



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 23, 2015

Mr. Ted Yi
YCH Enterprise Corporation
600 128th Avenue NE
Bellevue, WA 98005

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

- **Site Name:** Duvall Market
- **Property Address:** 15802 Main Street Northeast, Duvall, WA 98019
- **Facility/Site No.:** 764631
- **VCP Project No.:** NW2972
- **Cleanup Site ID No.:** 499

Dear Mr. Yi:

Thank you for submitting documents regarding your proposed remedial action for the Duvall Market facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site:

- Total gasoline range petroleum hydrocarbons (TPH-G) and benzene into soil.

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.



Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial actions:

1. Kane Environmental Inc., *Work Plan Addendum to April 2015 Phase II Environmental Assessment*, July 30, 2015.
2. Kane Environmental Inc., *Limited Phase II Environmental Site Assessment*, April 7, 2015.
3. WT Services Company, *Independent Cleanup Action, 15802 Main Street, Duvall, WA*, September 24, 2002.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by calling the NWRO resource contact at (425) 649-7235 or sending an email to: nwro_public_request@ecy.wa.gov.

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

- TPH-G and benzene into soil.

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has determined:**

- The proposed plan does not include details regarding the depth at which the borings will be re-drilled or the soil and ground water sampling method; therefore the adequacy of the proposed work cannot be fully evaluated.
- One ground water monitoring location will not provide enough information to characterize the ground water flow and direction. A minimum of three wells are necessary to calculate the direction and magnitude of the hydraulic gradient.
- Vertical and horizontal delineation at the locations of borings 808-03, 729-05, 729-01 and 808-01 is needed to determine the extent of the contamination in the southwestern area of the Property. Re-drilling at the locations of 729-05 and 729-01 will only provide vertical delineation, not lateral; therefore, the lateral boundaries of the contamination to the north, northwest, and southwest of the known impacted area will remain unknown.

- Ground water samples should be collected from areas that show impacts in soil, particularly those with the highest concentrations, to adequately evaluate any leaching into ground water.
- A copy of the 2008 geotechnical study completed HWA Geosciences for the City of Duvall has not been submitted to Ecology. Because the data is referenced in the report and used as supporting information for Site characterization, the laboratory analysis package and complete report must be included.

This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action. To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions regarding this opinion, please contact me at (425) 649-7058 or by email at taca461@ecy.wa.gov.

Sincerely,



Tamara Cardona, PhD
Toxics Cleanup Program

Enclosures: Site Description and Diagrams

cc: Sonia Fernandez, VCP Coordinator, Ecology
David Rankin, Kane Environmental Inc.

Site Description

Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined as total gasoline range petroleum hydrocarbons (TPH-G) and benzene in soil located at 15820 Main Street Northeast in Duvall, WA (Property). The Property, which corresponds to King County tax parcel numbers 2130700470, 2130700460, and 2130700445, is a total of 0.5 acres in size.

Area and Property Description: The Duvall Market consists of a single split-level 6,744-square foot building on the north half of the Property in a mixed land use zone. The Property is the location of a convenience store (Duvall Market). The Property is bounded by NE Virginia Street to the north; Main Street to the west; an alley to the east, and NE Stewart Street to the south. Businesses nearby include an antique mall to the north, a closed drive-through car wash to the northeast, a tavern to the west, and a Shell convenience store/gasoline station to the southwest. There is also vacant land to the northwest and a single family residence to the west.

Sources of Contamination: The source of contamination on the Property is two former gasoline underground storage tanks (USTs) that reportedly last operated in 1976. The USTs had storage capacities of approximately 675 and 4,000 gallons. They were both decommissioned in 2002. Soil samples collected at the time of the UST removal contained TPH-G and benzene at concentrations exceeding Method A cleanup levels.

Physiographic Setting: The Site is located at an elevation of approximately 70 to 75 feet above mean sea level. It is located in the Puget Sound Basin, east of the Puget Sound Lowland Physiographic Province and in the Cascade Mountain foothills. The Site is underlain by alluvium.

Surface/Storm Water System: The surface water body closest to the Site is the Snoqualmie River approximately 500 feet to the west. Surface water runoff in the area is captured in municipal storm drains and transported to the nearest surface water drainage.

Ecological Setting: The surface of the Property is covered by pavement and a building. Small landscaped or green areas are present on the Property and on nearby commercial and residential Properties. It is possible that wildlife utilize the area adjacent to the Snoqualmie River located approximately 500 feet to the west of the Property.

