eCOPY

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
PO Box 47775 • Olympia, WA 98504-7775 • (360) 407-6300

November 30, 2023

Glenn Zerkle
2929 NW 29th Ave
Portland, OR 97210

Re: Further Action at the following Site:

- **Site Name:** Quick Shop Mini Mart 27
- **Site Address:** 8817 St. Johns Road Vancouver, Clark County 98665
- **Facility/Site ID:** 36184476
- **Cleanup Site ID:** 5943
- **VCP Project ID:** SW0289

Dear Glenn Zerkle:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your workplan for independent cleanup of the Quick Shop Mini Mart 27 facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA),[1] chapter 70A.305 Revised Code of Washington (RCW).[2]

Issue Presented and Opinion

Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, chapter 70A.305 RCW, and its implementing regulations, Washington Administrative Code (WAC) chapter 173-340[3] (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

[1] https://apps.ecology.wa.gov/publications/SummaryPages/9406.html
[2] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305
[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

- This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following releases:

- Total Petroleum Hydrocarbon as Gasoline Range Organics (TPH-GRO) into soil and groundwater.
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) into soil and groundwater.
- Methyl tertiary-butyl ether (MTBE) into groundwater
- Tetrachloroethylene (PCE) and associated reductive dechlorination byproducts trichloroethylene (TCE), and cis-1,2-dichloroethene (DCE) into groundwater.

A parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

This opinion is based on the information contained in the documents listed in **Enclosure A**.

You can request these documents by filing a records request.[4] For help making a request, contact the Public Records Officer[5] or call (360) 407-6040. Before making a request, check whether the documents are available on Ecology's Cleanup Site Search webpage.[6]

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

Analysis of the Cleanup

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

1. Characterization of the Site.

The Quick Shop Mini Mart 27 (Site) is a commercial fuel station and convenience store located in Vancouver, WA (Clark County Parcel 106061000). A gasoline release was discovered during tank upgrade work in May 1995. During tank and dispenser upgrades, contamination was observed beneath the center of the dispenser island and near the tank fill ports on the south end of tanks. An interim action to remove impacted soil was partially completed at the time of discovery. Approximately 26 cubic yards of gasoline range hydrocarbons (TPH-GRO) impacted soil was removed from the Site. Excavation near the dispenser island ceased due to the proximity of the canopy footer though contamination apparently persisted deeper.[7] Remedial investigation began after soil excavation was completed. In total, 13 samples were collected immediately following soil excavation

[4] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[5] publicrecordsofficer@ecy.wa.gov
[6] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=
[7] RDM, Soil and Groundwater Investigation Report, May 1, 2015. Appendix G.

including 6 soil samples collected around the tank nest while installing anodes for the cathodic protection system, 2 soil samples collected in the dispenser area, and 5 samples collected from the tank excavation area. Collection depth of samples collected near the tank nest are not provided. Analytical data indicated a prism of soil contamination in the dispenser area extending to at least 15 feet bgs and extending laterally towards the tank nest at an unrecorded depth. Excavation dimensions, measurements, nor estimates are provided making spatial understanding of the release impacts and completeness of the initial investigation efforts difficult to evaluate.

Sometime during the summer of 1995, a 2-inch vapor extraction point (VEP) was constructed near the north side of the dispenser island. A blower was attached to the VEP and ran for 105 days actively extracting vapor to atmosphere. System exhaust was analyzed sporadically using a photoionization detector (PID) to evaluate vapor extraction efficacy. The extrapolated PID data was used determine the system had been effective and active extraction was stopped.[8] Groundwater was sampled from the VEP in November 1997. Groundwater analysis of the VEP sample indicated concentrations of TPH-GRO and BTEX exceeded the MTCA Method A cleanup level (CUL).[9] A sheen was observed during VEP groundwater sampling. On June 4, 1999, groundwater from the VEP was again sampled which indicated TPH-GRO and BTEX exceeded the Method A CUL.[10]

On October 20, 1999, seven soil borings (SP1-SP7) were advanced at the Site to facilitate soil and groundwater sampling. Soil samples collected during this event confirmed soil contamination near the tank nest and dispenser island. Groundwater collected from the borings confirmed groundwater was contaminated with TPH-GRO, BTEX, and MTBE. A sweet solvent odor was noticed during sampling prompting analysis of halogenated volatile organic compounds tetrachloroethylene (PCE), trichloroethylene (TCE), and cis-1,2-dichloroethene (DCE). PCE, TCE, and DCE were detected in the two groundwater samples analyzed for the substances, PCE concentrations exceeded the Method A CUL for groundwater at SP2.[11] On December 15, 1999, seven additional soil borings were advanced to facilitate additional groundwater sampling at the Site. MTBE was analyzed and determined to exceed the Method A CUL for groundwater. TPH-GRO was not analyzed in any of these samples.

