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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Southwest Region Office
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Bill Hrdina
La Center School District #101
PO Box 1840
La Center, WA 98629
bill.hrdina@lacenterschools.org

Re: No Further Action at the following contaminated Site:

- **Site Name:** La Center School District Future Site
- **Site Address:** 2001 NE Lockwood Creek Rd, La Center, Clark County, WA 98629
- **Facility/Site ID:** 96671
- **Cleanup Site ID:** 14855
- **VCP Project ID:** SW1675

Dear Bill Hrdina:

On November 9, 2021, the Washington State Department of Ecology (Ecology) received your request for an opinion on the proposed independent cleanup of the La Center School District Future Site (Site). On September 19, 2023, your submittal, including upload of electronic data, was complete and ready for our review. 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 no further action is necessary for your 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"). This opinion is limited to the identified release. 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 confirmed release:

- Dieldrin into the soil.

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

Enclosure A includes a detailed description and diagram of the Site.

The Property is comprised of three Clark County parcels: 209118000, 209120000, and 209119000. The Site is wholly contained within two parcels, 209118000 and 209120000.

Basis for the Opinion

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

Those documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Information on obtaining those records can be found on Ecology's public records requests web page.[4] Some site documents may be available on Ecology's Cleanup Site Search web page.[5]

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 no further action is likely necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

In our January 6, 2021 opinion letter, Ecology determined that the Site as adequately characterized under WAC 173-340-350(7). Additional data collected supports this conclusion. The Property has been re-developed as a middle school.

Interim Action Summary

[4] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[5] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=14855

In June 2020, PBS removed dieldrin- contaminated soil near tests pits TP3 and TP7. Each excavation was approximately 25 feet by 25 feet square, to a depth of approximately 1.5 feet below ground surface (bgs). A total of 137.47 tons of soil was removed from these two locations.

During August 2020, PBS removed 6,944.72 tons of dieldrin-contaminated soil from the A-S area, located in the southwest portion of the Property. The total extent of the excavation was approximately 300 feet by 400 feet, to depths of approximately 1.5 feet to 2 feet bgs.

The total of 7,082.19 tons of dieldrin-contaminated soil was disposed of at Cowlitz County's Headquarters Landfill, a permitted facility. Groundwater was not observed in any of the excavations.

Site Hazardous Substances

Dieldrin, glyphosate (evaluated as aminomethlyphosphonic acid or AMPA), and metals in soil concentrations were compared to applicable MTCA Method A and B cleanup levels (as screening levels) during the site investigation.

The metals in soil evaluated as part of the Site investigation included: arsenic, barium, chromium, copper, cobalt, lead, vanadium, and zinc. Arsenic, chromium, and lead were screened out, as concentrations were less than MTCA Method A cleanup levels for soil. Except for cobalt and vanadium in soil, barium, copper, and zinc were screened out, as concentrations were less than the MTCA Method B direct contact and protection of groundwater cleanup levels.

Cobalt concentrations were further evaluated in soil by Ecology to confirm whether they exceeded the MTCA Method B cleanup level. Ecology determined that cobalt concentrations in soil were in compliance with the MTCA Method B cleanup level for soil for protection of groundwater based on the statistical test presented in WAC 173-340-740(7). In the *Soil Cleanup Action Report*,[6] PBS further evaluated vanadium in soil. The analysis concluded that vanadium in soil was likely consistent with background concentrations and did not require additional action at the Site for protection of human health or ecological receptors. Ecology concurs with the analysis regarding vanadium in soil, and agrees that cobalt and vanadium can be successfully screened out as a Site hazardous substance and require no further action at the Site.

Glyphosate, a common herbicide, was evaluated by the concentrations of its break-down metabolite product, AMPA. Concentrations of AMPA in soil were less than MTCA Method B

[6] November 10, 2020.

cleanup levels for direct contact and protection of groundwater, so no additional evaluation was necessary.

Dieldrin concentrations in soil exceeded the MTCA Method B cleanup levels for protection of groundwater and direct contact. Dieldrin was further characterized and evaluated at the Site. A cleanup action, described in sections 3 and 4 below, was taken to address dieldrin in soil at the Site.**Current Pathway Status for Dieldrin**

Site exposure pathways, as currently known to Ecology, are described below.

Soil: After the excavation and off-Site disposal of contaminated soils, concentrations of dieldrin in soil are less than the MTCA Method B direct contact cleanup levels.

Currently, without detections of dieldrin in groundwater, the soil leaching to groundwater pathway is more likely than not incomplete. Dieldrin binds tightly to soil.[7] Dieldrin has not been detected in Site groundwater.

