STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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April 11, 2017

Scott Rose
Associated Environmental Group LLC
605 11th Ave SE
Olympia, WA 98501

Re: No Further Action at the following Site:

- **Site Name:** HOLTS QUIK CHEK MARKET
- **Site Address:** 400 N Pacific Ave, Kelso, 98626, Cowlitz County
- **Facility/Site No.:** 87376683
- **Cleanup Site No.:** 6797
- **VCP Project No.:** SW1445

Dear Scott Rose:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the HOLTS 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?

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

This opinion is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

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), *Environmental Covenant*, March 10, 2017.
2. State of Washington Department of Ecology (Ecology), *Opinion on Proposed Cleanup*; No Further Action Likely Determination, August 15, 2016.
3. AEG, *Amendment to NFA Request*, June 16, 2016.
4. Ecology, *Opinion on Proposed Cleanup; Further Action Determination*, March 17, 2016.
5. AEG, *Request for No Further Action*, January 7, 2016.
6. AEG, *Subsurface Investigation*, July 31, 2015.
7. AEG, *Work Plan for Final Closure*, July 31, 2015.
8. AEG, *October 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report*, November 5, 2015
9. AEG, *April 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report*, May 19, 2015
10. AEG, *January 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report*, February 4, 2015
11. AEG, *Holt's Quik Chek Quarterly Groundwater Sampling results Summary*, December 3, 2014.
12. Ecology, *Site Hazard Assessment*, March 26, 2014.
13. AEG, *Proposed Supplemental Remedial Investigation Work Plan*, July 15, 2011.
14. Ecology, *Opinion on Proposed Cleanup; Further Action Determination*, June 18, 2007.

15. Farallon Consulting, LLC (Farallon), *Final Quarter of Groundwater Monitoring*, May 24, 2007.
16. Farallon, *Site Closure Report; Holt's Quik Chek Site*, March 9, 2007
17. 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 **no 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 sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A.** Maps and Tables for the Site are also included in **Enclosure A**.

AEG has demonstrated that the Site has been sufficiently characterized and warrants a no further action determination with the use of an Environmental Covenant. Site characterization and groundwater monitoring at the Site show that;

- Groundwater sampling results from June 1997 through October 2015 show that contamination in groundwater has decreased to concentrations below MTCA Method A cleanup levels (CULs) in all wells except MW-6 (AEG's Table 2).
- Ecology agrees that MW-6 is likely completed in a different water-baring zone from the Site, and that contamination in this well is unrelated to the Site. This determination is based on;
    - No water was noted, and assumed not encountered, during the construction of MW-6 (EMCON's Boring log is included in Enclosure A).
    - MW-6 is completed in a siltstone that appears to go below the Site (Cross sections, AEG's Figures 6 and 7). The siltstone was noted in the bottom of the boring for MW-5. EMCON's boring logs for MW-6 and MW-5 are included in Enclosure A.

- There is a large difference in the groundwater elevations between MW-6, and all other Site wells, MW-1 through MW-5, and MW-7 (AEG's Table 3). MW-6 is hydraulically up gradient from the rest of the Site.

- AEG defined the vertical and horizontal extents of the contamination in soil. Petroleum contaminated soil (PCS) is still present at the Site and above the point of compliance for soils. AEG's Table 1, and Figures 5 through 7 show the extents of PCS at the Site. Because groundwater contamination levels have dropped below the CULs or are no longer detectible, PCS below the water table does not appear to be leaching into the groundwater. PCS is present off property, to the west, below N. Pacific Ave. and the sidewalk located between the road and the Holt's Quik Check Site.

- Ecology agrees that soil vapor is not a concern at the Site. Although boring P11, located approximately 12 feet from the building, showed high BTEX levels in 1997, they were at a depth of 16 feet below ground surface (bgs), and sampled prior to in situ remedial activities conducted from 2003 to 2005 (AEG's Table 1 and Figure 3). These in situ activities consisted of air sparging and a chemical oxidation application. AEG has shown that contamination is centered in the vicinity of MW-2, between the underground storage tank (UST) nest and N. Pacific Ave.

- A Terrestrial Ecological Evaluation (TEE) was submitted as part of the January 2016 Request for No Further Action that demonstrates that the Site qualifies for an exclusion from further evaluation based on these criteria;

  - All contaminated soil, is or will be, covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

  - There is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site.

- Because PCS is being left in place, the Site will be closed using an Environmental Covenant with institutional controls and long-term monitoring. The institutional and engineering controls for the Site are detailed in the Post-Cleanup Controls and Monitoring section of this letter. Ecology requested in the August 15, 2016 opinion letter that the City of Kelso be included as a Grantor on the Environmental Covenant because PCS extended off-property. Per the City of Kelso's request during a January 17, 2017 phone call, they did not sign the covenant as Grantor.

- AEG submitted a Disproportionate Cost Analysis (DCA) as part of the June 2016 Amendment to NFA request that examined the usability of multiple potential remedial activities, and proposed three potential cleanup alternatives. The proposed alternatives are;
    - Alternative 1; Closure with Covenant and Monitoring.
    - Alternative 2; Select excavation of PCS, and In-Situ Chemical Oxidation.
    - Alternative 3; Soil Vapor Extraction and Monitoring.

  AEG selected Alternative 1 as the preferred remedial action given the remedial activities performed, the extent of contamination, and Site specific conditions.

- Ecology agrees with this assessment based on the nature of the Site, the proximity of the contamination to features that will limit the effectiveness of other alternatives, and the lack of current groundwater contamination.

The exposure pathways for the Site as Ecology currently understands them are;

Soil-Direct Contact:
Incomplete. PCS at the Site is either at depths greater than 15 feet below ground surface, or is covered by a protective surface consisting of asphalt or cement. Institutional controls are being used to insure the integrity of the protective surface and inform interested parties to the existence of the PCS. An Environmental Covenant (included as Enclosure B) has been filed with Cowlitz County.

Soil-Leaching:
Incomplete. The Site has had four consecutive quarters of groundwater sampling that are below the MTCA Method A CULs for the Sites constituents of concern; BTEX, and TPH-G. Because PCS is being left in place, groundwater monitoring will be conducted every 18 months to assure the leaching pathway remains incomplete.

Soil-Vapor:
Incomplete. Volatile organic compounds (VOCs) in soil are not a concern at this Site because groundwater contamination at the Site has been reduced to below MTCA Method A CULs, and PCS is located at depths greater than 6 feet bgs or at a distance greater than 30 feet from the building.

Groundwater:
Incomplete. Contamination in groundwater has been remediated to concentrations below the MTCA Method A CULs, and has remained below the CULs for four quarters of sampling.

Ecological:
Incomplete. The Site has qualified for a TEE exemption because all contaminated soil, is or will be, covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination, and because there is less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site.

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.

The Site has been fully defined. MTCA Method A soil and groundwater CULs for unrestricted land use are being used for the Site, and Standard points of compliance (POC) are currently being used for the Site. The POCs and CULs for each media are;

Groundwater
"The standard point of compliance shall be established throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest most depth which could potentially be affected by the Site" (WAC 173-340-720(8)(b)). Contamination in all Site monitoring wells has decreased to levels below the CULs or laboratory detection limits except for well MW-6. There is good evidence that well MW-6 is not hydrogeologically connected to the rest of the Site, and therefore the contamination in this well is from a source other than the UST leak that occurred at the Site.

Soil
Protection of groundwater: "the point of compliance shall be established in the soils throughout the Site" (WAC 173-340-740(6)(b)). Because groundwater contamination has decreased to levels below the CULs or laboratory detection limits, contamination levels at or below the groundwater levels have no impact on the groundwater. Institutional controls in the form of a concrete and asphalt cap should mitigate any infiltration issues from contamination present above the groundwater level.

Vapor
"The point of compliance shall be established in the soils throughout the Site from the ground surface to the uppermost ground water saturated zone" (WAC 173-340-740(6)(c)). Since PCS will remain in place above the water table, the existing asphalt and concrete cap must remain in place and maintained to prevent exposure to vapors from contaminated soil. The Environmental Covenant will restrict the Site usage to protect human health or the environment.

Direct contact: "the point of compliance shall be established in the soils throughout the Site from the ground surface to fifteen feet below the ground surface" (WAC 173-340-740(6)(d)). Since PCS will remain in place above fifteen feet bgs, the existing asphalt and concrete cap must remain in place and maintained to prevent direct contact with the contaminated soil. The Environmental Covenant will restrict the Site usage to protect human health or the environment.

The unrestricted land use cleanup standards for the Site are as follows:

- For groundwater, Method A CULs are being applied. Because all detectible concentrations of constituents of concern have been below Method A CULs for four quarters or more, Ecology believes that this will be protective of groundwater. Continued groundwater monitoring will ensure that this remains true.
- For direct contact soils, Method A CULs are being applied to the extent practicable. Institutional and engineering controls will be used to prevent direct contact to remaining contaminated soils.
- For soils protective of groundwater, it has been established by empirical demonstration that current contamination levels are protective of groundwater.
- For soil-vapors, all remaining PCS is at depths greater than six feet bgs, or distances greater than 30 feet from a structure or building, and so there is no soil-vapor concern at the Site.

MTCA Method A CULs for soil and groundwater:

Contaminant	Soil Cleanup Levels (mg/Kg)	Groundwater Cleanup Levels (µg/L)
TPH-G	30	800
TPH-D & TPH-O	2,000	500
Benzene	0.03	5
Toluene	7	1,000
Ethylbenzene	6	700
Xylenes	9	1,000
Contaminant	**Soil Cleanup Levels (mg/Kg)**	**Groundwater Cleanup Levels (µg/L)**
Methyl tert-butyl ether (MTBE)	0.1	20
1-2 dichloroethane (EDC)	None	5
1-2 Dibromoethane (EDB)	0.005	0.01
Lead	250	15

3. Selection of cleanup action

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

Ecology believes that the cleanup action meets the threshold requirements of WAC 173-340-360(2) in that:

- It is protective of human health and the environment, complies with cleanup standards, and complies with applicable state and federal laws.
- Ecology believes that the cleanup method used is permanent to the maximum extent practicable, and provided for cleanup in a reasonable time frame.
- Since groundwater contamination levels have remained below CULs for four quarters or more, cleanup actions conducted are considered permanent for groundwater.
- The Site is not expected to be used as a school or residential Site. Planned future use of the Site is to continue as a fuel dispensing facility and shopping center.
- Some PCS will be remaining at the Site west of the USTs, below the sidewalk and the north bound side of N Pacific Ave. Institutional controls are being required at the Site. A copy of the Environmental Covenant is included in **Enclosure B**.

