

## **Request for No Further Action**

Conducted for: Holt's Quik Chek 400 North Pacific Avenue Kelso, Washington 98626-3516 Ecology Facility/Site ID No. 87376683 Ecology VCP ID No. SW1445

*Prepared for:* Mr. Han Kim P.O. Box 296 Littlerock, Washington 98556-0296

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AEG Project #: 14-174 Date of Report: January 7, 2016



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## TABLE OF CONTENTS

1.0	INTRODUCTION1
1.	1 SITE AND VICINITY BACKGROUND
1.2	2 INVESTIGATIVE AND REGULATORY HISTORY
1.	3 SITE GEOLOGY AND HYDROGEOLOGY4
2.0	SITE REVIEW
2.	1 REVISED GROUNDWATER GRADIENTS BASED ON 2015 SURVEY
2.2	2 SOURCE CONTROL ACHIEVED
2.3	3 EXPOSURE PATHWAYS
2.3	3.1 DIRECT CONTACT PATHWAY
2.3	3.2 CONSUMPTION OF GROUNDWATER PATHWAY
2.3	3.3 GROUNDWATER LEACHING PATHWAY
2.3	3.4 GROUNDWATER TO SURFACE WATER PATHWAY7
2.3	3.5 VAPOR INTRUSION PATHWAY
2.3	3.6 TERRESTRIAL ECOLOGICAL EVALUATION
2.4	4 CLEANUP STANDARDS
2.4	4.1 CLEANUP LEVELS
2.4	4.2 POINTS OF COMPLIANCE
2.5	5 COST AND BENEFITS OF ADDITIONAL CLEANUP
2.5	5.1 POTENTIAL ADDITIONAL ACTIVE REMEDIATION TECHNOLOGIES
2.5	5.2 COSTS OF ADDITIONAL POSSIBLE REMEDIATION10
2.5	5.3 BENEFITS OF ADDITIONAL POSSIBLE REMEDIATION
3.0	CONCLUSIONS
4.0	LIMITATIONS
5.0	REFERENCES

#### **FIGURES**

- Figure 1: Vicinity Map
- Figure 2: *Site Map*
- Figure 3: Boring and Well Location Map
- Figure 4: October 2015 Groundwater Contour Map
- Figure 5: Locations of Cross Sections
- Figure 6: Geologic Cross Section A-A'
- Figure 7: Geologic Cross Section B-B'

#### **TABLES**

- Table 1:Summary of Soil Analytical Results
- Table 2:
   Summary of Groundwater Analytical Results
- Table 3:Summary of Groundwater Elevations

#### **APPENDICES**

- Appendix I: Revised Groundwater Gradients based on new survey
- Appendix II: Draft Environmental Covenant
- Appendix III: Terrestrial Ecological Evaluation Form
- Appendix IV: Archived Tables

Archived Tables, Table 1, *Historic Soil Analytical Results for Petroleum Hydrocarbons and Lead (EMCON)*.

Appendix V: Archived Figures

Archived Figures, Figure 2, *Groundwater Data September 26, 1997* (*EMCON*) Archived Figures, Figure 3, *Site Plan Showing Soil Boring and Monitoring Well Locations (Farallon).* 

Archived Figures, Figure 4, Site Plan Showing Groundwater Elevation Contours (9/21/06) (Farallon)

Archived Figures, Figure 5, Site Plan (2/8/2007) (Farallon)

## **1.0 INTRODUCTION**

Associated Environmental Group, LLC (AEG) is pleased to provide this request for No Further Action (NFA) for Holt's Quik Chek, located at 400 North Pacific Avenue, in Kelso, Washington (Site). This report presents an overview of the remedial activities conducted to date at the Site, and an evaluation of the potential exposure pathways, cleanup standards, and costs and benefits of additional cleanup actions. The last opinion letter issued by the Washington State Department of Ecology (Ecology) was a Further Action opinion letter dated June 25, 2015. Documents submitted by AEG to Ecology since that time include a *Subsurface Investigation* report, dated July 31, 2015, and a *Quarterly Groundwater Monitoring Report* for the October 2015 sampling event, dated November 5, 2015.

## 1.1 Site and Vicinity Background

The Site is located northeast of the intersection of North Pacific Avenue and Cowlitz Way, and is positioned on a roughly 0.22-acre parcel designated by the Cowlitz County Assessor as Tax Parcel #20086. The Site is developed as a Texaco-branded gasoline station with a 3,075-square-foot convenience store, two fueling islands and associated underground storage tanks (USTs). The Site has operated as a retail gasoline service or automotive repair station since the 1960s. Holt's Quik Chek has operated a retail gasoline station and convenience store at the Site since 1981. A petroleum hydrocarbon (TPH) release was discovered by the property owner in 1997. Since then, subsurface investigations have been performed in the vicinity of the UST pad, fuel dispenser area, and in portions of Cowlitz Way and North Pacific Avenue. The immediate vicinity of the Site is residential. Another UST facility [Cowlitz County Motor Pool (FSID 1692365)] is reportedly located across the street to the south, and is listed as Cowlitz County Assessor Tax Parcel #20080. Figure 1, *Vicinity Map*, presents the general vicinity of the Site. The Site's current layout and features can be seen in Figure 2, *Site Map*, and Figure 3, *Boring and Well Location Map*.

## 1.2 Investigative and Regulatory History

## Phase II Environmental Site Assessments, AGI and EMCON – 1997

In 1997, AGI Technologies, Inc. (AGI) advanced 12 borings, and EMCON installed six monitoring wells at the Site. Soil samples were collected at various depths along with groundwater samples, and revealed gasoline-range TPH and benzene concentrations above the Ecology MTCA Method A cleanup levels for both soil and groundwater in the southwest quarter of the Site (Appendix IV, Archived Tables, Table 1, *Historic Soil Analytical Results for Petroleum Hydrocarbons and Lead (EMCON)*. For locations of the borings and wells, see Appendix V, Archived Figures, Figure 2, *Groundwater Data September 26, 1997 (EMCON)*, and Figure 3, *Farallon Consulting Site Plan Showing Soil Boring and Monitoring Well Locations (Farallon)*. As a result of the documented

release to soil and groundwater, the Site was listed on Ecology's Confirmed and Suspected Contaminated Sites List in 1997.