Geology: Soil at the Site consists of silty sand with gravel to depths of up to 16.5 feet below ground surface (bgs), the maximum depth explored.

Ground Water: Ground water has not been encountered during Site investigation and remediation to depths of 16.5 feet bgs, the maximum depth explored.

Water Supply: The City of Duvall purchases water from Seattle Public Utilities. Seattle Public Utilities obtains water from the Cedar River Watershed.

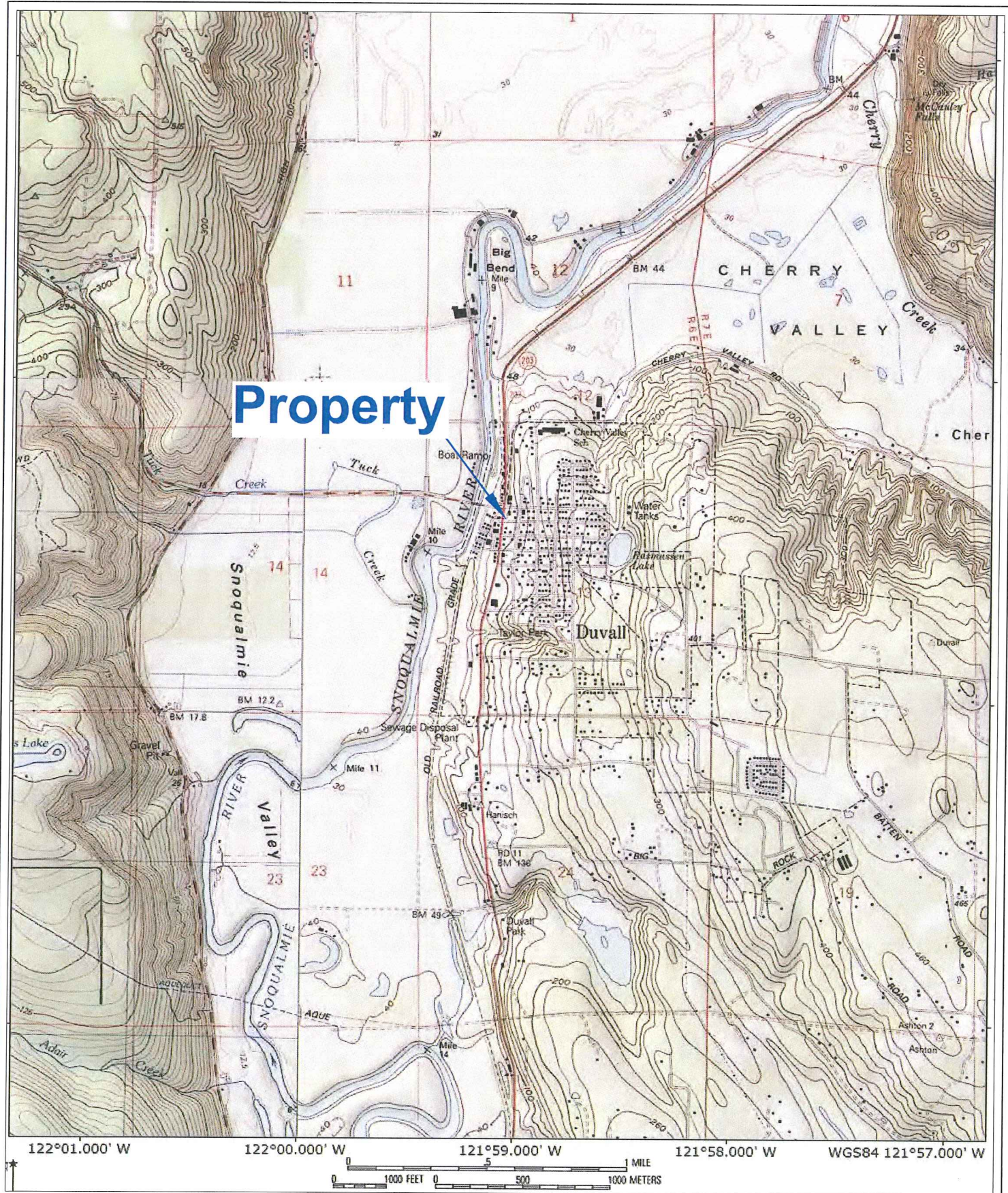
Release and Extent of Soil Contamination: Soil contamination was the result of a release from two gasoline USTs installed on the Property prior to the 1970's. Contamination was encountered

