



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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May 31, 2018

Electronic Copy

Dr. J. Blake Perkins
Perkins NW Leasing & Financing, LLC
811 NE 112th Avenue, Ste 100
Vancouver, WA 98684

Re: No Further Action at the following Site:

- **Site Name:** Today's Family Dentistry
- **Site Address:** 2616 NE 112th Ave, Vancouver, Clark County, WA 98684
- **Facility/Site No.:** 10775
- **Cleanup Site No.:** 11461
- **VCP Project No.:** SW1581

Dear Dr. Perkins:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Today's Family Dentistry 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 Revised Code of Washington (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 Washington Administrative Code (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:

- Chromium into soil and arsenic, chromium, and lead 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. Alpha Environmental, *Remedial Investigation Report*, dated March 22, 2018.
2. Ecology, *RE: Site Hazard Assessment Completion*, dated May 28, 2014.
3. Clark County Public Health (CCPH), *Site Hazard Assessment Worksheet 1*, 2014.
4. CCPH, *RE: Today's Family Dentistry*, March 7, 2013.
5. Ecology, *RE: Site Hazard Assessment—Today's Family Dentistry*, dated December 10, 2012.
6. Ecology, *RE: Early Notice Letter Regarding the Release of Hazardous Substances at the Today's Family Dentistry (site name) located at 2616 NE 112th Avenue, Vancouver, Washington 98684. Facility Site Identification Number: 10775 (existing site)*, dated January 6, 2011.

Pertinent Site email correspondence is included as **Enclosure B**. These documents are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. Public records can be requested at:
<https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>.

Alternatively, Ecology's Public Records Officer can be reached at
PublicRecordsOfficer@ecy.wa.gov or (360) 407-6040.

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, determine points of compliance, and select a cleanup action. A Site description is provided as **Enclosure A**.

Septic Sludge:

In August 2009, a cracked septic tank was discovered during a routine inspection at the 2616 NE 112th Ave, Vancouver Property (Property). Between February 11 and April 21, 2010, Ecology assisted with decommissioning of the septic tank, which included removal and eventual disposal of the septic sludge by Waste Watch, Inc. The tank was reportedly removed and the building at the Property was then connected to the City of Vancouver sewer system. Based on soil staining observed by CCPH during the tank removal, a release to soil and/or groundwater was suspected. An Environmental Reporting Tracking System (ERTS; #618320), was received for the Site on February 19, 2010. Based on Ecology's observations included in the ERTS report, the Site was added to its Confirmed and Suspected Contaminated Sites List.

Proper disposal of the septic sludge was provided to Ecology via documentation included as **Enclosure C**.

Site Chemicals of Concern (COCs):

In a letter dated January 6, 2011,¹ Ecology noted high levels of mercury, silver, copper, and zinc in septic sludge at the Site. Concentrations of septic sludge (sampled from inside the tank interior) were reported for arsenic at 5.38 milligrams per kilograms (mg/kg), chromium at 28.1 mg/kg, and lead at 107 mg/kg.

In February 2013, CCPH reported exceedances of the MTCA Method A cleanup levels for arsenic, chromium, and lead in groundwater. Chromium concentrations were reported in soil between the hexavalent and trivalent (total) cleanup levels; however, chromium was not speciated in soil. Mercury was also analyzed in soil and groundwater, but all concentrations were less than the MTCA Method A cleanup levels. Arsenic, chromium, and lead were identified as Site COCs by CCPH. The concentrations of copper, silver, and zinc, though high in the septic sludge, were at concentrations less than applicable MTCA cleanup levels in soil and groundwater.

Alpha Environmental proposed Site COCs of arsenic, chromium, and lead, which matches the list used by Ecology to complete the Site Hazard Assessment, as provided in a letter dated May 28, 2014.

Pathway Analysis:

Soil:

During the removal of the septic tank and associated sludge in 2010, Ecology observed some stained soil which potentially represented a release. In February 2013, CCPH conducted a Site investigation to evaluate the potential for a release to soil and groundwater, analyzing Site soils for total metals using United States Environmental Protection Agency (US EPA) Methods 6020 and 7471A (for mercury) and total metals in groundwater using US EPA

¹ Ecology, RE: *Early Notice Letter Regarding the Release of Hazardous Substances at the Today's Family Dentistry (site name) located at 2616 NE 112th Avenue, Vancouver, Washington 98684. Facility Site Identification Number: 10775 (existing site), dated January 6, 2011.*

Method 200.8. Boring locations B1 through B4 were chosen in accordance with US EPA guidance.²

The only exceedance of applicable MTCA Method A or B cleanup levels in soil was chromium. The concentration of chromium, at a maximum of 31 mg/kg, approximates the background concentrations in Clark County,³ and was between the MTCA Method A hexavalent (19 mg/kg) and total chromium (2,000 mg/kg) cleanup levels. In 2017, concentrations of arsenic, chromium, and lead in soil sampled were less than the background values for Clark County.⁴

Soil sampled in 2017 was analyzed for Site COCs and chromium was speciated for trivalent (total) and hexavalent chromium. No hexavalent chromium was detected; thus, total (trivalent) chromium is present at the Site. Total (trivalent) chromium has a MTCA Method A cleanup level of 2,000 mg/kg.

Groundwater:

In February 2013, CCPH sampled groundwater directly from each of four direct push borings (B1 through B4), analyzing for total priority pollutant metals via US EPA Methods 200.8 and 7470A (for mercury). Dissolved metals were not analyzed. CCPH reported exceedances of the MTCA Method A cleanup levels for arsenic, chromium, and lead. Concentrations of all other metals analyzed were less than the applicable MTCA Method A or B cleanup levels.

In July 2017, monitoring wells MW-1, MW-2, and MW-3 were installed at the Site. In October 2017, groundwater monitoring well MW-4 was installed at the Site. In 2017, groundwater was sampled twice from properly constructed monitoring wells, at approximately across seasonal fluctuations. Groundwater was sampled in July and October 2017 at monitoring wells MW-1, MW-2, and MW-3, and in October 2017 at monitoring well MW-4. These wells were installed to evaluate the following:

Monitoring well ID	Location	Purpose
MW-1	At toe of drainfield	At end of drainfield and between Site and City of Vancouver wellhead #7
MW-2	Adjacent to northwest corner of septic tank	Immediately adjacent to and downgradient of septic tank and stained soil area
MW-3	To east of septic tank	To provide potential background location, provide delineation to east
MW-4	At center of drainfield (B3)	Confirm current conditions at greatest 2013 groundwater contamination (B3)

Alpha Environmental reported that depth to groundwater ranged from a high of 6.34 feet below top of casing (TOC) in October 2017 at MW-4, to 11.16 feet below TOC at MW-3 in

² US EPA, 1992, *Guidelines for Closure of Shallow Disposal Wells*. See figures A-1 and A-2.

³ Statewide & Regional 90th Percentile Values from Table 1 in Ecology Publication #94-115, *Natural Background Soil Metals Concentrations in Washington State*, dated October 1994.

⁴ Ibid.

July 2017. Groundwater flow direction was calculated to the northwest for both 2017 sampling events. Groundwater samples were collected at approximately the same depth in both 2013 and 2017. In 2017, Alpha Environmental sampled groundwater using low flow sampling methodology, and analyzed for both total and dissolved metals. The Site is located outside the 10 year travel time wellhead protection zone for City of Vancouver wellhead #7, which is located approximately 3,100 feet to the southeast of the Site.

Concentrations of total metals in groundwater sampled were less than the laboratory practical quantitation limits (PQLs), except for nickel at MW-4 in October 2017, barium at MW-2 and MW-3 in July 2017, and chromium at MW-3 in July 2017. Dissolved metals were not detected at the laboratory PQL for any metal. All laboratory PQLs, for both total and dissolved metals, were less than the applicable MTCA Method A or B cleanup level.

Barium and nickel are not identified as Site COCs, and, for screening purposes, concentrations were well below the MTCA Method B cleanup levels. Total chromium was detected at a concentration 1.29 micrograms per Liter ($\mu\text{g/L}$) at MW-3, approximately at the PQL. The concentration of total chromium would have been less than the more common laboratory PQLs for total chromium in groundwater of 2.0 $\mu\text{g/L}$, 5.0 $\mu\text{g/L}$, or 10.0 $\mu\text{g/L}$. Other constituents identified in the septic sludge (e.g., copper, silver, and zinc) were also not detected in groundwater sampled.

Based on available groundwater data, Alpha Environmental concluded that the February 2013 grab groundwater results were likely elevated as an artifact of the temporary well installation.⁵ Based on Site soil and groundwater data, the Site is unlikely to pose a risk to the City of Vancouver's water supply.

Sediment and Surface Water:

There is no evidence of sediment or surface water at the Site and these pathways are incomplete. In its 2014 report, CCPH indicated that the surface water and sediment pathways did not require any additional evaluation.

Air (Vapor):

Based on soil groundwater concentrations below the MTCA cleanup levels, the vapor pathway would not require evaluation and that the pathway is incomplete per WAC 173-340-740(3)(b)(iii)(C)(III). Site COCs are non-volatile. Metals in septic sludge have been removed from the Site. In its 2014 report, CCPH indicated that the air pathway did not require any additional evaluation.