## **Cleanup Actions, Hart Crowser and Farallon Consulting - 2003**

In 2003, Hart Crowser installed a biosparging system at the Site. The system consisted of sparging air at about 0.1 cubic feet per minute in each of the eight sparge wells. Air was sparged into the subsurface water to raise dissolved oxygen levels to enhance the natural biodegradation processes. The biosparge system was operated until September 2005 when Farallon Consulting, LLC (Farallon) completed an in-situ chemical oxidation remediation using activated sodium persulfate. A total of 200 gallons of 5% sodium persulfate catalyzed with 10% hydrogen peroxide was injected into monitoring wells MW-2, MW-4, and MW-5. See Appendix V, Archived Figures, Figure 5, *Site Plan (Farallon)*. Approximately 50 gallons of the activated sodium persulfate solution was injected into the eight sparge wells. According to Farallon, in the *Site Closure Report* dated March 9, 2007:

"The chemical oxidation was successful in removing the residual soil contamination that was impacting groundwater based on the analytical results obtained from four subsequent quarters of groundwater monitoring."

## **Ecology Opinion Letter – June 18, 2007**

In 2007, Farallon submitted a NFA request letter to Ecology. Ecology determined that Further Action was needed at the Site under WAC 173-340-515(5) to fully characterize the Site. Ecology's opinion letter, dated June 18, 2007, stated:

"...if soil remains above MTCA Method A cleanup levels on the Holt's Quik Chek Market property, it is possible that a restrictive covenant could be filed with the Cowlitz County Auditor's office."

"If no contamination is present west of the monitoring well MW-5 and contamination is not present in the soil then the remediation is considered complete and no further action is required."

## Ecology Site Hazard Assessment (SHA) – March 26, 2014

In March 2014, Ecology performed an SHA for the Site in accordance with WAC 173-340-320. An SHA is a qualitative assessment of a site's potential threat to human health and the environment. Since the extent of off-property impacts had not yet been defined for this Site, the SHA resulted in a ranking of 2, and the Site was added to the state's Hazardous Sites List.

January 7, 2016

## Quarterly Groundwater Monitoring, AEG – October 2014 through April 2015

AEG performed quarterly groundwater monitoring at wells MW-1, MW-2, MW-3, MW-4, and MW-5 four times from October 2014 to April 2015. During these monitoring events, no constituents of concern were detected above MTCA Method A cleanup levels. Table 2, *Summary of Groundwater Analytical Results*, provides a summary of groundwater analytical results.

### **Ecology Opinion Letter – June 25, 2015**

In May 2015, AEG submitted the four quarters of groundwater data to Ecology for review in consideration of an NFA. Ecology determined that Further Action was still warranted at the Site. Ecology's opinion letter, dated June 25, 2015, stated the following:

"MW-6 should continue to be sampled and analyzed for benzene."

"...additional wells should be installed downgradient of MW-5."

"...the wells should be surveyed again so accurate data can be obtained."

"...it is not apparent whether soil contamination still remains above the MTCA method A cleanup levels on the Holts Quik Chek Market property. If soil remains it is possible that a restrictive [environmental] covenant could be filed with the Cowlitz County Auditor's office. However, monitoring would be required to determine that soil contamination is not an issue for human health or the environment."

"...Ecology requires four consecutive quarters of monitoring with sample results below the applicable cleanup levels before a site can be considered clean and a NFA determination made."

"...a TEE [Terrestrial Ecological Evaluation] needs to be completed for the Site."

### Subsurface Investigation & Additional Monitoring, AEG – June-October 2015

AEG advanced four soil borings (B-1 through B-4) on the property to determine whether residual impacts to soil were still present. Soil and groundwater samples were collected from each boring and laboratory analyzed for diesel-range TPH, lube oil-range TPH, gasoline-range TPH, benzene, toluene, ethylbenzene, and total xylenes (BTEX). Contamination above MTCA Method A levels was detected in the on-property soil borings.

A fifth boring was advanced further west and completed as monitoring well MW-7. All seven wells were sampled in July and October 2015. No contamination above MTCA Method A levels was detected in the wells, except for benzene in MW-6. Analytical results of the soil and groundwater samples are presented in Table 1, *Summary of Soil Analytical Results*, and Table 2, *Summary of Groundwater Analytical Results*.

In September 2015, the wells and property were surveyed. AEG subsequently replotted groundwater flow gradients for all groundwater monitoring events recorded since 1997, using the newly surveyed well elevations. These gradients are illustrated in Appendix I, *Revised Groundwater Gradients based on new survey*.

## 1.3 Site Geology and Hydrogeology

This Site is located near a bluff overlying the Cowlitz River, approximately 45 feet above the river. Surficial geology encountered at the Site to date consisted of silt and sand, with underlying siltstone in some locations. Sandy silt was encountered on the Site to a depth of approximately 13 feet bgs, with silty sand being found from approximately 13 feet bgs to approximately 22 feet bgs. Below 22 feet bgs is primarily sand. At MW-6, siltstone is found below 19 feet bgs to 31 feet bgs, the total depth explored. That siltstone was also detected at 29.5 feet bgs in MW-5.

Geologic maps describe this area as surficial Quaternary alluvium and outwash of the Cowlitz River, underlain by Eocene age nearshore sedimentary and volcanic rocks of the Cowlitz formation. The Cowlitz formation is described as "Micaceous, arkosic to basaltic marine sandstone, siltstone, and mudstone."<sup>1</sup> Monitoring wells MW-1 through MW-5, and MW-7 are all screened in sands, silty sands and sandy gravel to depths of approximately 30 feet bgs. At monitoring well MW-6, the sand, silty sand and gravel extends down only to 19 feet bgs, and monitoring well MW-6 is screened entirely in underlying siltstone (19-31 feet bgs), likely of the Cowlitz formation. Siltstone is also reported underlying the screened interval of MW-5 below 29.5 feet bgs, providing evidence that the siltstone of the Cowlitz formation is laterally extensive to some extent, although found below 29 feet bgs at MW-5 and likely other Site monitoring wells and borings. Reflecting subsurface topography, groundwater elevations in MW-6 have been 10 to more than 15 feet higher than other Site monitoring wells since MW-6 was installed in September 1997.

