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DEPARTMENT OF ECOLOGY
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March 28, 2023

Sally Biffle
13510 NE Fourth Plain Blvd
Vancouver, WA 98682
sbiffle16@hotmail.com

Re: No Further Action Likely at the following contaminated Site:

- **Site Name:** Electro Tech Metal Finishing LLP
- **Site Address:** 13511 NE Kerr Rd Ste 7, Vancouver, Clark County, WA 98682
- **Facility/Site ID:** 74748387
- **Cleanup Site ID:** 4351
- **VCP Project ID:** SW1400

Dear Sally Biffle:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Electro Tech Metal Finishing LLP facility (Site), dated May 3, 2022. The request for opinion, including acceptance of electronic Site data, was complete on October 4, 2022. 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, upon satisfactory resolution of the items in this opinion letter, that no further remedial action would likely be necessary to clean up contamination at the Site.

Please review this letter carefully. Ecology notes that tremendous cleanup progress has been made. The cleanup is substantially closer to a status of no further action than it was at the time of our February 25, 2021, opinion letter. As this is a ranked Site (2-Moderate High Risk), any no

[1] https://apps.ecology.wa.gov/publications/SummaryPages/9406.html
[2] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305

further action opinion letter issued requires a minimum 30-day public notice and comment period.

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"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. A Site description, as currently known to Ecology, is provided in **Enclosure A**. The Site is defined by the nature and extent of contamination associated with the following releases:

- Petroleum, as diesel range and heavy oil range total petroleum hydrocarbons (TPH-D and TPH-O; collectively, TPH-Dx) into the soil and groundwater.
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and metals (arsenic, barium, chromium, and lead) into the soil and groundwater.

The Property is comprised of three contiguous Clark County tax parcels, numbers 107429000, 107640000, and 158613000. Parcels 107429000 and 107640000 are owned by Kings Landing LLC. Parcel 158613000 was purchased by George Amalgam in the fall of 2021 and is owned by Alfordable Enterprise LLC. The Property is currently zoned as light industrial.

Please note that releases from multiple sites can affect a parcel of real property. At this time, Ecology has no information that other sites affect the parcel(s) associated with this Site.

Basis for the Opinion

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

You can request these documents by filing a records request.[4] For help making a request, contact the Public Records Officer at publicrecordsofficer@ecy.wa.gov or call 360-407-6040. Before making a request, check whether the documents are 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.

[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340
[4] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[5] https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=14894

Analysis of the Cleanup

Ecology has concluded that further remedial action is necessary to clean up contamination at the Site. We based that conclusion on the following analysis.

In an effort to support the likely final phase of Site cleanup work, Ecology provides this summary of the highlights of the opinion letter. More details are provided for each point in the opinion letter.

- The SB19 soil sample location appears to coincide the WW7 or 7AWW location and all have been cleaned up by excavation with offsite disposal at a landfill. No further action is necessary for cPAHs in soil at these three locations.

- For cPAHs in soil at sampling locations WW1A, WW1B, and WW6A, these locations have been remediated to below cleanup levels by excavation and off-Site disposal.

- Concentrations of chromium at the Site can be compared to the total chromium MTCA Method A cleanup levels of 2,000 milligrams per kilogram (mg/kg) for soil and 50 micrograms per Liter (µg/L) for groundwater.

- Continue groundwater sampling at Site wells, using low flow groundwater sampling methodology. Sample for total and dissolved metals. See detailed requests in section two.

- Please re-evaluate cPAHs in soil at sampling locations SW (0.5-2 feet bgs), SB20-12.5, and WW2A (0.5-2.0 feet bgs) and WW2B (7-10 feet bgs). It appears additional cleanup is needed at these locations.

- To confirm that ethylene dibromide (EDB) is not a concern at the Site, Ecology recommends sampling groundwater from Site monitoring wells one time and analyzing for EDB by EPA Method 8011. To date, the laboratory reporting limit for EDB in groundwater has exceeded the MTCA Method A cleanup level.

- Ecology will need to review at least four consecutive quarterly events (both total and dissolved) with arsenic, barium, chromium, and lead results less than the applicable cleanup levels at monitoring well MW-7.

- Remaining recommended groundwater analyses are:

    - Total and dissolved analyses for all metals in groundwater.

    - MW-1 through MW-6: EDB (once), arsenic, chromium, and lead.

    - MW7: EDB (once), diesel and heavy oil, cPAHs, arsenic, barium, chromium, lead.

- Please provide a new VCP change of contact form for the updated contact info for each of the new Property owners.

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action.

Ecology's February 25, 2021 Opinion Letter

In an opinion letter dated February 25, 2021, Ecology requested actions under eight general areas of need.