Ecological:

Alpha Environmental performed a simplified Terrestrial Ecological Evaluation (TEE) for the Site based on the soil concentrations approximating background. Ecology verified the TEE results based on a simplified evaluation using Table 749-1, which is included as **Enclosure D**. The Site can be excluded from further TEE and the pathway is considered incomplete.

⁵ p. 5 in Alpha Environmental's *Remedial Investigation Report*, dated March 22, 2018.

Site Hazard Assessment

Ecology provided a notice that a Site Hazard Assessment would be completed in a letter dated December 10, 2012. CCPH completed the Site Hazard Assessment (SHA) based on the results of the February 2013 Site investigation, and only scored the groundwater route for arsenic, chromium, and lead. The Site was ranked based on the potential for concentrations of metals to contaminate drinking water supplies, given that the City of Vancouver's population obtains drinking water from groundwater resources.⁶ Based on the SHA evaluation, the Site was ranked as a #2 (Moderate-High Risk) out of 5, with 1 representing the highest relative risk, and 5 representing the lowest relative risk. Ecology communicated the SHA result in a letter dated May 28, 2014.

Alpha Environmental concluded⁷ that if the SHA were completed using 2017 soil and groundwater data alone, the Site would score as unranked. It is Ecology's opinion that SW1581 is eligible to be removed⁸ as a ranked site based on the results of confirmational soil and groundwater monitoring at the Site.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA. Standard points of compliance have been established for soil and groundwater.

These are the applicable cleanup levels for the Site:

Site COC	MTCA Method	Soil (mg/kg)	Groundwater (µg/L)
Arsenic	A	20	5
Chromium	A	2,000	50
Lead	A	250	15

These are the applicable points of compliance for the Site:

Per WAC 173-340-740(6)(b), “[f]or soil cleanup levels based on the protection of ground water, the point of compliance shall be established in the soils throughout the site.”

Per WAC 173-340-740(6)(d): “[f]or soil cleanup levels based on human exposure via direct contact or other exposure pathways where contact with the soil is required to complete the pathway, the point of compliance shall be established in the soils through the site from the ground surface to fifteen feet below ground surface.”

⁶ <https://www.cityofvancouver.us/publicworks/page/aquifers-our-source-drinking-water>

⁷ p. 13 in Alpha Environmental's *Remedial Investigation Report*, dated March 22, 2018.

⁸ WAC 173-340-330(7)(a)(iii)(B) and -(G).

For groundwater, per WAC 173-340-720(8)(b): “[t]he standard point of compliance shall be established 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.”

Cleanup levels and points of compliance were not established for air, surface water, sediment, and ecological pathways, because these pathways were determined to be incomplete (as described above).

Site cleanup levels are met at the standard points of compliance for the Site. Current and future land use is anticipated to remain as commercial.

3. Selection of cleanup action.

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

Though a feasibility study was not conducted as typically completed per WAC 173-340-350, removal of the septic tank and septic sludge was completed. The building at the Property was connected to the City of Vancouver sewer and the historical source has been eliminated. Ecology concurs with the cleanup action taken.

The implemented cleanup action meets the requirements of WAC 173-340-360(2):

- Contaminated septic sludge was permanently removed and disposed of off-Site.
- CCPH issued a letter in March 7, 2013, indicating that, from their perspective, no further corrective action was necessary to address violations related to the septic system and sludge disposal. The letter then referred you to Ecology for further action regarding any further cleanup.
- The cleanup complies with MTCA cleanup levels and standard points of compliance established for the Site.
- Based on the data provided to Ecology, it does not appear a release occurred to soil, and reported concentrations of arsenic, chromium, and lead in soil approximate or are less than background concentrations for Clark County. The exceedances of MTCA Method A cleanup levels of arsenic, chromium, and lead in groundwater was more likely than not the result of grab groundwater sampling methodology and sample turbidity instead of being representative of actual Site groundwater conditions.
- Confirmational soil and groundwater samples were collected and analytical results comply with the MTCA cleanup levels established for the Site.

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards and points of compliance established for the Site. If no changes to this cleanup are required per the public comment period referenced below, then the Site monitoring wells should be decommissioned according to RCW 18.104 and WAC 173-160. Once decommissioned, submit a report of the monitoring well decommissioning to Ecology.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Hazardous Sites List.
- Confirmed and Suspected Contaminated Sites List.

That process includes public notice and opportunity to comment. Based on the comments received, Ecology will either remove the Site from the applicable lists or withdraw this opinion.

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.

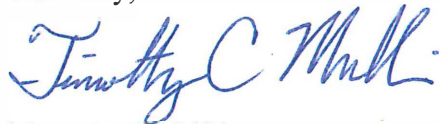
The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

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 (#SW1581).

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (360) 407-6265 or e-mail at tim.mullin@ecy.wa.gov.

Sincerely,



Tim Mullin, LHG
Toxics Cleanup Program
Southwest Regional Office

TCM: tam

Enclosures: A – Site Description and Figures
B – Email Correspondence
C – Waste Manifest and Disposal Documentation
D – Table 749-1

By certified mail: 9489 0090 0027 6019 1347 32

cc: Jim Cooper, Alpha Environmental
Nick Acklam, Ecology
Stephanie Bussell, Ecology
Ecology Site

Enclosure A

Site Description and Figures

- 1) Figure 1 – Vicinity Map
- 2) Figure 2 – Site Plan

Site Description

Site:

The Site is located on a part of the parcel at 2616 NE 112th Ave, Vancouver Clark County, Washington. According to the Clark County Assessor's website, the Site is associated with parcel 162643000, and is 0.82 acres in size (Property). A building and parking lot cover the eastern portion of the Property. The former septic tank area and existing historical septic drainfield is present in a grassy area comprising the western portion of the Property. The Property is zoned as community commercial.

Property History and Current Use:

The Property is currently occupied by a vacant building formerly used as a dental practice. The current Property owner purchased the Property in 2004. Land use is anticipated to remain commercial.

Property Vicinity:

The Property is in an area of residential and commercial properties.

Geology/Soils:

Site soils are predominantly sands with some limited silts and gravel.

Groundwater:

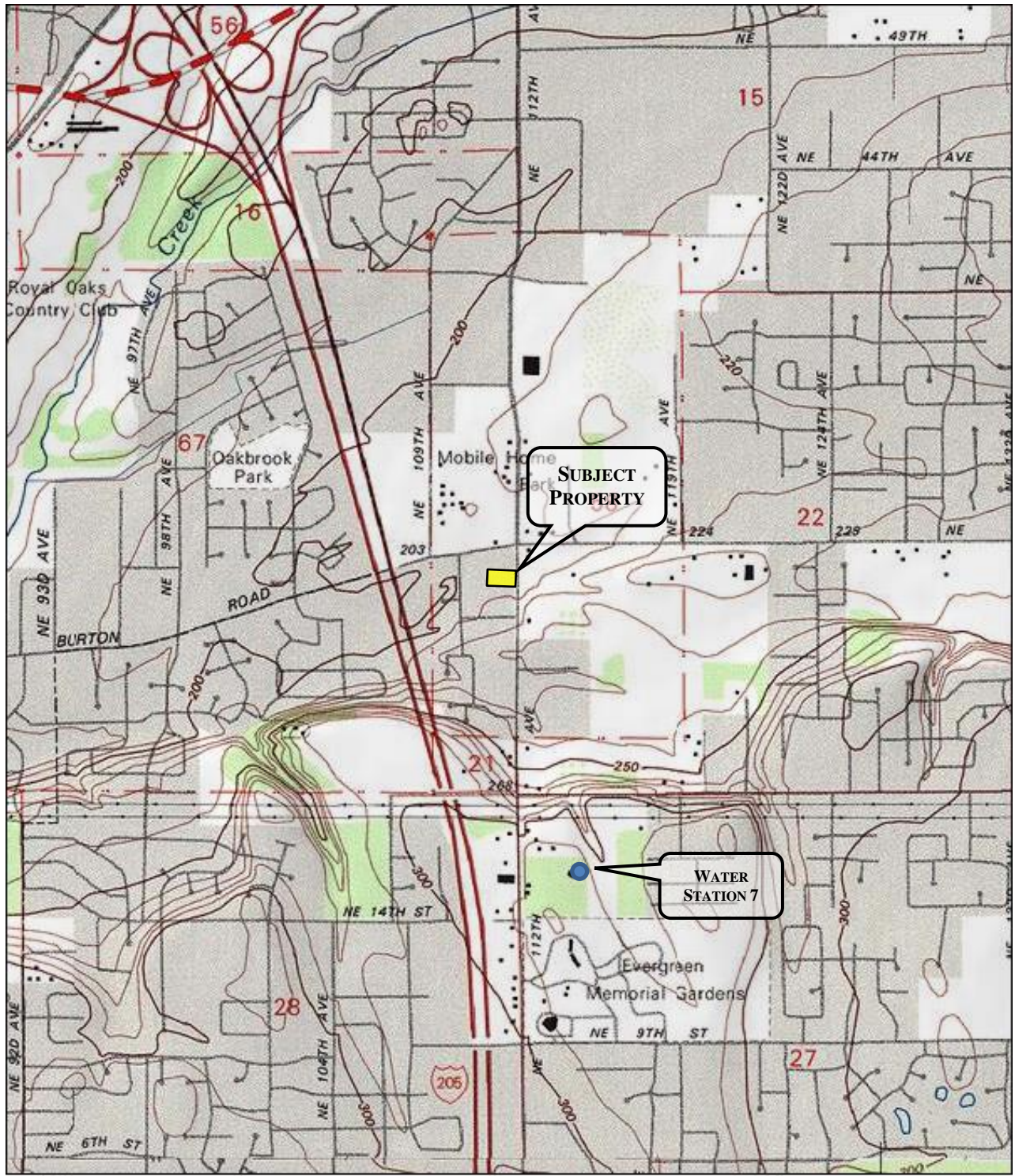
Four Site monitoring wells (MW-1 through MW-4) have been installed at the Site. Depth to groundwater in Site monitoring wells has ranged from 6.34 feet below top of casing (TOC) in October 2017 at MW-4, to 11.16 feet below TOC at MW-3 in July 2017. Site groundwater flow direction has been to the north-northwest (towards MW-2). City of Vancouver supply wells 7-1 and 7-2 (at water station 7) are located approximately 3,100 feet southeast of the Site. The Site is located just outside the 10 year zone of contribution for the City of Vancouver water station 7. Based on a 2017 flow direction to the northwest, water station 7 is considered to be hydraulically upgradient of the Site.