There appears to be two major components of groundwater flow at the Site. The higher elevation siltstone underlying the sandy alluvium at MW-6 creates a local groundwater gradient from MW-6 north towards MW-5. Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7 are completed in sands, and gradients measured in them over the years, without the influence of MW-6, have reflected the primary component of groundwater flow towards the river. The westward component of groundwater flow at the Site was last measured at approximately 0.064 feet per foot (ft/ft) west, and the secondary component from MW-6 to MW-5 was last measured at approximately 0.11 ft/ft north-northeast (Figure 4, *October 2015 Groundwater Contour Map*, Figure 5, Locations of Cross Sections, Figure 6, *Geologic Cross Section A-A'*, Figure 7, Geologic *Cross Section B-B'*).

<sup>1 &</sup>lt;u>http://mrdata.usgs.gov/geology/state/sgmc-unit.php?unit=ORTco%3B0</u> retrieved 11/5/2015.

This difference in measured groundwater elevations is not reflected in surface topography, which is relatively flat across the intersection of North Pacific Avenue and Cowlitz Way. Differences in well completion, geologic logging, and repeated groundwater elevation measurements since 1997 support a conclusion that MW-6 is cross to up-gradient of other Site monitoring wells. Cross sections A-A' and B-B', attached to this report, detail subsurface stratigraphy encountered at this Site.

These conclusions are based on monitoring well logs, well completion details, cross sections, and contour maps made from groundwater elevation measurements on September 23, 1997 (*As detailed in March 9, 2007, Site Closure Report, Holt's Quik Chek Site [Farallon])*, September 21, 2006 (Archived Figures, Figure 4, *Site Plan Showing Groundwater Elevation Contours (9/21/06)* (*Farallon*), and Appendix I; *Groundwater Contours based on new survey*.

## 2.0 SITE REVIEW

## 2.1 Revised Groundwater Gradients Based on 2015 Survey

Site monitoring wells were professionally surveyed in September 2015. Based on the surveyed elevations, AEG recalculated groundwater gradients for all 16 Site monitoring events from March 1997 until October 2015. Newly recalculated groundwater gradients show the influence of MW-6 as an upgradient location at this Site, and provide strong evidence that contamination detected at MW-6 did not likely originate at this Site. At this Site, the primary component of groundwater flows from west to east. A secondary component of groundwater flows from south to north, from MW-6. Site wells MW-5 and MW-7 are downgradient wells to the release. MW-1 and MW-6 are upgradient, with MW-2, MW-3 and MW-4 located near the most contaminated area. AEG provides revised groundwater gradients as an attachment to this report (Appendix I: *Groundwater Gradients based on new survey*).

## 2.2 Source Control Achieved

At this Site, sources of contamination have been actively remediated. Biosparging, chemical oxidation treatments and monitoring from 2002 to 2007 was reported to have been successful in removing and documenting the residual soil and groundwater contamination. Site monitoring and soil boring data obtained in the years since active remediation ceased has shown that contamination continues to be detected, interspersed in deep soils and locally in groundwater in temporary well points. However, permanent wells adjacent to and/or downgradient of these well points continue produce data below MTCA cleanup levels. Residual contamination has not been detected off the property, and is not laterally or vertically extensive, as measured in soil borings and Site monitoring wells.

## 2.3 Exposure Pathways

## 2.3.1 Direct Contact Pathway

The weight of evidence supports that the direct contact and incidental ingestion pathways [through the use of institutional controls] are not complete. Soil and groundwater contamination above MTCA Method A levels remains in soil on the Site property at approximately 10 to 25 feet bgs at the locations of soil borings B-1, B-2, B-3, and B-4. Groundwater contamination does not extend off-property, as repeatedly measured and confirmed in downgradient monitoring wells that extend beyond the limits of the Site.

Contamination at this Site is overlain with concrete and asphalt. There is no readily foreseeable risk of direct contact or incidental ingestion of petroleum-contaminated soils (PCS) at this Site. An environmental covenant will be filed for the property to ensure that any future Site development

will be protective of these pathways. A draft environmental covenant is attached to this request for review (Appendix II: *Draft Environmental Covenant*)

## 2.3.2 Consumption of Groundwater Pathway

The weight of evidence supports that the consumption of groundwater pathway is not complete. While contaminated groundwater was present above MTCA Method A cleanup levels in borings advanced on the property, these impacts were not confirmed in the more representative groundwater data collected from wells on the property or downgradient wells MW-5 or MW-7. There are no drinking water or irrigation wells listed near this Site. Site water is supplied by the City of Kelso (City), which has requirements for water supply in City code. As such, it is not likely shallow groundwater beneath the Site would ever be used as a drinking water source. Regardless, an environmental covenant will be filed for the property to ensure that groundwater is not used for any purpose.

## 2.3.3 Groundwater Leaching Pathway

The weight of evidence supports that the groundwater leaching pathway is not complete. It has been 18 years since the petroleum release was detected, and 12 years since significant active remediation of accessible PCS and groundwater was completed at this Site. Remaining, highly weathered TPH contamination was detected at up to 3,800 milligrams per kilogram (mg/kg) of gasoline-range TPH in soil, in a sample obtained from 10 feet bgs in soil boring B-1. Soil Boring B-1 detected gasoline-range TPH at 1,400 micrograms per liter ( $\mu$ g/L) in groundwater. This contamination may have been released locally during the soil boring process, as groundwater contamination has not been detected in nearby MW-2, or downgradient MW-5, providing empirical evidence that the highly weathered residual contamination is not laterally extensive. Soil and groundwater monitoring analytical results provide evidence that this pathway is not complete.

## 2.3.4 Groundwater to Surface Water Pathway

**The weight of evidence supports that the groundwater to surface water pathway is not complete.** While contaminated groundwater was present above MTCA Method A cleanup levels in borings advanced on the property, these impacts were not confirmed in the more representative groundwater data collected from the wells on the property or downgradient wells MW-5 or MW-7. The bluffs of the Cowlitz River are approximately 350 feet away from the location of contamination, and groundwater that could reach them is not above MTCA Method A cleanup levels, as verified by MW-5 and MW-7.