The extent of the Site is where the contaminants have come to be located, as defined under WAC 173-340-200. The Site extent can exceed property boundaries, or occupy a footprint within a given parcel. As depicted in the figures of the April 30, 2022 *Dig and Haul + Groundwater Sampling Event Report* (the Report), the Property and the Site appear as the same, however, the extent of contamination appears to occupy portions of the various parcels. The Site boundaries do not appear to exceed any of the parcel boundaries.

For the next deliverable, Ecology suggests revising applicable Site figures to show the maximum Site extent and where residual contamination or additional cleanup has removed it. Where Site cleanup levels are met at standard points of compliance on a given parcel, a property-specific no further action opinion request is also an option.

Table 830-1 Sampling

Soil and groundwater sampling at the Site has followed those requirements laid out in WAC 173-340-900, Table 830-1. Additional discussion of sampling results compared to MTCA cleanup levels for individual Site hazardous substances is provided below.

Site Hazardous Substances

Ecology appreciates the substantial amount of soil and groundwater data collected during the recent work. These needed data are critical to the cleanup path forward. Many potential contaminants of concern were evaluated during the initial response in 2009. The Site has been sampled in accordance with WAC 173-340-900, Table 830-1.

Based on the initial results, screening of analytical results carried forward the following contaminants for further evaluation: Gasoline range TPH (TPH-G), TPH-D, TPH-O, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), arsenic, barium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, and cPAHs.

After reviewing data collected to complete the remedial investigation and the groundwater monitoring included with the NFA request, Ecology recommends further evaluation at the Site for those contaminants discussed in the letter summary above and sections 3 and 4 of this letter.

Remedial Investigation Results

Since Ecology's February 25, 2021, opinion letter, additional site investigation and interim actions were taken to complete the remedial investigation and reduce contaminants in the environment. Ecology briefly summarizes the additional field work below. For detailed information, please see Blue Mountain Environmental and Consulting Company, Inc. (BMEC's) reports listed in Enclosure B.

From April 12-16, 2021, BMEC observed installation of 17 borings. A total of 98 soil samples and three grab groundwater samples were collected. Six monitoring wells (MW-1 through MW-6) were installed. Groundwater monitoring for these six wells has been completed quarterly from May 2021 through March 2022. A seventh monitoring well, MW-7, was installed based on the grab groundwater results at SB-17 in December 2021. A total of 25 borings have been advanced at the Site. Groundwater monitoring at MW-7 has occurred twice, in December 2021 and March 2022. Contaminated soils (cPAHs) at SB19 were removed by excavation in March 2022.

Ecology has the following comments about the current status of the cleanup:

1. Ecology's recommended approach for additional groundwater monitoring at the Site is to ensure protection of drinking water resources for the City of Vancouver. The Site is at the edge of a ten-year wellhead protection zone. The City of Vancouver's drinking water aquifers can be easily contaminated in many places.

2. Barium results in Site soil and groundwater were evaluated against the MTCA Method B cleanup levels: for soil this is the cleanup level protective of groundwater in the vadose zone at 13°C (1,600 mg/kg) and for groundwater, at 2,000 µg/L. This groundwater cleanup level incorporates the federal maximum contaminant level (MCL) as an applicable law for the MTCA Method B cleanup level.

    a. There was exceedance of the MTCA Method B groundwater cleanup level for barium at sample SB17-GW at 2,200 µg/L.

    b. A total of at least four consecutive quarterly groundwater monitoring results of total and dissolved barium in groundwater, where concentrations are in compliance with Site cleanup levels, should be collected and evaluated from monitoring well MW-7.

c. Sufficient barium in groundwater data has been provided to show compliance with the cleanup level of 2,000 µg/L for groundwater at monitoring wells MW-1 through MW-6. **No additional barium in groundwater needs to be collected at these six monitoring wells**.

d. Based on the Site depth to groundwater, Ecology recommends sampling Site monitoring wells using low flow groundwater sampling methodology with a bladder pump and dedicated tubing.

3. The concentration of diesel and heavy oil combined at grab groundwater location SB17 in April 2021 exceeded the MTCA Method A cleanup level of 500 µg/L. Concentrations of diesel and heavy oil in groundwater samples analyzed in December 2021 and March 2022 at MW-7 (location of SB17) were not detected. **Ecology requests four consecutive compliant quarterly events[6] for groundwater at MW-7 for diesel and heavy oil combined.**

   a. Sufficient data have been collected at the other six monitoring wells, MW-1 through MW-6, for Ecology to concur that those results are compliant with Site cleanup level for diesel and heavy oil in groundwater.

   b. No additional sampling for diesel and heavy oil in groundwater is needed at monitoring wells MW-1 through MW-6.

4. Hexavalent chromium speciation was completed at soil sample SB24-7.5. Hexavalent chromium was not detected at the laboratory practical quantitation limit of 1.2 mg/kg, which is less than the MTCA Method A cleanup level. The soil sample also contained 65 mg/kg total/trivalent chromium in it, which suggests that total or trivalent chromium is present at the Site and not hexavalent chromium. Additionally, hexavalent chromium was not identified in the original product samples collected.[7] **Therefore, concentrations of chromium at the Site can be compared to the total chromium MTCA Method A cleanup levels of 2,000 mg/kg for soil and 50 µg/L for groundwater**.

