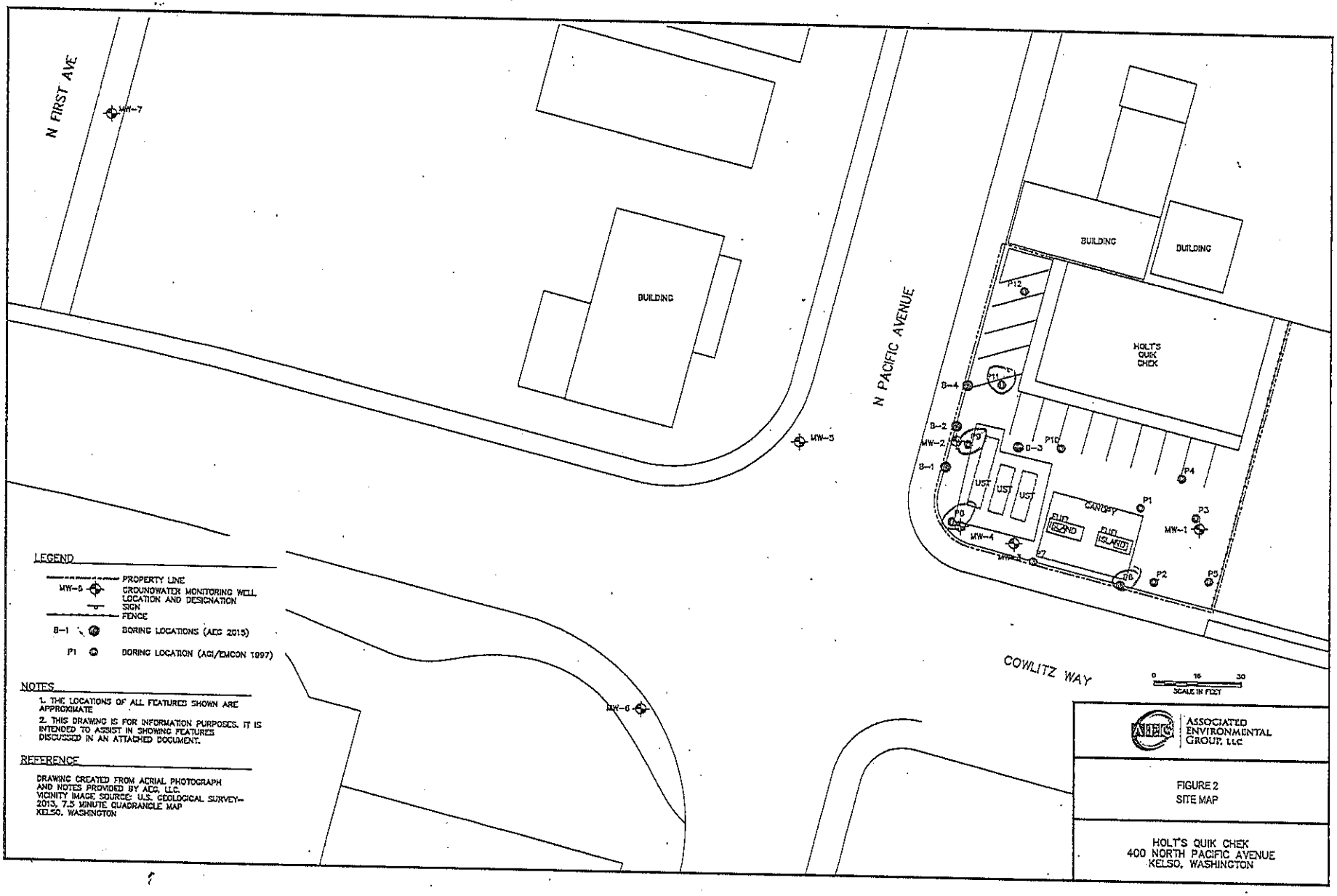
Ecology conducted a Site Hazard Assessment (SHA) (March 2014) and determined that since the extent of off-property impacts has not been defined for this Site, the Site received a ranking of 2, and the Site was added to the state's Hazardous Sites List.