## 2.3.5 Vapor Intrusion Pathway

<u>The weight of evidence supports that the vapor intrusion pathway is not complete.</u> Volatile contaminants of concern (COCs) for the vapor intrusion pathway were not detected in the 2015

January 7, 2016

AEG soil borings, or in Site monitoring wells, except for MW-6. MW-6 is located about 175 feet southwest from the location of remaining residual contamination in soil. AEG's opinion is that the minimum 10-foot difference in head between MW-6 and other Site monitoring wells and stratigraphy encountered while boring MW-6, discussed above, demonstrate that MW-6 is upgradient to cross gradient of this Site, and contamination there represents a release from another upgradient location. Also, residual impacts to soil are at least 10 feet bgs or greater, which is greater than the recommended 6-foot vertical separation distance for mitigating risk of potential vapor intrusion.

## 2.3.6 Terrestrial Ecological Evaluation

This Site qualifies for an exclusion from further TEE review based on points of compliance, and barriers to exposure. At this Site, all contaminated soil is below 6 feet bgs, and an environmental covenant will be used to manage remaining contamination.<sup>2</sup> All contaminated soil is also covered by asphalt and concrete, preventing exposure to plants and wildlife. Institutional controls will be used to manage remaining contamination.<sup>3</sup> In accordance with WAC 173-340-7490, a TEE form is included as an attachment to this report (Appendix III: *Terrestrial Ecological Evaluation*).

## 2.4 Cleanup Standards

## 2.4.1 Cleanup Levels

MTCA defines cleanup levels as:

"...the concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions."

These levels, combined with the location where these cleanup levels must be met (point of compliance [POC]), and other regulatory requirements that apply to a site, define the cleanup standards for a site.

For this Site, AEG intends to use MTCA Method A cleanup levels. The conditions for using the MTCA Method A cleanup levels are met at this Site because numerical standards are available for all indicator hazardous substances in all media of concern [WAC 173-340-704(1)(b)]. In addition, Method A cleanup levels are appropriate because only a few petroleum-related hazardous substances have been found.

<sup>2</sup> WAC 173-340-7491(1)(a)

<sup>3</sup> WAC 173-340-7491(1)(b)

<sup>605 11&</sup>lt;sup>TH</sup> AVE SE, SUITE 201 • OLYMPIA, WA • 98501-2363 Phone: 360.352.9835 • Fax: 360.352.8164 • Email: <u>admin@aegwa.com</u>

The MTCA Method A cleanup levels for the Site COCs are:

Soil:	<b>TPH-Gasoline</b>	30 mg/kg
	TPH-Diesel	2,000 mg/kg
	Benzene	0.03 mg/kg
	Toluene	7 mg/kg
	Ethylbenzene	6 mg/kg
	Total xylenes	9 mg/kg
Groundwater	TPH-Gasoline	800 ug/I
Ground water.	TPH-Diesel	500 μg/L
	Benzene	5 µg/L
	Toluene	1,000 µg/L
	Ethylbenzene	700 µg/L
	Total xylenes	1,000 µg/L

### 2.4.2 Points of Compliance

For this Site, it is assumed that the standard point of compliance will be applied.

- <u>Soil Direct Contact</u>: For soil cleanup levels based on human exposure via direct contact, the POC is throughout the Site from the ground surface to 15 feet bgs.
- <u>Soil Leaching</u>: For soil cleanup levels based on protection of groundwater, the POC is throughout the Site.
- <u>Groundwater</u>: For groundwater, the POC is 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.
- <u>Indoor Air/Soil Gas</u>: The POC is ambient and indoor air throughout the Site.

### 2.5 Cost and Benefits of Additional Cleanup

### 2.5.1 Potential Additional Active Remediation Technologies

Residual contamination remains detectable above MTCA Method A cleanup levels in soils between 10 feet bgs and 25 feet bgs, and locally in groundwater, in the area of soil borings B-1, B-2, B-3, and B-4, under the parking lot, between the Site structure, and near North Pacific Avenue.

Source control at this Site has been achieved using biosparging and chemical oxidation. Additional

January 7, 2016

use of these methods would not likely result in significant additional decreases in contaminant levels in soil. Groundwater contamination is below MTCA Method A levels in Site monitoring wells, and not laterally extensive where detected, so groundwater treatment would not likely result in significant removal of contaminants. The residual concentrations are not a strong source of vapors, so soil vapor extraction would not likely be effective. An engineered cap is possible, but not without removing the gas station infrastructure. The only regularly used remedial technology to address additional residual contamination at this Site is additional excavation of PCS and backfill with clean material.

## 2.5.2 Costs of Additional Possible Remediation

An engineered cap to soil contamination is conceivable, but not without extensive removal of gasoline station infrastructure and excavation of Site soils. AEG is not further evaluating an engineered cap.

Additional excavation of PCS is possible at the Site. To prevent collapse of buildings and of North Pacific Avenue during excavation, excavating to between 10 and 25 feet bgs in the parking lot would require significant engineered shoring along North Pacific Avenue, shoring of the building at 404 Pacific Avenue, and shoring of the main Site building. Up to 10 feet of overburden would have to be removed and stockpiled to access underlying PCS. Contaminated PCS would need to be removed to an appropriate landfill, and the excavation filled with clean backfill. The cost of accessing residual contamination is significant. The costs to excavate additional PCS would outweigh the benefit gained.

## 2.5.3 Benefits of Additional Possible Remediation

The MTCA regulation provides a preference for permanent remediation of contamination. The benefit of excavation of remaining PCS would be to provide a permanent remedial solution for this Site without additional requirements or monitoring.

This Site's exposure pathways are likely incomplete. An environmental covenant will help ensure that Site exposure pathways remain incomplete. Additional remediation at this Site would provide very little incremental benefit to the Site's overall protectiveness.

## 3.0 CONCLUSIONS

It is AEG's opinion that an NFA (with institutional controls) is warranted for the Site for the following reasons:

- 1. Sources of contamination have been actively remediated to the maximum extent practicable.
- 2. Remaining residual contamination in soil is localized in areas that would be difficult to access, and thereby costly to remediate with little added benefit.
- 3. Exposure pathways are not complete (with institutional controls).
- 4. Contamination is effectively contained.
- 5. Concentrations of contaminants in groundwater collected from monitoring wells MW-1 through MW-5 have been either non-detect or below MTCA cleanup levels for five consecutive quarters, and for three consecutive quarters in MW-7.
- 6. Monitoring Well MW-6 groundwater elevations are repeatedly 10 to 15 feet higher than other Site monitoring wells, and have been since the well was installed in 1997. Based upon the current well survey, corrected groundwater gradients, and well construction details, AEG has determined that well MW-6 is cross to upgradient of the Site. MW-6 is also the only location where benzene has been detected in groundwater. It is AEG's opinion that the presence of benzene in MW-6 is from another nearby upgradient site. The Cowlitz County Motor Pool (FSID 1692365) site is located across the street to the south of the Site and east of MW-6. This is an inactive UST facility that had five USTs closed in place, and could be a suspected source. Further, MW-5 is downgradient of MW-6, and has not detected any benzene contamination. Thus, the weight of evidence supports that the benzene contamination detected at MW-6 is likely from a separate source, and does not extend into this Site.