Surface/Storm Water/Septic Systems:

The nearest surface water, Burnt Bridge Creek, is located 4,900 feet northwest of the Site. A former septic tank was determined to be cracked upon inspection in 2009 and Clark County Public Health Department required the septic tank be removed and the building connected to public sewer. In 2010, the septic system was removed and the Property building connected to City of Vancouver sewer.

Source of Contamination:

Contamination was believed to have been released from disposal of dental wastes to the former septic tank at the Property.



TN * MN
16°

0 5 1 MILE
0 1000 FEET 0 500 1000 METERS
Printed from TOPO! ©2000 National Geographic Holdings (www.topo.com)

SOURCE: USGS 7.5 Minute Topographic Map – Orchards, WA Quadrangle, 1990



11080 SW ALLEN BLVD, STE 100
BEAVERTON, OREGON 97005
(503) 292-5346

FIGURE 1: VICINITY MAP

Project Name: 2616 NE 112th Avenue
Vancouver, Washington 98684
Project Number: 17-16167






APPROXIMATE SCALE IN FEET



LEGEND

 Monitoring Well Locations

MW-1 Monitoring Well Numbers



11080 SW ALLEN BLVD, STE 100
 BEAVERTON, OREGON 97005
 (503) 292-5346

FIGURE 2: SITE PLAN

Project Name: 2616 NE 112th Avenue
 Vancouver, Washington 98684

Project Number: 17-16167



Enclosure B

Email Correspondence

From: [Mullin, Tim \(ECY\)](#)
To: [Jim Cooper](#)
Cc: [J. Blake Perkins](#)
Subject: RE: 2616 NE 112th Avenue
Date: Friday, March 23, 2018 1:25:00 PM

Jim,

Thanks for the SW1581 Remedial Investigation report and I will look out for the two hard copies. I logged the report in with today's date in order to hold a place in line. Currently, the SW1581 opinion is 8th in my queue.

I will take a look through the report next week and determine if I have any initial questions or request any more info in order to keep the opinion process moving. However, I will wait for an email from Ecology's EIM data coordinator to review the Site data and draft the opinion at one time. I have found completing both tasks at once is the most efficient approach.

As a reminder, delisting of ranked Sites in Ecology's Voluntary Cleanup Program requires a minimum 30-day public comment period after a No Further Action letter is issued.

Sincerely,

Tim Mullin, LHG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
tmul461@ecy.wa.gov

From: Jim Cooper [<mailto:jim@alphaenvironmental.net>]
Sent: Friday, March 23, 2018 12:19 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Cc: J. Blake Perkins <j.blake.perkins@gmail.com>
Subject: 2616 NE 112th Avenue

Good afternoon Tim. Attached is a copy of the Remedial Investigation report for 2616 NE 112th Avenue, Vancouver. I dropped two copies in the mail today and laboratory data has been uploaded to the EIM database.

Have a nice weekend.

Jim

Jim Cooper, R.G.

Senior Geologist



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Direct: 503-928-5434

Cell: 503-929-5652

jim@alphaenvironmental.net

www.alphaenvironmental.net

From: [Mullin, Tim \(ECY\)](#)
To: [Jim Cooper](#)
Cc: [J. Blake Perkins](#)
Subject: RE: VCP #SW1581: 2616 NE 112th Ave
Date: Monday, March 05, 2018 8:37:00 AM
Attachments: [Ecology_early_notice_letter-Jan 6-2011.pdf](#)

Jim,

Per your request below, please see attached. Third paragraph of the letter appears to contain the pertinent information.

Sincerely,

Tim Mullin, LHG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
tmul461@ecy.wa.gov

From: Jim Cooper [<mailto:jim@alphaenvironmental.net>]
Sent: Thursday, March 01, 2018 6:56 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Cc: J. Blake Perkins <j.blake.perkins@gmail.com>
Subject: RE: VCP #SW1581: 2616 NE 112th Ave

Good evening Tim. The report is just about ready. Can you provide me with a copy of the Early Notice document referenced below.

Ecology believes these Site contaminants of concern (COCs) are those metals which were identified in the [Early notice letter dated January 6, 2011](#), and for those Site COCs exceeding cleanup levels from the 2013 soil and groundwater sampling.

Thanks, Jim

From: Mullin, Tim (ECY) [<mailto:TMUL461@ECY.WA.GOV>]
Sent: Wednesday, November 22, 2017 2:35 PM
To: Jim Cooper <jim@alphaenvironmental.net>
Subject: FW: VCP #SW1581: 2616 NE 112th Ave

One additional item to consider – for groundwater data, final laboratory reports showing both the PQL/RL and the MDL values would be helpful. Thanks.

From: Mullin, Tim (ECY)
Sent: Wednesday, November 22, 2017 2:16 PM
To: 'J. Blake Perkins' <j.blake.perkins@gmail.com>
Cc: 'Jim Cooper' <jim@alphaenvironmental.net>; Tim Mullin (TMUL461@ecy.wa.gov) <TMUL461@ecy.wa.gov>; Acklam, Nicholas (ECY) <nack461@ECY.WA.GOV>
Subject: VCP #SW1581: 2616 NE 112th Ave

To formally request a No Further Action status for SW1581, please have Alpha Environmental submit a comprehensive cleanup report to Ecology. Per WAC 173-340-515(4), the report format is ultimately up to the VCP customer, but I have included some suggested report details below. I am not meaning to be overly prescriptive here, and I hope I do not come across as patronizing or condescending (not my intention at all).

My opinion is that the cleanup performed for the Site has made a good case for a status of No Further Action (NFA). Of note, local Ecology management is used to seeing four consecutive quarters (1 year) of clean groundwater data with NFA requests for Sites like SW1581. Fewer than four consecutive quarters of groundwater monitoring to demonstrate compliance with cleanup levels is possible, but requires ironclad justification. A great comprehensive report is essential for making that NFA case through my chain of command.

I suggest:

- 1) Use a cover letter to request the NFA per WAC 173-340-840(1).
 - a. Submit one electronic copy and two hard copies of the report (WAC 173-340-840(2)).
- 2) Upload all data to Ecology's EIM database as required by WAC 173-340-840(5).
 - a. <http://www.ecy.wa.gov/eim/submitdata.htm>
- 3) Report contents are recommended to follow the applicable requirements in Ecology's various checklists:
 - a. RI: <https://fortress.wa.gov/ecy/publications/SummaryPages/1609006.html>
 - i. My opinion is that the RI checklist is of great value to guide the report format when describing the cleanup for this particular Site.
 - b. FS: <https://fortress.wa.gov/ecy/publications/SummaryPages/1609007.html>
 - c. CAP: <https://fortress.wa.gov/ecy/publications/SummaryPages/1609008.html>
- 4) Consider giving particular attention to the following in the report (though not necessarily in this order):
 - a. Describe the original decommissioning of the septic tank, including sludge sampling, removal and disposal.
 - i. Provide all septic sludge disposal documentation (likely as an appendix).
 - ii. Recommend including any copies of permits, etc. documenting the sewer line install to show that the historical source has been removed and operations changed.
 - b. Provide figures and tables:
 - i. Example figures: vicinity, 5 and 10 year wellhead protection zone, site plan, groundwater contour maps for each groundwater monitoring event)
 - ii. Example tables (sludge sampling data, soil data, depth to water measurements, groundwater data)