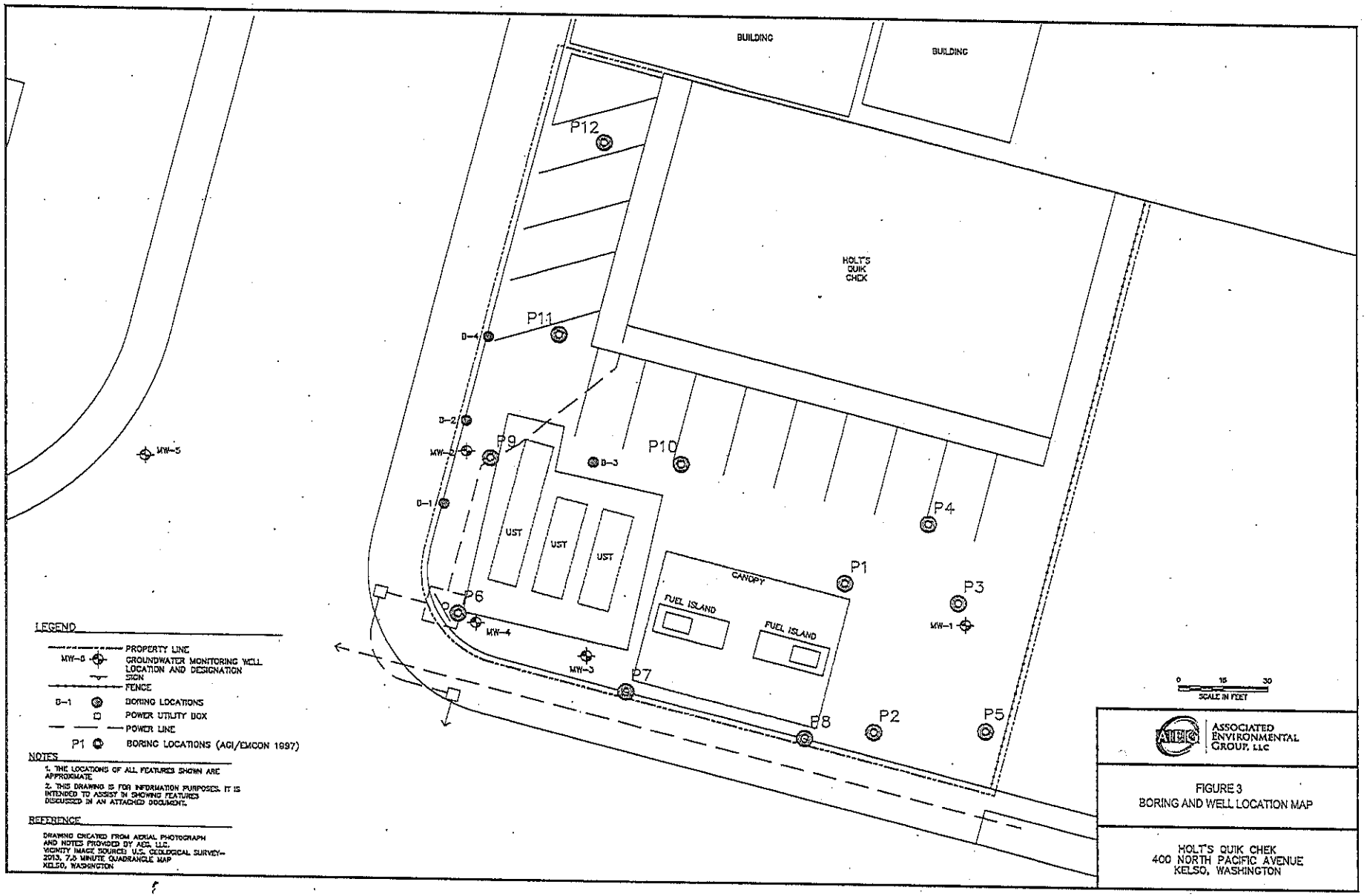
Quarterly groundwater monitoring of wells MW-1 through MW-5 was conducted from October 2014 to April 2015. During these monitoring events, no constituents of concern were detected above MTCA Method A CULs. Following these groundwater monitoring events, an NFA request was submitted to Ecology (May 2015). Ecology determined that Further Action (FA letter June 2015) was still warranted at the Site. Activities recommended were; to continue sampling MW-6, investigate down gradient of wells MW-5 and MW-6, to establish actual well top-of-casing elevations so that a true groundwater flow gradient can be determined, explore the possibility of an EC for the Site, to show four quarters of groundwater results below MTCA Method A CULs, complete a TEE, and to submit all data on EIM in addition to the hard copy reports.