5. MTCA Method A cleanup levels for lead in Site soil and groundwater appear to be appropriate. Where needed, Ecology recommends continuing to sample Site monitoring wells for both total and dissolved lead in groundwater.

   a. Low flow groundwater sampling methodology using a bladder pump and dedicated tubing is recommended.

[6] To meet Stage III groundwater monitoring requirements, section 10.3, Ecology Publication 10-09-057, Guidance for Remediation of Petroleum Contaminated Sites, revised June 2016.

[7] Table 2-1, Ecology and Environment, Inc., Biffle Property, Integrated Assessment Report, May 2010.

b. At least four consecutive quarterly events of compliant results for lead in groundwater should be achieved at each Site monitoring well.

6. Concentrations of VOCs in site soil and groundwater are less than the MTCA Method A cleanup levels. This includes benzene, toluene, ethylbenzene, total xylenes, 1,2-dichloroethane (EDC), methyl tert-butyl ether (MTBE), naphthalene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene. No additional sampling is needed at the Site for these contaminants.

7. Ecology notes that the EDB laboratory practical quantitation limit (PQL) for both soil and groundwater samples appears to exceed the MTCA Method A cleanup level for EDB for both soil and groundwater. **To confirm that EDB is not a concern at the Site, Ecology recommends sampling groundwater one time from all Site monitoring wells and analyzing for EDB by EPA Method 8011.** The laboratory PQL must be less than the MTCA Method A cleanup level of 0.005 µg/L. If EDB is not detected, additional monitoring for EDB would not be required. However, if EDB is detected, continue sampling EDB in groundwater at the affected well(s).

Arsenic in Groundwater

Ecology found that the background value for arsenic in groundwater for Southwest Washington, including Clark County is 4.9 µg/L.[8] This is less than the MTCA Method A cleanup level for arsenic in groundwater of 5.0 µg/L. Therefore, no adjustment to the cleanup level is necessary to account for background[9], and the MTCA Method A cleanup level for arsenic in groundwater appears to be appropriate for this Site***.***

Concentrations of arsenic in Site groundwater have periodically been both in compliance with the MTCA Method A cleanup level and exceeding the MTCA Method A cleanup level at various Site wells. Dissolved arsenic concentrations have been in compliance with the MTCA Method A cleanup level for groundwater sampled from all Site wells.

Septic Systems and Stormwater Catch Basin Review

Ecology and the Environment, Inc., in a report produced for USEPA,[10] concluded that the septic systems were a potential source of contamination, as well as the stormwater catch basin system to the north of the Site building (north of the former Electro Tech Metal Finishing, LLC facility), based on observations of run off into these catch basins. This reported release into the stormwater catch basins prompted the original initial investigation at the Site. Three on-site septic systems were decommissioned by order of Ecology.

[8] Section 5.1.6, Ecology Publication No. 14-09-044, Natural Background Groundwater Arsenic Concentrations in WA, January 2022.
[9] WAC 173-340-700
[10] Biffle Property Integrated Assessment Report, May 2010.

Contamination was also shown to have entered the stormwater system by catch basin samples BP01SD and BP02SD. In 2021, remaining contamination in the storm water catch basins was removed by vacuum truck and disposed of at a permitted facility. No material remained after the interim action was taken.

The closest sampling locations to the storm drains are soil samples NPL-A, NPL-B, BP08, and BP09. Grab groundwater was collected at BP09. The closest groundwater monitoring well to the catch basins is MW-3. Any material in the catch basin system appears to have been sufficiently removed. **Based on data collected in this area, additional total and dissolved arsenic, chromium, and lead data in groundwater from MW-3 should be obtained to confirm results are in compliance with Site cleanup levels**.

Excavation of cPAHs at SB19

At boring SB19, cPAH concentrations in soil exceeded the MTCA Method A cleanup level. An interim action to remediate contaminated soil at SB19 was taken in July 2021. Confirmatory soil samples, both laterally and vertically (at 12.5 feet bgs) were collected. Concentrations of cPAHs in soil sampled at the excavation extents were in compliance with the MTCA Method A cleanup level. A total of 8.7 tons of soil, and a crushed 55-gallon drum found during excavation, were removed and disposed of at Wasco County Landfill in The Dalles, OR.

No further action is needed with regards to the cPAHs in soil at SB19. By co-location, sampling locations WW7 or 7AWW are also considered remediated. Ecology supports interim actions taken at the Site, consistent with WAC 173-340-430.