Groundwater: Groundwater (as grab samples) was tested at ten total locations–eight of which were post-remediation. The results indicated that dieldrin was not detected in groundwater. However, based on one grab groundwater location exhibiting laboratory reporting limits that exceeded the MTCA Method B cancer cleanup level (used as a screening level), monitoring well MW-1 was installed at this location. The depth to groundwater in this well was measured at approximately 9.80 feet below top of casing. The analytical results indicated that dieldrin was not detected in groundwater from MW-1. The Site is not located within a wellhead protection zone.

Air/Soil Vapor: The air/soil vapor pathway is most likely incomplete. Dieldrin binds tightly to soil. The residual dieldrin concentrations in soil are approximately six times less than the direct contact cleanup level. The Henry's Law constant for dieldrin is less than 1E-05, and dieldrin has low vapor pressure. Based on the removal of the dieldrin-impacted soil to less than the direct contact cleanup level, the air/soil vapor pathway is more likely than not incomplete.

Ecological: From WAC 173-340-900, Table 749-2, the concentration of dieldrin protective of ecological receptors for unrestricted land use is 0.17 milligrams per kilogram (mg/kg). The terrestrial ecological evaluation (TEE) at this Site would be completed as a simplified TEE under WAC 173-340-7492(2)(c). As such, Ecology concurs that the Site is excluded from further TEE.

Surface Water: Per the national hydrogeology database, an ephemeral stream crosses the northwestern corner of the Property. A soggy area was observed in November 2017 in the southwest corner of the Property. However, there are no wetlands, inundated areas, or priority

[7] https://www.atsdr.cdc.gov/toxguides/toxguide-1.pdf

habitat areas currently mapped on the Property or Site. The nearest perennial surface water body is part of the flood plain for the Lewis River, located approximately 0.75 miles west-southwest of the Site. Based on the lack of detections of dieldrin in groundwater, and the distance to surface water, no further evaluation of the surface water pathway is necessary.

Sediment: There is no area of the Site which meets the definition of WAC 173-204-505(22). There is no sediment at the Site and the pathway is incomplete.

Response to Last Opinion Letter Requests

Sufficient information has been provided to Ecology to meet our requests in the opinion letter dated January 6, 2021. The school is on municipal water and sewer, per Clark County Assessor files[8] and Clark County Auditor file, both available online documenting utility easements and utilities installation.[9]

Site Data into Ecology's Environmental Information Management (EIM) Database

All Site data have been uploaded to EIM and were accepted on September 19, 2023. The VCP cleanup project manager reviewed and approved all remaining Site data on September 21, 2023.

Investigation Derived Waste (IDW)

It appears that soil sampling for IDW profiling purposes has been completed. If not already done, please dispose of all IDW in accordance with local, state, and federal requirements. Site data show that no IDW designates as dangerous waste.[10]

2. Establishment of Cleanup Standards.

Cleanup standards, including cleanup levels, points of compliance, and applicable laws are proposed in the *Soil Cleanup Action Plan*. We concur with the cleanup standards set for the Site, summarized in the table below.

Cleanup Standards: Under MTCA, cleanup standards consist of three primary components; points of compliance,[11] cleanup levels,[12] and applicable state and federal laws.[13] The applicable MTCA Method B cleanup levels that apply to the Site are:

[8] https://gis.clark.wa.gov/gishome/Property/?pid=findSN&account=209118000#
[9] https://e-docs.clark.wa.gov/LandmarkWeb/search/DocumentBy?Key=Assessor&booktype=OR&ClerkFileNumber=5760733 and https://e-docs.clark.wa.gov/LandmarkWeb/search/DocumentBy?Key=Assessor&booktype=OR&ClerkFileNumber=5918817
[10] WAC 173-303
[11] WAC 173-340-200 "Point of Compliance."
[12] WAC 173-340-200 "Cleanup level."
[13] WAC 173-340-200 "Applicable state and federal laws," WAC 173-340-700(3)(c).

Site Hazardous Substance	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)[14]
Dieldrin	0.063[15]	0.0055[16]

Ecology updated the CLARC database of standard cleanup levels in February 2021. Ecology's Voluntary Cleanup Program (VCP) re-evaluated applicable cleanup levels for the Site, determining that:

The MTCA Method B cleanup level for direct contact for dieldrin in soil at the Site is appropriate. Dieldrin was not detected in groundwater, whether at grab locations or from monitoring well MW-1. Supporting the use case for direct contact cleanup levels for soil.

Points of Compliance. In section 4.2.1, of PBS' *Soil Cleanup Action Report*, you propose standard points of compliance for the Site. Ecology concurs with standard points of compliance for this Site, and summarizes our current understanding of points of compliance for all media (including incomplete pathways) at the Site in the table below.