- Because both the source and most of the contamination at the Site have been removed, cleanup actions have prevented any future release and minimized any future migration.
- Cleanup actions are not relying on dilution or dispersion.
- Remediation levels are not being used for this Site.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site. This determination is dependent on the continued performance and effectiveness of the post-cleanup controls and monitoring specified below.

Cleanup actions at the Site to date have included the list below to the extent practicable in the vicinity of the UST nest in soil and throughout the Site in groundwater.

- A biosparging system that operated from the spring of 2003 until September 2005.
- An in-situ chemical oxidation remediation using activated sodium persulfate was applied following the biosparging activities.
- Natural attenuation of groundwater.
- Establishment of institutional controls and long term monitoring with an Environmental Covenant.

Post-Cleanup Controls and Monitoring

Post-cleanup controls and monitoring are remedial actions performed after the cleanup to maintain compliance with cleanup standards. This opinion is dependent on the continued performance and effectiveness of the following:

1. Compliance with institutional controls.

Institutional controls prohibit or limit activities that may interfere with the integrity of engineered controls or result in exposure to hazardous substances. The following institutional controls are necessary at the Site:

- No activity shall be conducted on the Site that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

- No activity shall be conducted on the Site that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to:
    - Any activity that results in the release of residual contamination that was contained as a part of the remedial action or,
    - Any Activity that exacerbates or creates a new exposure to residual contamination remaining on the Site.
- Any interest in any portion of the Site shall provide for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with the Environmental Covenant.
- Any lease for any portion of the Site shall restrict uses and activities consistent with the Environmental Covenant and notify all lessees of the restrictions on the use of the Site.
- Any reference monuments and boundary markers used to define the areal extent of coverage of the Environmental Covenant should be preserved. Should a monument or marker be damaged or destroyed, it shall be replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.
- The remedial action for the Site is based on containing contaminated soil under a cap consisting of pavement and asphalt parking area. The primary purpose of this cap is to restrict access to the residual soil contamination to prevent direct contact exposure. As such, the following restrictions shall apply within the area illustrated in **Exhibit B** of the Environmental Covenant:
    - Any activity listed below that is conducted on the Site and will compromise the integrity of the cap is prohibited without prior written approval by Ecology.
        - Drilling or digging through the cap,
        - Piercing the cap with a sampling device, post, stake or similar device,
        - Grading, excavation, or installation of underground utilities,
        - Removal of the cap, or
        - Application of loads in excess of the cap load bearing capacity.
- The groundwater beneath the Site shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation.
- Drilling of a well for any water supply purpose is strictly prohibited.

- Groundwater extracted from the Site for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

- Groundwater monitoring shall be conducted and reported in accordance with the *Groundwater Monitoring and Contingency Plan* included in **Exhibit C** of the Environmental Covenant.

To implement those controls, an Environmental Covenant has been recorded on the following parcel of real property in Cowlitz County:

- 20086.

Ecology approved the recorded Covenant. A copy of the Covenant is included in **Enclosure B**.

2. Operation and maintenance of engineered controls.

Engineered controls prevent or limit movement of, or exposure to, hazardous substances. The following engineered control is necessary at the Site:

- A cap consisting of asphalt that is being used for the parking lot, and road surfaces; and concrete that is being used for the UST nest cap, and sidewalk, and will also function as the protective covering that limits exposure of PCS to humans and wildlife and reduce infiltration of water through the contaminated soils.

Ecology has approved the operation and maintenance plan you submitted for this engineered control. A copy of the plan is included in **Enclosure B** (Exhibit C of the Environmental Covenant).

3. Performance of confirmational monitoring.

Confirmational monitoring is necessary at the Site to confirm the long-term effectiveness of the cleanup. The monitoring data will be used by Ecology during periodic reviews of post-cleanup conditions. Ecology has approved the monitoring plan you submitted. A copy of the plan is included in **Enclosure B** (Exhibit C of the Environmental Covenant).

Periodic Review of Post-Cleanup Conditions

Ecology will conduct periodic reviews of post-cleanup conditions at the Site to ensure that they remain protective of human health and the environment. If Ecology determines, based on a periodic review, that further remedial action is necessary at the Site, then Ecology will withdraw this opinion.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Hazardous Sites List.
- Confirmed and Suspected Contaminated Sites List.
- Leaking Underground Storage Tank List.

That process includes public notice and opportunity to comment. Based on the comments received, Ecology will either remove the Site from the applicable lists or withdraw this opinion.

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).

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 (#SW1445).

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 (360) 407-6437 or e-mail at aaren.fiedler@ecy.wa.gov.

Sincerely,

Aaren Fiedler
SWRO Toxics Cleanup Program

AF: kb

Enclosures: A – Description, Diagrams, and Tables of the Site
B – Environmental Covenants for Institutional Controls; Including the Confirmational Monitoring, and Operation and Maintenance Plan

By Certified Mail: [91 7199 9991 7037 0279 7635]

cc: Han Kim, Holt's Quik Chek
Tammy Baraconi, City of Kelso
Matthew Alexander, Ecology
Nicholas Acklam, Ecology
Panjini Balaraju, Ecology

Enclosure A

Description, Diagrams and Tables 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 (Google Map, AEG's Figure 1). 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 properties. 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. Because the USTs passed pressure test following release discovery, Ecology assumes that the contamination resulting from previous USTs located at the Site. Subsurface investigations conducted at the Site indicate the presence of petroleum contamination in both soils and groundwater. No soil vapor investigations have been conducted. The horizontal and vertical extent of the contamination has been defined. The horizontal extents appear to be located in the area around MW-2 and the USTs; extending to the west underneath N Pacific Ave. The vertical extents of the contamination appears to be from approximately 4 feet bgs to approximately 29 feet bgs.

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. Groundwater flow direction appears to be to the west. There is evidence that MW-6 is not hydrogeologically connected to the other Site wells.

Site History

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.

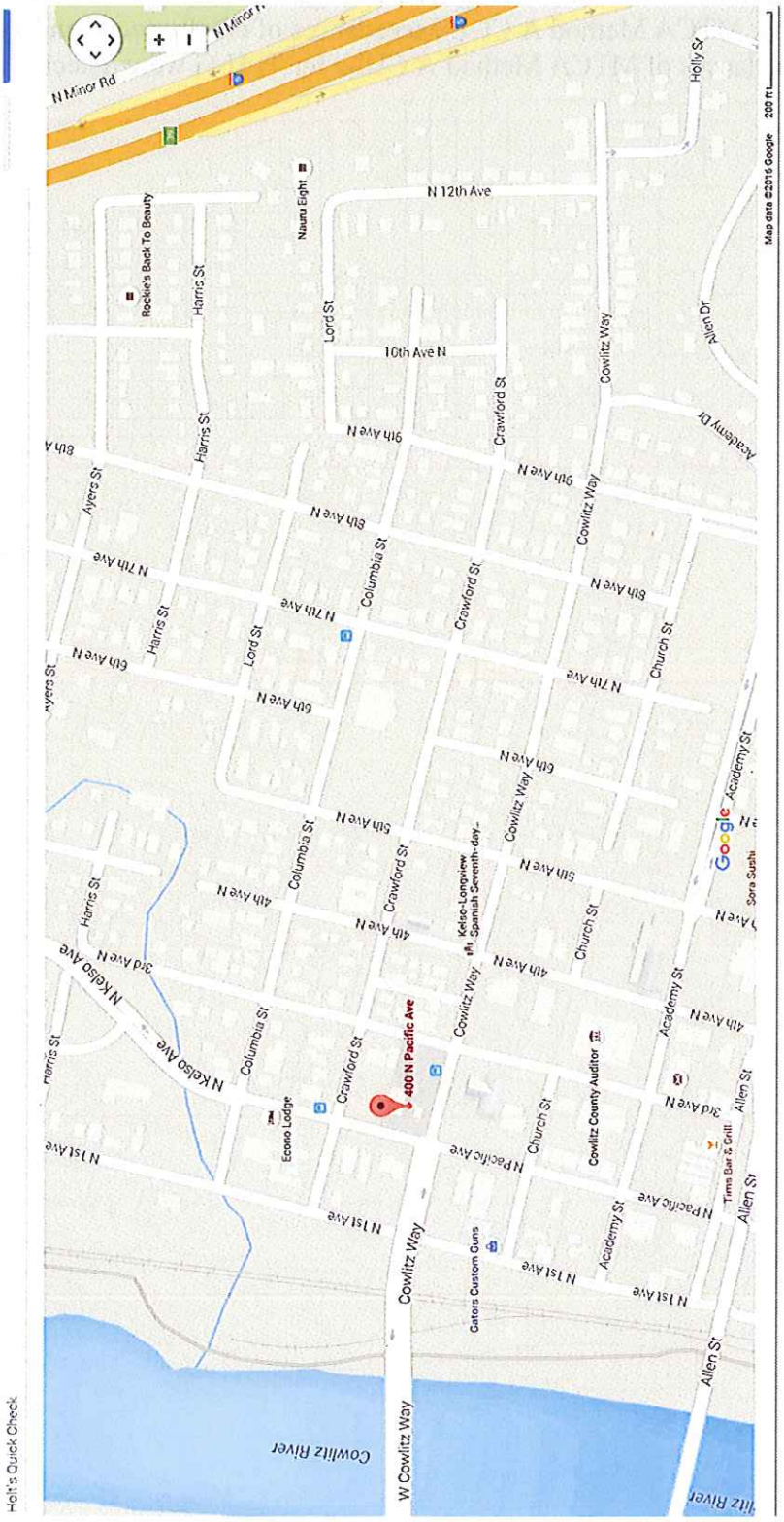
After these remediation activities were completed, a Site Closure Report (March 2007) was submitted to Ecology. Ecology issued a Further Action Determination letter (June 2007) in which it was recommended that a down gradient well be installed, that the potential of an Environmental Covenant be explored, 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.