Regular quarterly groundwater monitoring continued until December 2002. Groundwater data indicated frequent Method A CUL exceedances of benzene, MTBE, and PCE at MW3 while MTBE and PCE sporadically exceeded Method A CUL at MW-2. Monitoring wells MW-1 and MW-4 were removed from regular monitoring after the December 2001 monitoring event. After the December 2002 event, monitoring shifted to annual sampling of MW3. Generally, MTBE concentrations decreased in MW3.

[8] RDM, Vapor Extraction Report, Jun 18, 1997. Field Operation and Results.
[9] RDM, Minit Mart #27 – Astro #727, Letter, February 2, 1998.
[10] RDM, Minit Mart #27 – Astro #727, Letter, July 15, 1999.
[11] RDM, Soil and Groundwater Investigation Report, May 5, 2000. Table 2.

Full compliance well network sampling resumed in 2006. PCE was detected at concentrations in excess of the Method A CUL at MW-1 and MW-4. Sporadic exceedances of PCE continued to be observed in groundwater from MW1 and MW4 through November 2010 when groundwater monitoring was paused. In that time, groundwater from MW2 and MW3 bore detectable concentrations of PCE but at or below the Method A CUL. Groundwater monitoring ceased until March 2015. PCE was still detected at concentrations less than the Method A CUL in all groundwater monitoring wells and at the VEP.

Ecology has determined your characterization of the Site **is not** sufficient to establish cleanup standards and select a cleanup action.

Tetrachloroethylene

PCE has been detected above the Method A CUL sporadically in each groundwater compliance well at the Site. The source of PCE in groundwater, while suggested to be the adjacent Caribou Reality Group Site (CSID: 1699), has not been investigated. Ecology recommends resuming groundwater sampling in existing monitoring wells and any additional wells and soil boings completed at the Site. Ecology suggests adding TCE, DCE, vinyl chloride, and ethene to evaluate the anaerobic reductive dechlorination pathway of PCE at the Site.

If the Site would like to demonstrate an alternate source of contamination, additional remedial investigation up and downgradient of the current well network is needed. The Site will very likely not obtain a closure determination until the nature and extent of all Site contaminants is understood.

Methyl tertiary-butyl ether

MTBE was detected in groundwater from MW3 at concentrations 104 times the Method A CUL in June 2000. No effort was made to remediate or monitor off-property migration. No evaluation or monitoring of attenuation was completed. Ecology provides that MTBE is a highly mobile chemical that is highly resistant to natural degradation. Based on the time elapsed and reductions observed, it is likely that MTBE was not attenuated within the source zone but transported downgradient and off property, beyond the limits of remedial investigation.

Ecology needs to evaluate groundwater data collected downgradient of the Property to define the spatial extents of the Site. Ecology suggests collecting groundwater data across the St Johns Road right of way to determine where previously detected MTBE may be located.

Soil Sample Depths

Soil samples collected from the depths less than 9 feet have not been analyzed for contamination. Ecology suggests collecting additional soil samples from the understood release area, tank nest and dispenser island areas, to evaluate near surface soils.

Proposed Hand Auger Borings

Ecology concurs with the placement of hand auger borings HA-1 and HA-2 however disagrees with the planned boring depth. 1995 samples #1-10 and #2-15 identified TPH-GRO in excess of the Method A CUL at 10 and 15 feet bgs, respectively. To vertically delineate the Site, Ecology suggests advancing soil borings to 20 feet with samples collected at 5, 10, 15, 18, and 20 feet. Collected samples may be preserved and archived, disposal pending analytical results of the 5 foot and 18-foot bgs samples. Ensure the selected boring methodology will achieve the desired depths so data contributes to a complete remedial investigation.

Terrestrial Ecological Evaluation

Ecology recommends re-evaluating the TEE[12] after additional data collection to determine if the selected exclusions still apply.