AEG recommends an NFA determination be granted for this Site, following the filing of an environmental covenant with Cowlitz County as part of that determination. The environmental covenant would restrict land use to prevent any exposure to residual contamination in the subsurface, providing assurance that the Site will continue to meet Ecology's requirements in the future. A draft environmental covenant is attached to this report for Ecology review. As part of the institutional controls for the Site, AEG also recommends performing long-term groundwater monitoring to ensure containment and protectiveness. Due to a lack of any noticeable trends in the existing groundwater data, AEG recommends performing monitoring on an 18-month frequency.

## 4.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with Mr. Han Kim. It has been prepared using generally accepted professional practices, related to the nature of the work accomplished. This report was prepared for the exclusive use of Mr. Han Kim and his designated representatives for the specific application to the project purpose.

Recommendations, opinions, site history, and proposed actions contained in this report apply to conditions and information available at the time this report was completed. Since conditions and regulations beyond our control can change at any time after completion of this report, or our proposed work, we are not responsible for any impacts of any changes in conditions, standards, practices, and/or regulations subsequent to our performance of services. We cannot warrant or validate the accuracy of information supplied by others, in whole or part.

## 5.0 **REFERENCES**

American Society for Testing and Materials (ASTM) Standard E 1903-97. *Standard Guide Environmental Site Assessments: Phase II Environmental Site Assessment Process.* 

Associated Environmental Group LLC, *Subsurface Investigation Conducted on: Holt's Quik Chek*, July 8, 2015.

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Washington State Department of Ecology, 2007, *Model Toxic Control Act Statute and Regulation* – *Chapter 173-340 WAC*, Publication number 94-06 (Revised November 2007).

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Washington State Department of Ecology, 2015, Further Action at the following Site: Holts Quik Chek Market, (June 25, 2015).

**FIGURES** 

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## **TABLES**

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## Table 1 - Summary of Soil Analytical ResultsHolt's Quik ChekKelso, Washington

	Depth Collected (feet)			Vo	latile Organi	c Compounds (m	ig/kg)	Total Petroleur	n Hydrocarbons (	TPH) (mg/kg)
Sample Number		h Date Collected (feet)	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	
	0.02	0.05	0.05	0.15	10	50	100			
MTCA Metho	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

Samula Number	Data Callastad		Total Petroleum Hydrocarbons (TPH) (µg/l)					
Sample Number	Date Collected	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil
	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100		
	1/20/2015	<1.0	<1.0	<1.0	<3.0	160		
MXV 1	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100		
IVI VV - 1	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
	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100		
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100		
MW 2	4/22/2015	<1.0	<1.0	<1.0	<3.0	140		
IVI W-2	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
	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100		
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100		
MW 3	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100		
101 00 - 3	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
	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100		
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100		
MW-4	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100		
101 00 1	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
	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100		
	1/20/2015	<1.0	<1.0	<1.0	<3.0	180		
MW-5	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	2.0	40.0		
	10/2015	45	3.1	<1.0	<3.0	180		
MW-6	10/20/2015	42	2.6	1.1	8.0	430	<250	<500
	(17/0015	.1.0	-1.0	-1.0	.1.0	-100	-2.50	-500
	6/1//2015	<1.0	<1.0	<1.0	<1.0	<100	<250	<500
MW-7	10/2015	<1.0	<1.0	<1.0	<1.0	<100		
	10/20/2015	<1.0	<1.0	<1.0	3.0	<100	<250	<500
<b>P</b> 1	6/17/2015	<1.0	25	36	160	1 400	<250	<500
B-1	6/17/2015	<1.0	2.3	<1.0	<3.0	<100	< <u>-230</u>	<500
B.3	6/17/2015	<1.0	<1.0	<1.0	<3.0	<100	1 100	<500
B-3	6/17/2015	<1.0	<1.0	26	<3.0	<100	<250	<500
PC	)L (µg/l)	1.0	1.0	1.0	3.0	100	250	500
MTCA Mathad A	$C \left[ \cos^{-1} \right]$	5.0	1.00	700	1.000	1 000*	500	500
MTCA Method A Cleanup Levels ( $\mu g/l$ )		5.0	1,000	/00	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./					Actual	
TOC		Depth to	Depth to	Free Product	Groundwater	Change in
Elevation	Date	Water	Free Product	Thickness	Elevation	Elevation
(feet)		(feet)	(feet)	(feet)	(feet)	(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

## **APPENDIX I**

Revised Groundwater Gradients based on new survey

605 11<sup>th</sup> Ave. SE, Suite 201 • Olympia, WA • 98501 Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

![](_page_29_Figure_0.jpeg)

![](_page_30_Figure_0.jpeg)

![](_page_31_Figure_0.jpeg)

![](_page_32_Figure_0.jpeg)

![](_page_33_Figure_0.jpeg)

![](_page_34_Figure_0.jpeg)

![](_page_35_Figure_0.jpeg)

![](_page_36_Figure_0.jpeg)

![](_page_37_Figure_0.jpeg)

![](_page_38_Figure_0.jpeg)

![](_page_39_Figure_0.jpeg)

![](_page_40_Figure_0.jpeg)

![](_page_41_Figure_0.jpeg)

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![](_page_42_Figure_0.jpeg)

![](_page_43_Figure_0.jpeg)

![](_page_44_Figure_0.jpeg)

## **APPENDIX II**

## **Draft Environmental Covenant**

605 11<sup>th</sup> Ave. SE, Suite 201 • Olympia, WA • 98501 Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com Washington State Department of Ecology