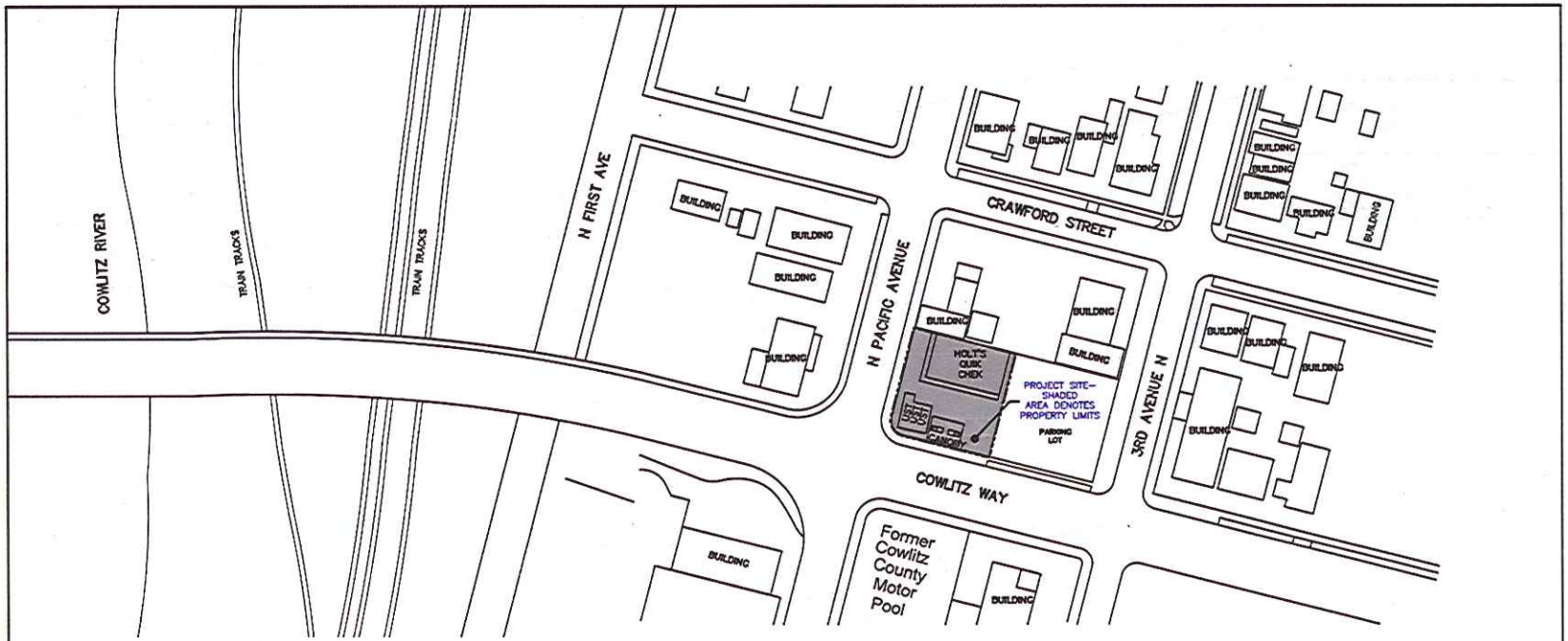
Ecology conducted a Site Hazard Assessment (SHA) (March 2014) and determined that since the extent of off-property impacts has not been defined for this Site, the Site received a ranking of 2, and the Site was added to the state's Hazardous Sites List.

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 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 Environmental Covenant 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.

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 AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY– 2013, 7.5 MINUTE QUADRANGLE MAP KELSO, WASHINGTON

PROJECT LOCATION

VICINITY MAP

N
W E
S

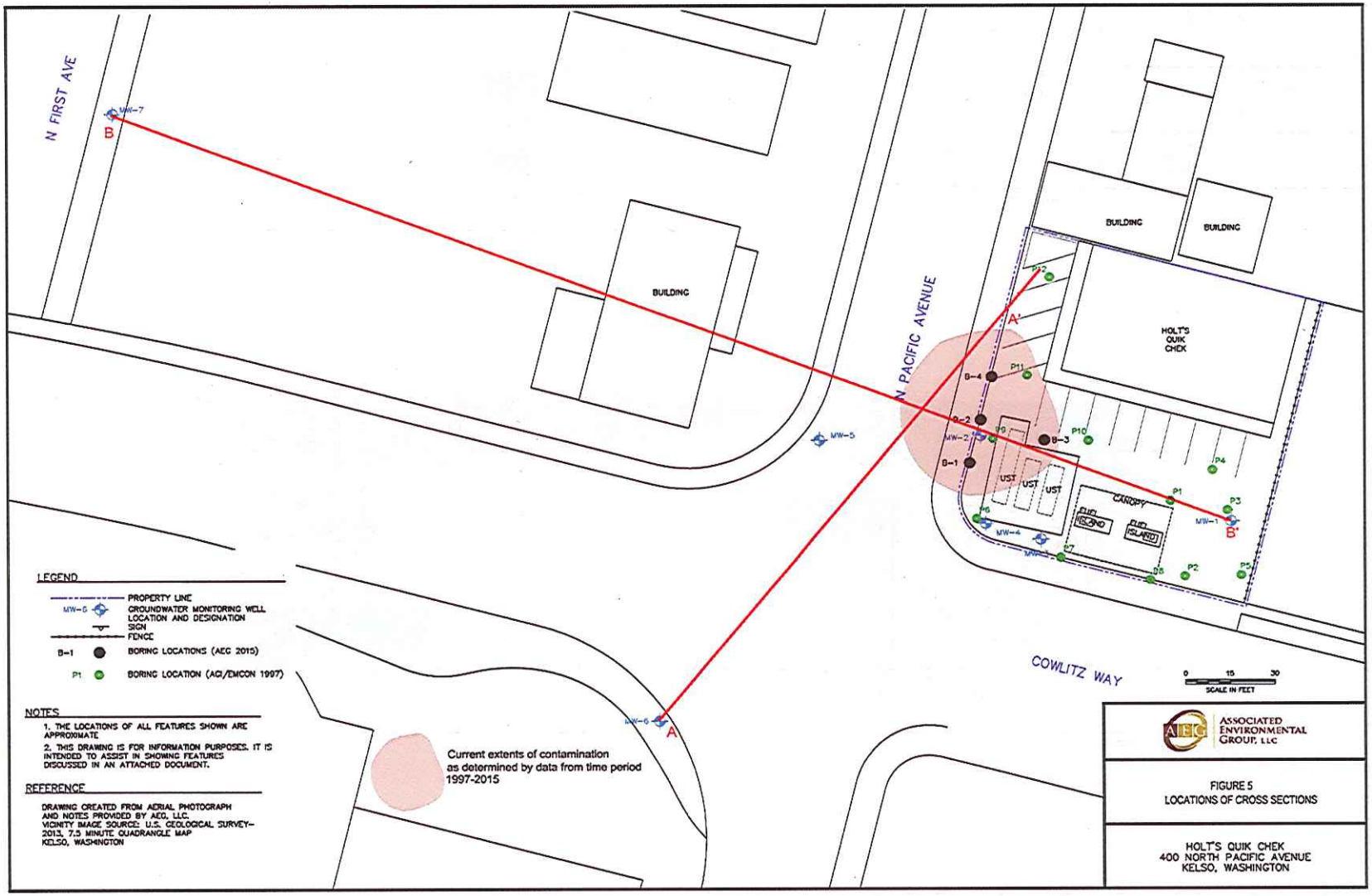
0 15 30
SCALE IN FEET

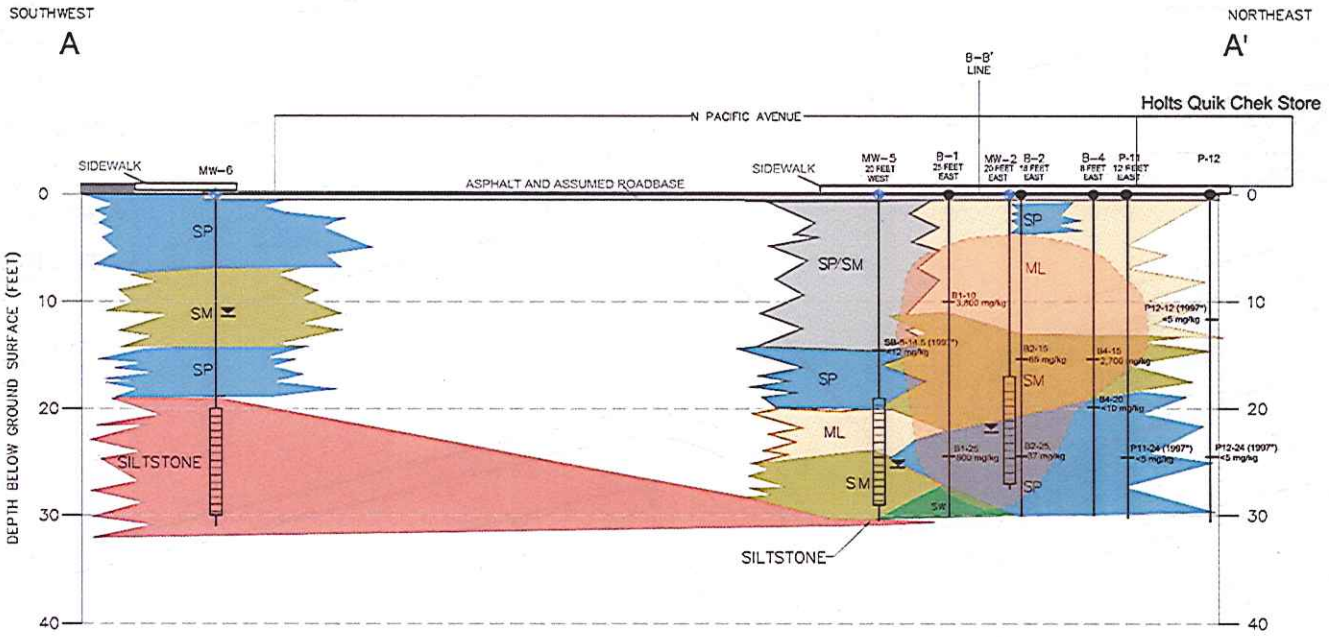
ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 1
VICINITY MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON


BUILDING
BUILDING
HOLT'S QUIK CHEK
P12
P11
P10
P9
P8
P7
P6
P5
P4
P3
P2
P1
B-4
B-3
B-2
B-1
MW-5
MW-6
MW-4
MW-3
MW-1
UST
UST
UST
CANOPY
FUEL ISLAND
FUEL ISLAND
LEGEND
PROPERTY LINE
GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SIGN
FENCE
BORING LOCATIONS
POWER UTILITY BOX
POWER LINE
BORING LOCATIONS (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 AGI, 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 3
BORING AND WELL LOCATION MAP
HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON


N FIRST AVE
N PACIFIC AVENUE
COWLITZ WAY
BUILDING
BUILDING
BUILDING
HOLT'S QUIK CHEK
CANOPY
UST
UST
UST
FUEL ISLAND
FUEL ISLAND
MW-7
MW-5
MW-2
MW-1
MW-4
MW-6
B
A
A'
B'
B-1
B-2
B-3
B-4
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
Current extents of contamination as determined by data from time period 1997-2015
0
15
30
SCALE IN FEET
LEGEND
PROPERTY LINE
GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SIGN
FENCE
BORING LOCATIONS (AEC 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
ASSOCIATED ENVIRONMENTAL GROUP, LLC
FIGURE 5
LOCATIONS OF CROSS SECTIONS
HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON



LEGEND

B-1 MW-3

- WELL, SOIL BORING
- GROUNDWATER LEVEL FROM 10/20/15

B1-15
100 mg/kg – GASOLINE-RANGE TPH (MG/KG) 2015

- MAXIMUM DEPTH EXPLORED
- SOIL CONTACT

ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS, WITH SLIGHT PLASTICITY
SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SM	SILTY-SANDS, SAND-SILT MIXTURES
SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
	SILTSTONE REPORTED IN EMCON 1997 BORING LOGS

* Note- Non detect values from EMCON 1997 are included to help bound contamination. Detected 1997 values are not thought to be currently representative due to subsequent remediation that occurred at the Site. Because detection limits are not available, non detect values reported at lowest reported detected concentration.