Toxicity Equivalency Factor (TEF) Calculations

Ecology evaluated cPAHs in soil and groundwater, adjusting concentrations reported at the Site by the toxicity equivalency factors (TEFs) from Table 708-2, WAC 173-340-900. The results were compared against the MTCA Method A cleanup levels for benzo[a]pyrene in soil (0.1 mg/kg) and groundwater (0.1 µg/L).

All soil results are in compliance with the Method A cleanup level except for SW (0.5-2 feet bgs), SB20-12.5, WW2A (0.5-2.0 feet bgs), and WW2B (7-10 feet bgs). Please recalculate the TEF for each result, compare to the MTCA Method A cleanup level for benzo[a]pyrene in soil, and address these locations by a cleanup action.

No cPAHs were detected in groundwater samples at wells MW-1 though MW-4 and MW-7, but cPAHs were detected at MW-5 and MW-6. Ecology completed a TEF calculation for cPAHs in groundwater sampling in September 2021 from monitoring well MW-5. The calculation result was 0.0667 µg/L, which is less than the MTCA Method A cleanup level for benzo[a]pyrene in groundwater of 0.1 µg/L. The same calculation was performed for the

September 2021 cPAH in groundwater data from MW-6, and the result was 0.0085 µg/L. Both concentrations of cPAHs in groundwater collected from MW-5 and MW-6 were in compliance with the MTCA Method A cleanup level for benzo[a]pyrene.

Based on TEF calculations, there are four consecutive sampling events with compliant results for cPAHs in groundwater at all Site groundwater monitoring wells except MW-7 where only two quarters of sampling have been performed. **Based on the four quarters of compliant results in groundwater, at this time, cPAHs sampling in groundwater could pause at the Site for monitoring wells MW-1 through MW-6. Sampling for cPAHs in groundwater could continue in groundwater at only monitoring well MW-7.** Ecology cautions additional sampling for cPAHs in groundwater may be necessary if a long-term groundwater monitoring plan were necessary at the Site, or additional cPAHs are identified in soil at a previously unknown location.

For those cPAHs which are not included in the TEF calculation, Ecology directly compared cPAH concentrations in soil and groundwater to the most stringent MTCA Method B cleanup level. All of these cPAHs in soil and groundwater are in compliance with the MTCA cleanup levels at the Site.

Other Locations of cPAHs in Soil

Based on the results of our TEF calculations, Ecology requests further evaluation of cPAHs in soil for SW, SB20-12.5, WW2A, and WW2B. The concentrations of cPAHs as benzo[a]pyrene appear to exceed the MTCA Method A cleanup level at each location, after adjusting for the TEF at each location. Please evaluate cPAH concentrations at each location further, including re-calculating any TEF. It appears likely that additional excavation would be optimal to remove the contaminated soils. This could be taken as an interim action or based on the results of a feasibility study with a disproportionate cost analysis.

MW-7 Groundwater

Grab groundwater sample SB17-GW is most closely associated with monitoring well MW-7. At SB17-GW in April 2021, there were exceedances of the MTCA cleanup levels for diesel, heavy oil, and total arsenic, barium, chromium, and lead in groundwater. In order to determine that analytical concentrations in groundwater are in compliance with MTCA cleanup levels, **Ecology will need to see at least four consecutive quarterly events with diesel and heavy oil, arsenic, barium, chromium, and lead results (both total and dissolved) less than the applicable cleanup levels at monitoring well MW-7**. Ecology recommends low flow groundwater sampling methodology with a peristaltic or bladder pump and dedicated tubing at MW-7.

Background Study

The Report discusses the potential for metals in groundwater as potentially being related to a background or area wide problem. As the Site hazardous substances in soil and groundwater are primarily the same contaminants associated former operations at the Property, **Ecology does not concur that metals in groundwater represent background.** Ecology reviewed Clark County specific background data for metals[11] as well as the background sample results from Ecology and the Environment's May 1, 2010, Site Assessment Report. Ecology reviewed each potential contaminant against available information to determine which contaminants required more evaluation at the Site.

Ecology does not recommend pursuing a background study for metals in groundwater at the Site. Ecology also does not recommend making a non-potability demonstration at this Site under WAC 173-340-720(2). None of these parameters would likely be met.

Ecology recommends continued quarterly groundwater monitoring for those contaminants where compliance still remains to be determined, using low flow groundwater methodology with a peristaltic pump or bladder pump and dedicated tubing, and then comparing the analytical results to applicable MTCA Method A and Method B cleanup levels. Both total and dissolved metals concentrations[12] could be used at this Site to determine if contaminant concentrations in groundwater are in compliance with cleanup levels, as supported by WAC 173-340-720(9).

Vapor Intrusion/Air Pathway Comments

It does not appear that the vapor intrusion pathway has yet been evaluated at the Site. Based on the soil and groundwater data provided, it does not appear volatile compounds are present in concentrations in excess of the laboratory practical quantitation limit or MTCA cleanup levels. Concentrations of petroleum hydrocarbons are less than the MTCA Method A cleanup levels, which is typically enough to determine that the soil to vapor/air pathway is incomplete. Based on available data, it appears that the air/soil vapor pathway is incomplete at the Site.