After Recording Return Original Signed Covenant to: <sup>1</sup> [Ecology Site Manager] Toxics Cleanup Program Department of Ecology P.O. Box 47775 Olympia, WA 98504-7775

## **Environmental Covenant**

### (For MTCA Sites – August 20, 2015 Version)

Grantor: Mr. Han Kim<sup>2</sup> Grantee: State of Washington, Department of Ecology (hereafter "Ecology") Brief Legal Description: SUB:KELSO OLD TOWN BLK:11 LOT:5,6 DESC: EXC R/W ON PTN LOT 5 FEE 840221034 SECT,TWN,RNG:27-8N-2W PARCEL: 20086 Tax Parcel Nos.: 20086

## RECITALS<sup>3</sup>

**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 **Holts 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 conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principal contaminants remain on the Property: <sup>4</sup>

Medium	Principal Contaminants Present
Soil	Gasoline-range hydrocarbons and BTEX Constituents

<sup>&</sup>lt;sup>1</sup> Some counties keep the original Covenant, others don't. If the signed original is available, it must be sent to Ecology. If the signed original is not available, send a legible copy to Ecology.

<sup>&</sup>lt;sup>2</sup> The Grantor of a Covenant typically is the fee simple land owner of the property. The Grantor may also include holders of other property interests such as a holder of an easement, right-of-way, mineral right, lien, or mortgage.

<sup>&</sup>lt;sup>3</sup> This section is primarily used to describe this document and its purpose. It should not be used for substantive binding provisions.

<sup>&</sup>lt;sup>4</sup> List the contaminants for the associated media. If more than a few are present, list the top three to five for each medium.

**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 Ecology. This includes the following documents:

- Farallon, Site Closure Report, Holts Quik Chek Site, March 9, 2007
- Farallon Consulting, LLC, Final Quarter of Groundwater Monitoring, May 24, 2007
- State of Washington Department of Ecology (Ecology), Further Action Determination, June 18, 2007
- Associated Environmental Group, LLC (AEG), Proposed Supplemental Remedial Investigation Work Plan, July 15, 2011
- State of Washington Department of Ecology (Ecology), Site Hazard Assessment, March 26, 2014
- AEG, Holts Quik Chek Quarterly Groundwater Sampling Results Summary, December 3, 2014.
- AEG, January 2015 Holts Quik Chek Quarterly Groundwater Sampling Results Summary, February 4, 2015
- AEG, April 2015 Holts Quik Chek Quarterly Groundwater Sampling Results Summary, May 19, 2015
- Washington Department of Ecology Further Action Determination, June 25, 2015
- AEG, Subsurface Investigation, Holts Quik Chek, July 31, 2015.
- AEG, Workplan for Final Closure, Holts Quik Chek, July 31, 2015.
- AEG, October 2015 Holts Quik Chek Quarterly Groundwater Sampling Results Summary, November 5, 2015
- AEG, Request for No Further Action, Holts Quik Chek, December 30, 2015.

**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

**Mr. Han Kim**, as Grantor and fee simple owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the GRANTOR has in the property and 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:

Publication No. 15-09-054 (August 2015)

**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 at least 6 feet of soil and asphalt, and located in the vicinity of soil borings B-1, B-2, B-3, and B-4 as illustrated in **Exhibit B**. The primary purpose of this cap is to restrict access to the residual soil contamination. 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 shallow groundwater beneath the Property 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 and in downgradient areas to monitor the performance of the remedial action. 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.

Long-term monitoring of the groundwater is to be conducted on an 18-month frequency until Ecology performs a Periodic Review (about every five years) and determines whether the monitoring frequency may be altered, or monitoring can be discontinued altogether. Wells MW-2, MW-3, MW-4, and MW-5 will be sampled every 18 months, and analyzed for gasoline-range petroleum hydrocarbons, and benzene, ethylbenzene, toluene, and xylene (BTEX) compounds. The locations of the wells are illustrated in **Exhibit B**.

## 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, including but not limited to title, easement, leases, and security or other interests, must:

- i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.<sup>5</sup>
- **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 [COUNTY] COUNTY

<sup>&</sup>lt;sup>5</sup> Ecology may waive this notice provision for some units at a Property where the anticipated use is a multitenant/owner building where some owners or tenants are unlikely to be exposed to residual contamination. For example: upper story apartments or condominiums, or commercial tenants in a strip mall, with limited rights to use the grounds under and around the building (such as for parking).

If Ecology agrees to such a waiver, the circumstances of the waiver must be detailed in paragraph 4.a.i. In addition to the specific circumstances, this provision must include the following statement: "Waiver of this advance notice to Ecology for these transactions does not constitute waiver of this notice for the entire Property nor a waiver of the requirement in Section 4.a.ii. to include this notice in any document conveying interest in the Property."

## 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.

Mr. Han Kim	Environmental Covenants Coordinator
P.O. Box 296	Washington State Department of Ecology
Littlerock, Washington 98556-0296	Toxics Cleanup Program
	P.O. Box 47600
	Olympia, WA 98504 – 7600
	(360) 407-6000
	ToxicsCleanupProgramHQ@ecy.wa.gov

## 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. <sup>6</sup> For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site: <sup>7</sup>

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.

<sup>&</sup>lt;sup>6</sup> 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.

 $<sup>^{7}</sup>$  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.

### Washington State Department of Ecology

**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.

## 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 MTCA and UECA. 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 MTCA and UECA.

**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 \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_.

Signature: \_\_\_\_\_

by: \_Mr. Han Kim\_\_\_\_\_

Title: \_\_\_\_\_

### INDIVIDUAL ACKNOWLEDGMENT

STATE OF \_\_\_\_\_\_ COUNTY OF \_\_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, I certify that \_\_\_\_\_ 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.

Notary Public in and for the State of Washington <sup>8</sup> Residing at \_\_\_\_\_\_ My appointment expires \_\_\_\_\_\_

<sup>&</sup>lt;sup>8</sup> Where landowner is located out of state, replace with appropriate out-of-state title and location.

#### Washington State Department of Ecology

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

Dated: \_\_\_\_\_

## STATE ACKNOWLEDGMENT

STATE OF

COUNTY OF \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, I certify that \_\_\_\_\_

personally appeared before me, acknowledged that **he/she** is the

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.