2. Establishment of Cleanup Standards.

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

Cleanup Standards: Under MTCA, cleanup standards consist of three primary components; points of compliance,[13] cleanup levels,[14] and applicable state and federal laws.[15]

a. Points of Compliance. Points of compliance are the specific locations at the Site where cleanup levels must be attained. Ecology understands the Site has compared data at the standard point of compliance. For clarity, Ecology provides the following table of standard points of compliance that likely apply to the Site:

[12] RDM, Soil and Groundwater investigation Report, May 1, 2015. Appendix F.
[13] WAC 173-340-200 "Point of Compliance."
[14] WAC 173-340-200 "Cleanup level."
[15] WAC 173-340-200 "Applicable state and federal laws," WAC 173-340-700(3)(c).

Media	Points of Compliance
Soil-Direct Contact	Based on human exposure via direct contact, the standard point of compliance is throughout the Site from ground surface to fifteen feet below the ground surface. *WAC 173-340-740 (6)(d)*
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site. *WAC 173-340-740(6)(b)*
Soil-Protection of Plants, Animals, and Soil Biota	Based on ecological protection, the standard point of compliance is throughout the Site from ground surface to fifteen feet below the ground surface. *WAC 173-340-7490(4)(b)*
Groundwater	Based on the protection of groundwater quality, the standard point of compliance 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. *WAC 173-340-720(8)(b)*
Groundwater-Surface Water Protection	Based on the protection of surface water, the standard point of compliance is all locations where hazardous substances are released to surface water. *WAC 173-340-730(6)*
Air Quality	Based on the protection of air quality, the point of compliance is indoor and ambient air throughout the Site. *WAC 173-340-750(6)*

b. Cleanup Levels. Cleanup levels are the concentrations of a hazardous substance in soil, water, air, or sediment that are determined to be protective of human health and the environment. At this Site, MTCA Method A unrestricted cleanup screening levels were used to evaluate TPH-GRO, BTEX, MTBE, and PCE contamination detected at the Site.

c. Applicable Laws and Regulations. In addition to establishing minimum requirements for cleanup standards, applicable local, state, and federal laws may also impose certain technical and procedural requirements for performing cleanup actions. These requirements are described in WAC 173-340-710. An online tool[16] is currently available to help you evaluate the local requirements that may be necessary.

All cleanup actions conducted under MTCA shall comply with applicable state and federal laws.[17] The person conducting a cleanup action shall identify all applicable local, state, and federal laws. The department shall make the final interpretation on whether these requirements have been correctly identified and are legally applicable or relevant and appropriate.[18]

[16] https://apps.oria.wa.gov/opas/index.asp
[17] WAC 173-340-710(1)
[18] WAC 173-340-710(2)
Note – MTCA Method A includes ARARs and concentration-based tables (WAC 173-340-700(5)(a)) If MTCA Method A remains in use as proposed Site cleanup levels, identify non-concentration based technical and procedural requirements. If Method B or C cleanup levels are proposed, also include concentration-based requirements.

There are three general groups of applicable local, state, and federal laws that need to be included:

i. **Chemical-Specific:** Examples of chemical-specific laws include promulgated concentrations from another rule that result in adjusting proposed cleanup levels. Method A is inclusive of these laws. For Methods B or C, additional evaluation of chemical-specific applicable state and federal laws is required.

ii. **Action-Specific:** Examples of action-specific laws include requirements for obtaining local permits to excavate and/or dispose of contaminated soil, stormwater construction permits, or the requirement to notify local law enforcement in case human remains are discovered during excavation. All MTCA cleanups require evaluation of action-specific applicable state and federal laws.

iii. **Location-Specific:** Examples of location-specific laws include specific requirements for working near wetlands or archeologically important areas. All MTCA cleanups require evaluation of location-specific applicable state and federal laws.

After you have identified appropriate applicable local, state, and federal laws, report to Ecology the applicable local, state, and federal laws applicable to this cleanup, and how those laws and regulations specifically effect the proposed cleanup.

3. Selection of Cleanup Action.

Ecology has determined that additional remedial investigation is necessary at the Site before selecting a cleanup action.

4. Cleanup.

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

In 1995, approximately 27 cubic yards of petroleum contaminated soil was removed from Site. A single-point vapor extraction system was operated for 105 days. Groundwater was regularly monitored between 2000 and 2010.