Current extents of contamination as determined by data from time period 1997-2015

HORIZONTAL SCALE 0 10 20

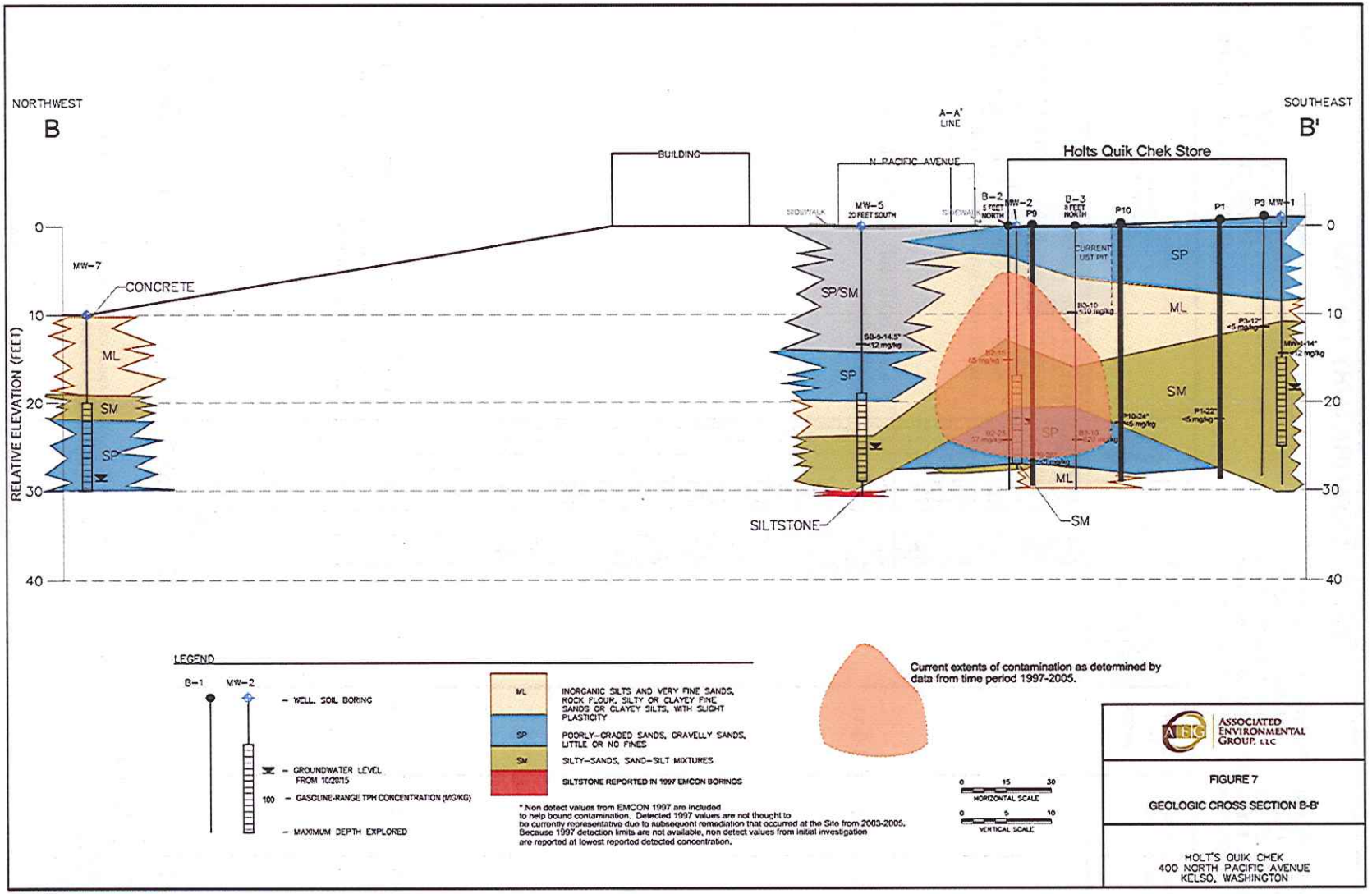
VERTICAL SCALE 0 5 10

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 6

GEOLOGIC CROSS SECTION A-A'

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON



ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 7

GEOLOGIC CROSS SECTION B-B'

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

LOG OF EXPLORATORY BORING

PROJECT NAME Holts Quik Chek
LOCATION Kelso, Washington
DRILLED BY Cascade Drilling, Inc.
DRILL METHOD Hollow Stem Auger
LOGGED BY Michelle Lange

BORING NO. MW-5
PAGE 1 OF 2
GROUND ELEV.
TOTAL DEPTH 30.50'
DATE COMPLETED 09/23/97

SAMPLE NUMBER	SAMPLE TYPE	BLOWS PER 6 INCHES	GROUND WATER LEVELS	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHOLOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.5 foot: ASPHALT
								0.5 to 14.75 feet: SAND WITH SILT (SP-SM); brown; fine; few nonplastic silt; trace medium to coarse sand; trace fine to coarse, subangular to subrounded gravel; damp to moist.
								@ 4.5 to 30.5 feet: localized iron staining; micaceous.
S-4.5	SS	6-8-11		5				
S-9.5	SS	8-12-14		10				
S-14.5	SS	8-10-16		15				14.75 to 19.5 feet: SAND (SP); gray to brown; fine to coarse; trace nonplastic silt; moist; petroleum hydrocarbon-like odor.
S-19.5	SS	4-12-14		20				19.5 to 19.75 feet: SILTY SAND (SM); gray to

REMARKS

(1) SS = Soil samples collected with 3-inch outside-diameter split-spoon sampler. (2) Blow counts do not represent SPT results. (3) Borings were hand augered from ground surface to approximately 4 feet bgs for utility clearance purposes.

EMCON

LOG OF EXPLORATORY BORING

PROJECT NAME	Holts Quik Chek	BORING NO.	MW- 5
LOCATION	Kelso, Washington	PAGE	2 OF 2
DRILLED BY	Cascade Drilling, Inc.	GROUND ELEV.	
DRILL METHOD	Hollow Stem Auger	TOTAL DEPTH	30.50'
LOGGED BY	Michelle Lange	DATE COMPLETED	09/23/97

SAMPLE NUMBER	SAMPLE TYPE	BLOWS PER 6 INCHES	LITHOLOGIC DESCRIPTION
			brown; fine to coarse; some low plasticity silt; moist.
			19.75 to 24.0 feet: SILT (ML); brown; fine; few nonplastic silt; trace medium to coarse sand; trace fine to coarse, subangular to subrounded gravel; damp to moist.
5-24.5	SS	10-16-21	24.0 to 30.25 feet: SILTY SAND (SM); gray; fine to medium; little nonplastic to low plasticity silt; wet; petroleum hydrocarbon-like odor. @ 24.5 wet.
5-29.5	SS	20-50/6"	30.25 to 30.5 feet: SILTSTONE; red.
			Total depth drilled = 29.5 feet. Total depth sampled = 31.0 feet.

WELL COMPLETION DETAILS:

0.5 to 18.5 feet: Nominal 2-inch inside-diameter, flush-threaded, Schedule 40 PVC blank riser pipe.

18.5 to 29.0 feet: Nominal 2-inch inside-diameter, flush-threaded, Schedule 40 PVC well screen with 0.010-inch machined slots.

29.0 to 29.5 feet: Nominal 2-inch inside-diameter, flush-threaded, Schedule 40 PVC end cap.

0 to 1.0 foot: Flush monument and concrete.

1.0 to 15.0 feet: Bentonite chips hydrated with potable water.

15.0 to 31.0 feet: 10 - 20 Colorado Silica Sand.

REMARKS

(1) SS = Soil samples collected with 3-inch outside-diameter split-spoon sampler. (2) Blow counts do not represent SPT results. (3) Borings were hand augered from ground surface to approximately 4 feet bgs for utility clearance purposes.

LOG OF EXPLORATORY BORING

PROJECT NAME	Holts Quik Chek	BORING NO.	MW- 6
LOCATION	Kelso, Washington	PAGE	1 OF 2 -
DRILLED BY	Cascade Drilling, Inc.	GROUND ELEV.	
DRILL METHOD	Hollow Stem Auger	TOTAL DEPTH	31.00'
LOGGED BY	Michelle Lange	DATE COMPLETED	09/23/97

SAMPLE NUMBER	SAMPLE TYPE	BLOWS PER 6 INCHES	LITHOLOGIC DESCRIPTION
			0 to 7.0 feet: SAND WITH SILT (SP-SM); brown; *fine; micaceous;* few nonplastic silt; few fine to coarse, subangular to subrounded gravel; trace medium to coarse sand; damp to moist.
6-4.5	SS	6-10-11	*@ 4.5 to 6.0 feet: reddish patches; no gravel.*
6-7	GRAB		**7.0 to 9.0 feet: SILTY SAND (SM);** gray; fine; some nonplastic to low plasticity silt; moist; petroleum hydrocarbon-like odor.
6-9.5	SS	6-10-11	**9.0 to 14.0 feet: SILTY SAND (SM);** mottled gray and brown with reddish patches; fine; micaceous; some nonplastic to low plasticity silt; trace medium to coarse sand; trace fine to coarse, subangular to subrounded gravel; moist.
6-14.5	SS	50/6"	**14.0 to 19.0 feet: GRAVELLY SAND WITH SILT (SP-SM);** brown; fine to coarse; micaceous; little fine subangular gravel; trace nonplastic silt; moist; hydraulic fuel-like odor.
6-19.5	SS	50/6"	**19.0 to 31.0 feet: SILTSTONE;** reddish; micaceous; damp.