Terrestrial Ecological Evaluation (TEE)

A terrestrial ecological evaluation (TEE) form was received by Ecology, dated November 26, 2019. Ecology reviewed the form, which requested an exclusion from further TEE based on various factors. Rather than complete a background study for the Site or conduct a site-specific TEE, Ecology re-visited the TEE and evaluated the site for exclusion from further TEE using the simplified TEE process under WAC 173-340-7492(2)(a)(ii), Table 749-1. There are less than 1.0 acres of undeveloped contiguous land within 500 feet of the Site. Based on our evaluation, the Site is excluded from further TEE. Ecological based

[11] Ecology publication 94-115, Natural Background Soil Metals Concentrations in Washington State, October 1994.
[12] WAC 173-340-720(9)

cleanup levels do not have to be considered for the Site. The results of the Table 749-1 calculation are included in **Enclosure C**.

Environmental Information Management (EIM) System

Please continue to upload all Site data collected since August 1, 2005, per Ecology Toxics Cleanup Program Policy 840.[13] Site data uploaded to EIM prior to this opinion review appear to be for July 21, 2015-March 30, 2022. These data have been reviewed and are approved.

Based on the SW1400 correspondence record with Ecology, it appears that there was a request by email on February 11, 2021, to upload data from 2009 to present to EIM, but not Site data from 2007. A copy of this correspondence is included as **Enclosure D**. Please upload any remaining Site data from 2009 to EIM. Please continue to upload any Site data collected at this Site into EIM.

2. Establishment of Cleanup Standards.

Cleanup Standards: Under MTCA, cleanup standards consist of three primary components; points of compliance,[14] cleanup levels,[15] and applicable state and federal laws.[16] Surface water, sediment, ecological, and air pathways are all incomplete and don't require additional evaluation at the Site.

a. Points of Compliance. Points of compliance are the specific locations at the Site where cleanup levels must be attained. The below appear to be the standard points of compliance applicable to the Site.

[13] https://apps.ecology.wa.gov/publications/documents/1609050.pdf
[14] WAC 173-340-200 "Point of Compliance."
[15] WAC 173-340-200 "Cleanup level."
[16] WAC 173-340-200 "Applicable state and federal laws," WAC 173-340-700(3)(c)

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);* ***Pending soil and groundwater sampling results.***
Soil- Protection of Groundwater	Based on the protection of groundwater, the standard point of compliance is throughout the Site. *WAC 173-340-747;* ***Pending groundwater sampling results.***
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)****; Pending groundwater sampling results.***

b. **<u>Cleanup Levels</u>.** Cleanup levels are the concentrations of a hazardous substance in soil, water, air, or sediment that are determined to be protective of human health and the environment. MTCA Method A or the most stringent MTCA Method B cleanup levels appear to be applicable at the Site. Where a MTCA Method A cleanup level is not available, a MTCA Method B cleanup level can be proposed and is applicable. Ecology suggests reviewing Ecology's Cleanup Levels and Risk Calculation (CLARC) database and evaluating MTCA Method B cleanup levels where MTCA Method A cleanup levels are not established.

Chromium in Soil

Chromium in Site soils has been evaluated for both total (trivalent) and hexavalent chromium. Hexavalent chromium was not detected at the sample of the highest concentration of chromium in soil at the Site. Therefore, it appears that it is more likely than not that the MTCA Method A cleanup level for chromium in soil of 2,000 mg/kg applies for this cleanup.

Cleanup Level Concurrence

Ecology concurs with the cleanup levels for those contaminants requiring further evaluation for the Site, as listed in the table below. Alternately, if new data or evaluation suggests adjustments are needed, these cleanup levels should be re-examined.

Hazardous Substance[17]	**MTCA Soil Cleanup Level** (mg/kg)	**MTCA Groundwater Cleanup Level** (µg/L)
TPH as diesel and heavy oil (TPH-D + TPH-O)	2,000	500
Arsenic	20	5
Barium	1,600	2,000
Chromium[18]	2,000	50
Copper	280	640
Lead	250	15
Nickel	1,600	2,000
Zinc	120	4,800
cPAHs	0.1	0.1

Based on sampling results to date, concentrations of Site contaminants in soil and groundwater comply with cleanup levels at a standard point of compliance, except for the below at one or more locations. Ecology needs more data to be able to concur that these contaminants meet cleanup levels at a standard point of compliance.