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)* ***Cleanup levels have been met at a standard point of compliance.***
Soil-Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site. *WAC 173-340-747* ***Pathway is incomplete. Dieldrin not detected in groundwater samples collected.***
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)* ***Pathway is incomplete. Dieldrin not detected in groundwater samples collected.***

[14] µg/L = micrograms per Liter.
[15] Protective of the direct contact pathway given the absence of dieldrin in groundwater.
[16] The cancer value for dieldrin in groundwater is appropriate to ensure cancer risk at Site is less than 1×10^{-6}.

In section 4.2.3, of PBS' *Cleanup Action Report*, a list of applicable state and federal laws is proposed. It appears that none of the proposed laws, though incorporated and considered to set cleanup standards for the Site, reduced the proposed cleanup levels. Ecology concurs that it is more likely than not that the proposed list of applicable laws is sufficient. However, if dieldrin is detected in groundwater, additional review of applicable laws and related cleanup standards would be necessary.

3. Selection of Cleanup Action.

Based on the data from the excavation independent interim action, air/vapor, ecological, surface water, and sediment pathways are more likely than not incomplete for the Site.

PBS selected excavation to remove contaminated soil to address soil and groundwater pathways. Contaminated soil was disposed of off-site at a permitted facility (Headquarters Landfill in Cowlitz County). All concentrations of dieldrin reported in disposed soil and remaining soils at the Site were less than the treatment standard of 0.13 mg/kg and less than two times the cleanup level. In fact, the maximum concentration remaining in soil was less than the MTCA Method B cleanup level protective of direct contact.

Excavation as a cleanup action is consistent with requirements under WAC 173-340-360(2)(d) for school properties.

A feasibility study with disproportionate cost analysis was not required to select a cleanup for the Site because excavation of all contaminated soil was the most permanent cleanup option.[17] For other cleanup Sites with dieldrin in soil where Ecology determined no further action was necessary, excavation with off-Site disposal at a permitted facility was the cleanup alternative implemented.[18] The list of dieldrin in soil Sites was statewide.

4. Cleanup.

Ecology has determined your cleanup meets the standards set for the Site. Performance soil and groundwater samples meet cleanup standards for each AOC. Contaminated soils were properly disposed at off-Site permitted facilities.

Excavation was completed in three areas where dieldrin in soil concentrations exceeding the MTCA Method B direct contact cleanup level had previously been identified, TP-3, TP-7,

[17] WAC 173-340-360(3)(d)
[18] Email correspondence from Ecology to VCP customer team, Re: SW1675: Ecology's Toxics Cleanup Program Information – Removal of Dieldrin in soil, July 26, 2019.

and A-S wetland. None of the dieldrin in soil locations exceeded the dangerous waste treatment standard requiring on-Site treatment before landfill disposal. A total of 62 performance soil and eight grab groundwater samples were collected.

Excavation of dieldrin contaminated soils resulted in approximately 7,082.19 tons of soil being removed and disposed of at Cowlitz County's Headquarters Landfill. Dieldrin was not detected in Site groundwater. Based on the most recent available satellite photographs, the excavation area appears to be completely fenced, though fencing is not required for this cleanup as an institutional control.

The cleanup performed at the Site meets the threshold requirements under WAC 173-340-360(2), and:

- Is protective of human health and the environment.
- Is in compliance with cleanup standards.
- Is in compliance with applicable state and federal laws.
- Used permanent solutions to the maximum extent practicable.
- Provides for a reasonable restoration timeframe.
- Sufficiently considers public concerns.
- Does not require institutional controls or compliance monitoring.
- Meets the cleanup action requirements under WAC 173-340-360(2)(d).

You must decommission resource protection wells[19] installed as part of the remedial action that are not needed for any other purpose at the Site. Resource protection wells (aka monitoring wells) must be decommissioned in accordance with WAC 173-160-460.[20] Well decommissioning must be overseen by a driller licensed in Washington State. Currently, there is one monitoring well at the Site to decommission, MW-1.

Independent Remedial Action Grants (IRAG) Information

Remedial action grant information is available on our website.[21] Current local government guidance for reimbursement of eligible cleanup costs after issuance of a no further action determination is also available.[22]

[19] https://app.leg.wa.gov/WAC/default.aspx?cite=173-160-410
[20] https://app.leg.wa.gov/WAC/default.aspx?cite=173-160-460
[21] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-process/Paying-for-cleanups
[22] https://apps.ecology.wa.gov/publications/summarypages/2009055.html

Please ensure you submit any cultural resources documentation associated with the general Property development with any grant application. Reimbursement under IRAGs is up 10-50% of eligible cleanup costs (up to a maximum reimbursement of $300,000), contingent upon available funding and overall competition for grants. Ecology notes that the VCP SW1675 project entered VCP on April 22, 2019, in advance of the cultural resources consultation requirement cut-off date of January 1, 2020 for VCP projects, in order to remain eligible for IRAG funding.