REMARKS

(1) SS = Soil samples collected with 3-inch outside-diameter split-spoon sampler. (2) Blow counts do not represent SPT results. (3) Borings were hand augered from ground surface to approximately 4 feet bgs for utility clearance purposes.

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

Sample Number	Depth Collected (feet)	Sampled By	Date Collected	Volatile Organic Compounds								Total Petroleum Hydrocarbons			Lead
				Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDC	EDB	Naphthalene	Gasoline	Diesel	Heavy Oil	
P1-22	22.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P2-18	18.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P3-12	12.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P4-18	18.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P5-12	12.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P6-20	20.0	AGI	3/27/1997	<0.05	<0.1	1.2	<3	--	--	--	--	1900	--	--	--
P6-25	25.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P7-12	12.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P7-20	20.0	AGI	3/27/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P8-16	16.0	AGI	3/28/1997	<0.05	0.1	0.4	8.4	--	--	--	--	250	--	--	--
P8-20	20.0	AGI	3/28/1997	<0.05	0.2	0.4	7.8	--	--	--	--	200	--	--	--
P8-24	24.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P9-12	12.0	AGI	3/28/1997	<0.05	<0.1	1.5	3.7	--	--	--	--	710	--	--	--
P9-28	28.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P10-12	12.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P10-24	24.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P11-16	16.0	AGI	3/28/1997	8.7	220	110	760	--	--	--	--	12,000	--	--	--
P11-24	24.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P12-12	12.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
P12-20	20.0	AGI	3/28/1997	<0.05	<0.1	<0.1	<0.1	--	--	--	--	<5	--	--	--
MW-1-14	14-15.5	EMCON	6/24/1997	ND	ND	ND	ND	--	--	--	--	ND	ND	ND	ND
MW-2-9.5	9.5-11	EMCON	6/24/1997	2.4	6.7	25	23	--	--	--	--	5760	334**	ND	ND
MW-2-27	27-27.5	EMCON	6/24/1997	ND	ND	0.8	ND	--	--	--	--	436	ND	ND	ND
MW-3-19	19-20.5	EMCON	6/25/1997	ND	ND	ND	ND	--	--	--	--	ND	ND	ND	ND
MW-4-19	19-20.5	EMCON	6/25/1997	ND	0.3	0.5	2	--	--	--	--	1280	209**	ND	ND
MW-4-21.5	21.5-23	EMCON	6/25/1997	ND	ND	ND	ND	--	--	--	--	12	ND	ND	ND
MW-5-14.5	14-15.5	EMCON	9/26/1997	ND	ND	ND	ND	--	--	--	--	ND	ND	ND	ND
MW-6-7	7.0	EMCON	9/26/1997	1.21	1.92	9.09	4.97	--	--	--	--	2270	37.2**	ND	ND
MW-6-19.5	19.5-20	EMCON	9/26/1997	ND	ND	ND	ND	--	--	--	--	ND	ND	ND	ND
MW-7-15	15.0	AEG	6/17/2015	<0.02	<0.05	<0.05	<0.15	<0.05	<0.01	<0.05	<0.05	<10	<50	<100	--
B1-10	10.0	AEG	6/17/2015	<0.02	1.6	54	300	<0.05	<0.01	<0.05	6.3	3800	<50	<100	--
B1-25	25.0	AEG	6/17/2015	<0.02	<0.05	0.17	1.1	<0.05	<0.01	<0.05	5	800	<50	<100	--
B2-15	15.0	AEG	6/17/2015	<0.02	<0.05	0.11	0.53	<0.05	<0.01	<0.05	2.9	65	<50	<100	--
B2-25	25.0	AEG	6/17/2015	<0.02	<0.05	<0.05	0.27	<0.05	<0.01	<0.05	0.78	37	<50	<100	--
B3-10	10.0	AEG	6/17/2015	<0.02	<0.05	<0.05	<0.15	<0.05	<0.01	<0.05	<0.05	<10	<50	<100	--
B3-25	25.0	AEG	6/17/2015	<0.02	<0.05	<0.05	<0.15	<0.05	<0.01	<0.05	<0.05	620	<50	<100	--
B4-15	15.0	AEG	6/17/2015	<0.02	0.53	13	96	<0.05	<0.01	<0.05	0.78	2700	<50	<100	--
B4-20	20.0	AEG	6/17/2015	<0.02	<0.05	<0.05	<0.15	<0.05	<0.01	<0.05	<0.05	<10	<50	<100	--
PQL (mg/kg)				0.02	0.05	0.05	0.15	0.05	0.01	0.05	0.05	10	50	100	5
MTCA Method A Cleanup Levels (mg/kg)				0.03	7	6	9	0.1	NL	0.005	5	100*	2,000	2,000	250

Notes:
All results are in milligrams per kilogram (mg/kg)
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
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
**According to EMCON, detected hydrocarbons in the diesel range appear to be due to the overlap from the gasoline range.

EDB = Ethylene Dibromide
EDC = 1,2-Dichlorocthane
MTBE = Methyl Tert-Butyl Ether
PQL = Practical Quantitation Limit (laboratory detection limit)
NL = No Method A cleanup level is listed.
ND = Not Detected (detection limits unavailable)

Site Tables

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

Sample Number	Date Collected	Volatile Organic Compounds (µg/L)								Total Petroleum Hydrocarbons (µg/L)			Total Lead	Dissolved Lead
		Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDC	EDB[1]	Naphthalene	Gasoline	Diesel	Heavy Oil		
MW-1	6/23/1997	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	--	--
	9/26/1997	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	1.8	ND
	12/15/1997	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	--	--
	3/13/1998	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	--	--
	6/11/1998	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	--	--
	12/23/2004	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	3/17/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	6/24/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	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	<1.0	<0.5	<0.1	<1.0	740	<250	<500	--	--
MW-2	6/23/1997	29.8	15.7	142	287	--	--	--	--	4,890	260	<500	--	--
	9/26/1997	25.5	32.3	174	372	--	--	--	--	7,750	<250	<500	2.1	1.8
	12/15/1997	33.3	20.5	238	461	--	--	--	--	8,650	<250	<500	--	--
	3/13/1998	3.32	6.46	103	202	--	--	--	--	3,100	<250	<500	--	--
	6/11/1998	6.05	9.4	117	195	--	--	--	--	4,560	291	<500	--	--
	3/13/2004	12.20	1.89	15.1	9.47	--	--	--	--	2,560	--	--	--	--
	8/19/2004	4.40	1.56	7.45	4.06	--	--	--	--	1,110	--	--	--	--
	12/23/2004	4.54	0.51	1.56	1.15	--	--	--	--	678	--	--	--	--
	3/17/2005	2.25	<0.50	1.62	<1.0	--	--	--	--	506	--	--	--	--
	6/24/2005	7.20	<0.50	0.866	<1.0	--	--	--	--	940	--	--	--	--
	9/26/2005	11.50	<1.0	5.06	<3.0	--	--	--	--	1060	--	--	--	--
	12/29/2005	0.91	<0.50	<0.50	<1.0	--	--	--	--	108	--	--	--	--
	3/24/2006	3.54	<0.50	<0.50	<1.0	--	--	--	--	362	--	--	--	--
	6/29/2006	<0.50	<0.50	<0.50	<1.0	--	--	--	--	219	--	--	--	--
	9/21/2006	2.95	<0.50	<0.50	<1.0	--	--	--	--	248	--	--	--	--
	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	<1.0	<0.5	<0.1	<1.0	230	<250	<500	--	--
MW-3	6/23/1997	0.8	<0.50	<0.50	<1.0	--	--	--	--	90.7	<250	<500	--	--
	9/26/1997	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	3.8	ND
	12/15/1997	1.3	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	--	--
	3/13/1998	<0.50	<0.50	2.82	5.18	--	--	--	--	143	<250	<500	--	--
	6/11/1998	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	<250	<500	--	--
	3/13/2004	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	12/23/2004	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	3/17/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	6/24/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	9/26/2005	<1.0	<1.0	<1.0	<3.0	--	--	--	--	<100	--	--	--	--
	12/29/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	3/24/2006	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	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	<1.0	<0.5	<0.1	<1.0	110	<250	<500	--	--
MW-4	6/23/1997	1.6	<0.50	0.67	<1.0	--	--	--	--	691	<250	<500	--	--
	9/26/1997	<0.50	<0.50	<0.50	<1.0	--	--	--	--	258	<250	<500	3.5	ND
	12/15/1997	3.78	<0.50	<0.50	<1.0	--	--	--	--	331	<250	545	--	--
	3/13/1998	<0.50	<0.50	1.74	3.26	--	--	--	--	114	<250	<500	--	--
	6/11/1998	<0.50	<0.50	<0.50	<1.0	--	--	--	--	205	<250	<500	--	--
	12/23/2004	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	3/17/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	6/24/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	9/26/2005	<1.0	<1.0	<1.0	<3.0	--	--	--	--	<100	--	--	--	--
	12/29/2005	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	3/24/2006	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	9/21/2006	<0.50	<0.50	<0.50	<1.0	--	--	--	--	<50	--	--	--	--
	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	<1.0	<0.5	<0.1	<1.0	<100	<250	<500	--	--
MW-5	9/26/1997	14.5	1.07	20.8	17.7	--	--	--	--	2,740	<250	<500	8.3	ND
	12/15/1997	22.7	3.06	0.93	<1.0	--	--	--	--	2,510	<250	<500	--	--
	3/13/1998	6.68	<0.50	9.83	1.47	--	--	--	--	1,080	<250	<500	--	--
	6/11/1998	12.1	0.66	3.18	<1.0	--	--	--	--	1,730	<250	<500	--	--
	3/13/2005	7.48	0.583	1.77	3.65	--	--	--	--	1,190	--	--	--	--
	6/24/2005	6.67	<0.50	12.3	3.18	--	--	--	--	2,140	--	--	--	--
	9/26/2005	2.19	<1.0	<1.0	<3.0	--	--	--	--	<100	--	--	--	--
	12/29/2005	<5.0	<5.0	145	55	--	--	--	--	5,830	--	--	--	--
	3/24/2006	2.01	<0.50	0.92	1.37	--	--	--	--	373	--	--	--	--
	6/29/2006	<0.50	0.575	<0.50	<1.0	--	--	--	--	710	--	--	--	--
	9/21/2006	1.11	0.521	1.9	<1.0	--	--	--	--	180	--	--	--	--
	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	9/26/1997	31.1	2.42	11	9.55	--	--	--	--	2,070	<250	<500	ND	ND
	12/15/1997	218	6.32	<1.0	3.58	--	--	--	--	415	<250	<500		
	3/13/1998	244	<2.50	4.76	<5.0	--	--	--	--	<400	284	<500		
	6/11/1998	360	8.35	24	<3.0	--	--	--	--	754	354	<500		
	6/19/2004	3.13	0.693	<0.50	<1.0	--	--	--	--	<50	--	--		
	12/23/2004	11	0.695	<0.50	<1.0	--	--	--	--	<50	--	--		
	7/16/2015	45	3.1	<1.0	<3.0	--	--	--	--	180	--	--	--	--
	10/20/2015	42	2.6	1.1	8	<1.0	<0.5	<0.1	<1.0	430	<250	<500	--	--
MW-7	6/17/2015	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	<0.1	<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	<1.0	<0.5	<0.1	<1.0	<100	<250	<500	--	--
B-1	6/17/2015	<1.0	2.5	36	160	<1.0	<0.5	<0.1	8.5	1,400	<250	<500	--	--
B-2	6/17/2015	<1.0	<1.0	<1.0	<3.0	<1.0	<0.5	<0.1	<1.0	<100	540	<500	--	--
B-3	6/17/2015	<1.0	<1.0	<1.0	<3.0	<1.0	<0.5	<0.1	<1.0	<100	1,100	<500	--	--
B-4	6/17/2015	<1.0	<1.0	2.6	<3.0	<1.0	<0.5	<0.1	<1.0	<100	<250	<500	--	--
MTCA Method A Cleanup Levels (µg/L)		5.0	1,000	700	1,000	20	5	0.01	160	1,000*	500	500	15	15