AEG submitted a Subsurface Investigation (July 2015) where monitoring well MW-7 and soil borings B-1 through B-4 were advanced at the Site. MW-7 showed no detectible BTEX or TPH-G in soil or groundwater. Soil borings B-1 through B-4 were advanced in the vicinity of the USTs and show MTCA Method A CUL exceedances of ethylbenzene and xylenes in B1-25 and B4-15. Exceedances of MTCA Method A CULs for TPH-G were detected in B1-10, B1-25, B3-25, and B4-15. MW-7 was intended to be the down gradient well for the Site, however, updated and corrected well top-of-casing elevations has switched the groundwater flow gradient from west to north-northwest.

Site Diagrams




N FIRST AVE
N PACIFIC AVENUE
COWLITZ WAY
MW-7
MW-5
MW-6
BUILDING
BUILDING
BUILDING
HOLT'S QUIK CHEK
CANOPY
UST
UST
UST
FUEL ISLAND
FUEL ISLAND
MW-1
MW-2
MW-3
MW-4
B-1
B-2
B-3
B-4
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
LEGEND
PROPERTY LINE
GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SIGN
FENCE
BORING LOCATIONS (AEG 2015)
BORING LOCATION (AGI/EMCON 1997)
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 AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY-- 2013, 7.5 MINUTE QUADRANGLE MAP KELSO, WASHINGTON
0
15
30
SCALE IN FEET
ASSOCIATED ENVIRONMENTAL GROUP, LLC
FIGURE 2
SITE MAP
HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON


BUILDING
BUILDING
HOLT'S QUIK CHEK
P12
P11
P9
P10
P4
P1
P3
P6
P7
P8
P2
P5
B-4
B-2
B-3
B-1
MW-5
MW-2
MW-4
MW-3
MW-1
UST
UST
UST
CANOPY
FUEL ISLAND
FUEL ISLAND
LEGEND
PROPERTY LINE
MW-0 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SIGN
FENCE
B-1 BORING LOCATIONS
POWER UTILITY BOX
POWER LINE
P1 BORING LOCATIONS (AGI/EMCON 1997)
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0 15 30
SCALE IN FEET
ASSOCIATED ENVIRONMENTAL GROUP, LLC
FIGURE 3
BORING AND WELL LOCATION MAP
HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

Table 1 - Summary of Soil Analytical Results
Holt's Quik Chek
Kelso, Washington

Sample Number	Depth Collected (feet)	Date Collected	Volatile Organic Compounds (mg/kg)				Total Petroleum Hydrocarbons (TPH) (mg/kg)		
			Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil
MW-7-15	15.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	<10	<50	<100
B1-10	10.0	6/17/2015	<0.02	1.6	54	300	3,800	<50	<100
B1-25	25.0	6/17/2015	<0.02	<0.05	0.17	1.1	800	<50	<100
B2-15	15.0	6/17/2015	<0.02	<0.05	0.11	0.53	65	<50	<100
B2-25	25.0	6/17/2015	<0.02	<0.05	<0.05	0.27	37	<50	<100
B3-10	10.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	<10	<50	<100
B3-25	25.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	620	<50	<100
B4-15	15.0	6/17/2015	<0.02	0.53	13	96	2,700	<50	<100
B4-20	20.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	<10	<50	<100
PQL (mg/kg)			0.02	0.05	0.05	0.15	10	50	100
MTCA Method A Cleanup Levels (mg/kg)			0.03	7	6	9	100*	2,000	2,000

Notes:
mg/kg = milligrams per kilogram
-- Not analyzed for constituent
< Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* TPH-Gasoline Cleanup Level with no presence of Benzene anywhere at the Site

Table 2 - Summary of Groundwater Analytical Results
Holt's Quik Chek
Kelso, Washington

Sample Number	Date Collected	Volatile Organic Compounds (µg/l)				Total Petroleum Hydrocarbons (TPH) (µg/l)		
		Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil
MW-1	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	160	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	10/20/2015	<1.0	1.3	3.7	26	740	<250	<500
MW-2	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	140	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	10/20/2015	<1.0	<1.0	<1.0	<3.0	720	<250	<500
MW-3	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	10/20/2015	<1.0	<1.0	2.8	19	110	<250	<500
MW-4	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	10/20/2015	<1.0	<1.0	<1.0	<1.0	<100	<250	<500
MW-5	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	180	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	10/20/2015	--	--	--	--	--	--	--
MW-6	7/16/2015	45	3.1	<1.0	<3.0	180	--	--
	10/20/2015	43	2.6	1.1	8.0	430	<250	<500
MW-7	6/17/2015	<1.0	<1.0	<1.0	<1.0	<100	<250	<500
	7/16/2015	<1.0	<1.0	<1.0	<1.0	<100	--	--
	10/20/2015	<1.0	<1.0	<1.0	3.6	<100	<250	<500
B-1	6/17/2015	<1.0	2.5	36	160	1,400	<250	<500
B-2	6/17/2015	<1.0	<1.0	<1.0	<3.0	<100	540	<500
B-3	6/17/2015	<1.0	<1.0	<1.0	<3.0	<100	1,100	<500
B-4	6/17/2015	<1.0	<1.0	2.6	<3.0	<100	<250	<500
PQL (µg/l)		1.0	1.0	1.0	3.0	100	250	500
MTCA Method A Cleanup Levels (µg/l)		5.0	1,000	700	1,000	1,000*	500	500

Notes:
ug/L= micrograms per liter
-- Not analyzed for constituent
< Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* TPH-Gasoline Cleanup Level with no presence of Benzene anywhere at the Site

Table 3 - Summary of Groundwater Elevations
Holt's Quik Chek
Kelso, Washington

Well No./ TOC Elevation (feet)	Date	Depth to Water (feet)	Depth to Free Product (feet)	Free Product Thickness (feet)	Actual Groundwater Elevation (feet)	Change in Elevation (feet)
MW-1	10/7/2014	17.67	--	--	23.51	--
41.18	1/20/2015	14.75	--	--	26.43	2.92
	4/22/2015	16.09	--	--	25.09	-1.34
	7/16/2015	17.30	--	--	23.88	-1.21
	10/20/2015	17.98	--	--	23.20	-0.68
MW-2	10/7/2014	23.36	--	--	17.33	--
40.69	1/20/2015	22.02	--	--	18.67	1.34
	4/22/2015	22.00	--	--	18.69	0.02
	7/16/2015	23.15	--	--	17.54	-1.15
	10/20/2015	23.89	--	--	16.80	-0.74
MW-3	10/7/2014	22.49	--	--	18.41	--
40.9	1/20/2015	21.28	--	--	19.62	1.21
	4/22/2015	21.31	--	--	19.59	-0.03
	7/16/2015	22.28	--	--	18.62	-0.97
	10/20/2015	22.98	--	--	17.92	-0.70
MW-4	10/7/2014	23.36	--	--	17.50	--
40.86	1/20/2015	22.02	--	--	18.84	1.34
	4/22/2015	21.98	--	--	18.88	0.04
	7/16/2015	23.17	--	--	17.69	-1.19
	10/20/2015	23.94	--	--	16.92	-0.77
MW-5	10/7/2014	25.75	--	--	14.50	--
40.25	1/20/2015	24.31	--	--	15.94	1.44
	4/22/2015	24.08	--	--	16.17	0.23
	7/16/2015	25.46	--	--	14.79	-1.38
	10/20/2015	26.22	--	--	14.03	-0.76
MW-6	7/16/2015	11.37	--	--	29.37	--
41.74	10/20/2015	12.97	--	--	27.77	-1.60
MW-7	7/16/2015	17.83	--	--	12.46	--
30.29	10/20/2015	18.46	--	--	11.83	-0.63

Notes:
TOC = Top of casing elevation relative to assigned benchmark.
-- = Not measured, not available, or not applicable

Table 1
Historic Soil Analytical Results for Petroleum Hydrocarbons and Lead
Holt's Quik Chek Market
400 North Pacific Avenue
Kelso, Washington
Farallon PN: 359-001

Sample Identification	Date Sampled	Sampled By	Depth (ft)[1]	Soil Analytical Results (milligrams per kilogram)							
				GRO[2]	DRO[3]	ORO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Xylenes[4]	Total Lead[5]
P1-22	3/27/1997	AGI	22.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P2-18	3/27/1997	AGI	18.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P3-12	3/27/1997	AGI	12.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P4-18	3/27/1997	AGI	18.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P5-12	3/27/1997	AGI	12.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P6-20	3/27/1997	AGI	20.0	1900	-	-	<0.05	<0.1	1.2	<3	-
P6-25	3/27/1997	AGI	25.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P7-12	3/27/1997	AGI	12.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P7-20	3/27/1997	AGI	20.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P8-20	3/28/1997	AGI	20.0	200	-	-	<0.05	0.2	0.4	7.8	-
P8-16	3/28/1997	AGI	16.0	250	-	-	<0.05	0.1	0.4	8.4	-
P8-24	3/28/1997	AGI	24.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P9-12	3/28/1997	AGI	12.0	710	-	-	<0.05	<0.1	1.5	3.7	-
P9-28	3/28/1997	AGI	28.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P12-12	3/28/1997	AGI	12.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P10-24	3/28/1997	AGI	24.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P11-16	3/28/1997	AGI	16.0	12,000	-	-	8.7	220	110	760	-
P11-24	3/28/1997	AGI	24.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P12-12	3/28/1997	AGI	12.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
P12-20	3/28/1997	AGI	20.0	<	-	-	<0.05	<0.1	<0.1	<0.1	-
MW-1-14	6/24/1997	EMCON	14-15.5	ND	ND	ND	ND	ND	ND	ND	ND
MW-2-9.5	6/24/1997	EMCON	9.5-11	5,760	334*	ND	2.4	6.7	25	23	ND
MW-2-27	6/24/1997	EMCON	27-27.5	436	ND	ND	ND	ND	0.8	1.6	ND
MW-3-19	6/25/1997	EMCON	19-20.5	ND	ND	ND	ND	ND	ND	ND	ND
MW-4-19	6/25/1997	EMCON	19-20.5	1,280	209*	ND	ND	0.3	0.5	2	ND
MW-4-21.5	6/25/1997	EMCON	21.5-23	12	ND	ND	ND	ND	ND	ND	ND
SB-5-14.5	9/26/1997	EMCON	14-15.5	ND	ND	ND	ND	ND	ND	ND	ND
SB-6-7	9/26/1997	EMCON	7.0	2,270	37.2	ND	1.21	1.92	9.09	4.97	ND
SB-6-19.5	9/26/1997	EMCON	19.5-20	ND	ND	ND	ND	ND	ND	ND	ND
MTCA Method A Cleanup Levels for Soil[5]				30	2,000	2,000	0.03	7	6	9	250

NOTES:

Results in BOLD denote concentrations above MTCA Method A cleanup levels.

< denotes result is less than laboratory practical quantitation limit or analyte not detected at or above the reporting limit listed.

[1]Depth in feet below ground level.

[2]Analyzed by Northwest Method WTPH-G.

[3]Analyzed by Northwest Method WTPH-D (extended).

[4]Analyzed U.S. Environmental Protection Agency (EPA) Method 5030/8020.

[5]Analyzed by EPA Method 6010A.

[6]Washington State Department of Ecology Model Toxics Control Act Cleanup Regulation (MTCA) Method A Soil Cleanup Level, Table 740-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended February 2001.

- = not analyzed
ND = not detected
* = Detected hydrocarbons in the diesel range appear to be due to the overlap of gasoline-range hydrocarbons.
DRO = total petroleum hydrocarbons (TPH) as diesel-range organics
GRO = TPH as gasoline-range organics
ORO = TPH as heavy oil-range organics

Table 2
Analytical Results of Groundwater Samples
Holt's Quik Check
Kelso, Washington
Farallon PN: 359-001