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 70A.305.040(4).

2. Opinion Does Not Constitute a Determination of Substantial Equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination.
See RCW 70A.305.080(8) and WAC 173-340-545.

3. State is Immune from Liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion.
See RCW 70A.305.170(6).

Contact Information

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

For more information about the VCP and the cleanup process, please visit our Voluntary Cleanup Program webpage.[19] If you have any questions about this opinion, please contact me at (360) 407-6266 or Joseph.Kasperski@ecy.wa.gov.

Sincerely,

Joe Kasperski, LG
Toxics Cleanup Program
Southwest Region Office

JKK/AT

Enclosures (1): A Basis for the Opinion: List of Documents

cc by email: Josh Owen, Martin S Burck Associates, Inc, jowen@msbaenvironmental.com
Jerome Lambiotte, Ecology, jerome.lambiotte@ecy.wa.gov
Ecology Site File

[19] https://www.ecy.wa.gov/vcp

Enclosure A

Basis for the Opinion

This page intentionally left blank.

List of Documents

1. Martin S. Burk Associates, Inc, *Supplemental Investigation Work Plan*, June 21, 2023.
2. Ecology, *Further Action at the following Site Quick Shop Minit Mart 27*, June 10, 2015
3. Robert D. Miller Consulting Inc (RDM), *Soil and Groundwater Report*, May 1, 2015.
4. RDM, *Groundwater Report for the Purpose of Site Closure – March 18, 2015, Event,* April 2, 2015.
5. Ecology, *Further Action at the following Site: Quick Shop Minit Mart 27,* August 9, 2011.
6. RDM, *Fifth Groundwater Report for the Purpose of Partial Site Closure – November 2010 Event*, December 15, 2010.
7. RDM, *Fourth Groundwater Report for Site Closure – July 2010*, August 24, 2010.
8. RDM, *Third Groundwater Report for Site Closure – March 2010*, May 26, 2010.
9. RDM, *Second Groundwater Report for Site Closure – November 2009*, December 16, 2009.
10. RDM, *First Groundwater Report for Site Closure – Sept 2009*, December 11, 2009.
11. RDM, *Groundwater Report for December 2007 Annual Monitoring Event*, January 24, 2008.
12. RDM, *Groundwater Report for Compliance Summer 2006 Monitoring Event*, November3, 2006.
13. RDM, *Groundwater Report for December 2005 Annual Monitoring Event*, January 11, 2006.
14. RDM, *Groundwater Report for December 2004 Annual Monitoring Event*, January 4, 2005.
15. RDM, *Groundwater Report for December 2003 Annual Monitoring Event*, December 20, 2003.
16. RDM, *Compliance Groundwater Monitoring Report for December 2002 Event*, December 30, 2002.
17. RDM, *Telephone Discussion with Craig Rankine of Ecology*, November 27, 2002.
18. RDM, *Compliance Groundwater Monitoring Report for September 2002*, October 30, 2002,
19. RDM, *Compliance Groundwater Monitoring Report for July 2002 Event*, September 4, 2002.
20. RDM, *Groundwater Monitoring Report for March 2002 Event*, April 29, 2002.

21. RDM, *Groundwater Monitoring Report for December 2001 Event, December 28, 2001.*

22. RDM, *Groundwater Monitoring Report for May 2001 Event,* June 25, 2001.

23. RDM, *Groundwater Monitoring Report for February 16, 2001, Event*, March 7, 2001.

24. RDM, *Groundwater Monitoring Report for October 2, 2000, Event*, October 25, 2000.

25. Ecology, *Further Action at the following Site: Quick Shop Minit Mart 27*, October 3, 2000.

26. RDM, *Addendum to the Groundwater Monitoring Report for June 28, 2000*, August 10, 2000.

27. RDM, *Groundwater Monitoring Report for June 28, 2000, Event*, August 7, 2000.

28. RDM, *Soil and Groundwater Investigation Report*, May 5, 2000.

29. RDM, *Minit Mart – Astro #27*, Letter, October 4, 1999.

30. RDM, *Astro Station #727 – Minit Mart #27*, Letter, July 15, 1999.

31. RDM, *Minit Mart #27 – Astro #727*¸ Letter, February 2, 1998.

32. RDM, *Vapor Extraction Report*, June 18, 1997.