



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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December 5, 2019

Janet Frentzel
Pier One, Bay One
San Francisco, CA 94111

Re: No Further Action at the following Site:

- **Site Name:** Qualex Photo Finishing Facility
- **Site Address:** 21249 72nd Avenue South, Kent, 98032
- **Facility/Site No.:** 598108
- **Cleanup Site ID No.:** 332
- **VCP Project No.:** NW3088

Dear Janet Frentzel:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Qualex Photo Finishing 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

Ecology has determined that no 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

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(s):

- Total Petroleum Hydrocarbons-Diesel Range (TPH-Dx), Total Petroleum Hydrocarbons Heavy Oil-Range (TPH-HO) into both Soil & Groundwater.
- Arsenic, Selenium, Iron, & Manganese into Groundwater.

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note 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.

Basis for the Opinion

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

1. Geologica, Inc. (Geologica), October 2, 2003: *Phase II Subsurface Environmental Investigation, Former Qualex Photofinishing Facility*, San Francisco, CA
2. Geologica, February 19, 2004a: *Supplemental Phase II Site Investigation, Former Qualex Photofinishing Facility*, San Francisco, CA
3. Geologica, July 1, 2004b: *March 2004 Quarterly Groundwater Sampling Results, Former Qualex Photofinishing Facility*, San Francisco, CA
4. Geologica, October 29, 2004c: *June 2004 Quarterly Groundwater Sampling Results, Former Qualex Photofinishing Facility*, San Francisco, CA
5. Geologica, January 5, 2005: *2004 Annual Summary Quarterly Groundwater Sampling, Former Qualex Photofinishing Facility*, San Francisco, CA
6. Geologica, April 4, 2006a: *Trap Tank Sump Closure, Former Qualex Photofinishing Facility*, San Francisco, CA
7. Geologica, August 3, 2006b: *2006 Groundwater Sampling Results, Former Qualex Photofinishing Facility*, San Francisco, CA
8. Geologica, March 12, 2007: *Supplemental Groundwater Quality Assessment, Former Qualex Photofinishing Facility*, San Francisco, CA
9. Geologica, May 22, 2008: *March 2008 Groundwater Quality Assessment, Former Qualex Photofinishing Facility*, San Francisco, CA
10. Geologica, April 2, 2010: *March 2009 Groundwater Quality Monitoring Results, Former Qualex Photofinishing Facility*, San Francisco, CA
11. Geologica, March 25, 2011: *January 2011 Groundwater Quality Monitoring Results, Former Qualex Photofinishing Facility*, San Francisco, CA
12. Farallon Consulting (Farallon), July 26, 2016: *Groundwater Monitoring Results, Former Qualex Photofinishing Facility*, Proj. No. 1071-013-001, Sacramento, CA
13. Farallon, August 29, 2016: *VCP Application and Request for No Further Action Determination*. Proj. No. 1071-013-001, Sacramento, CA
14. Farallon, May 30, 2017: *Remedial Investigation and Feasibility Study Report, Former Qualex Photofinishing Facility*. Proj. No. 1071-013-001, Sacramento, CA
15. Washington State Department of Ecology (Ecology), September 6, 2017: *Further Action Opinion Letter for VCP Project #NW3088*. Lacey, WA
16. Farallon, June 20, 2019: *March 2018 Groundwater Quality Monitoring Results, Former Qualex Photofinishing Facility*, San Francisco, CA

These documents are kept in the Central Files of the Headquarters Office of Ecology for review by appointment only. You can make an appointment by calling (360) 407-7224.

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 remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in detail in Enclosure A.