- iii. All geologist's boring logs for MW-1, MW-2, MW-3, and MW-4
- c. Ecology believes these Site contaminants of concern (COCs) are those metals which were identified in the Early notice letter dated January 6, 2011, and for those Site COCs exceeding cleanup levels from the 2013 soil and groundwater sampling.
 - i. Additional metals data collected for soil and groundwater supports the conclusion that no risk remains and that the Site is cleaned up.
- d. Develop a Site Conceptual Model and address all exposure pathways:
 - i. Describe future anticipated use of the Property.
 - ii. For air, sediment, and surface water pathways, a couple of sentences each about why these are incomplete pathways will suffice.
 - iii. Ecological – fill out the TEE form and use the simplified TEE process under WAC 173-340-7492 to exclude the Site from further TEE.
 - 1. See WAC 173-340-900, 749-1 Table:
http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/Table_749-1.htm
 - 2. Form:
<https://fortress.wa.gov/ecy/publications/SummaryPages/ecy090300.html>
 - iv. Soil – both direct contact and leaching to groundwater (why these are not a risk)
 - v. Groundwater – drinking water, direct contact, and ingestion (why these are not a risk)
 - vi. Provide available details for the City of Vancouver drinking water wells to the southeast – screen intervals and distance from the Site (I think the wells are over 3,000 feet to the southeast)
- e. Discuss how the source removal (sludge in the septic tank) and soil and groundwater sampling to date meets the requirements for:
 - i. Site characterization and delineation under WAC 173-340-350
 - ii. How cleanup levels have been met for Site COCs in soil (WAC 173-340-740) and groundwater (see WAC 173-340-720(9) in particular):
 - 1. Recommend using MTCA Method A cleanup levels for soil and groundwater wherever possible
 - 2. Recommend using MTCA Method B direct contact cleanup levels for soil and Method B for groundwater where MTCA Method A cleanup levels have not been established
 - iii. Explain why a feasibility study was not necessary under WAC 173-340-350 (ordered to complete the sludge removal, septic tank decommissioning, and connect the dentist office to sanitary sewer)
 - iv. How the cleanup has met the requirements of WAC 173-340-360
 - v. Detail how contamination identified during the 2013 sampling no longer presents a risk to human health and the environment. Critical as this Site has a Site hazard rank of 2.
- f. Include all disposal documentation and data to date for all generated investigation derived waste from the well installation and sampling
- g. Include all laboratory reports. If you need any copies of any historical sampling results, let me know.
- h. Provide copies of all available field notes for the groundwater monitoring.
- i. Provide survey documentation as an appendix.

- 5) Please be advised that, after an NFA letter is issued for a ranked Site, a 30-day public comment period is required for the NFA status.
- a. The 30 day period doesn't usually happen right after the NFA is issued, as the public comment period request goes into a queue and then Ecology Public Involvement schedules the comment period. MTCA discusses public involvement in the cleanup process under WAC 173-340-600.
 - b. If sufficient comments are received or new information is presented which indicates that additional cleanup is necessary, the NFA status could be rescinded. I haven't heard of a case of an NFA being overturned for Southwest Region VCP, but it is a possibility.
 - c. If Ecology receives public comments, Ecology has to generate a response to comments document.
 - d. After the response to comments document is finalized and presuming no change in NFA status is made, a final notification letter will be submitted confirming the result.
 - e. **In the meantime, do NOT decommission the monitoring wells at the Site.**
 - i. Per RCW 18.104.040(7), well decommissioning will eventually have to happen, but not until after the public comment period is over and Ecology indicates it is acceptable to do so.

If I unintentionally left anything out, please include the information in the report. If in doubt regarding whether or not to include documentation, please include it. Please call with any questions. Thank you.

Tim

Tim Mullin, LG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
Tim.Mullin@ecy.wa.gov

From: Jim Cooper [<mailto:jim@alphaenvironmental.net>]
Sent: Tuesday, November 21, 2017 10:27 AM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Cc: J. Blake Perkins <j.blake.perkins@gmail.com>
Subject: 2616 NE 112th Ave

Good morning Tim. Here are the latest results for the groundwater sampling. Everything was non-detect again, except for a very low detection of nickel.

Looks like this should be enough to move us toward closure.

Thanks, Jim

Jim Cooper, R.G.

Senior Geologist



11080 SW Allen Blvd, Ste 100
Beaverton, Oregon 97005

Office: 503-292-5346

Direct: 503-928-5434

Cell: 503-929-5652

jim@alphaenvironmental.net

www.alphaenvironmental.net

From: [Mullin, Tim \(ECY\)](#)
To: [J. Blake Perkins](#)
Cc: [Jim Cooper](#); [Tim Mullin \(TMUL461@ecy.wa.gov\)](#); [Acklam, Nicholas \(ECY\)](#)
Subject: VCP #SW1581: 2616 NE 112th Ave
Date: Wednesday, November 22, 2017 2:15:00 PM

To formally request a No Further Action status for SW1581, please have Alpha Environmental submit a comprehensive cleanup report to Ecology. Per WAC 173-340-515(4), the report format is ultimately up to the VCP customer, but I have included some suggested report details below. I am not meaning to be overly prescriptive here, and I hope I do not come across as patronizing or condescending (not my intention at all).

My opinion is that the cleanup performed for the Site has made a good case for a status of No Further Action (NFA). Of note, local Ecology management is used to seeing four consecutive quarters (1 year) of clean groundwater data with NFA requests for Sites like SW1581. Fewer than four consecutive quarters of groundwater monitoring to demonstrate compliance with cleanup levels is possible, but requires ironclad justification. A great comprehensive report is essential for making that NFA case through my chain of command.

I suggest:

- 1) Use a cover letter to request the NFA per WAC 173-340-840(1).
 - a. Submit one electronic copy and two hard copies of the report (WAC 173-340-840(2)).
- 2) Upload all data to Ecology's EIM database as required by WAC 173-340-840(5).
 - a. <http://www.ecy.wa.gov/eim/submitdata.htm>
- 3) Report contents are recommended to follow the applicable requirements in Ecology's various checklists:
 - a. RI: <https://fortress.wa.gov/ecy/publications/SummaryPages/1609006.html>
 - i. My opinion is that the RI checklist is of great value to guide the report format when describing the cleanup for this particular Site.
 - b. FS: <https://fortress.wa.gov/ecy/publications/SummaryPages/1609007.html>
 - c. CAP: <https://fortress.wa.gov/ecy/publications/SummaryPages/1609008.html>
- 4) Consider giving particular attention to the following in the report (though not necessarily in this order):
 - a. Describe the original decommissioning of the septic tank, including sludge sampling, removal and disposal.
 - i. Provide all septic sludge disposal documentation (likely as an appendix).
 - ii. Recommend including any copies of permits, etc. documenting the sewer line install to show that the historical source has been removed and operations changed.
 - b. Provide figures and tables:
 - i. Example figures: vicinity, 5 and 10 year wellhead protection zone, site plan, groundwater contour maps for each groundwater monitoring event)
 - ii. Example tables (sludge sampling data, soil data, depth to water measurements, groundwater data)
 - iii. All geologist's boring logs for MW-1, MW-2, MW-3, and MW-4
 - c. Ecology believes these Site contaminants of concern (COCs) are those metals which were identified in the Early notice letter dated January 6, 2011, and for those Site COCs exceeding cleanup levels from the 2013 soil and groundwater sampling.
 - i. Additional metals data collected for soil and groundwater supports the conclusion that no risk remains and that the Site is cleaned up.
 - d. Develop a Site Conceptual Model and address all exposure pathways:
 - i. Describe future anticipated use of the Property.
 - ii. For air, sediment, and surface water pathways, a couple of sentences each about why these are incomplete pathways will suffice.
 - iii. Ecological – fill out the TEE form and use the simplified TEE process under WAC 173-340-7492 to exclude the Site from further TEE.
 1. See WAC 173-340-900, 749-1 Table:

http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/Table_749-1.htm

2. Form:

<https://fortress.wa.gov/ecy/publications/SummaryPages/ecy090300.html>

- iv. Soil – both direct contact and leaching to groundwater (why these are not a risk)
 - v. Groundwater – drinking water, direct contact, and ingestion (why these are not a risk)
 - vi. Provide available details for the City of Vancouver drinking water wells to the southeast – screen intervals and distance from the Site (I think the wells are over 3,000 feet to the southeast)
 - e. Discuss how the source removal (sludge in the septic tank) and soil and groundwater sampling to date meets the requirements for:
 - i. Site characterization and delineation under WAC 173-340-350
 - ii. How cleanup levels have been met for Site COCs in soil (WAC 173-340-740) and groundwater (see WAC 173-340-720(9) in particular):
 - 1. Recommend using MTCA Method A cleanup levels for soil and groundwater wherever possible
 - 2. Recommend using MTCA Method B direct contact cleanup levels for soil and Method B for groundwater where MTCA Method A cleanup levels have not been established
 - iii. Explain why a feasibility study was not necessary under WAC 173-340-350 (ordered to complete the sludge removal, septic tank decommissioning, and connect the dentist office to sanitary sewer)
 - iv. How the cleanup has met the requirements of WAC 173-340-360
 - v. Detail how contamination identified during the 2013 sampling no longer presents a risk to human health and the environment. Critical as this Site has a Site hazard rank of 2.
 - f. Include all disposal documentation and data to date for all generated investigation derived waste from the well installation and sampling
 - g. Include all laboratory reports. If you need any copies of any historical sampling results, let me know.
 - h. Provide copies of all available field notes for the groundwater monitoring.
 - i. Provide survey documentation as an appendix.
- 5) Please be advised that, after an NFA letter is issued for a ranked Site, a 30-day public comment period is required for the NFA status.
- a. The 30 day period doesn't usually happen right after the NFA is issued, as the public comment period request goes into a queue and then Ecology Public Involvement schedules the comment period. MTCA discusses public involvement in the cleanup process under WAC 173-340-600.
 - b. If sufficient comments are received or new information is presented which indicates that additional cleanup is necessary, the NFA status could be rescinded. I haven't heard of a case of an NFA being overturned for Southwest Region VCP, but it is a possibility.
 - c. If Ecology receives public comments, Ecology has to generate a response to comments document.
 - d. After the response to comments document is finalized and presuming no change in NFA status is made, a final notification letter will be submitted confirming the result.
 - e. In the meantime, do **NOT** decommission the monitoring wells at the Site.
 - i. Per RCW 18.104.040(7), well decommissioning will eventually have to happen, but not until after the public comment period is over and Ecology indicates it is acceptable to do so.