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 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).

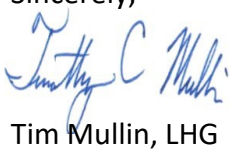
Termination of Agreement

Thank you for cleaning up the Site under the VCP. This opinion terminates the VCP Agreement governing VCP Project No. SW1675.

Questions

For more information about the VCP and the cleanup process, please visit our Voluntary Cleanup Program web site.[23] If you have any questions about this opinion, please contact me at (360) 999-9589 or tim.mullin@ecy.wa.gov.

Sincerely,



Tim Mullin, LHG
VCP Cleanup Project Manager
Toxics Cleanup Program
Southwest Regional Office

TCM/jc

Enclosures (2): A – Site Description
B – Document List

cc by email: Tom Mergy, PBS, tom.mergy@pbsusa.com
Bret Waldron, PBS, bret.waldron@pbsusa.com
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Fiscal, VCP Fiscal Analyst (w/o encl)
TCP, Operating Budget Analyst (w/o encl)

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

Enclosure A

Site Description

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Site Description

The Site is located at 2001 NE Lockwood Creek, La Center, Clark County, Washington. The Property includes three Clark County parcels: 209118000, 209120000, and 209119000.

Property History and Current Use

No Site-specific information is available about application rates or frequency of historical chemicals used at the Property. The Property has been used, likely continuously, as pasture land and a hay field since at least 1951. The use of the Property as pasture land/hay field is based on available records and aerial photographs. Some satellite photographs also show tractor tracks coming onto the Property from adjacent parcels. This suggests that chemical mixing and storage was likely completed off-Property. Construction of the middle school on the Property commenced in May 2020 and finished on September 27, 2021, during the height of the COVID-19 pandemic.

Property Vicinity

The Site is located in an area of mixed residential, municipal, and agricultural use.

Soils and Geology

To the maximum depth explored of 15 feet bgs, the Site is generally underlain by varying amounts of silty sand, clay, and silts. Grab groundwater borings were advanced to approximately 15 feet bgs. Monitoring well MW-1 was installed to a depth of 15 feet bgs. The excavation depths were up to two feet bgs.

Groundwater

PBS measured the depth to groundwater in properly constructed monitoring well MW-1 for the September 9, 2021 sampling event at 9.80 feet bgs.

Surface/Storm Water/Septic Systems

As part of the development of the Property into a middle school, the Property is now connected to city water and sewer. The easements for utilities are documented by files available online at the Clark County Auditor's office.[24] The nearest perennial surface water is approximately 0.75 miles west-southwest of the Site.

[24] https://e-docs.clark.wa.gov/LandmarkWeb/search/DocumentBy?Key=Assessor&booktype=OR&ClerkFileNumber=5918817

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Enclosure B

Document List

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

1. PBS, Confirmation Groundwater Monitoring Report, November 3, 2021.
2. Ecology, RE: No Further Action Likely at the following Site, June 22, 2021.
3. PBS, Soil Cleanup Action Report, November 10, 2020.
4. Ecology, Further Action at the Following Site, letter, addressed to Bill Hrdina (La Center School District #101), November 26, 2019.
5. PBS, Remedial Action Work Plan La Center Middle School Construction, August 22, 2019.
6. Tim Mullin (tim.mullin@ecy.wa.gov), SW1675: Ecology Toxics Cleanup Program Information – Removal of Dieldrin in soil, email, July 26, 2019.
7. PBS, Supplemental Sampling Work Plan, May 29, 2019.
8. US Army Corps of Engineers and Ecology, NWS-2018-696, Joint Public Notice Application for a Department of the Army Permit and a Washington Department of Ecology Water Quality Certification and/or Coastal Zone Management Consistency Concurrence, March 11, 2019.
9. PBS, Soil Investigation Report, February 26, 2019.
10. Ecology, Initial Investigation Report, November 20, 2018.
11. PBS Engineering and Environmental, Inc. (PBS), Critical Areas Report, October 5, 2018.
12. Olson Environmental, LLC (Olson), Wetland Delineation & Assessment Critical Areas Report, September 28, 2018.
13. BSK Associates, Report for V8H0281 La Center Middle School Soil, letter, addressed to Kevin Grosz (Olson), August 29, 2018.
14. Olson, Fish & Wildlife Habitat Conservation Areas Assessment, November 30, 2017.
15. Olson, Wetland Delineation and Assessment, November 22, 2017.

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