Notes:
All results in micrograms per liter (µg/L)
-- = Not analyzed for constituent
< = Not detected at the listed laboratory detection limits
[1]While the detection limit is greater than the cleanup level, it should be noted that no EDB was detected in soil.
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

EDB = Ethylene Dibromide
EDC = 1,2-Dichloroethane
MTBE = Methyl Tert Butyl Ether
PQL = Practical Quantification Limit (laboratory detection limit)
ND = Not Detected (detection limits unavailable)

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	--
40.74	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

Enclosure B

Environmental Covenants for Institutional Controls; Including the Confirmational Monitoring, and Operation and Maintenance Plan

After Recording Return
Original Signed Covenant to:
Mr. Aaren Fiedler
Toxics Cleanup Program
Department of Ecology
P.O. Box 47775
Olympia, WA 98504-7775

3563718
03/10/2017 04:20:38 PM Pages: 20
Covenants ASSOCIATED ENVIRONMENTAL GROUP 92.00
Cowlitz County Washington

Environmental Covenant

Grantor: Richard & Cynthia Chin
Grantee: State of Washington, Department of Ecology
Brief Legal Description: Kelso Old Town Lot 5,6 BLK 11
Tax Parcel No.: 20086.

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act ("MTCA"), chapter 70.105D RCW and Uniform Environmental Covenants Act ("UECA"), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as **Holt's Quik Chek, Facility Site I.D. 87376683.** The Property is legally described in Exhibit A, and illustrated in Exhibit B, both of which are attached (hereafter "Property"). If there are differences between these two Exhibits, the legal description in Exhibit A shall prevail.

c. The Property is the subject of remedial action under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principle contaminants remain on the Property:

Medium	Principle Contaminants Present
Soil	Gasoline-range Total Petroleum Hydrocarbons (TPH), benzene, toluene, ethylbenzene, total xylenes (BTEX)
Groundwater	Gasoline-range TPH, Diesel-range TPH, toluene, ethylbenzene, total xylenes

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through the Washington State Department of Ecology. **This includes the following documents:**

- EMCON, **Phase I Environmental Site Assessment Report, Holt's Quik Chek Market, Kelso,** December 5, 1997.
- EMCON, **Phase II Site Investigation Report, Holt's Quik Chek Market, Kelso,** September 4, 1997.
- EMCON, **Additional Phase II Site Investigation, 2nd Quarter Groundwater Sampling and Soil Vapor Extraction Pilot Test Report, Holt's Quik Chek Market, Kelso,** September 26, 1997.
- EMCON, **Quarterly Groundwater Sampling Report, December 1997, Holt's Quik Chek Market, Kelso,** April 28, 1998.
- Farallon Consulting LLC. **Site Closure Report, Holt's Quik Chek Site, 400 North Pacific Avenue, Kelso, Washington,** March 9, 2007.
- Farallon Consulting LLC. **Final Quarter of Groundwater Monitoring, Holt's Quik Chek Site, 400 North Pacific Avenue, Kelso, Washington,** May 24, 2007.
- Washington State Department of Ecology, **Further Action Opinion Letter,** June 18, 2007.
- Associated Environmental Group LLC, **Holt's Quik Chek Quarterly Groundwater Sampling Results Summary, Holts Quik Chek, Kelso, Washington,** December 3, 2014.
- Associated Environmental Group LLC, **January 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report, Holt's Quik Chek, Kelso, Washington,** February 4, 2015.
- Associated Environmental Group LLC, **April 2015 Holt's Quik Chek Quarterly Groundwater Sampling Results Report, Holt's Quik Chek, Kelso, Washington,** May 19, 2015.
- Associated Environmental Group LLC, **Subsurface Investigation, Holt's Quik Chek, 400 North Pacific Avenue, Kelso, Washington,** July 31, 2015.
- Associated Environmental Group LLC, **Work Plan for Final Closure, Holt's Quik Chek, 400 North Pacific Avenue, Kelso, Washington,** July 31, 2015.
- Washington State Department of Ecology, Further Action Opinion Letter dated June 25, 2015, Paul Turner.

e. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* The rights of Ecology as an "agency" under UECA, other than its' right as a holder, are not an interest in real property.

COVENANT

Richard & Cynthia Chin, as Grantor and fee simple owner of the Property, hereby grants to the Washington State Department of Ecology, and its successors and assignees, (hereafter "Ecology") the following covenants. Furthermore, it is the intent of the Grantor that such

covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. **Protection of Human Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. **Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. **Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

e. **Preservation of Reference Monuments.** Grantor shall make a good faith effort to preserve any reference monuments and boundary markers used to define the areal extent of coverage of this Covenant. Should a monument or marker be damaged or destroyed, Grantor shall have it replaced by a licensed professional surveyor within 30 days of discovery of the damage or destruction.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to the Property.

a. **Containment of Soil Materials.**

The remedial action for the Property is based on containing contaminated soil under a cap consisting of asphalt parking area and cement cover, and located as illustrated in **Exhibit B**. The primary purpose of this cap is to restrict access to the residual soil contamination to prevent direct contact exposure. As such, the following restrictions shall apply within the area illustrated in **Exhibit B**:

Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with sampling device, post, stake or similar device; grading; excavation; installation of underground utilities; removal of the cap; or, application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

b. Groundwater Use.

The groundwater beneath the Property remains contaminated and shall not be extracted for any purpose other than temporary construction dewatering, investigation, monitoring or remediation. Drilling of a well for any water supply purpose is strictly prohibited. Groundwater extracted from the Property for any purpose shall be considered potentially contaminated and any discharge of this water shall be done in accordance with state and federal law.

c. Monitoring.

Several groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. Monitoring shall be conducted and reported in accordance with the *Groundwater Monitoring and Contingency Plan* enclosed in **Exhibit C**. Monitoring and reporting shall also include an inspection of the condition of the cap. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. Conveyance of Any Interest. The Grantor, when conveying any interest in any part of the Property described/illustrated in Exhibit B, including but not limited to title, easement, leases, and security or other interests, must:

i. Notify Ecology at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE COWLITZ COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. Reporting Violations. Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. Emergencies. For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within 24 hours of the discovery of the event.

d. Notification procedure. Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

Richard & Cynthia Chin 400 N. Pacific Avenue Kelso, WA 98626 soriyuri@yahoo.com	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504 – 7600 (360) 407-6000

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. [1] For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site: [2]

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the site requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

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[1] Example of inconsistent uses are using the Property for a use not allowed under the covenant (i.e. mixed residential and commercial use on a property restricted to industrial uses), OR drilling a water supply well when use of the groundwater for water supply is prohibited by the covenant.

[2] An example of an activity that is unlikely to be considered a permanent modification is a proposal to disturb a cap to repair an existing underground utility that passes through the site. However, installing a new underground utility within a capped area would be a permanent change.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including Chapter 70.105D RCW and Chapter 64.70 RCW. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. The Grantor shall be responsible for all costs associated with implementation of this Covenant. Furthermore, the Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant.

e. This Covenant shall be liberally construed to meet the intent of the Model Toxics Control Act, chapter 70.105D RCW and Uniform Environmental Covenants Act, chapter 64.70 RCW.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned Grantor warrants he/she holds the title to the property and has authority to execute this Covenant.

EXECUTED this 27th day of February, 2017.

Richard & Cynthia Chin

Property Owner

INDIVIDUAL ACKNOWLEDGMENT

STATE OF Washington
COUNTY OF Cowlitz

On this 27th day of February, 2017, I certify that Richard & Cynthia Chin personally appeared before me, acknowledged that ~~he/~~she is the individual described herein and who executed the within and foregoing instrument and signed the same at ~~his/her~~ free and voluntary act and deed for the uses and purposes therein mentioned.

KATIE M MARTINSEN
Notary Public
State of Washington
My Commission Expires
September 05, 2019

Notary Public in and for the State of Washington
Residing at Castle Rock
My appointment expires 9/5/2019

The Department of Ecology, hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Rebecca S. Lawson

Rebecca S. Lawson, P.E., LHG
Section Manager
Toxics Cleanup Program
Southwest Regional Office

Dated: 3/9/2017

STATE ACKNOWLEDGMENT

STATE OF Washington

COUNTY OF Thurston

On this 9th day of March, 2017, I certify that Rebecca S. Lawson personally appeared before me, acknowledged that **he/she** is the Toxics Cleanup Section Mgr. of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that **he/she** was authorized to execute said instrument for said state agency.