- cPAHs in soil at SW (0.5-2 feet bgs), SB20-12.5, and WW2A (0.5-2.0 feet bgs) and WW2B (7-10 feet bgs).
- Diesel and heavy oil in groundwater at MW-7.
- Arsenic in groundwater.
- Barium in groundwater at MW-7.
- Chromium in groundwater.
- Lead in groundwater.
- Potentially EDB in groundwater, pending at least one round of groundwater sampling results where the laboratory reporting limit for EDB is less than the MTCA Method A cleanup level.

c. **Applicable Laws and Regulations.** Ecology reviewed ARARs for the Site, and concluded no additional requirements applied which would impact cleanup levels or points of compliance at the Site, except for barium in groundwater. The federal MCL at 2,000 ug/L is more stringent than the MTCA Method B noncancer cleanup level for barium in

[17] Based on exceedance of cleanup level identified at the Site, per data collected to date.
[18] Total or trivalent chromium is present at the Site based on no hexavalent chromium in sampling results.

groundwater. Thus, the federal MCL should be used as the cleanup level in groundwater because that is known to be protective of human health. This is consistent with WAC 173-340-708(10) and WAC 173-340-720(4)(c).

3. Selection of Cleanup Action.

As interim cleanup actions, Ecology supports the excavation which removed the contaminated soils. Excavation is encouraged for further removal of contaminated soils. Additionally, Ecology concurs with the vacuum truck removal of stormwater system sediment.

Evaluation of cPAHs in Site Media

Ecology evaluated cPAHs in soil and groundwater, adjusting concentrations reported at the Site by the toxicity equivalency factors (TEFs) from Table 708-2, WAC 173-340-900. The results were compared against the MTCA Method A cleanup level for benzo[a]pyrene of 0.1 mg/kg. All soil and groundwater results are in compliance, except for SW (0.5-2 feet bgs), SB20-12.5, and WW2A (0.5-2.0 feet bgs) and WW2B (7-10 feet bgs). These locations should be further evaluated and likely require cleanup.

Ecology recognizes that BMEC's Remedial Investigation Report[19] considered leaving the cPAH contaminated soil in place at SB20-12.5 and potentially considering institutional controls. However, leaving any contaminated soil in place at the Site is not recommended. Contaminated soils are all less than 15 feet bgs, which would require an environmental covenant with institutional and engineered controls, long-term groundwater monitoring (potentially in perpetuity), and five-year (periodic) reviews. A cap (e.g., asphalt parking lot or concrete pad) with monitoring and maintenance would also be required. Additionally, MTCA prefers permanent cleanup solutions where technically feasible. As the Site is located in the City of Vancouver and drinking water resources are particularly exposed in this area, **Ecology strongly encourages a permanent cleanup solution for any remaining cPAHs concentrations exceeding cleanup levels in soil, namely excavation with off-Site disposal at a permitted facility.**

4. Cleanup.

The following interim actions have been completed at the Site:

1. End of operations which likely contributed to the source.

2. Removal of potentially contaminated material from the stormwater system by vacuum truck.

3. At boring SB-19, cPAH concentrations in soil exceeded the MTCA Method A cleanup level.

[19] P. 22, Remedial Investigation Report, July 12, 2021.

An interim action, remediating this location, was taken in July 2021. Confirmatory soil samples, both laterally and vertically (at 12.5 feet bgs) were collected. Concentrations of cPAHs in soil sampled at the excavation extents were in compliance with the MTCA Method A cleanup level. A total of 8.7 tons of soil and a crushed 55-gallon drum found during excavation, were removed and disposed of at the Wasco County Landfill in Dalles, Oregon.

a. **No further action is needed with regards to the cPAHs in soil at SB-19.**

4. Per correspondence with Ecology dated September 3, 2021, it appears Ecology concurred with lab filtering for samples or using a bladder pump when a peristaltic pump would not reach groundwater. Same low flow groundwater methodology was recommended to be used to sample all wells. This decision pre-dates the current VCP site manager.

   a. Any future groundwater sampling is recommended to be completed by low flow groundwater sampling methodology and a peristaltic or bladder pump with dedicated tubing at each well. Any metals analysis is recommended to be for both total and dissolved.

   b. Compliance with cleanup levels should be completed on a per well basis, per WAC 173-340-720(9). Based on the thorough evaluation of potential Site contaminants, Ecology provides the list of analytes in groundwater at Site monitoring wells to continue to evaluate at the Site:

      i. Total and dissolved analyses for all metals in groundwater.

      ii. MW-1 through MW-6: EDB (once), arsenic, chromium, and lead.

      iii. MW7: EDB (once), diesel and heavy oil, cPAHs, arsenic, barium, chromium, lead.

5. Ecology recommends evaluating results after each quarterly sampling event to confirm if four consecutive events have been achieved of results compliant with cleanup levels for each Site hazardous substance. Dissolved metals may be sufficient for this evaluation.

6. As this is a ranked Site (2-Moderate High risk), any no further action opinion letter issued requires a minimum 30-day public notice and comment period.

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.[20]

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).

