



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

October 22, 2015

Ms. Carrie Pederson
PLIA
300 Desmond Drive
Lacey, WA 98504

Re: Opinion on Proposed Cleanup of the following Site:

- **Site Name:** Vashon Auto Center/Island Mart
- **Site Address:** 17817 99th Ave SW Vashon, WA 98070
- **Facility/Site No.:** 37689576
- **VCP Project No.:** NW2863

Dear Ms. Pederson:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of the Vashon Auto Center/Island Mart 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

Upon completion of the proposed cleanup, will further remedial action likely be necessary to clean up contamination at the Site?

NO. Ecology has determined that, upon completion of your proposed cleanup, no further remedial action will likely be necessary to clean up contamination associated with the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below.

1. Description of the Site.

The Site is defined by the nature and extent of contamination associated with the following releases

- Total petroleum hydrocarbons (TPH) in the gasoline-range (TPH-G) and volatile organic compounds (VOCs); Benzene, Toluene, Ethylbenzene and Xylene (BTEX) into the soil and groundwater.
- 1, 2-Dichloroethane (EDC) in the soil.
- TPH as diesel and methyl-tertbutyl-ether (MTBE) in the groundwater

That release has affected more than one parcel of real property: the **right-of-ways easements of Southwest 178th Street and Vashon Highway Southwest**.

Enclosure A includes a detailed description and (**Enclosure B**) diagram of the Site, as currently known to Ecology.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Draft Corrective Action Plan, Vashon Auto Center/Island Mart, 17817 (17803) Vashon Island Hwy (99th Ave. SW) Vashon, WA 98070. Project No. 55906 of August 19, 2015 by KANE Environmental, Inc.
2. TEE Exclusion Report Vashon Auto Center Island Mart of 2/19/15 by KANE Environmental, Inc.
3. Response to Ecology Letter of September 25, 2015 on the Draft CAP: Vashon Auto Center/Island Mart NW2863 by KANE Environmental Inc., of October 2, 2015

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

1. Cleanup of the Site.

Ecology has concluded that, upon completion of your proposed cleanup consisting of a combination of extractions of contaminated groundwater coupled with Soil Vapor Extraction (SVE), **no further remedial action** will likely be necessary to clean up contamination associated with the Site. That conclusion is based on the following analysis:

a. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup for the Site. The Site is described above and in **Enclosure A**.

b. Establishment of cleanup standards for the Site.

- i. Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

The proposed Method A cleanup levels are:

Soil:

TPH-Gasoline	30 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/l
TPH-Diesel	500 ug/l
Benzene	5 ug/l
Toluene	1000 ug/l
Ethylbenzene	700 ug/l
Total Xylenes	1000 ug/l
1,2 Dichloroethane (EDC)	5 ug/l

Vapor- Method B- Indoor Air:

Naphthalene (TPH-Diesel)	1.37 ug/m ³ (non-carcinogen)	-
Benzene	0.32 ug/m ³ (carcinogen)	
Toluene	2290 ug/m ³ (non-carcinogen)	
Ethylbenzene	457 ug/m ³ (non-carcinogen)	
Total Xylenes	45.7 ug/m ³ (non-carcinogen)	

The proposed Points of Compliance are:

Soil -Direct Contact: For soil cleanup levels based on human exposure via direct contact, the point of compliance is: “...*throughout the Site from ground surface to 15 feet below the ground surface.*”

Soil- Leaching: For sites where soil cleanup levels are based on the protection of groundwater: “...*the point of compliance is throughout the Site.*” **Performance Wells** are depicted as KMW-2, MW-3, KMW-9, KMW-1, KMW-6 & MW-4

Groundwater: For groundwater, the standard point of compliance as established under WAC 173-340-720(8) is: “...*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.” **CPOC** are depicted as MW-5, MW-6, MW-7 & MW-8 (upgradient)*

Vapor: Ambient and Indoor Air throughout the site (**Note:** If Clients sleepover night at the Mart, Indoor air investigation must be tailored for residential: 24 hr setting rather than 8 hr commercial approach)

c. Selection of cleanup for the Site.

Ecology has determined the cleanup you proposed for the Site meets the substantive requirements of MTCA. Your proposed cleanup meets minimum cleanup requirements and will not exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Site.

- *Extraction of contaminated groundwater*
- *Soil Vapor Extraction in the Un-saturated zone; Please note -Ecology will review the success of SVE to meet remedial action objective at the site in year 3.*
- *Baseline Indoor Vapor/Subsequent SVE Startup Indoor/Out Door Vapor Assessment*
- *Appropriate Soil/Groundwater/Air Confirmation Report*
- *Projected Restoration Time-Frame: 3-4 yrs*

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 proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. Opinion is limited to proposed cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Site upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

Closure Report must include all relevant information/communication with the city or other entities with fee interest on the Public Rights of Ways concerning access/assessment to address contamination on the Public Right of ways: **Southwest 178th Street and Vashon Highway Southwest.**

4. State is immune from liability.

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

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at 360-407-7244 or e-mail at nmad461@ecy.wa.gov.