Lorna L. Gadwa
Notary Public in and for the State of Washington

LORNA L. GADWA
NOTARY PUBLIC
STATE OF WASHINGTON
COMMISSION EXPIRES
SEPTEMBER 17, 2019

Residing at Olympia, WA

My appointment expires 9-17-19

Exhibit A

LEGAL DESCRIPTION

PARCEL 20086:

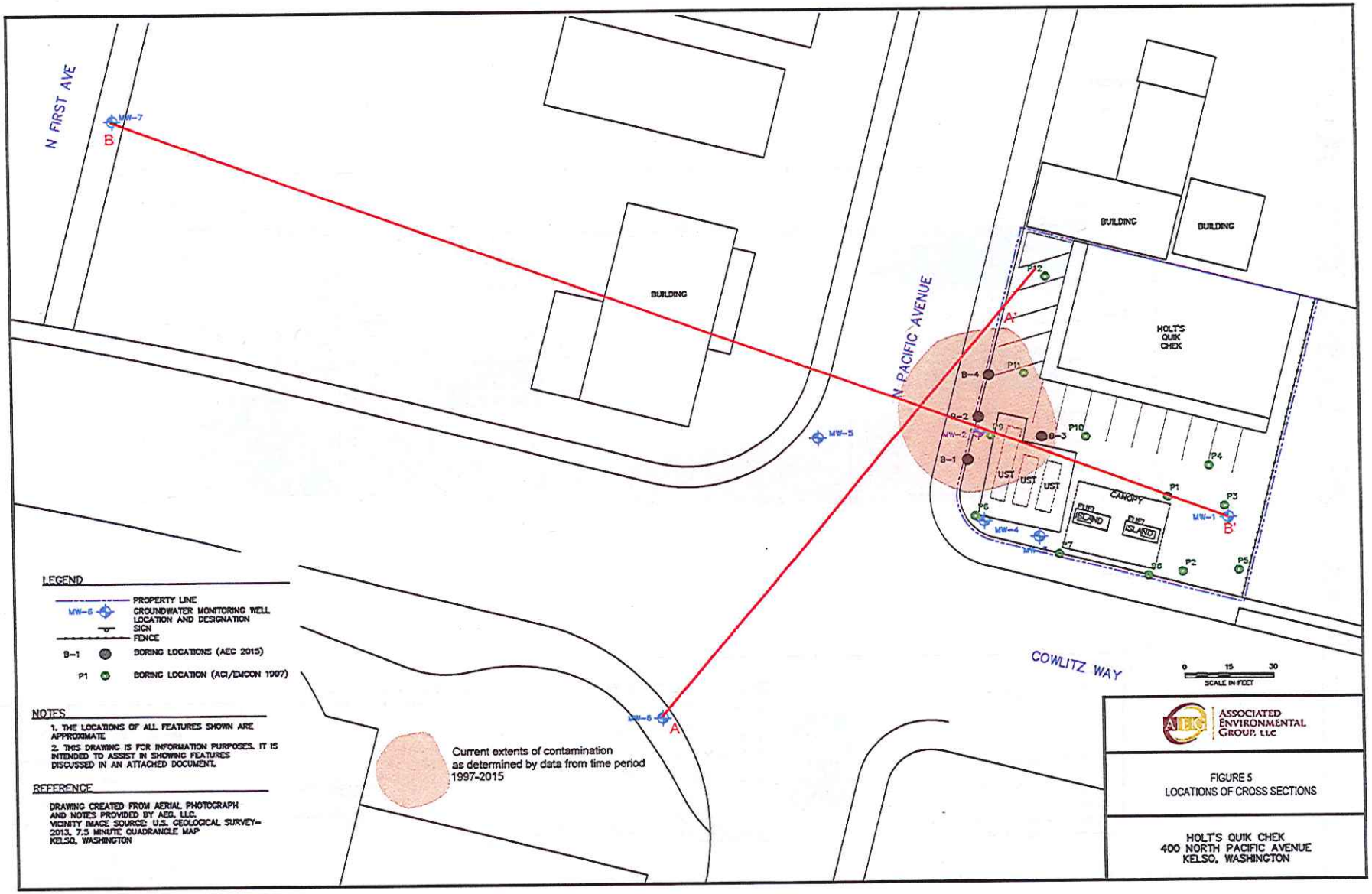
Lots 5 and 6, Block 11, Original Town of Kelso, as recorded in Volume 3 of Plats, Pages 11 and 12, records of Cowlitz County, State of Washington.

EXCEPT that portion conveyed to the State of Washington by deed recorded under Auditor's File No. 840221034.

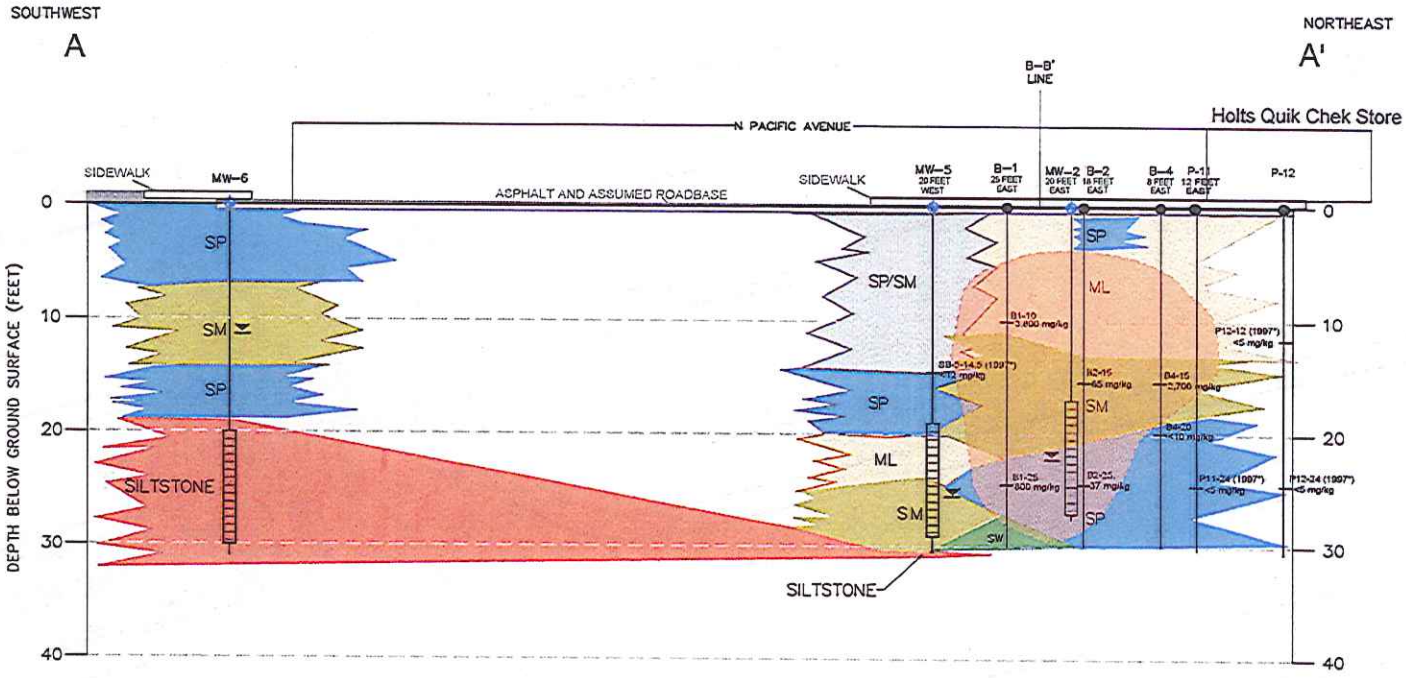
Situate in the County of Cowlitz, State of Washington.

Exhibit B

PROPERTY MAP & LOCATION OF RESTRICTIONS


N FIRST AVE
N PACIFIC AVENUE
COWLITZ WAY
BUILDING
BUILDING
BUILDING
HOLT'S QUIK CHEK
CANOPY
FUEL ISLAND
UST
UST
UST
MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
B-1
B-2
B-3
B-4
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
A
A'
B
B'
Current extents of contamination as determined by data from time period 1997-2015
0 15 30
SCALE IN FEET
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
ASSOCIATED ENVIRONMENTAL GROUP, LLC
FIGURE 5
LOCATIONS OF CROSS SECTIONS
HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
14-174_XSECTIONS.DWG	KCD 12/19/2015	NP 12/19/2015	NP 12/19/2015	14-174



LEGEND

B-1 MW-3 – WELL, SOIL BORING

– GROUNDWATER LEVEL FROM 10/20/15

B1-15 100 mg/kg – GASOLINE-RANGE TPH (MG/KG) 2015

– MAXIMUM DEPTH EXPLORED

– SOIL CONTACT

ML – INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS, WITH SLIGHT PLASTICITY

SP – POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES

SM – SILTY-SANDS, SAND-SILT MIXTURES

SW – WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES

SILTSTONE REPORTED IN EMCON 1997 BORING LOGS

Current extents of contamination as determined by data from time period 1997-2015