[20] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545

Contact Information

Thank you for choosing to clean up the Site under the VCP. 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 Voluntary Cleanup Program webpage.[21] 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
Toxics Cleanup Program
Southwest Region Office

TCM/js

Enclosures (4): A – Site Description
B – Document List
C – Terrestrial Ecological Evaluation (TEE)
D – Email Correspondence

cc by mail: Chris Dechert, Kings landing LLC, Property Owner
George Amalgam, Alfordable Enterprise LLC, Property Owner

cc by email: Brent Bergeron, LHG, Blue Mountain Environmental & Consulting Company, brentb@bnbenv.com
Bryan DeDoncker, Clark County Public Health; bryan.dedoncker@clark.wa.gov
Patrick Craney, City of Vancouver; patrick.craney@cityofvancouver.us
Jerome Lambiotte; jerome.lambiotte@ecy.wa.gov
Ecology Site File

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

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Enclosure A

Site Description

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Site Description

The Site is located at 13511 NE Kerr Rd, in Vancouver, Clark County, Washington. The Property consists of three Clark County parcels: 107429000 (north), 107640000 (central) and 158613000 (south). Two buildings are located on the Property, which is nearly 1.6 acres. The L-shaped building on the central parcel consists of thirteen units, five of which were rented by Electro Tech from 2000 through March 2009. J&S Steel operated out of a former building on the south parcel, and one unit in the central parcel building from 1981 through 2014.

Property History and Current Use: The Property has been used for various manufacturing purposes, and for parking vehicles (north parcel).

Property Vicinity: The Site is located in an area of mixed commercial and residential properties.

Soils and Geology: To the maximum depth explored of approximately 40 feet bgs, the Site is underlain primarily by a foot of fill and then varying amounts of silts, sands, and gravels. See p. 7 in Blue Mountain Environmental Corporation (BMEC), Dig and Haul + Groundwater Sampling Event Report, April 30, 2022, for an excellent description of Site lithology.

Groundwater: Based on boring logs and depth to water obtained from Site monitoring wells (MW-1 through MW-7), Site groundwater ranges from approximately 22-36 feet below top of casing. Seasonal fluctuation appears to be about 2-4 feet, depending on the monitoring well. The Site is at the eastern edge of the City of Vancouver's 10-year wellhead travel time frame for drinking water supply well #8 and wells 1 (WS #8 WF) and 2 (WS #8 Well #2 WW). Groundwater flow direction has been calculated to the southwest.

Surface/Storm Water/Septic Systems/Wetlands: Two catch basins are still present at the Property. Some contamination ran off into these catch basins. Three former septic systems were decommissioned on orders from Ecology, as these were a source of release at the Site. Currently, the Site building is connected to City of Vancouver sewer and water.

The nearest surface water is Burnt Bridge Creek, located approximately 0.8 miles to the south of the Site. In 2009, surface water was sampled as part of the Integrated Assessment led by EPA and Ecology and supported by Ecology and the Environment as contractor to EPA, but this referred to surface water in the storm water catch basin system. There was a concern at the time that the stormwater system might be connected to Burnt Bridge Creek. There are no wetlands or priority habitats at the Site.

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Enclosure B

Document List

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Document List.

1. Blue Mountain Environmental Corporation (BMEC), *Dig and Haul + Groundwater Sampling Event Report*, April 30, 2022.

2. BMEC, *GWSE Report*, December 8, 2021.

3. BMEC, *Remedial Investigation Report*, July 12, 2021.

4. BMEC, *Analytical Data for Electro Tech*, April 28, 2021.

5. BMEC*, Remedial Investigation and Monitoring Well Installation Work Plan*, November 10, 2020.

6. Waste Watch, Inc., *Sally Biffle Property*, undated (received November 25, 2019).

7. Waste Watch, Inc., *March 2017 Addendum to sampling plan and results*, August 20, 2017.

8. PSC Environmental Services, *Removal Action Report for Electro Tech*, January 17, 2011.

9. Ecology and Environment, Inc., *Biffle Property Integrated Assessment Report*, May 2010.

10. Clark County Public Health Department, *Site Hazard Assessment*, J&S Steel, undated (received February 20, 2008).

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Enclosure C

Terrestrial Ecological Evaluation (TEE)

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Table 749-1
Simplified Terrestrial Ecological Evaluation – Exposure Analysis Procedure under WAC 173-340-7492(2)(a)(ii).[a]

Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre). "Undeveloped land" means land that is not covered by existing buildings, roads, paved areas or other barriers that will prevent wildlife from feeding on plants, earthworms, insects or other food in or on the soil.	
1) From the table below, find the number of points corresponding to the area and enter this number in the box to the right.	
Area (acres) / Points 0.25 or less / 4 0.5 / 5 1.0 / 6 1.5 / 7 2.0 / 8 2.5 / 9 3.0 / 10 3.5 / 11 4.0 or more / 12	6
2) Is this an industrial or commercial property? See WAC 173-340-7490(3)(c). If yes, enter a score of 3 in the box to the right. If no, enter a score of 1.	3
3) Enter a score in the box to the right for the habitat quality of the site, using the rating system shown below[b]. (High = 1, Intermediate = 2, Low = 3)	3
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2. See footnote c.	2
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	1
6) Add the numbers in the boxes on lines 2 through 5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified terrestrial ecological evaluation may be ended under WAC 173-340-7492 (2)(a)(ii).	9