Sincerely,



NNAMDI I. MADAKOR

Nnamdi Madakor P.H.G, P.G., VCP Statewide Coordinator
HQ – VCP Policy & Technical Manager
Toxic Cleanup Program

Enclosures: Figures 7c & 7d: Extent of Site Groundwater (GW) Impact
 Figures 3 & 4: Proposed SVE Location & GW Extraction Wells

cc: Annica Brown, Vertex (email only)
 David Rankin, Kane Environmental (email only)
 Lisa, Sweitzer, Ecy (email only)
 Sonia Fernandez, Ecy (email only)

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EXHIBIT A SITE DESCRIPTION

Site Description

Site Name: Vashon Auto Center/Island Mart
Site Address: 17817 99th Ave SW, Vashon, WA 98070
Facility Site No.: 37689576
Cleanup Site ID: 8946
VCP Project No: NW2863

Site and Property Definition: The Property is located at 17817 99th Ave SW, Vashon. The Site consists of Total petroleum hydrocarbons (TPH) in the gasoline-range (TPH-G) and volatile organic compounds (VOCs); Benzene, Toluene, Ethylbenzene and Xylene (BTEX) into the soil and groundwater; 1, 2-Dichloroethane (EDC) in the soil and TPH as diesel and methyl-tertbutyl-ether (MTBE) in the groundwater. The ground water impacts may be going off-site into the right-of-ways easements of Southwest 178th Street and Vashon Highway Southwest.

Area Description: The Property is bounded on the North by Southwest 178th Street, with the Vashon Theater beyond, east by Vashon Highway Southwest with a small office and construction storage beyond, south by two small commercial buildings, west by an alley way with several retail stores and an automobile repair facility beyond.

Property History and Current Use: The Property is occupied by the Vashon Chevron convenience store with four gasoline pump island dispensers on the north end of the Property. Progressively to the south are two commercial tenant spaces (formerly Island Automotive) and a restaurant. Asphaltic concrete covers the area to the east of the existing structures. Crushed rock covers much of the native soil exposed to west of the structures.

Contaminant Sources and History of Releases: The source of the release is suspected to be a turbine pump leak near the east end of the tank nest situated to the north of the Island Mart store. Soil impacts exceeding MTCA Method A are restricted to the Property, specifically near the northern edge of the Property. Groundwater impacts exceeding MTCA Method A is restricted to the northern portion of the Property and a portion of the adjacent roadway (SW 178th Street).

Physiographic Setting: Property is approximately 390 feet above mean sea level (msl). Locally, near surface soils generally consist of glacial till (dense sands/silts) and groundwater flows generally in northerly and easterly directions towards Puget Sound. The groundwater level is apparently 5 to 10 feet below ground surface (bgs). The U.S. Geological Survey (USGS) Topographic Maps for the property indicate a gradual slope to the east.

Ecological Setting: A Terrestrial Ecological Evaluation has been conducted for the Property. A Simplified Evaluation was conducted. No further evaluation was necessary based on the Exposure Analysis of current or planned land use makes wildlife exposure unlikely; Pathway Analysis that no potential exposure pathways from soil contamination to ecological receptors; Contaminant Analysis that 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.

Geology: Vashon Island is located in the Puget Sound Basin, where the majority of geological and land features were formed during the Pleistocene Epoch which began approximately 1.5 million years ago. Soils in the Puget Sound Basin and specifically in the vicinity of the site generally consist of glacial till deposited by the retreat of the Vashon Glacier. Glacial till generally is a mixture of sand and gravel with silt and clay.

Environmental drilling on the Property indicates dense sands and silts with pebbles and trace clay within the upper 20 feet (soil boring logs are included as Attachment B). Deeper subsurface conditions reportedly consist of mostly silt (with minor sandy or gravelly layers) from 150 feet to >1000 feet.

Ground Water: A vegetated area is located to the west of the Vashon Island Chevron building and appears to be acting as a recharge area for the shallow aquifer where the wells are screened. This localized recharge area, combined with presence of several tank excavations acting as conduits for groundwater flow, appears to be responsible for the divergent groundwater contours observed on the Property.

County records show that a “Critical Aquifer Recharge Area” is located about 1,500 to the east and up-gradient of the Property.

County records also show that a 10-year radius Wellhead Project Area is situated about 1,500 feet south-southwest and up- and/or cross-gradient of the Property. The actual wellhead location is about 7,000 feet south-southwest of the Property.