Monitoring Well Identification	Sample Identification	Date Sampled	Sampled By	Analytical Results						
				Benzene[1]	Toluene[1]	Ethylbenzene[1]	Total Xylenes[1]	GRO[2]	DRO[3]	ORO[3]
MW-1	HQM-062797-1	6/27/1997	EMCON	<0.50	<0.50	<0.50	<1.0	<80	<250	<500
	MW-1-092697	9/26/1997	EMCON	<0.50	<0.50	<0.50	<1.0	<80	<250	<500
	MW-1-121597	12/15/1997	EMCON	<0.50	<0.50	<0.50	<1.0	<80	<250	<500
	MW-1-031398	3/13/1998	EMCON	<0.50	<0.50	0.64	<1.0	<80	<250	<500
	061198-MW-1	6/11/1998	EMCON	<0.50	<0.50	<0.50	<1.0	<80	<250	<500
	MW1-122304	12/23/2004	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW1-031705	3/17/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW1-062805	6/28/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
MW-2	HQM-062797-3	6/27/1997	EMCON	20.8	15.7	142	287	4,880	268	<500
	MW-2-092697	9/26/1997	EMCON	25.5	22.3	174	372	7,750	<250	<500
	MW-2-121597	12/15/1997	EMCON	33.3	20.5	238	461	8,650	<250	<500
	MW-2-031398	3/13/1998	EMCON	3.32	6.46	103	202	3,100	<250	<500
	MW-2-031398-D	3/13/1998	EMCON	2.72	5.74	94	181	2,860	<250	<500
	061198-MW-2	6/11/1998	EMCON	4.12	3.92	106	178	4,090	291	<500
	061198-MW-20	6/11/1998	EMCON	6.06	9.4	117	195	4,560	282	<500
	MW-2	3/13/2004	Farallon	12.2	1.89	15.1	7.47	2,560	—	—
	MW2-081904	8/19/2004	Farallon	4.4	1.56	7.45	4.06	1,110	—	—
	MW2-122304	12/23/2004	Farallon	4.54	0.507	1.56	1.15	678	—	—
	MW2-031705	3/17/2005	Farallon	2.25	<0.50	1.62	<1.0	506	—	—
	MW2-062805	6/28/2005	Farallon	7	<0.50	0.866	<1.0	940	—	—
	MW2-092805	9/28/2005	Farallon	11.5	<1.0	5.06	<3.0	1,060	—	—
	MW2-122905	12/29/2005	Farallon	0.908	<0.50	<0.50	<1.0	108	—	—
	MW-2-032406	3/24/2006	Farallon	3.54	<0.50	<0.50	<1.0	362	—	—
	MW2-062906	6/29/2006	Farallon	<0.500	<0.500	<0.500	<1.00	219	—	—
	MW-2-092106	9/21/2006	Farallon	2.95	<0.500	<0.500	<1.00	248	—	—
MTCA Method A Cleanup Levels for Groundwater[4]				5	1,000	700	1,000	800	500	500

Table 2
Analytical Results of Groundwater Samples
Holt's Quik Check
Kelso, Washington
Farallon PN: 359-001

Monitoring Well Identification	Sample Identification	Date Sampled	Sampled By	Analytical Results						
				Benzene[1]	Toluene[1]	Ethylbenzene[1]	Total Xylenes[1]	GRO[2]	DRO[3]	ORO[3]
MW-3	HQM-062797-2	6/27/1997	EMCON	0.8	<0.50	<0.50	<1.0	90.7	<250	<500
	MW-3-092697	9/26/1997	EMCON	<0.50	<0.50	<0.50	<1.0	<80	<250	<500
	MW-3-121597	12/15/1997	EMCON	1.3	<0.50	<0.50	<1.0	<80	<250	<500
	MW-3-031398	3/13/1998	EMCON	<0.50	<0.50	2.82	5.18	143	<250	<500
	061198-MW-3	6/11/1998	EMCON	<0.50	<0.50	<0.50	<1.0	<80	<250	<500
	MW-3	3/13/2004	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW3-122304	12/23/2004	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW3-031705	3/17/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<80	—	—
	MW3-062805	6/28/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW3-092805	9/28/2005	Farallon	<1.0	<1.0	<1.0	<3.0	<100	—	—
	MW3-122905	12/29/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW-3-032406	3/24/2006	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
MW-4	HQM-062797-4	6/27/1997	EMCON	1.6	<0.50	0.67	<1.0	691	<250	<500
	MW-4-092697	9/26/1997	EMCON	<0.50	<0.50	<0.50	<1.0	255	<250	<500
	MW-4D-092697	9/26/1997	EMCON	<0.50	<0.50	<0.50	<1.0	190	<250	<500
	MW-4-121597	12/15/1997	EMCON	3.78	<0.50	<0.50	<1.0	331	<250	545
	MW-4D-121597	12/15/1997	EMCON	3.76	<0.50	<0.50	<1.0	289	<250	<500
	MW-4-031398	3/13/1998	EMCON	<0.50	<0.50	1.74	3.26	124	<250	<500
	061198-MW-4	6/11/1998	EMCON	<0.50	<0.50	<0.50	<1.0	205	<250	<500
	MW4-122304	12/23/2004	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW4-031705	3/17/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW4-062805	6/28/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW4-092805	9/28/2005	Farallon	<1.0	<1.0	<1.0	<3.0	<100	—	—
	MW4-122905	12/29/2005	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW-4-032406	3/24/2006	Farallon	<0.50	<0.50	<0.50	<1.0	<50	—	—
	MW-4-092106	9/21/2006	Farallon	<0.500	<0.500	<0.500	<1.00	<50.0	—	—
MTCA Method A Cleanup Levels for Groundwater[4]				5	1,000	700	1,000	800	500	500