HORIZONTAL SCALE 0 10 20

VERTICAL SCALE 0 5 10

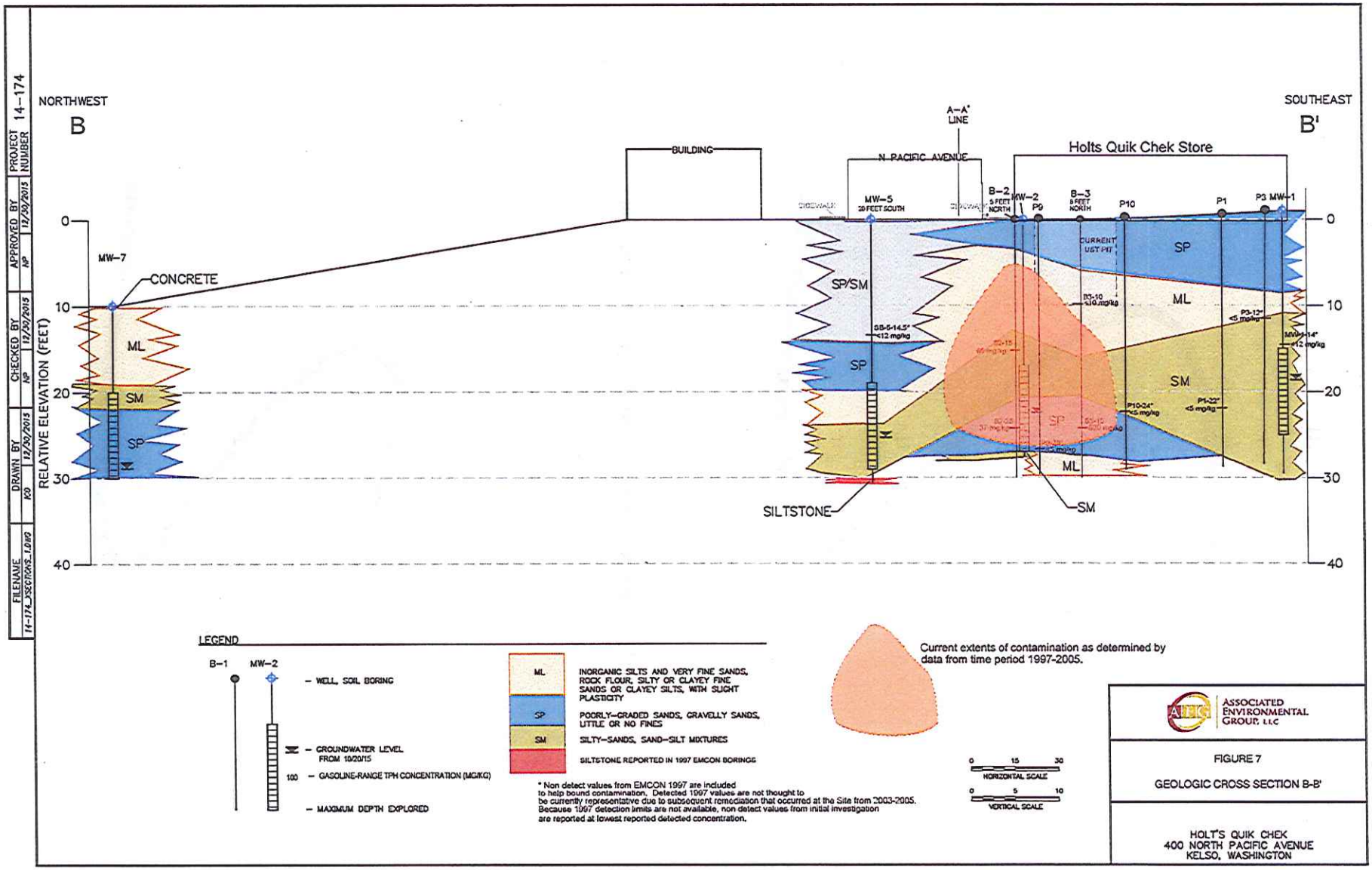
* Note- Non detect values from EMCON 1997 are included to help bound contamination. Detected 1997 values are not thought to be currently representative due to subsequent remediation that occurred at the Site. Because detection limits are not available, non-detect values reported at lowest reported detected concentration.

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 6

GEOLOGIC CROSS SECTION A-A'

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON



LEGEND

B-1 MW-2 – WELL, SOIL BORING

– GROUNDWATER LEVEL FROM 10/20/15

100 – GASOLINE-RANGE TPH CONCENTRATION (MG/KG)

– MAXIMUM DEPTH EXPLORED

ML – INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS, WITH SLIGHT PLASTICITY

SP – POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES

SM – SILTY-SANDS, SAND-SILT MIXTURES

SILTSTONE REPORTED IN 1997 EMCON BORINGS

* Non detect values from EMCON 1997 are included to help bound contamination. Detected 1997 values are not thought to be currently representative due to subsequent remediation that occurred at the Site from 2003-2005. Because 1997 detection limits are not available, non detect values from initial investigation are reported at lowest reported detected concentration.

Current extents of contamination as determined by data from time period 1997-2005.

HORIZONTAL SCALE 0 15 30

VERTICAL SCALE 0 5 10

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 7

GEOLOGIC CROSS SECTION B-B'

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

Exhibit C

GROUNDWATER MONITORING & CONTINGENCY PLAN

ASSOCIATED ENVIRONMENTAL GROUP, LLC

Groundwater Monitoring and Contingency Plan

Prepared for:
Holt's Quik Chek
400 North Pacific Avenue
Kelso, WA 98626
Facility/Site ID # 87376683
VCP # SW1445

Prepared for:
Richard & Cynthia Chin
400 N. Pacific Avenue
Kelso, WA 98626

Prepared and Reviewed by:

Shawn Lombardini, L.G.
Project Geologist

Scott Rose, L.H.G.
Senior Hydrogeologist

Project #05-176
Date of Report: January 10, 2017

Table of Contents

Figures:

1.0 INTRODUCTION

Associated Environmental Group, LLC (AEG) has prepared the proposed ***Groundwater Monitoring and Contingency Plan*** for Holt's Quik Chek, located at 400 N. Pacific Avenue in Kelso, Cowlitz County, Washington (Site). The purpose and objectives of this report are to summarize the plan for ongoing confirmational monitoring selected on-Site wells in support of a request of No Further Action with an Environmental Covenant for the Property.

1.1 Site Location and Description

The Model Toxics Control Act Cleanup Regulation (MTCA) defines a Site/Facility as:

"*...any building, structure, installation, equipment, pipe or pipeline...well, pits, pond, lagoon, impoundment, ditch, landfill, storage container...or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.*" (WAC 173-340-200)

The Site is located at the intersection of North Pacific Avenue and Cowlitz Way, and is positioned on roughly 0.22 acres. The Site is developed as a gas station with a 3,075 square foot convenience store and two associated fueling islands. A retail gasoline service or automotive repair station has operated on Site since the 1960s. Holt's Quik Chek has operated a retail gasoline station and convenience store at the Site since 1981. A petroleum release was discovered in 1997. Since then, subsurface investigations have been performed in the vicinity of the underground storage tank (UST) pad, fuel dispenser area, and in portions of Cowlitz Way and North Pacific Avenue. The immediate vicinity of the Site is residential.

At this Site, remaining soil contamination above MTCA Method A cleanup levels occurs in the vicinity of the UST nest. However, groundwater contamination above MTCA Method A cleanup levels has not been detected in Site monitoring wells over four or more quarters. The direction of groundwater flow has been consistently measured to the west toward the Cowlitz River, located approximately 150 feet west of the Site.

2.0 PROPOSED GROUNDWATER COMPLIANCE/CONTINGENCY PLAN

The Groundwater Compliance/Contingency Plan, based on WAC 173-340-820, includes a list of components as follows:

2.1 Well Sampling Schedule

- Four separate sampling events are included in this plan for a total of approximately 5 years of groundwater monitoring at the Site.
- Monitoring will occur at 18-month intervals. Due to a lack of a seasonal trend in impacts to groundwater, this interval was selected to obtain future seasonal water quality and groundwater elevation information and variability for the Site over a longer term.

2.2 Well Sampling Details

- Four existing Site monitoring wells (MW-1, MW-2, MW-4, and MW-5) will be included at each sampling event. These wells were selected at Ecology's request to ensure a complete picture of Site conditions is obtained over the first five-year period. Following the first five-year Periodic Review by Ecology, a request may be made to reduce the number of wells to be monitored, as well as the frequency of monitoring. The locations of the wells are illustrated on the attached Figure 1.
- Prior to sampling, depth to groundwater will be measured in each of the wells to be sampled using an interface probe accurate to the nearest one-tenth of an inch and recorded.
- Monitoring wells will be sampled via EPA-approved low-flow purging technique using a peristaltic pump at a rate of less than 500 milliliters (mL) per minute.
- Each well will be purged through a flow-through cell and field parameters recorded. Purging parameters to be recorded include temperature, pH, conductivity, total dissolved solids (TDS), dissolved oxygen (DO), and Oxidation/reduction potential (ORP). Field data sheets will be included as part of the monitoring reports.
- The field parameters will be recorded every five minutes until stabilized. Stability by EPA methods includes:

  "...Three successive readings should be within ± 0.1 for pH, ± 3% for conductivity, ± 10 mv for redox potential, and ± 10% for turbidity and DO...."

- Groundwater samples will be collected in method-approved laboratory-provided containers, and submitted for the following analyses:

- Gasoline-range petroleum hydrocarbons (TPH) by Northwest Method NWTPH-Gx.
- Diesel-range TPH by Northwest Method NWTPH-Dx.
- Benzene, toluene, ethylbenzene, and xylene (BTEX) compounds by EPA Method 8260.
- MTCA Table 830-1 constituents (if non-detect after first event, a request may be made to Ecology to discontinue for subsequent events), including the following:
  - Ethylene dibromide (EDB) by EPA Method 8011.
  - 1,2-dichloroethane (EDC) and methyl tert-butyl ether (MTBE) by EPA Method 8260.
  - Total lead by EPA Method 7010.

- Upon collection, the groundwater samples will be placed in a chilled cooler for transport to a Washington State registered analytical laboratory for analysis, using standard chain of custody protocols.

2.3 Quality Controls

- All groundwater samples will be collected in accordance with industry protocols for the collection, documentation, and handling of samples.
- New nitrile gloves will be used in handling all sampling containers and sampling devices.
- All non-dedicated sampling equipment will be scrubbed with Alconox detergent and rinsed with distilled water prior to each use.
- The laboratory report will provide quality assurance/quality control (QA/QC), which will include the following as appropriate: surrogate recoveries for each sample, method blank results, duplicate analyses, matrix or blank spiked analyses, and duplicate spike analyses.

2.4 Cap Inspection

As part of sampling activities, the area of the UST nest and surrounding surface cover, which is acting as a cap for remaining soil contamination, will be inspected for integrity (such as signs of cracks or other damage) to ensure the cap is properly maintained, preventing exposure to residual contaminated soils. AEG will work with the property owner to repair any cracks or other damage noted during the inspection. Cap inspection observations will be documented in an AEG Daily Field Report form (attached).

2.5 Reporting

Sampling event reports will be prepared following each event documenting the depth to water, field measurements, analytical results summaries of the groundwater monitoring/sampling activities, cap inspection results, and any other activities pertinent to the cleanup at the Site. All reports generated by AEG will be reviewed by a Washington State licensed hydrogeologist. Groundwater monitoring reports will be submitted to Ecology for review within 90 days of obtaining the laboratory analytical results. All data generated will be submitted to Ecology in accordance with WAC 173-340-840(5), in both written and electronic format.

3.0 CONTINGENCY PLAN

Should contaminants of concern (COCs) be detected above MTCA Method A cleanup levels in groundwater, AEG will immediately resample the well to confirm the presence of Site COCs. AEG will notify Ecology and obtain an opinion for further action before initiating any additional activities.


BUILDING
BUILDING
HOLT'S QUIK CHEK
P12
P11
P10
P9
P8
P7
P6
P5
P4
P3
P2
P1
B-4
B-3
B-2
B-1
MW-5
MW-6
MW-4
MW-3
MW-1
UST
UST
UST
CANOPY
FUEL ISLAND
FUEL ISLAND
LEGEND
PROPERTY LINE
GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SIGN
FENCE
BORING LOCATIONS
POWER UTILITY BOX
POWER LINE
BORING LOCATIONS (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 1
BORING AND WELL LOCATION MAP
HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON