



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

May 2, 2014

Joan Davenport  
City of Yakima  
129 North 2nd Street  
Yakima, WA 98901

**Re: Further Action at the following Site:**

- **Site Name:** Interstate 82 Exit 33A Yakima City Landfill
- **Site Address:** 805 N. 7th St., Yakima  
(Parcels 191318-41001 and 191318-42001)
- **Facility/Site No.:** 1927
- **VCP Project No.:** CE0406

Dear Ms. Davenport:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Interstate 82 Exit 33A Yakima City Landfill 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**

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Is further remedial action necessary to clean up contamination at the Site?

**YES. 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 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**

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



- Unknown hazardous substances into the soil (no soil samples were collected or analyzed).
- Lead, chromium, arsenic, iron, manganese, sodium, nitrate, vinyl chloride, and low pH into the groundwater. Other hazardous substances may also be present where initial screening laboratory method detection limits (MDLs) were above MTCA cleanup levels.

Please note a parcel of real property can be affected by multiple sites. The Boise Cascade Mill facility (# 450) also affects parcel(s) of real property associated with this Site. This opinion does not apply to any contamination associated with the Boise Cascade Mill facility.

### **Basis for the Opinion**

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This opinion is based on the information contained in the documents listed below:

1. SLR International Corporation, July 17, 2012. *Soil Vapor and Groundwater Sampling Report – May 2012 Event, Closed City of Yakima Landfill, Yakima, Washington*
2. SLR International Corporation, March 17, 2010. *Additional Investigation Report, Closed City of Yakima Landfill Site*
3. International Corporation, October 12, 2009. *Remedial Investigation Report, Closed City of Yakima Landfill Site*
4. Parametrix, October 2008, *Phase II Environmental Site Assessment, Former City of Yakima Municipal Landfill, Yakima, Washington*
5. Contents of Ecology site file

Those documents are kept at the Central Regional Office (CRO) of Ecology for review by appointment only. You can make an appointment by calling the CRO resource contact (509) 575-2490.

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

### **Analysis of the Cleanup**

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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 focus of this opinion letter, at the request of the City of Yakima, is to provide an opinion regarding the remedial investigation previously conducted at the Site.

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

The Site is described as releases associated with a former municipal landfill that operated during the 1960s. It is important to note that groundwater contamination may be comingled with plumes associated with the upgradient Boise Cascade Mill site.

In February 2008, a Phase II site assessment was conducted and work consisted of a geophysical survey, 14 test pits, two soil borings, installation of one new monitoring well, three soil vapor probes, and collecting samples from three monitoring wells. A rough lateral extent of the municipal solid waste (MSW) was delineated. Iron, manganese, and vinyl chloride were detected in groundwater above MTCA Method B cleanup levels. Soil vapor concentrations of methane were found near the boundaries of the MSW above the lower explosive limit (LEL), including the plywood plant building. No soil samples were ever analyzed for any of the contaminants of concern.

In October 2009 through May 2012, a remedial investigation was conducted and work consisted of 56 test pits to delineate lateral extent of the MSW, 41 soil borings to define vertical extent of the landfill, five temporary monitoring wells to assess groundwater quality, 20 soil vapor probes, installation of eight new monitoring wells for continued monitoring of groundwater, and sampling of 11 monitoring wells. Based on the investigation, the landfill is estimated to hold ~408,500 cubic yards of MSW. Arsenic, iron, manganese, sodium, nitrate, and low pH were detected in groundwater above MTCA cleanup levels. Soil vapor concentrations of methane were found above the LEL near the boundary of the MSW at the plywood plant building and the eastern boundary of the landfill. Besides limited sampling for disposal purposes, no soil samples were analyzed during this investigation.

No investigation of soil contamination has occurred. Contaminants have not been assessed in soil and the lateral and vertical extent of any soil contamination has not been characterized.

The extent of MSW along the eastern boundary (Interstate 82) of the landfill has not been fully characterized. Soil gas vapor concentrations for methane have also not been collected for this area.

The lateral and vertical extent of groundwater contamination has not been fully characterized. More groundwater monitoring wells may be needed to provide for full characterization. Ecology recommends shorter well screen lengths to yield more representative results (10 ft. instead of 15 ft.). Well screen lengths not exceeding 10 ft. are also recommended by the EPA's *MSW Landfill Criteria Technical Manual*.