Characterization Activities:

Previous characterization activities are described in detail in Enclosure A and in the *Further Action Opinion Letter* (Ecology, September 2017). Characterization activities that have commenced since the aforementioned Opinion Letter are described below:

- March 2018, Farallon conducted groundwater sampling on monitoring wells MW-1 through MW-5 on March 12, 2018 to assess concentrations of COPCs relative to Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A or B cleanup levels.
- Groundwater samples were analyzed for diesel-range organics (DRO). DRO were only detected above the laboratory practical quantitation limit (PQL) in well MW-4, and this concentration was below the MTCA Method A cleanup level (CUL) of 500 µg/L.
- Farallon's analysis found no discernible correlation between dissolved oxygen (DO) and oxygen reduction potential (ORP) with dissolved iron and manganese (including the March 2018 sampling event), Farallon has concluded that natural attenuation of petroleum hydrocarbons is unlikely to be occurring. It is not expected that concentrations of petroleum hydrocarbons (e.g. DRO) will improve significantly in the future.
- Groundwater samples were also analyzed for dissolved arsenic. Arsenic concentrations ranged from 4.7 – 51 µg/L. While samples registered above the MTCA Method A CUL of 5 µg/L, it was observed that these concentrations were similar to natural background levels of arsenic observed at a nearby site (Farallon, 2017). As regional background levels of arsenic have been observed to be higher than the MTCA Method A CUL, it is unlikely that concentrations in groundwater at the Site will ever be observed below the Method A CUL.

- Farallon observed that arsenic concentrations have not been increasing over time despite reducing conditions present at the Site and it is therefore unlikely that petroleum impacts at the Site are affecting dissolved arsenic concentrations.
 - Selenium concentrations obtained during this sampling event were not found to exceed the laboratory PQL of 5 µg/L, indicating that all groundwater samples had selenium concentrations below the Method B CUL of 80 µg/L.
 - Concentrations of dissolved iron in groundwater from this sampling event were found to range from 2,800 - 8,500 µg/L, which are below the MTCA Method B CUL of 11,200 µg/L.
 - Concentrations of dissolved manganese from this sampling event were found to range from 260 – 810 µg/L, which are below the MTCA Method B CUL of 2,240 µg/L.
 - In response to a request by Ecology in the 2017 *Further Action Opinion Letter*, Farallon conducted a beneficial well use survey to ensure that no extraction wells were located within ¼ mile of the Site. Farallon reported that no drinking water supply wells were located within ¼ mile of the Site (Farallon, 2019).
 - Additionally, Farallon determined that it is highly unlikely that potable water extraction wells would ever be used at this Site due to: 1) existence of drinking water supply provided by a public utility and 2) King County Department of Public Health code prohibition of the installation of potable water wells near various infrastructure elements present throughout the Site (Farallon, 2019).
 - Ecology has determined that No Further Action is needed at the Site for the following reasons: 1) the only groundwater impacts found to be above MTCA CULs are dissolved arsenic levels that are typical of the regional background level 2) it is very unlikely that groundwater extraction wells would ever be pursued at the Site due to existing municipal water supply and legal restrictions on well installation.
- In summary, Farallon has determined that arsenic is the only COPC consistently present in all MWs at levels above the respective MTCA Method A or B CULs during the latest monitoring event. As arsenic concentrations are present at levels expected for regional background and groundwater extraction is unlikely to ever be pursued at the Site, Ecology has determined that no further action is required.

Below is an evaluation of potential exposure pathways.

Conceptual Site Model / Exposure Pathways:

Soil-Direct Contact:

This pathway is *incomplete*. Geologica removed all residual priority pollutant metals- and petroleum-contaminated soil (PCS) during tank trap excavation and removal activities in 2006 (Ecology, 2017).

Soil-Leaching:

This pathway remains *potentially complete*. Arsenic, iron, & manganese are likely leaching out of the soil due to the on-Site natural reducing conditions (Enclosure A), (Farallon, July 2016), & (Geologica March 2011).

Soil-Vapor:

This pathway is *incomplete*. No volatile constituents detected in soil or groundwater at the Site.

Groundwater:

This pathway is currently *complete*. As indicated above and in detail in Enclosure A, arsenic is present in groundwater at concentrations above the MTCA Method A CUL of 5 µg/ L. Historical arsenic detections have ranged between 1.18 to 60.0 µg/L. However, arsenic concentrations have been found to be within range of the natural regional background level for arsenic in this area and it is unlikely that concentrations below the CUL will ever be observed. Measurable groundwater impacts were also observed for iron, manganese and DRO, but these were found to be below their respective MTCA Method A or B CULs in all instances. Observed impacts to groundwater are mitigated by the likelihood that no groundwater withdrawal wells will be pursued in the future at the Site.