If I unintentionally left anything out, please include the information in the report. If in doubt regarding whether or not to include documentation, please include it. Please call with any questions. Thank you.

Tim

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Southwest Region – Toxics Cleanup Program
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300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
Tim.Mullin@ecy.wa.gov

From: Jim Cooper [mailto:jim@alphaenvironmental.net]
Sent: Tuesday, November 21, 2017 10:27 AM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Cc: J. Blake Perkins <j.blake.perkins@gmail.com>
Subject: 2616 NE 112th Ave

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Thanks, Jim

Jim Cooper, R.G.
Senior Geologist



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www.alphaenvironmental.net

From: [J. Blake Perkins](#)
To: [Mullin, Tim \(ECY\)](#)
Subject: 2616 NE 112th Ave
Date: Tuesday, November 21, 2017 10:41:07 AM

Tim,

You have probably already received the testing results from the latest round of water sampling from Jim Cooper at AlphaEnvironmental, and if not, please check your email. Based on the sampling results, I would like to formally request you move to close this file and issue a No Further Action letter. We have complied with every request made by Ecology since the beginning of this ordeal, and the latest testing proves that the environmental hazards in question (specifically chromium) have consistently not been detected in any appreciable levels in the groundwater at our property. Furthermore, the costs to comply with your requests are continuing to mount, with no definitive end in sight. Again, the sampling you requested has been done, and the contamination you suspected at the site is not present, which makes further sampling seem overburdensome and unproductive. I respectfully request that this cleanup action request be closed so we can move ahead with the pending sale and satisfy all parties involved.

Thank you,

Blake Perkins

From: [Jim Cooper](#)
To: [Mullin, Tim \(ECY\)](#)
Cc: [J. Blake Perkins](#)
Subject: 2616 NE 112th Ave
Date: Tuesday, November 21, 2017 10:26:47 AM
Attachments: [A7J0984 FINAL 11 21 17 0846---A---2616 NE 112th Ave-17-16167.pdf](#)

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Thanks, Jim

Jim Cooper, R.G.

Senior Geologist



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From: [Mullin, Tim \(ECY\)](#)
To: [J. Blake Perkins](#)
Subject: RE: SW1581 - Today's Family Dentistry Recommendations
Date: Wednesday, October 04, 2017 4:38:00 PM

Per our initial conversation, my understanding was a No Further Action opinion letter in hand is necessary to close the sale. Based on that, I agree with your assumption that the sale would not close in 2017.

Best I can do regarding the groundwater monitoring is to discuss once I review the 4Q17 groundwater data from all four wells and before recommending any additional rounds of monitoring. October through the first week or two of November is typically the lowest point of the year for groundwater. Based on heavy winter and spring rainfall for 2017, July may approximate a high point for groundwater beneath the Site, but that is speculation on my part. Will need to compare depth to water numbers and analytical results from July and ~November to have some insight.

From: J. Blake Perkins [mailto:j.blake.perkins@gmail.com]
Sent: Wednesday, October 04, 2017 4:05 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: Re: SW1581 - Today's Family Dentistry Recommendations

Tim,

From what I gather, it appears that closing on the property sale is likely out of the question for 2017. Is that a correct assumption? Our initial conversation was that all efforts would be made to satisfy Ecology's requests so that the buyer would be able to close on the sale this year.

Also, based on weather and historical rainfall for 2017, one could assume the first sampling WAS during a 'low' period, and the Q3 sampling will be during a much higher period, thus accommodating your need for a High/Low comparison. I will get with Jim to have the 4th well installed ASAP so we can have sampling quickly to help provide direction moving forward.

Blake

J. Blake Perkins, DDS
New Image Cosmetic and Family Dentistry / Dental Sleep Medicine of Vancouver
811 NE 112th Ave Suite 100
Vancouver, WA 98684
360-604-7151

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This information is intended only for the use of the individual(s) or entity to whom it is

addressed. Please delete it if you are not the intended recipient.**

On Oct 4, 2017, at 3:48 PM, Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV> wrote:

Here are Ecology's recommendations regarding the path forward for SW1581 (Today's Family Dentistry):

- 1) Per discussion with Alpha Environmental, based on the July 2017 sampling event, Site groundwater flow direction has been calculated to the north (MW-2 would then be the downgradient point for the Site).
- 2) The July 2017 groundwater data remains to be finalized by the laboratory. The soil data is already finalized.
- 3) Non-detect hexavalent chromium results for soil indicate that 2,000 mg/kg (total or trivalent chromium) is appropriate for this Site.
- 4) With the adjustment to the chromium value, all soil sampling results during well install (and the 2013 data as well) are less than the applicable MTCA Method A or B cleanup levels.
- 5) Site monitoring wells MW-1, MW-2, and MW-3 have been surveyed.
- 6) Groundwater analytical results from MW-1, MW-2, and MW-3 for July 2017 are below MTCA Method A and B cleanup levels (and with the exception of barium, groundwater analytical results are less than the laboratory practical quantitation limit [PQL]).
 - a. The chromium value of 1.29 ug/L would have been less than the laboratory PQL if the lab had used a value of 2 ug/L as the PQL as some labs do.
 - b. Soil and groundwater results do not indicate an area wide contamination source.
 - c. Original well install plan was designed to surround drain field as well as determine if an area wide contamination source was causing the groundwater contamination.
 - d. If an area wide contamination source was present, sampling groundwater in the drainfield would not have been necessary. However, now, the highest historical concentrations in groundwater should be confirmed to determine if the septic was the source.
 - e. This is an adjustment to June 2017 meeting outcome. The change is based on the data collected in July 2017.
- 7) Thus, Ecology recommends installing one groundwater monitoring well (MW-4) at former boring location B3.**
 - a. The purpose of this well is to confirm if any contamination is present at the formerly highest concentrations in groundwater at the Site.
 - b. This well would not have been recommended if an area wide contamination source had been identified.
 - c. The 2013 boring B3 had the highest concentrations of metals in groundwater and is located in the septic drainfield.

- d. The 2013 groundwater sample from B3 was collected at approximately 18.5 feet below ground surface. Depending on the depth to water encountered in the field, a monitoring well screen length greater than 10 feet may be necessary.
 - i. Ensure that the sampling depth of 18.5 ft bgs is not near the bottom of the well screen to avoid accidentally collecting soil particles during groundwater sampling. These soil particles settle in the well bottom.
 - ii. When present during groundwater sampling, increased turbidity in the sample from soil particles in the bottom of the well may artificially increase metals results in groundwater.
 - e. Develop the monitoring well.
 - f. Use low flow groundwater sampling methodology. Wait at least two weeks after well installation and development to sample the wells.
 - g. Sample for both total and dissolved metals.**
 - h. To start, for the purposes of providing the full comparison of historical and current data, Ecology recommends sampling total and dissolved metals at proposed monitoring well MW-4 for the exact same list as B3 (priority pollutant metals: antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, zinc).
 - i. Sample groundwater from the new well MW-4 as part of November(ish) groundwater monitoring event, which also should incorporate sampling at wells MW-1, MW-2 and MW-3.
 - j. May need as few as two additional groundwater sampling events (high and low water seasonal water levels; e.g. November and May). However, evaluate data from 4Q17 groundwater monitoring event, which may indicate more than two groundwater events are necessary.
 - k. No soil samples are recommended during the well install.
 - i. However, may need TCLP for soil, if required by the landfill for disposal purposes, as soil generated is from inside septic drainfield.
 - ii. Soils generated may be potentially more contaminated than during install of MW-1, MW-2, or MW-3.
 - iii. Landfill may accept 2013 soil data results to profile this data and then may not need TCLP results.
- 8) If groundwater flow direction suddenly shows a strong westerly component – re-evaluate and discuss with Ecology.
- 9) A follow up survey including the new monitoring well could be completed. However, three surveyed monitoring wells is the minimum necessary to calculate flow direction, which has been completed at the Site.
- 10) Please indicate if the above information is desired as part of a formal opinion letter.
- 11) As the Site is ranked as a 2, please remember that for ranked VCP Sites, after the NFA is issued there is a minimum 30-day public comment period.