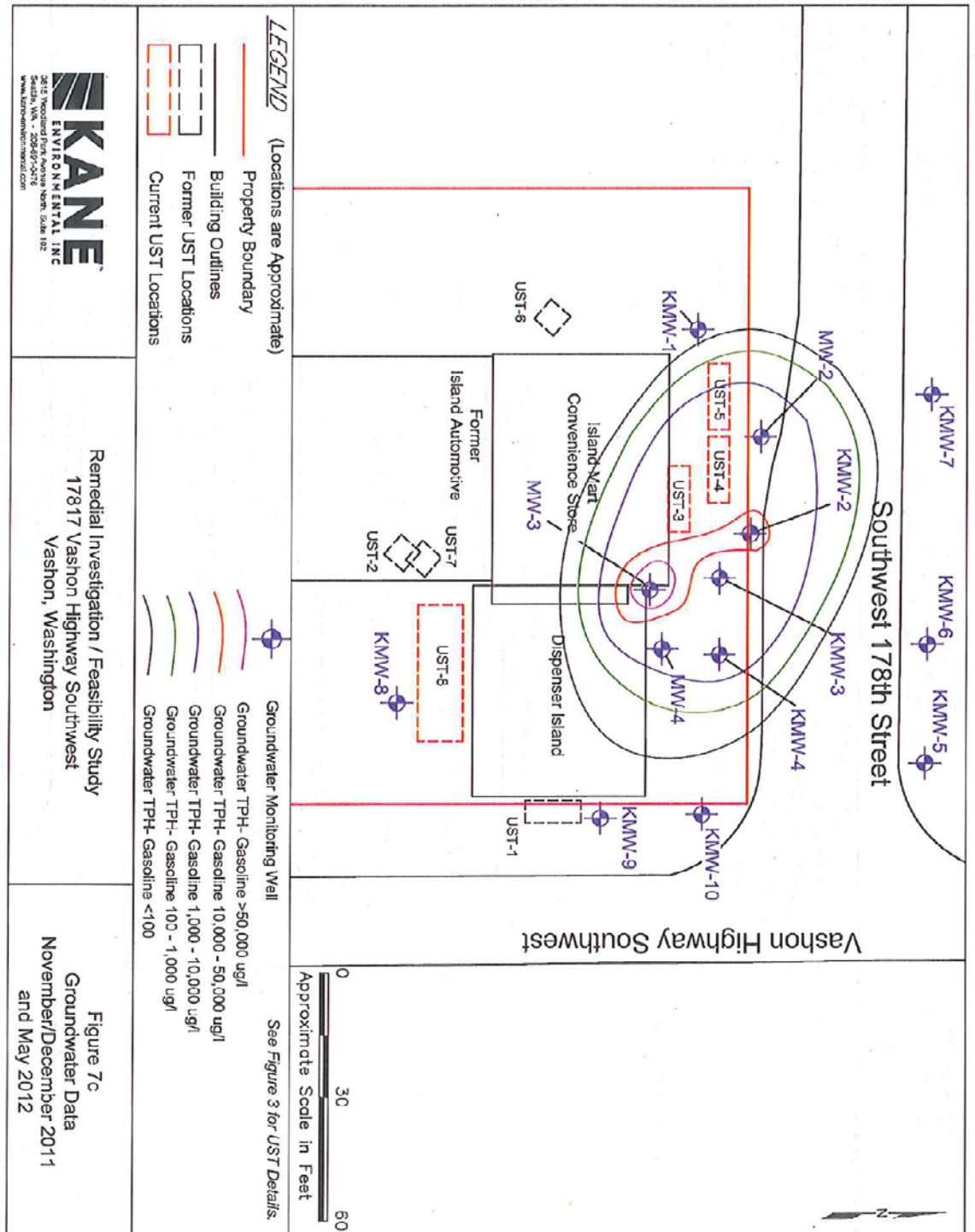
Surface Water: Storm water is collected into a series of storm water drains in the asphalt parking lot and routed to the existing storm sewer system within the roadways. Graveled exterior to the west drains via percolation into the subsurface.

Water Use: Drinking water at the Site is currently supplied by the local water district, which also utilize drinking water wells on Vashon Island.

Interim Actions: Several small USTs were removed and others removed/upgraded the 1990’s. The initial phase of soil/groundwater testing was conducted in 1999. The four monitoring wells installed in 1999. Subsequent groundwater monitoring was conducted in October of 2010 and March 2011. Injection of microbes and ground water monitoring in 2010. In May 2012, Kane Environmental installed six additional monitoring wells on and in the vicinity of the identified zone of groundwater contamination on the Property. SVE/AS Pilot Study, November 2011 through January 2012.

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EXHIBIT B SITE MAP



Remedial Investigation / Feasibility Study
 17817 Vashon Highway Southwest
 Vashon, Washington

Figure 7c
 Groundwater Data
 November/December 2011
 and May 2012

