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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Region Office
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March 26, 2026

Donald F. May,
CPA Chief Financial Officer
The Hearthstone at Green Lake
6720 E. Green Lake Way N. Seattle, WA 98103
(dmay@hearthstone.org)

RE: Additional downgradient monitoring wells and the proposed pilot study work plan

Name: Plastic Sales & Services
Location: 6860, 6869, and 6870 Woodlawn Avenue NE, Seattle WA
CSID: 2074
Facility: 1948927

Dear Donald F. May:

Thank you for submitting the following reports:

- Bench-Scale Test Report, dated March 3, 2026
- Lines of Evidence for No Further Treatment of Shallow Water-Bearing Zone, dated February 10, 2026
- 2025 Progress Report, dated February 4, 2026
- Fourth Quarter 2025 Progress Memorandum, dated January 22, 2026

Additional Downgradient Groundwater Monitoring Wells to Be Installed

Washington State Department of Ecology (Ecology) has determined that one critical piece of information is missing from the cleanup effort at Plastic Sales site. It is unknown where the contaminated groundwater plume ends. This missing information prevents Ecology and Hearthstone from defining the site boundary, from developing a good and valuable pilot study

work plan, and from selecting an appropriate final cleanup remedy in the supplemental Feasibility Study report.

Ecology requests an additional pair of shallow and deep monitoring wells to be installed between monitoring wells pairs MW36/MW37 and MW34/MW35. These wells shall be installed further downgradient east as practicable of MW34/MW35 on the sidewalk at 6900 East Green Lake Way North. Ecology requests the new shallow monitoring well be screened between 10-20ft below ground surface (bgs), and the deep monitoring well be screened between 35-45ft bgs.

Ecology provides the following evidence in supporting the need for additional downgradient monitoring wells at 6900 Green Lake Way North:

1. Monitoring wells MW34/MW35 continue to show concentrations of the contaminants of concern (COCs) exceeding MTCA cleanup levels (CULs). It is unclear how far the contaminated groundwater has migrated beyond MW34/MW35.

Strategies

Seattle, Washington

Well ID	Sample ID	Sampled By	Sample Date	Sample Point Depth (feet bgs)	Analytical Results ⁽¹⁾ (micrograms per liter)				
					PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
MW35	MW35-20221115	SoundEarth	11/15/22	40.00	3,300	110	310	< 0.20	2.8
	MW35-20230418	SoundEarth	04/18/23	40.00	240	25	340	< 2.0	1.2
	MW35-20231026	SoundEarth	10/26/23	42.00	3,600	220	1,300	3.1	30
	MW35-20240416	SoundEarth	04/16/24	40.00	4.7	1.9	26	< 0.20	0.32
	MW35-20241028	SoundEarth	10/28/24	40.00	17	5.8	39	< 0.20	2.6
	MW35-20250422	SoundEarth	04/22/25	40.00	15	4.0	21	< 0.20	1.2
	MW35-20251008	SoundEarth	10/08/25	40.00	28	8.9	45	0.24	12
	MW36-20221115	SoundEarth	11/15/22	20.00	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20

Well ID	Sample ID	Sampled By	Sample Date	Sample Point Depth (feet bgs)	Analytical Results ⁽¹⁾ (micrograms per liter)				
					PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
MW34	MW34-20221116	SoundEarth	11/16/22	20.00	13	4.6	39	< 0.20	9.2
	MW34-20230418	SoundEarth	04/18/23	20.00	2.0	0.30	2.9	< 0.20	7.3
	MW34-20231026	SoundEarth	10/26/23	21.00	1.2	0.23	1.2	< 0.20	1.9
	MW34-20240416	SoundEarth	04/16/24	20.00	0.23	< 0.20	0.91	< 0.20	1.0
	MW34-20241024	SoundEarth	10/24/24	20.00	0.33	0.21	0.96	< 0.20	1.1
	MW34-20250422	SoundEarth	04/22/25	20.00	< 0.20	< 0.20	0.42	< 0.20	0.42
	MW34-20251007	SoundEarth	10/07/25	20.00	< 0.20	0.21	0.61	< 0.20	0.99

2. Groundwater flow at the Site, particularly for the deep water-bearing zone, is calculated to the northeast to north-northeast in 4th Avenue Northeast (Figures 3 and 5, Fourth Quarter 2025 Progress Memorandum). This places monitoring well pair MW36/MW37 in a cross-gradient position to groundwater flow and MW36/MW37 wells are not representative of downgradient Site conditions.

3. Ecology has reviewed the cross sections and well logs provided by Sound Earth Strategies Inc. (SoundEarth) and believes the existing “intermediate” monitoring wells MW32, MW34, and MW36 do not represent a separate water-bearing zone, but that the screened intervals intercept both shallow and deeper water-bearing zones identified at the Site. Therefore, water levels and analytical results from these wells will not be representative of groundwater conditions at those locations.
4. In order to provide more reliable data, Ecology requests that monitoring wells MW32, MW34, and MW36 be decommissioned and replaced with shallow-screened wells that do not intercept the silty sands at approximate depth of 20 feet bgs.

Pilot Study

Hearthstone presented its bench-scale study conclusions in the submitted Bench-Scale Test Report.

“The bench-scale study concluded that NaMnO₄ is favorable for in situ treatment of groundwater at the Site. NaMnO₄ chemical oxidized all CVOs (PCE, TCE, cis-1,2-DCE and VC) in soil and groundwater, achieving greater than 99 percent reduction. The bench-scale test demonstrated that NaMnO₄ chemical oxidation is not selective, destroying all CVOs and eliminating the accumulation of cis-1,2-DCE and VC.”

Oxidation is known for having limited radius of influence. The completed bench-scale study does not provide specific information on how effective the oxidation will be at Plastic Sales Site. Ecology agrees with Hearthstone that a pilot study should be conducted before SoundEarth drafts a supplemental Feasibility Study report.

For the proposed pilot study work plan, Ecology recommends the following, but not limited to:

- a. Oxidant will be injected into wells IW69, IW70, IW71, IW72 and MW31;
- b. Groundwater samples will be collected from monitoring wells MW32/MW33, MW34/35 and the new pair of shallow and deep downgradient monitoring wells to be installed at 6900 Green Lake Way North. Data from these downgradient wells will be used to evaluate the oxidation effectiveness and its radius of influence.
- c. Oxidant will be injected into the existing injection wells along the south side of Woodlawn Avenue Northeast, such as IW22 and IW15.
- d. Oxidant should also be injected into the existing injection wells along the north side of Woodlawn Avenue Northeast, such as IW29, IW32, IW34, IW36 and IW38

- e. Groundwater samples will be collected from monitoring wells MW9, MW10, and MW6 to evaluate the oxidation effectiveness and its radius of influence.
- f. If the pilot study shows the oxidation treatment is effective in the deep water-bearing zone, shallow groundwater water-bearing zone could also be treated with the oxidation as part of the final remedy.

Also, Appendix C (Prima's Bench Scale Study Report) was not attached in the submitted Bench-Scale Test report. Please submit the Appendix C of the Bench-Scale Test report.

If you have any questions, please contact me at (425) 457-3842 or sunny.becker@ecy.wa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Sunny Becker".

Sunny Becker
Site Manager
Toxics Cleanup Program, NWRO

cc: Tom Cammarata—SoundEarth Strategies, Inc. (tcammarata@soundearthinc.com)
Levi Fernandes-- SoundEarth Strategies, Inc. (lfernandes@soundearthinc.com)