



**FILE COPY**

STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
4601 N Monroe Street • Spokane, WA 99205-1295 • 509-329-3400

January 22, 2019

Christina McClelland  
GHD  
20818 44<sup>th</sup> Avenue West Suite 190  
Lynnwood, WA 98036

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

- **Site Name:** USAAC Geiger Field GF003
- **Site Address:** Will D Alton Ln & Spotted Rd, Spokane
- **Facility/Site No.:** 663
- **VCP Project No.:** EA0263

Dear Ms. McClelland:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the USAAC Geiger Field GF003 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:

- Petroleum hydrocarbons into the Soil
- Petroleum hydrocarbons into the Ground Water

## **Basis for the Opinion**

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

1. GHD, Remedial Investigation Report, Phillips 66 Facility No. 6880, Geiger Corrections Facility, December 19, 2018.
2. GHD, Quarterly Groundwater Monitoring- January through March 2018, Phillips 66 Facility No. 6880, Geiger Corrections Facility, July 5, 2018.
3. GHD, Semi-Annual Groundwater Monitoring- July through December 2017, Phillips 66 Facility No. 6880, Geiger Corrections Facility, February 8, 2018.
4. TetraTech, Semiannual Groundwater Monitoring Report- April 2017, June 22, 2017.
5. AECOM, Second Quarter 2014 Groundwater Monitoring Report, February 2015.
6. AECOM, Site Investigation Report, February 2014.
7. Maxim Technologies, Inc., Aquifer Test Results Report, Yellowstone Pipe Line/Geiger Correctional Facility, Will D. Alton and Spotted Road, Spokane, Washington, October 15, 2002.
8. Maxim Technologies, Inc., Third Quarter 2002 Monitoring Report, Yellowstone Pipeline Release Site, Geiger Corrections Center, Spokane Airport Business Park, Spokane, Washington, October 7, 2002.
9. Maxim Technologies, Inc., Second Quarter 2002 Monitoring Report, Yellowstone Pipeline Release Site, Geiger Corrections Center, Spokane, Washington, July 12, 2002.
10. URS Corporation, Human Health Risk/Vapor Exposure, Geiger Heights Corrections Center, May 17, 2002.

11. Maxim Technologies, Inc., Additional Site Characterization, Yellowstone Pipeline Geiger Heights Corrections Center, Spokane Airport Business Park, Spotted Road and Will D. Alton Lane, Spokane, Washington, May 2002.
12. Maxim Technologies, Inc., Additional Site Characterization and Site Specific Risk Assessment, Geiger Heights Corrections Center, Spokane Airport Business Park, Spokane, Washington, January 11, 2002.
13. Remedial Excavation and Assessment Report, Yellowstone Pipe Line – Geiger Heights Corrections Center, Spokane Airport Business Park, Spotted Road and Will D. Alton Lane, Spokane, Washington, January 2002.
14. Maxim Technologies, Inc., Proposed Remedial Excavation Work Plan and Cost Estimate, Yellowstone Pipe Line – Geiger Heights Minimum Security Facility, Spokane Airport Business Park, Spokane, WA, August 17, 2001.
15. Maxim Technologies, Inc., Subsurface Site Characterization, Yellowstone Pipe Line – Geiger Heights Minimum Security Facility, Spokane Airport Business Park, Spotted Road and Will D. Alton Lane, Spokane, Washington, July 23, 2001.

These documents are kept in the Central Files of the Eastern Regional Office of Ecology (ERO) for review by appointment only. You can make an appointment by calling the ERO resource contact at (509) 329-3415.

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:

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

#### **Soil**

- Ecology agrees that site soils will require additional management. Current samples should be collected and analyzed for gasoline-range petroleum hydrocarbons (GRPH), diesel-range petroleum hydrocarbons (DRPH), and volatile organic compounds (VOCs). The results will be compared to a site-specific cleanup level established using the extractable petroleum hydrocarbon (EPH) and volatile petroleum hydrocarbon (VPH) fractionation data. Please use

- the MTCASAT workbook and provide Ecology with the EPH/VPH fractionation data and the completed workbook showing all applicable calculations. The MTCASAT workbook may be downloaded from the link below.

[https://ecology.wa.gov/Asset-Collections/Doc-Assets/Regulations-Permits/Guidance-technical-assistance/Online-cleanup-tools/MTCATPH11-1-\(1\)](https://ecology.wa.gov/Asset-Collections/Doc-Assets/Regulations-Permits/Guidance-technical-assistance/Online-cleanup-tools/MTCATPH11-1-(1))

- The use of the 1,500 mg/kg generic TPH concentration only applies to sites that qualify for use of a soil model remedy and where groundwater has not been impacted by residual saturation of petroleum hydrocarbons. Please see Ecology's guidance on Model Remedies for Sites with Petroleum Contaminated Soils. <https://fortress.wa.gov/ecy/publications/SummaryPages/1509043.html>
- The site-specific soil cleanup level cannot exceed either the residual saturation level (TPH-G = 1,000 mg/kg from MTCA Table 747-5) or a level shown to be protective of groundwater using an empirical demonstration. This is true regardless of whether the groundwater is potable.

### **Soil Vapor**

- Ecology agrees that the risk of petroleum vapor intrusion to indoor air should be evaluated. Please refer to Ecology's Vapor Intrusion Guidance for screening criteria.

<https://fortress.wa.gov/ecy/publications/documents/1709043.pdf>

### **Groundwater**

- Ecology does not agree that compliance with MTCA groundwater cleanup standards has been reached, nor is it appropriate to use the groundwater saturation point as the cleanup level (assuming this is defined as the point of solubility for petroleum). According to WAC 173-340-720(7)(d), the cleanup level shall not exceed a concentration that would result in non-aqueous phase liquid being present in the groundwater. This is true regardless of whether the groundwater is potable. Prior reports indicate that a petroleum sheen has been observed in shallow groundwater, which would suggest that free NAPL has been present at the site.
- Representative groundwater samples should continue to be collected from a minimum of three monitoring wells in both the shallow and deep groundwater

zones. Samples from MW-1R and MW-2 demonstrate that residual soil petroleum concentrations are not protective of shallow groundwater. The results from MW-5D demonstrate that there is potentially hydrologic continuity between the shallow and deep groundwater zones, and continued sampling in the deep aquifer will be required to demonstrate compliance with cleanup standards.

- For a determination of groundwater non-potability, Ecology will require documentation of pump tests demonstrating a yield of less than 0.5 gallons per minute. The results must be representative of the entire lateral and vertical extent of the aquifer, and not limited to a potential low-conductivity zone within the aquifer. For non-potable groundwater Method B cleanup levels required by WAC 173-340-720(6), you must use the MTCASAT workbook and provide Ecology with the EPH/VPH fractionation data and the completed workbook showing all applicable calculations.
- Use of a site-specific groundwater cleanup level based on non-potability also requires that notice is sent to potentially affected property owners, local governments, and tribes for public comment on existing and planned uses of the groundwater. Institutional controls may also be required to limit exposure to the groundwater (WAC 173-340-720(6)(c)(iii)).

### **Limitations of the 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.

#### **3. State is immune from liability.**

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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) 329-3522 or e-mail at [ted.uecker@ecy.wa.gov](mailto:ted.uecker@ecy.wa.gov)

Sincerely,



Ted M. Uecker  
ERO Toxics Cleanup Program

tmu:mk

cc: Rich Solomon, Phillips 66