Please let me know if there are any questions or if I unintentionally omitted anything.

Thank you,
Tim

Tim Mullin, LG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
Tim.Mullin@ecy.wa.gov

From: [Mullin, Tim \(ECY\)](#)
To: [Jim Cooper](#); [J. Blake Perkins](#)
Cc: [Tim Mullin \(TMUL461@ecy.wa.gov\)](mailto:Tim.Mullin(TMUL461@ecy.wa.gov))
Subject: SW1581 - Today's Family Dentistry Recommendations
Date: Wednesday, October 04, 2017 3:48:00 PM

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Thank you,
Tim

Tim Mullin, LG
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Southwest Region – Toxics Cleanup Program

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300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
Tim.Mullin@ecy.wa.gov

From: [Jim Cooper](#)
To: [Mullin, Tim \(ECY\)](#)
Subject: RE: SW1581 phone call summary
Date: Thursday, August 31, 2017 4:33:17 PM
Attachments: [2616 NE 112th Ave . Vancouver - Site Plan.pdf](#)
[17-16167 Boring Logs.pdf](#)

Hi Tim, here are those documents.

Thanks, Jim

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Wednesday, August 16, 2017 7:18 AM
To: Jim Cooper <jim@alphaenvironmental.net>
Subject: RE: SW1581 phone call summary

Good morning Jim,

I have availability this afternoon anytime from 12:30pm-3pm, and 3:30pm-4:30pm and on Thursday from 7am-10am and 11am-12pm. I will be out of the office Friday.

A figure with well locations and boring logs (even if draft) would be helpful for me during our discussion.

Thank you,
Tim

From: Jim Cooper [mailto:jim@alphaenvironmental.net]
Sent: Tuesday, August 15, 2017 2:26 PM
To: Mullin, Tim (ECY) <TMUL461@ECY.WA.GOV>
Subject: RE: SW1581 phone call summary

Good afternoon Tim. Here are the results for the soil sampling and 1st round of groundwater sampling. I was hoping we may be able to discuss them later this week. All soil results are below background levels and water is far below cleanup levels.

Thanks, Jim

Jim Cooper, R.G.
Senior Geologist



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Beaverton, Oregon 97005

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Direct: 503-928-5434

Cell: 503-929-5652

jim@alphaenvironmental.net

www.alphaenvironmental.net

From: Mullin, Tim (ECY) [<mailto:TMUL461@ECY.WA.GOV>]

Sent: Monday, July 24, 2017 4:23 PM

To: Jim Cooper <jim@alphaenvironmental.net>

Subject: SW1581 phone call summary

Hi Jim,

Per our conversation regarding SW1581, I would not anticipate TCLP would be necessary to profile and dispose of the soil cuttings generated from the well install at SW1581. It sounded like to me that the concentrations were background (low level). Based on the "20-times rule" in the dangerous waste regulations (WAC 173-303) I would think that the total metals results would be sufficient data for disposal purposes. The TCLP maximum concentrations are listed in a table in WAC 173-303-090 and is linked below for reference. This typically means that arsenic and lead at total metals concentrations of less than 100 mg/kg would not designate as dangerous waste if run under TCLP, based on the formula at the USEPA link below.

For reference:

<http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-090>

https://archive.epa.gov/epawaste/hazard/web/html/faq_tclp.html#Total

I do recommend using an approved transporter and facility for disposal of Site derived soil and groundwater. Before transporting any investigation derived waste for disposal, I suggest working with the facility/vendor to ensure that no additional information is required prior to moving the drum or drums off-Site. For efficiency, as long as soil wouldn't designate as dangerous waste, it may be possible to coordinate disposal of both soil and purge groundwater from the Site at the same time.

Unfortunately, Washington State law prohibits me from recommending (or not recommending) any particular vendor, though I'm sure you are aware of plenty of options locally in Portland/Vancouver who could assist.

Thank you,

Tim

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300 Desmond Drive Southeast
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360-407-6265
Tim.Mullin@ecy.wa.gov

From: [Mullin, Tim \(ECY\)](#)
To: [Jim Cooper](#)
Subject: SW1581 phone call summary
Date: Monday, July 24, 2017 4:23:00 PM

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Tim.Mullin@ecy.wa.gov

From: [Jim Cooper](#)
To: [Mullin, Tim \(ECY\)](#)
Subject: RE: SW1581 - Today's Family Dentistry
Date: Monday, July 10, 2017 2:19:06 PM

Will do Tim. Thank you

Jim

From: Mullin, Tim (ECY) [mailto:TMUL461@ECY.WA.GOV]
Sent: Monday, July 10, 2017 2:17 PM
To: Jim Cooper <jim@alphaenvironmental.net>
Subject: SW1581 - Today's Family Dentistry

Hi Jim:

Thanks for the call this afternoon about SW1581 – Today's Family Dentistry. Per our call:

For the soil samples:

1. Total metals and hexavalent speciation
2. TCLP metals in soil only if total metals in soil concentrations warrant TCLP

Three monitoring wells installed at the Site. Waiting approximately two weeks for sampling.

Per previous communication, please use low flow groundwater sampling methodology. Sample for both total and dissolved metals in groundwater.

If you recollect differently, please let me know.

Thank you,
Tim

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360-407-6265
Tim.Mullin@ecy.wa.gov

From: [Mullin, Tim \(ECY\)](#)
To: [J. Blake Perkins](#); [Jim Cooper](#)
Cc: [Tim Mullin \(TMUL461@ecy.wa.gov\)](mailto:Tim.Mullin(TMUL461@ecy.wa.gov))
Subject: SW1581 meeting recap
Date: Friday, June 16, 2017 4:29:00 PM

Thank you both for your time today discussing VCP project #SW1581. Brief summary of our meeting (at least my recollection – let me know if you recall differently or propose revisions):

- 1) No written opinion requested at this time.
- 2) Site is just outside 10 year wellhead protection travel time zone to City of Vancouver well which is located to the southeast.
- 3) To the extent known, discussed historical operations at the Site and historical orchards in the area.
- 4) Former dentist office operated at Site from 1982-2004. Dr. Perkins acquired Site in 2004. Septic system removed in 2009 after sludge sampling indicated high metals concentrations. May have been former residence at Site before 1982, but have to verify with historical records.
- 5) Phase II ESA completed by Clark County in 2013, found arsenic, chromium, and lead in four grab groundwater samples exceeding MTCA Method A cleanup levels. Other metals detected but less than cleanup levels. Chromium in soil exceeded MTCA Method A hexavalent chromium cleanup level, but less than trivalent chromium cleanup level. Chromium concentrations in soil were approximately the Clark County background level of 27 milligrams per kilogram, as reported in Ecology's Publication No. 94-115, *Natural Background Soil Metals Concentrations in Washington State*.
- 6) Installing three permanent monitoring wells as soon as schedules permit in order to collect more information. As close as possible, install one well in NW corner of property, one well along southern property boundary, one well in center of property approximately in western bank of parking stalls.
 - a. Utility markout.
 - b. Likely direct push installation.
 - c. Soil samples (including shallow soil samples) and low flow groundwater monitoring samples.
 - d. Official guidance is to wait at least 48-72 hours to sample the monitoring wells after installation, recommend waiting closer to 2 weeks to let things settle after well install to ensure the most accurate metals concentrations in groundwater.
 - e. Recommend total and dissolved metals in groundwater. I noted total metals and TCLP metals for soil.
 - f. Start quarterly monitoring.
 - g. Survey monitoring wells.
 - h. Evaluate groundwater sampling results to determine next steps.
 - i. Will want to take note of marked utility locations from well install.
- 7) Alpha Environmental to look into availability of additional historical information.
- 8) Ecology to look into nearby Sites for availability of local groundwater gradient information.
- 9) EIM data upload in process as work proceeds.