Surface Water:

This pathway is *incomplete*. No surface water features are located within the immediate vicinity of the Site.

Ecological:

This pathway is *incomplete*. Farallon completed a terrestrial ecological evaluation (TEE). The Site qualifies for an exclusion (Farallon August 2016).

2. Establishment of Cleanup Standards.

Ecology has determined the cleanup levels and points of compliance (POCs) you established for the Site [meet](#) the substantive requirements of MTCA.

In 2006, Geologica removed the presumed source of dissolved priority pollutant metals, TPH-Dx & -HO impacts to soil and groundwater (Enclosure A).

The Groundwater MTCA Method A CULs are:

TPH-Dx	500 µg/L
TPH-HO	500 µg/L
Arsenic	5 µg/L

The Groundwater MTCA Method B CULs are:

Iron	11,200 µg/L
Manganese	2,240 µg/L
Selenium	80 µg/L

Ecology determined the following POCs apply to the Site:

Soil - Leaching: For sites where soil cleanup levels are based on the protection of groundwater: "*...the point of compliance is throughout the Site.*"

Groundwater: For groundwater, the standard point of compliance as established under WAC 173-340-720(8) 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.*"

3. Selection of Cleanup Action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The trap tank and associated piping have been removed. Soil impacted with TPH-Dx, -HO, and primary pollutant metals have been excavated and disposed of off-Site, and therefore no longer pose a threat to human health and the environment (Enclosure A).

In May 2005, Ecology issued an *Independent Remedial Action Request for Review* letter (May 10, 2005) for former VCP Site no. NW 1202. The letter indicated the dissolved arsenic concentrations were a result of the TPH release, due to the consequent increase in organic carbon in groundwater, resulting in a reducing environment, thereby enabling metals to dissolve and mobilize in groundwater.

Since the issuance of the aforementioned letter, groundwater has been periodically sampled at the Site to evaluate if the dissolved metals (i.e. arsenic) concentrations have decreased (Enclosure A).

Recent and historical groundwater data indicate no discernable trend or decrease in dissolved metals concentrations. Concentrations of dissolved metals appear to be stable and either below their respective CULs (selenium, manganese, iron) or within regional background levels (arsenic). During March 2018 sampling, TPH-Dx concentrations were below the laboratory PQLs in all samples except one, which was still below the MTCA Method A CUL.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

Geologica determined the source of soil and groundwater contamination was the interior trap tank. The trap tank acted as a sump to collect sediment and other solids (i.e. metals) from wastewater, prior to discharge to the sanitary sewer. Geologica determined the connecting lines to the trap tank were compromised, resulting in subsurface spillage, impacting surrounding soils with TPH-Dx, -HO and priority pollutant metals.

A total of 9-tons of impacted soil were excavated, removed and disposed of off-Site (Geologica, March 2006).

To date, on-Site cleanup actions have included the following:

- Removal of the trap tank and associated ancillary equipment.
- Excavation and disposal of approximately 9-tons of impacted soil in the trap tank vicinity.
- Installation of five permanent groundwater MWs.
- Collection and laboratory analysis of both soil and groundwater samples, including a total of 13 groundwater monitoring events since July 2003, with final groundwater characterization sampling occurring in March 2018.

Listing of the Site

Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List (CSCSL).

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 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.

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).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project.

For more information about the VCP and the cleanup process, please visit our website: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (360) 407-6834 or e-mail at jason.cook@ecy.wa.gov.

Sincerely,



J.G. Cook, LG
Headquarters
Toxics Cleanup Program

Mike Shaljian
Headquarters
Toxics Cleanup Program

Enclosure

cc: Sandra Caldwell, Ecology
Lindsay Gordon, Ecology

Janet Frentzel
November 25, 2019
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Enclosure A

**Further Action Letter, (Ecology - September 6, 2017)
Including: Description and Diagrams of the Site**