The laboratory MDLs of previous groundwater sampling for some hazardous substances were above MTCA cleanup levels. Examples of these in the 2008 study include arsenic, lead, polychlorinated biphenyls (PCBs), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), ethylene dibromide (EDB), pentachlorophenol (PCP), and other volatile organic compounds (VOCs)/semi-volatile organic compounds (SVOCs). Examples in the 2009 study include EDB, PCP, cPAHs, bis(2-ethylhexyl) phthalate, and other VOCs/SVOCs. Ecology does not consider this data to be representative of Site conditions. Contaminants of concern cannot be eliminated where the MDLs exceeded MTCA cleanup levels.

Ecology recommends conducting **at least four consecutive quarters** of groundwater monitoring for the entire well network, including any new wells, associated with the Site. This should include all hazardous substances likely to be encountered at a MSW landfill site, including, but not limited to, those previously screened for the Site.

These hazardous substances should include, but are not limited to:

- Total petroleum hydrocarbons (TPH)
  - o Hydrocarbon Identification (HCID)
  - o Gasoline range hydrocarbons (GRO)
  - o Diesel range hydrocarbons (DRO)
  - o Heavy Oils
  - o Mineral Oil
- VOCs
- SVOCs
- PCBs
- Metals (total and dissolved)
- Chlorinated pesticides
- General Chemistry (Conventionals)
  - o At a minimum nitrate and pH

The reports received for the 2009, 2010, and 2012 remedial investigations did not include a copy of the sampling and analysis plan (SAP) and quality assurance project plan (QAPP). If requested, Ecology can review and comment on these documents under the VCP program before further remedial investigation takes place. It is also helpful if the SAP/QAPP is included with the final report so that Ecology has it for reference while preparing the VCP opinion.

**2. Establishment of cleanup standards.**

Ecology has determined the cleanup levels you established for the Site meet the substantive requirements of MTCA. A point of compliance for soil and groundwater has not been established for the Site.

**a. Cleanup levels.**

The use of MTCA Method A and B soil and groundwater cleanup levels for Unrestricted Land Uses are appropriate throughout the Site.

**b. Terrestrial Ecological Evaluation (TEE).**

The TEE is required to be completed. If appropriate, please provide the basis and supporting documentation for an exemption from the TEE process.

**3. Selection of cleanup action.**

No cleanup action has been selected for the Site.

**4. Cleanup.**

No significant cleanup has occurred at the Site. A small amount of MSW may have been removed and disposed of at either the Terrace Heights or Cheyne Landfills during construction of the freeway off-ramp in 1996.

**5. Professional License Requirements**

Any site investigation/cleanup document containing geologic or engineering work (generally, interpretation of geologic or groundwater data, design calculations, plans, or as-built plans) must be submitted under the seal of the appropriately licensed professional.

**6. Environmental Information Management System (EIM)**

In accordance with WAC 173-340-840(5) and Ecology Toxics Cleanup Program Policy 840 (Data Submittal Requirements), data generated for Independent Remedial Actions shall be submitted simultaneously in both a written and electronic format. For additional information regarding electronic format requirements, see the website <http://www.ecy.wa.gov/eim>.

Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination.

An EIM data submittal has been received for the 2009, 2010, and 2012 remedial investigations for this Site.

Please submit any additional data that is collected.

**Limitations of Opinion**

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**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 performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

Joan Davenport  
City of Yakima  
May 2, 2014  
Page 7

**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 70.105D.030(1)(i).

**Contact Information**

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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 web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm). If you have any questions about this opinion, please contact me by phone at (509) 454-7835 or e-mail at [matthew.durkee@ecy.wa.gov](mailto:matthew.durkee@ecy.wa.gov).

Sincerely,



Matthew Durkee, LG  
Site Manager  
CRO Toxics Cleanup Program

cc: Dolores Mitchell, Ecology  
Dennis Radocha, OfficeMax Inc.  
Mike Staton, SLR International Corporation  
Kurt Peterson, Cascadia Law Group  
Greg Demers, LeeLynn, Inc., & Wiley Mt., Inc.  
Brad Hill, LeeLynn, Inc., & Wiley Mt., Inc.  
Jenifer Hill, WSDOT  
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