Notary Public in and for the State of Washington

Residing at \_\_\_\_\_

My appointment expires \_\_\_\_\_

## Exhibit A

## LEGAL DESCRIPTION

## Brief Legal Description: SUB:KELSO OLD TOWN BLK:11 LOT:5,6 DESC: EXC R/W ON PTN LOT 5 FEE 840221034 SECT,TWN,RNG:27-8N-2W PARCEL: 20086 Tax Parcel Nos.: 20086

## Exhibit B

## **PROPERTY MAP ILLUSTRATING LOCATION OF RESTRICTIONS**

![](_page_56_Figure_0.jpeg)

## **APPENDIX III**

## **Terrestrial Ecological Evaluation Form**

605 11<sup>th</sup> Ave. SE, Suite 201 • Olympia, WA • 98501 Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

![](_page_58_Picture_0.jpeg)

## **Voluntary Cleanup Program**

## Washington State Department of Ecology Toxics Cleanup Program

## TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

- 1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
- 2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
- 3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

## Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <a href="http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm">www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm</a>.

## Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name:

Facility/Site Address:

Facility/Sit	te No:
r aunity/On	

VCP Project No.:

## Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name:				Title:	
Organization:					
Mailing address:					
City:			te:	Zip code:	
Phone: Fax:			E-mail:		

Step 3: DOO	Step 3: DOCUMENT EVALUATION TYPE AND RESULTS								
A. Exclusior	A. Exclusion from further evaluation.								
1. Does the	. Does the Site qualify for an exclusion from further evaluation?								
	fes If you answered "YES," then answer Question 2.								
Unkı	No or If you answered " <b>NO" or "UKNOWN,"</b> then skip to <b>Step 3B</b> of this form.								
2. What is th	ne basis for the exclusion? Check all that apply. Then skip to Step 4 of this form.								
Point of C	ompliance: WAC 173-340-7491(1)(a)								
	All soil contamination is, or will be,* at least 15 feet below the surface.								
	All soil contamination is, or will be,* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.								
Barriers to	Exposure: WAC 173-340-7491(1)(b)								
	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.								
Undevelop	ped Land: WAC 173-340-7491(1)(c)								
	There is less than 0.25 acres of contiguous <sup>#</sup> undeveloped <sup>±</sup> land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.								
	For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous <sup>#</sup> undeveloped <sup>±</sup> land on or within 500 feet of any area of the Site.								
Backgrour	nd Concentrations: WAC 173-340-7491(1)(d)								
	Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.								
* An exclusion acceptable to E "Undevelope prevent wildlife "Contiguous" highways, exte by wildlife.	based on future land use must have a completion date for future development that is Ecology. d land" is land that is not covered by building, roads, paved areas, or other barriers that would from feeding on plants, earthworms, insects, or other food in or on the soil. undeveloped land is an area of undeveloped land that is not divided into smaller areas of nsive paving, or similar structures that are likely to reduce the potential use of the overall area								

В.	. Simplified evaluation.							
1.	. Does the Site qualify for a simplified evaluation?							
	□ Y	es If you answered "YES," then answer Question 2 below.						
	🗌 N Unkn	lo or or own If you answered " <b>NO</b> " or " <b>UNKNOWN,</b> " then skip to <b>Step 3C</b> of this form.						
2.	Did you co	onduct a simplified evaluation?						
	🗌 Y	es If you answered "YES," then answer Question 3 below.						
	🗌 N	lo If you answered " <b>NO,</b> " then skip to <b>Step 3C</b> of this form.						
3.	Was furthe	er evaluation necessary?						
	□ Y	es If you answered "YES," then answer Question 4 below.						
	🗌 N	lo If you answered " <b>NO,</b> " then answer <b>Question 5</b> below.						
4.	lf further e	valuation was necessary, what did you do?						
		Used the concentrations listed in Table 749-2 as cleanup levels. If so, then skip to <b>Step 4</b> of this form.						
		Conducted a site-specific evaluation. If so, then skip to Step 3C of this form.						
5.	If no furthe to Step 4 o	er evaluation was necessary, what was the reason? Check all that apply. Then skip f this form.						
	Exposure /	Analysis: WAC 173-340-7492(2)(a)						
	Area of soil contamination at the Site is not more than 350 square feet.							
		Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.						
	Pathway A	nalysis: WAC 173-340-7492(2)(b)						
		No potential exposure pathways from soil contamination to ecological receptors.						
	Contamina	nt Analysis: WAC 173-340-7492(2)(c)						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.						
		No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.						

C.	. Site-specify the problem require con	<b>fic evaluation.</b> A site-specific evaluation process consists of two parts: (1) formulating n, and (2) selecting the methods for addressing the identified problem. Both steps isultation with and approval by Ecology. <i>See</i> WAC 173-340-7493(1)(c).						
1.	Was there a problem? See WAC 173-340-7493(2).							
	Y	Yes If you answered "YES," then answer Question 2 below.						
	□ N	If you answered "NO," then identify the reason here and then skip to Question 5 below:						
		No issues were identified during the problem formulation step.						
		While issues were identified, those issues were addressed by the cleanup actions for protecting human health.						
2.	What did y	ou do to resolve the problem? See WAC 173-340-7493(3).						
		Used the concentrations listed in Table 749-3 as cleanup levels. If so, then skip to <b>Question 5</b> below.						
		Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. <i>If so, then answer <b>Questions 3 and 4</b> below.</i>						
3.	<b>If you cond</b> Check all th	ducted further site-specific evaluations, what methods did you use? nat apply. See WAC 173-340-7493(3).						
		Literature surveys.						
		Soil bioassays.						
		Wildlife exposure model.						
		Biomarkers.						
		Site-specific field studies.						
		Weight of evidence.						
		Other methods approved by Ecology. If so, please specify:						
4.	What was	the result of those evaluations?						
		Confirmed there was no problem.						
		Confirmed there was a problem and established site-specific cleanup levels.						
5.	Have you problem re	already obtained Ecology's approval of both your problem formulation and esolution steps?						
	□ Y	es If so, please identify the Ecology staff who approved those steps:						
	□ N	0						

## Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.