Thank you,
Tim

Tim Mullin, LG
Voluntary Cleanup Program Site Manager
Southwest Region – Toxics Cleanup Program
Washington State Department of Ecology
300 Desmond Drive Southeast
Lacey, WA 98503
360-407-6265
Tim.Mullin@ecy.wa.gov

Enclosure C

Waste Manifest and Disposal Documentation

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number WAB000036938	2. Page 1 of 2	3. Emergency Response Phone 800-548-1613	4. Manifest Tracking Number 002822342 FLE	
5. Generator's Name and Mailing Address Today's Family Dentistry 2815 NE 112th Ave Vancouver, WA 98684 Generator's Phone: 360-897-7780				Generator's Site Address (if different than mailing address)		
6. Transporter 1 Company Name Waste Watch, Inc.				U.S. EPA ID Number OR0000086224		
7. Transporter 2 Company Name Savannah Transport, Inc.				U.S. EPA ID Number KS0000336891		
8. Designated Facility Name and Site Address EQ Detroit, Inc. 1923 Frederick Street Detroit, MI 48211 Facility's Phone: 313-923-8080				U.S. EPA ID Number MID980991566		
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		No.	Type			
1.	UN002, Waste Environmentally Hazardous Substances, Liquid, n.o.s., (acidity), 9, PGII	03	TP	825	g	D009
2.						
3.						
4.						
14. Special Handling Instructions and Additional Information 1) E104024DET, ER0171, jh04232						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offeror's Printed/Typed Name Dr. Blake Perkins				Signature 		Month Day Year 5 14 10
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
17. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Tim Ferrick				Signature 		Month Day Year 5 14 10
Transporter 2 Printed/Typed Name Jerome Godsey				Signature 		Month Day Year 5 14 10
18. Discrepancy						
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number: _____ U.S. EPA ID Number _____						
18b. Alternate Facility (or Generator) _____ U.S. EPA ID Number _____						
Facility's Phone: _____						
18c. Signature of Alternate Facility (or Generator)						Month Day Year
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.	2.	3.	4.			
1.	H141					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name Julie Gerich				Signature 		Month Day Year 5 14 10

GENERATOR
TRANSPORTER INT'L
DESIGNATED FACILITY

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator ID Number WAH000036438	22. Page 2	23. Manifest Tracking Number 002872342FLE		
24. Generator's Name Today's Family Dentist						
25. Transporter <u>3</u> Company Name EQIS			U.S. EPA ID Number MI0000263871			
26. Transporter <u>4</u> Company Name K-Com			U.S. EPA ID Number IND984957563			
27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers		29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes
		No.	Type			
Transportation Only						
32. Special Handling Instructions and Additional Information						
33. Transporter <u>3</u> Acknowledgment of Receipt of Materials						
Printed/Typed Name Shandi Lambert			Signature Shandi Lambert		Month Day Year 05 20 10	
34. Transporter <u>4</u> Acknowledgment of Receipt of Materials						
Printed/Typed Name MICHAEL E. MEREDITH			Signature Michael Meredith		Month Day Year 5 21 10	
35. Discrepancy						
36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						

GENERATOR

TRANSPORTER

DESIGNATED FACILITY



Generator Approval Notification

May 17, 2010

Customer: WASTE WATCH INC

Fax: (503) 465-1843

ENVIRONMENTAL MANAGER
TODAYS FAMILY DENTISTRY
2616 NE 112TH AVE
VANCOUVER, WA 98684

This Generator Approval Notification acknowledges the acceptability of waste material(s) into the EQ environmental protection facility identified below and ensures that this facility has the appropriate permit(s) issued by federal and state regulatory agencies to properly transport, treat, and/or dispose of the waste material(s).

EQ FACILITY: EQ Detroit, Inc. (MID980991566)
1923 Frederick, Detroit, MI 48211

Approval Number: E104024DET

Generator EPA ID: WAH000036438

Expires On: 05/11/2011

Waste Common Name: MERCURY SEPTIC SLUDGE

Comments:

Primary Waste Code: D009

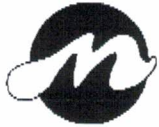
Secondary Waste Codes:

The Approval(s) listed above are based upon characterization information supplied to EQ by the Customer and the generator (if other than the Customer). The Customer is ultimately responsible for the accuracy and completeness of all such information, whether provided by the Customer or the generator. The Customer must notify the EQ Resource Team immediately upon knowledge of any changes to this information. This Approval and all wastes which are transported, delivered, or tendered to EQ under this Approval shall be subject to the attached Standard Terms and Conditions.

The Approval(s) will expire on the date(s) noted. Any new Approvals obtained from EQ on future business will be valid for a period of one (1) year from the date of issuance. Within 60 days of the Approval Expiration Date, you will be notified of the requirements for recertification.

YOUR BUSINESS. OUR SOLUTIONS. A PRODUCTIVE PARTNERSHIP®

Mail or fax to: EQ Detroit, Inc., 1923 Frederick, Detroit, MI 48211, Phone: 1-800-495-6059 Fax: 1-313-923-3375



Mercury Waste Solutions, Inc.

21211 Durand Avenue
Union Grove, Wisconsin 53182-9711
800-741-3343 or direct at (262)878-2599
262-878-2699 fax

Certificate of Disinfection

I certify that the material being shipped to Mercury Waste Solutions, Inc. (MWSI) has been disinfected or does not contain any organisms known to be a threat to human health, including Mycobacterium (the tuberculosis bacterium), the hepatitis B or the HIV-1 (AIDS) virus. If MWSI should discover by observation, culture or otherwise any of the above to be incorrect, then they may return the waste to me, at my expense

Date: 4/15/10

X Authorized Signature: [Signature]

Print name and title: Dr Blake Perkins

Company: Total Family Dentistry

Phone: 503-465-9683

Partial list of E.P.A. Registered Sterilants labeled for use against Mycobacterium SPP (Tubercle Bacilli)

Manufacturer	Product
Alcide Corp.	Alcide ABQ 4: 1: I-Base
	Alcide Exspor 4: 1: I-Base
Calgon Vestal Labs	Calgon-San,
Carroll Co.	Ocidc 200 Cleaner Disinfectant
Huntington Labs Inc.	Phenocide 128
	Phenocide 256
Hysan Corp,	C-Spra Disinfectant Deodorant Detergent
National Labs	Amphyl
	Amphyl Disinfectant Deodorant Detergent
Preserve International	Advantage 256 Cleaner Disinfectant Deodorant
Pharmaceutical Research Labs Inc.	Clidox-S Base
Spartan Chemical Co.	PD-64 Phenolic Base Cleaner & Disinfectant
Wave Energy Systems	Wavicide-01
West Chemical Products Inc.	Tamed Iodine Wesodyne G
Wexford Gas Inc.	Super Wex-Ccl Concentrated Germicidal Detergent
Wyeth-Ayerst Labs	Sonacide
Zep Manufacturing	Zep Formula 3387



WASTE MATERIAL PROFILE SHEET

Clean Harbors Profile No. CH431189

A. GENERAL INFORMATION

GENERATOR EPA ID #/REGISTRATION # **WAH000036438** GENERATOR NAME: **Today's Family Dentistry**
 GENERATOR CODE (Assigned by Clean Harbors) **TO2256** CITY **Vancouver** STATE/PROVINCE **WA** ZIP/POSTAL CODE **98684**
 ADDRESS **2616 NE 112th Ave** PHONE: **(360) 892-7780**
 CUSTOMER CODE (Assigned by Clean Harbors) **WA0416** CUSTOMER NAME: **Waste Watch LLC**
 ADDRESS **255B Depot St** CITY **Fairview** STATE/PROVINCE **OR** ZIP/POSTAL CODE **97024**

B. WASTE DESCRIPTION

WASTE DESCRIPTION: **Metal contaminated sludge**

PROCESS GENERATING WASTE (Please provide detailed description of process generating waste):

Septic sludge treated with bleach, contaminated with heavy metals

C. PHYSICAL PROPERTIES (at 25C or 77F)

PHYSICAL STATE SOLID WITHOUT FREE LIQUID POWDER MONOLITHIC SOLID LIQUID WITH NO SOLIDS LIQUID/SOLID MIXTURE % FREE LIQUID % SETTLED SOLID % TOTAL SUSPENDED SOLID <input checked="" type="checkbox"/> SLUDGE GAS/AEROSOL	NUMBER OF PHASES/LAYERS 1 2 3 TOP 0.00 % BY VOLUME (Approx.) MIDDLE 0.00 BOTTOM 0.00				VISCOSITY (if liquid present) 1 - 100 (e.g. Water) 101 - 500 (e.g. Motor Oil) 501 10,000 (e.g. Molasses) > 10,000		COLOR dark
	ODOR <input type="checkbox"/> NONE <input checked="" type="checkbox"/> MILD <input type="checkbox"/> STRONG Describe:		BOILING POINT °F (°C) <= 95 (<-35) 95 - 100 (35-38) 101 - 129 (38-54) >= 130 (>54)		MELTING POINT °F (°C) <input type="checkbox"/> < 140 (<60) <input type="checkbox"/> 140-200 (60-93) <input checked="" type="checkbox"/> > 200 (>93)		TOTAL ORGANIC CARBON <input type="checkbox"/> <= 1% <input checked="" type="checkbox"/> 1-9% <input type="checkbox"/> >= 10%
FLASH POINT °F (°C) < 73 (<23) 73 - 100 (23-38) 101 - 140 (38-60) 141 - 200 (60-93) > 200 (>93)	pH <= 2 2.1 - 6.9 7 (Neutral) <input checked="" type="checkbox"/> 7.1 - 12.4 >= 12.5	SPECIFIC GRAVITY < 0.8 (e.g. Gasoline) 0.8-1.0 (e.g. Ethanol) 1.0 (e.g. Water) 1.0 1.2 (e.g. Antifreeze) <input checked="" type="checkbox"/> > 1.2 (e.g. Methylene Chloride)	ASH < 0.1 0.1 - 1.0 1.1 - 5.0 <input checked="" type="checkbox"/> 5.1 - 20.0		BTU/LB (MJ/kg) <input checked="" type="checkbox"/> < 2,000 (<4.6) 2,000-5,000 (4.6-11.6) 5,000-10,000 (11.6-23.2) > 10,000 (>23.2) Actual:		

D. COMPOSITION (List the complete composition of the waste, include any inert components and/or debris. Ranges for individual components are acceptable. If a trade name is used, please supply an MSDS. Please do not use abbreviations.)