Table 2
Analytical Results of Groundwater Samples
Holt's Quik Check
Kelso, Washington
Farallon PN: 359-001

Monitoring Well Identification	Sample Identification	Date Sampled	Sampled By	Analytical Results						
				Benzene[1]	Toluene[1]	Ethylbenzene[1]	Total Xylenes[1]	GRO[2]	DRO[3]	ORO[3]
MW-5	MW-5-092697	9/26/1997	EMCON	14.5	1.07	20.8	17.7	2,740	<250	<500
	MW-5-121597	12/15/1997	EMCON	22.7	3.06	0.93	<1.0	2,510	<250	<500
	MW-5-031398	3/13/1998	EMCON	4.48	<0.50	9.03	1.47	1,080	<250	<500
	061198-MW-5	6/11/1998	EMCON	12.1	0.66	3.18	<1.0	1,730	<250	<500
	MW5-031705	3/17/2005	Farallon	7.48	0.983	1.77	3.65	1,190	—	—
	MW5-062805	6/28/2005	Farallon	4.67	<0.50	12.3	3.18	2,140	—	—
	MW5-092805	9/28/2005	Farallon	2.19	<1.0	<1.0	<3.0	<100	—	—
	MW5-122905	12/29/2005	Farallon	<5.0	<5.0	145	55	3,530	—	—
	MW-5-032406	3/24/2006	Farallon	2.91	<0.50	0.92	1.27	373	—	—
	MW5-062906	6/29/2006	Farallon	<0.500	0.576	<0.500	<1.00	710	—	—
	MW-5-092106	9/21/2006	Farallon	1.11	0.831	1.9	<1.00	180	—	—
	MW-5-041107	4/11/2007	Farallon	0.626	<0.500	<0.500	<1.00	124	—	—
MW-6	MW-6-092697	9/26/1997	EMCON	31.1	2.42	14	9.55	2,070	<250	<500
	MW-6-121597	12/15/1997	EMCON	210	6.32	<1.0	3.38	416	<250	<500
	MW-6-031398	3/13/1998	EMCON	244	<2.50	4.76	<5.0	<400	284	<500
	061198-MW-6	6/11/1998	EMCON	500	8.35	26	<5.0	750	354	<500
	MW6-081904	8/19/2004	Farallon	3.13	0.693	<0.50	<1.0	<50	—	—
	MW6-122304	12/23/2004	Farallon	13	0.695	<0.50	<1.0	<50	—	—
MTCA Method A Cleanup Levels for Groundwater[4]				5	1,000	700	1,000	800	500	500

NOTES:

Bold result exceeds Washington State Model Toxics Control Act Cleanup Regulation Method A groundwater cleanup level.

< denotes result is less than the laboratory practical quantitation limit listed or analyte not detected at or above the reporting limit.

— denotes sample not analyzed for specific analyte.

[1] Analyzed by U. S. Environmental Protection Agency Method 8021B.

[2] Analyzed by Northwest Method NWTPH-G.

[3] Analyzed by Northwest Method NWTPH-Dx

[4] Model Toxics Control Act Cleanup Regulation Method A cleanup levels for groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as amended February 2001.

DRO = total petroleum hydrocarbons (TPH) as diesel-range organics

GRO = TPH as gasoline-range organics

ORO = TPH as oil-range organics