Northwest Region:	<b>Central Region:</b>
Attn: VCP Coordinator	Attn: VCP Coordinator
3190 160 <sup>th</sup> Ave. SE	1250 West Alder St.
Bellevue, WA 98008-5452	Union Gap, WA 98903-0009
Southwest Region:	<b>Eastern Region:</b>
Attn: VCP Coordinator	Attn: VCP Coordinator
P.O. Box 47775	N. 4601 Monroe
Olympia, WA 98504-7775	Spokane WA 99205-1295

![](_page_62_Figure_3.jpeg)

ECY 090-300 (07/2015) To request ADA accommodation including materials in a format for the visually impaired, call Ecology Toxic Cleanup Program 360-407-7170. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at 877-833-6341.

## **APPENDIX IV**

## **ARCHIVED TABLES**

605 11<sup>th</sup> Ave. SE, Suite 201 • Olympia, WA • 98501 Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

# Table 1 Historic Soil Analytical Results for Petroleum Hydrocarbons and Lead All and the second secon

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Samula Identification	Date Sampled	Sampled By	Depth	Soil Analytical Results (milligrams per kilogram)							
Sample Identification			(ft) <sup>1</sup>	GRO <sup>2</sup>	DRO <sup>3</sup>	ORO <sup>3</sup>	Benzene <sup>4</sup>	Toluene <sup>4</sup>	Ethylbenzene	Xylenes <sup>4</sup>	Total Lead <sup>5</sup>
P1-22	3/27/1997	AGI	22,0	ধ		-	<0.05	<0,1	<0.1	<0.1	-
P2-18	3/27/1997,,,	AGI .	. 18.0	<5	-	• • •	· <0.05	<0.1	<0.1	<0.1	-
P3-12	3/27/1997	AGI	12.0	< <b>s</b>	-	•	<0.05	<0.1	` · <0.1	<0.1	-
P4-18	3/27/1997	AGI	18.0	<5		-	<0.05	<0.1 .	<0.1	<0.1	-
P5-12	3/27/1997	AGI	12.0	<b>&lt;5</b>		-	<0.05	<0.1	<0.1	<0.1	
P6-20	3/27/1997	AGI	20.0	1900	-	-	<0,05	<0.1	1.2	. <8	-
P6-25	3/27/1997	AGI	25.0	ব	-	-	<0.05	<0.1	<0.1	· <0.1	-
P7-12	3/27/1997	AGI <sup>.</sup>	12.0	<5	<b>-</b> .		<0,05	<0.1	<0,1	•. <0.1	· _
P7-20	3/27/1997	AGI	20.0	<5		-	<0.05	<0.1	<0.1	<0,1	т
P8-20	3/28/1997	- AGI	20.0	200	-	. <del>.</del>	<0.05	0.2	0.4	7.8	-
P8-16	3/28/1997	AGI	- 16.0	250	•	4. <sup>1</sup> <del>-</del> 4.	<0.05	0.1	0.4	8.4	-
P8-24	3/28/1997	. AGI	24.0 •	<5		-	<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	· <5	-	· •	<0.05	<0,1	<0,1	<0.1 ·	· -
P12-12	3/28/1997	AGI	12.0	<i></i>	-	-	<0.05	<0.1	<0.1	<0.1	-
P10-24	3/28/1997	AGI ·	24.0	্ব	· • .	·	<0.05	<0.1	<0.1	<0.1	-
P11-16	3/28/1997	AGI	1: - 16.0	12,000	-		8.7	. 220	110	760	-
P11-24	3/28/1997	AGI	24.0	<5	-	-	<0.05	<0.1	<0.1	<0.1	-
P12-12	3/28/1997	AGI		<5	-	-	<0.05	· <0.1	<0.1	<0.1	-
P12-20	3/28/1997	· AGI	20.0	<		. <del>.</del>	<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
	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 <sup>5</sup>				30 ;;	2,000	2,000	0,03	7	6	9	250

NOTES:

21.50.

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

15

L ... -

< denotes result is less than laboratory practical quantitation limit or analyte not de

٠.

Depth in fect below ground level.

<sup>2</sup>Analyzed by Northwest Method WIPH-G.

<sup>3</sup>Analyzed by Northwest Method WTPH-D (extended).

<sup>4</sup>Analyzed U.S. Environmental Protection Agency (EPA) Method 5030/8020.

<sup>1</sup>Analyzed by EPA Method 6010A.

<sup>5</sup>Washington State Department of Ecology Model Toxics Control Act Cleanup Regulation (MTCA) Method A <sup>5</sup>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.

P

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

GRO = TPH as gasoline-range organics ORO = TPH as heavy oil-range organics

## **APPENDIX V**

## **ARCHIVED FIGURES**

605 11<sup>th</sup> Ave. SE, Suite 201 • Olympia, WA • 98501 Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

![](_page_66_Figure_0.jpeg)

ENW-BOTHELL2/DATA: G:\DWG\41241001\BO003R01.dwg Xrefs: <NONE> Scale: 1 = 30.00 DimScale: 1 = 30.00 Date: 11/6/97 Time: 12:40 PM

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, -	LEGEND:
MW-1 🕁	Existing Monitoring Well Locations
31.0	Groundwater Elevation Contour
(39.19)	Groundwater Elevation (feet) on September 26, 1997
¥1	General Groundwater Flow Direction
G 2,740 D ND O ND 14.5 1.07 20.8 17.7 Pb 6.3 LVED P5 ND	Laboratory Results in Parts per Billion
TPH-G =	Total Petroleum Hydrocarbons
трН-D =	Total Petroleum Hydrocarbons
TPH-0 =	as Diesel Total Petroleum Hydrocarbons
В. —	as Oil Benzene
т =	
E =	Ethylbenzene
X =	Total Xylenes
TOTAL Pb =	Total Lead
DLVED Pb =	Dissolved Lead
bers in <b>Bol</b> od A Clean	d Equal or Exceed MTCA up Levels
* <b>MW-6</b>	Groundwater Elevation Data not Included in Groundwater Contours
0	30 60
S	CALE (ft)
0.03	Figure 2 HOLT'S QUIK CHEK MARKET 400 NORTH PACIFIC AVENUE KELSO, WASHINGTON GROUNDWATER DATA SEPTEMBER 26, 1997

![](_page_67_Figure_0.jpeg)

![](_page_68_Figure_0.jpeg)

![](_page_69_Figure_0.jpeg)

![](_page_69_Figure_1.jpeg)

Drawn By:DEW Checked By:TM

Date:2/6/07 | Disk Reference:359001