Footnotes:

a It is expected that this habitat evaluation will be undertaken by an experienced field biologist. If this is not the case, enter a conservative score (1) for questions 3 and 4.

b **Habitat rating system.** Rate the quality of the habitat as high, intermediate or low based on your professional judgment as a field biologist. The following are suggested factors to consider in making this evaluation:

Low: Early successional vegetative stands; vegetation predominantly noxious, nonnative, exotic plant species or weeds. Areas severely disturbed by human activity, including intensively cultivated croplands. Areas isolated from other habitat used by wildlife.

High: Area is ecologically significant for one or more of the following reasons: Late-successional native plant communities present; relatively high species diversity; used by an uncommon or rare species; priority habitat (as defined by the Washington Department of Fish and Wildlife); part of a larger area of habitat where size or fragmentation may be important for the retention of some species.

Intermediate: Area does not rate as either high or low.

c Indicate "yes" if the area attracts wildlife or is likely to do so. Examples: Birds frequently visit the area to feed; evidence of high use by mammals (tracks, scat, etc.); habitat "island" in an industrial area; unusual features of an area that make it important for feeding animals; heavy use during seasonal migrations.

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Approximate 500 foot radius for TEE VCP SW1400

December 19, 2022

TCP Cleanupsites 1

- Awaiting Cleanup
- Cleanup Started
- Complete
- Monitoring

1:4,514

0 0.04 0.07 0.15 mi

0 0.05 0.1 0.2 km

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Enclosure D

Email Correspondence

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Enclosure D. February 11, 2021 email.

Responded to consultant email:

Hi,
Regarding the sample list you provided below, I will try to make the remaining EIM upload easier for you. It looks like you are referring below to 2007-2008 samples described in Section 10 of the 2010 Ecology and Environment Integrated Assessment report. Some of the 2007-2008 lab reports you reference appear to be for County-obtained samples for the Site' initial investigation. Ecology's Policy 840 (page 2, bottom) states that while we encourage you to upload initial investigation samples, EIM upload of initial investigation samples is optional. In this case, the initial investigation samples are not of high value to the ongoing investigation, and obtaining those records may be difficult.

I would prefer you focus on obtaining and uploading the 59 samples listed in Table 3.1 of that 2010 report, starting on Page 89 of 98 of the pdf that were obtained for the 2009 effort between September 21 and September 26, 2009. If you haven't already, I suggest you upload those 59 samples.

Regarding our available documents, all the electronic documents I have access to for the SW1400 Site are in Ecology's site document repository. Anything else from Ecology's hard copy file for the Site would need to be obtained through a public records request.

I did check this morning if there had been a previous public records request for the SW1400 Site that had resulted in an electronic file of the older records that I could forward to you- but it doesn't look like there is anything available. It may be worthwhile for you to put in a records request to obtain the older reports in Ecology's file for the Site. For example, you could request all documents in Ecology's file for Site CSID 4351 up to 2010. That would get you all the old reports we have in our site file.

Thanks, Hope this helps.
Adam

Adam Harris, LHG (He/Him)
Cleanup Project Manager/Hydrogeologist
Washington State Department of Ecology
Toxics Cleanup Program, Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775
(360) 407-6528
adam.harris@ecy.wa.gov

From: ymeyer@bmecww.com <ymeyer@bmecww.com>
Sent: Wednesday, February 10, 2021 4:43 PM
To: Sinclair, Gaylen (ECY) <GSIN461@ECY.WA.GOV>
Cc: Harris, Adam (ECY) <adha461@ECY.WA.GOV>
Subject: RE: EIM Data Review: Study ID VCSW1400, Electro Tech Metal Finishing
Importance: High

Gaylen and Adam, I have found the references to the analyses you referenced and I will submit a request for the following labs:

EDGE Analytical Lab 2008 Lab# 04609195, 04609193, 0460919 Ref# 08-03818

Pyxis Lab 2009 J&S Steel Septic Samples

Test America 2008 results for samples collected on 12/6/2007

2007a results for samples collected on 7/17/2007 and 7/24/2007

2007b results for samples collected on 9/20/2007

2007c results for samples collected on 12/7/2007 by Waste Watch

I just want to confirm that these are the analyses referenced for EIM data entry and I'm covering all the requested data. Adam, is it possible for you to send me those labs or do I need to submit a records request?

Thanks for your guidance

Yancy Meyer
BMEC
509-520-4416