in 2002 at the time the tanks were removed at concentrations above MTCA Method A cleanup levels. A soil sample at a depth of five feet bgs near the southern edge of the Property and south of the former UST location had concentrations as high as 1,700 milligrams per kilogram (mg/kg) of TPH-G, 2.4 mg/kg of benzene, 12 mg/kg of toluene, 9 mg/kg of ethylbenzene and 31 mg/kg of xylenes. Following removal of the USTs, an estimated 236 tons of soil were removed and disposed off-Site. However, after the soil confirmation samples were analyzed, it was determined that contamination remained in the southwest corner of the excavation at a depth of three feet bgs (sampling location 808-03) at concentrations above MTCA Method A cleanup levels for TPH-G (400 mg/kg) and benzene (0.08 mg/kg) .

In preparation for reconstruction on Main Street in 2008, the City of Duvall conducted a geotechnical design study for the new pavement and utilities. Test pits are reported to have been excavated to depths of four feet in the utility alignment and soil samples collected at depths of two and four feet bgs in each of the test pits. The samples appear to have been analyzed for petroleum contaminants. No contamination above the MTCA cleanup levels was reported in the test pits closest to the former excavation area, which were at least 20 feet from the southern and western boundaries of the former excavation; however, the complete report was not submitted to Ecology.

In 2015, a Limited Phase II Environmental Site Assessment was completed. Three soil borings were installed within the City of Duvall right-of-way adjacent to the Property. Borings were advanced using hollow stem augers, one south and two west of the former excavation area. The borings were completed to maximum depths of 14 to 16.5 feet bgs or until drill rig refusal occurred on boulders or dense glacial till. No indicators of gasoline contamination were observed and no ground water was encountered. However, results from the boring closest to the western edge of the excavation (B-1) indicate that gasoline contamination above the MTCA Method A cleanup level remains on the Site at depths of four and six feet bgs.

Diagrams of the Site



Duvall
Market

Main Street Northeast

TP-22+00		
Depth	Analyte	mg/kg
2'	Benzene	<0.03
	Gasoline	<3
4'	Benzene	<0.03
	Gasoline	<3

B-3 (3/24/15)		
Depth	Analyte	mg/kg
4'	Benzene	<0.02
	Gasoline	10.9
8'	Benzene	<0.02
	Gasoline	<5
13.5'	Benzene	<0.02
	Gasoline	<5

729-05@3'		
Analyte	mg/kg	
Benzene	0.30	
Gasoline	540	

808-03@3'		
Analyte	mg/kg	
Benzene	0.06	
Gasoline	400	

B-1 (3/24/15)		
Depth	Analyte	mg/kg
4'	Benzene	<0.02
	Gasoline	756
6.5'	Benzene	<0.02
	Gasoline	186
13'	Benzene	<0.02
	Gasoline	<5

808-01@5'		
Analyte	mg/kg	
Benzene	0.04	
Gasoline	37	

729-01@5'		
Analyte	mg/kg	
Benzene	2.4	
Gasoline	1,700	

TP-21+40		
Depth	Analyte	mg/kg
2'	Benzene	<0.03
	Gasoline	<3
4'	Benzene	<0.03
	Gasoline	<3






B-2 (3/24/15)		
Depth	Analyte	mg/kg
6'	Benzene	<0.03
	Gasoline	<3
8.5'	Benzene	<0.03
	Gasoline	5
16'	Benzene	<0.03
	Gasoline	<3

Joint Trench		
Depth	Analyte	mg/kg
2'	Benzene	<0.03
	Gasoline	<3
4'	Benzene	<0.03
	Gasoline	5

Northeast Stewart Street

LEGEND

0 20 40
Approximate Scale in Feet

-  Approximate location of property line
-  Approximate location of hollow stem auger borings (3/24/15)
-  Approximate Extent of Remedial Excavation (WT Services, 2002)
-  Approximate location of soil samples with results in red exceeding MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses (WT Services, 2002)
-  Approximate Location of Test Pit and Results (HWA, 2008)

KANE
ENVIRONMENTAL INC
Project No: 67802

Limited Phase II Environmental Site Assessment
15820 Main Street Northeast
Duvall, Washington

Figure 2:
Site Plan with Boring
Locations