CHEMICAL	MIN	MAX	UOM
SAND, DIRT, GRIT, STONES	3.0000000	15.0000000	%
SODIUM HYPOCHLORITE	11.0000000	13.0000000	%
WATER	75.0000000	85.0000000	%

DOES THIS WASTE CONTAIN ANY HEAVY GAUGE METAL DEBRIS OR OTHER LARGE OBJECTS (EX., METAL PLATE OR PIPING >1/4" THICK OR >12" LONG, METAL REINFORCED HOSE >12" LONG, METAL WIRE >12" LONG, METAL VALVES, PIPE FITTINGS, CONCRETE REINFORCING BAR OR PIECES OF CONCRETE >3")? YES NO

If yes, describe, including dimensions:

DOES THIS WASTE CONTAIN ANY METALS IN POWDERED OR OTHER FINELY DIVIDED FORM? YES NO

DOES THIS WASTE CONTAIN OR HAS IT CONTACTED ANY OF THE FOLLOWING; ANIMAL WASTES, HUMAN BLOOD, BLOOD PRODUCTS, BODY FLUIDS, MICROBIOLOGICAL WASTE, PATHOLOGICAL WASTE, HUMAN OR ANIMAL DERIVED SERUMS OR PROTEINS OR ANY OTHER POTENTIALLY INFECTIOUS MATERIAL? YES NO

I acknowledge that this waste material is neither infectious nor does it contain any organism known to be a threat to human health. This certification is based on my knowledge of the material. Select the answer below that applies:

The waste was never exposed to potentially infectious material. YES NO

Chemical disinfection or some other form of sterilization has been applied to the waste. YES NO

I ACKNOWLEDGE THAT THIS PROFILE MEETS THE CLEAN HARBORS BATTERY PACKAGING REQUIREMENTS. YES NO

I ACKNOWLEDGE THAT MY FRIABLE ASBESTOS WASTE IS DOUBLE BAGGED AND WETTED. YES NO

SPECIFY THE SOURCE CODE ASSOCIATED WITH THE WASTE. **G14**

SPECIFY THE FORM CODE ASSOCIATED WITH THE WASTE. **W609**



E. CONSTITUENTS

Are these values based on testing or knowledge?

Knowledge Testing

If based on knowledge, please describe the rationale applied to identify and characterize the waste material (ex., include reference to Material Safety Data Sheets, process considerations, operating procedures).

Please indicate which constituents below apply. Concentrations must be entered when applicable to assist in accurate review and expedited approval of your waste profile. Please note that the total regulated metals and other constituents sections require answers.

Table with columns: RCRA, REGULATED METALS, REGULATORY LEVEL (mg/l), TCLP mg/l, TOTAL, UOM, NOT APPLICABLE. Rows include ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD, MERCURY, SELENIUM, SILVER, VOLATILE COMPOUNDS (BENZENE, CARBON TETRACHLORIDE, etc.), SEMI-VOLATILE COMPOUNDS (o-CRESOL, m-CRESOL, etc.), and PESTICIDES AND HERBICIDES (ENDRIN, LINDANE, etc.).

HOCs section with checkboxes for NONE, < 1000 PPM, and >= 1000 PPM.

PCBs section with checkboxes for NONE, < 50 PPM, and >= 50 PPM, plus a question about TSCA 40 CFR 761.

ADDITIONAL HAZARDS

DOES THIS WASTE HAVE ANY UNDISCLOSED HAZARDS OR PRIOR INCIDENTS ASSOCIATED WITH IT, WHICH COULD AFFECT THE WAY IT SHOULD BE HANDLED?

YES NO (if yes, explain)

CHOOSE ALL THAT APPLY

- DEA REGULATED SUBSTANCE, EXPLOSIVE, FUMING, OSHA REGULATED CARCINOGENS, POLYMERIZABLE, RADIOACTIVE, REACTIVE MATERIAL, NONE OF THE ABOVE



F. REGULATORY STATUS

YES NO USEPA HAZARDOUS WASTE?
D009

YES NO DO ANY STATE WASTE CODES APPLY?
WT02
 Texas Waste Code

YES NO DO ANY CANADIAN PROVINCIAL WASTE CODES APPLY?

YES NO IS THIS WASTE PROHIBITED FROM LAND DISPOSAL WITHOUT FURTHER TREATMENT PER 40 CFR PART 268?
 LDR CATEGORY: **This is subject to LDR.**
 VARIANCE INFO:

YES NO IS THIS A UNIVERSAL WASTE?

YES NO IS THE GENERATOR OF THE WASTE CLASSIFIED AS CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR (CESQG)?

YES NO IS THIS MATERIAL GOING TO BE MANAGED AS A RCRA EXEMPT COMMERCIAL PRODUCT, WHICH IS FUEL (40 CFR 261.2 (C)(2)(II))?

YES NO DOES TREATMENT OF THIS WASTE GENERATE A F006 OR F019 SLUDGE?

YES NO IS THIS WASTE STREAM SUBJECT TO THE INORGANIC METAL BEARING WASTE PROHIBITION FOUND AT 40 CFR 268.3(C)?

YES NO DOES THIS WASTE CONTAIN VOC'S IN CONCENTRATIONS >=500 PPM?

YES NO DOES THE WASTE CONTAIN GREATER THAN 20% OF ORGANIC CONSTITUENTS WITH A VAPOR PRESSURE > .3KPA (.044 PSIA)?

YES NO DOES THIS WASTE CONTAIN AN ORGANIC CONSTITUENT WHICH IN ITS PURE FORM HAS A VAPOR PRESSURE > 17 KPA (11.2 PSIA)?

YES NO IS THIS CERCLA REGULATED (SUPERFUND) WASTE ?

YES NO IS THE WASTE SUBJECT TO ONE OF THE FOLLOWING NESHAP RULES?
 Hazardous Organic NESHAP (HON) rule (subpart G) Pharmaceuticals production (subpart GGG)

YES NO IF THIS IS A US EPA HAZARDOUS WASTE, DOES THIS WASTE STREAM CONTAIN BENZENE?
 YES NO Does the waste stream come from a facility with one of the SIC codes listed under benzene NESHAP or is this waste regulated under the benzene NESHAP rules because the original source of the waste is from a chemical manufacturing, coke by-product recovery, or petroleum refinery process?
 YES NO Is the generating source of this waste stream a facility with Total Annual Benzene (TAB) >10 Mg/year?
 What is the TAB quantity for your facility? _____ Megagram/year (1 Mg = 2,200 lbs)
 The basis for this determination is: Knowledge of the Waste Or Test Data Knowledge Testing
 Describe the knowledge : _____

G. DOT/TDG INFORMATION

DOT/TDG PROPER SHIPPING NAME:

UN3082, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S., (MERCURY, ZINC), 9, PG III

H. TRANSPORTATION REQUIREMENTS

ESTIMATED SHIPMENT FREQUENCY ONE TIME WEEKLY MONTHLY QUARTERLY YEARLY OTHER **300 gals per tote**

<input checked="" type="checkbox"/> CONTAINERIZED 4-5 CONTAINERS/SHIPMENT	<input type="checkbox"/> BULK LIQUID GALLONS/SHIPMENT: 0 Min -0 Max	<input type="checkbox"/> BULK SOLID SHIPMENT UOM: TON YARD TONS/YARDS/SHIPMENT: 0 Min - 0 Max
STORAGE CAPACITY: CONTAINER TYPE: CUBIC YARD BOX PALLET	<input checked="" type="checkbox"/> TOTE TANK DRUM	
OTHER: DRUM SIZE: 300		

I. SPECIAL REQUEST

COMMENTS OR REQUESTS:

We needed to use 330 gal size totes, BUT we only filled to 300 gallons to meet 300 gal max for pricing requirements

GENERATOR'S CERTIFICATION

I hereby certify that all information submitted in this and attached documents is correct to the best of my knowledge. I also certify that any samples submitted are representative of the actual waste. If Clean Harbors discovers a discrepancy during the approval process, Generator grants Clean Harbors the authority to amend the profile, as Clean Harbors deems necessary, to reflect the discrepancy.

AUTHORIZED SIGNATURE	NAME (PRINT)	TITLE	DATE
<u>wwatch@earthlink.net</u>	_____	_____	<u>4/12/2010</u>

This waste profile has been submitted using Clean Harbors' electronic signature system.

Enclosure D

Table 749-1

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, earth-worms, 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.		
<u>Area (acres)</u>	<u>Points</u>	8
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	
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.		4
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).		12

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.



January 22, 2019

Dear S L:

The following is in response to your request for proof of delivery on your item with the tracking number:
9489 0090 0027 6019 1347 32.

Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	June 14, 2018, 2:56 pm
Location:	VANCOUVER, WA 98684
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™ Return Receipt Electronic
Recipient Name:	dr j blake perkins

Shipment Details

Weight:	6.1oz
----------------	-------

Recipient Signature

Signature of Recipient:

Address of Recipient:

811 112th
1st

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004