

Letter Health Consultation

Hamilton Centerpoint Site Eatonville, Pierce County, Washington

March 17, 2014

Prepared by

**The Washington State Department of Health
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry**



Foreword

The Washington State Department of Health (DOH) prepared this health consultation under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is part of the U.S. Department of Health and Human Services. ATSDR is responsible for health issues related to hazardous substances.

The purpose of a health consultation is to assess the health threat posed by hazardous substances in the environment. If needed, a health consultation will also recommend steps or actions to protect public health. Health consultations are initiated in response to health concerns raised by residents or agencies about exposure to hazardous substances.

This health consultation was prepared in accordance with ATSDR methodologies and guidelines. However, the report has not been reviewed and cleared by ATSDR. The findings in this report are relevant to conditions at the site during the time the report was written. It should not be relied upon if site conditions or land use changes in the future.

Use of trade names is for identification only and does not imply endorsement by state or federal health agencies.

For additional information, please contact us at 1-877-485-7316 or visit our web site at www.doh.wa.gov/consults.

For persons with disabilities this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY call 711).

For more information about ATSDR, contact the CDC Information Center at 1-800-CDC-INFO (1-800-232-4636) or visit the agency's web site at www.atsdr.cdc.gov.



STATE OF WASHINGTON

DEPARTMENT OF HEALTH

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March 17, 2014

Ms. Rebecca Lawson
Washington Department of Ecology
Toxics Cleanup Program
Southwest Regional Office
PO Box 47775
Olympia, Washington 98504-7775

Re: Letter Health Consultation
Preliminary Health Assessment
Hamilton Centerpoint Site
Eatonville, Pierce County, Washington

Dear Ms. Lawson:

The Washington Department of Health (DOH) conducted a health consultation for the Hamilton Centerpoint site. It is one of a number of sites where the Washington Department of Ecology (Ecology) completed a Site Hazard Assessment (SHA) in 2013. Consistent with the agreement between DOH and Ecology regarding SHAs, DOH completed a preliminary health assessment of the site, which included evaluating Ecology's SHA site documentation.(1)

DOH found that contaminated soil and groundwater at the site lie within the Town of Eatonville's well head protection area. The town's public water supply wells serve the Eatonville community, including residents, businesses, schools, and daycares.(2) DOH cannot currently conclude whether the site could harm people's health because the site has not been well characterized. DOH recommends additional site investigation including monitoring well installation and testing.

DOH conducts health consultations under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR).

Background and Statement of Issues

The Hamilton Centerpoint site is an approximately 33-acre vacant parcel (parcel number 0416231052) located at 349 Madison Avenue South in Eatonville.(3) The property is bordered

by Madison Avenue South and vacant land to the west, vacant land to the north, Weyerhaeuser Road South and Town of Eatonville Water Department property to the east, and the Mashel River to the south (Figure 1).

The Hamilton Centerpoint site is part of the approximately 63-acre former Eatonville Lumber Company property, which included a saw mill and related structures. The lumber company operated from about 1907 to 1954. Dry kilns, railroad tracks and spurs, railroad round house, oil houses, machine shop, garages, and a repair shed appear to have been part of the lumber company operation (Figure 2). The lumber company reportedly did not treat their wood or wood products; however, that information has not been verified. Between approximately 1960 and 1990, the former lumber company property was reportedly used as a chicken farm. Based on available information, it appears that a significant part of the lumber company and some of the chicken farm operation occurred on the Hamilton Centerpoint site.(4)

Limited environmental investigations were conducted at the Hamilton Centerpoint site between 2003 and 2010. During those investigations, some of the former lumber company and chicken farmer operations were identified as sources or potential sources of site contamination. However, the site was never fully characterized.(4-6)

An underground storage tank (UST) containing bunker fuel was identified in the northwestern portion of the site in 2003 (Figure 3).(4) The UST, which was an approximately 14,000 gallon poured in-place concrete tank, was decommissioned and demolished in 2010. At the time of the decommissioning, the UST contained approximately 2,765 gallons of bunker fuel that was classified as “bunker C.” It was assumed that the bunker fuel was used to fuel locomotives at the former lumber company.(6) Diesel and oil range hydrocarbons were found in the soil in the vicinity of the former UST and visible petroleum was observed in groundwater.(5;6) However, no estimate of the amount of petroleum that might have been released to the soil or groundwater has been made.

Groundwater in the vicinity of the former UST was reported as approximately 17 to 18 feet below ground surface (bgs) in September 2010.(6) Groundwater at the site likely flows in a southerly direction, toward the Mashel River.(5;6) However, no monitoring wells exist at the site to confirm groundwater flow direction or to evaluate the impact of the petroleum release on groundwater quality.

The former UST was located approximately 1,100 feet northeast of some of the Town of Eatonville’s public water supply wells (Wells 1, 2, 6, and 7) (Steve McKasson, Eatonville Water Department, personal communication, February 14, 2014) and within the town’s well head protection area.(4;6). These four water supply wells are located on Water Department property (Figure 3) and range in depth from 38 to 74 feet.(7) Some Town of Eatonville abandoned/emergency wells (Wells 3, 4 and 5) are located approximately 1,500 feet east of the other four wells (Steve McKasson, Eatonville Water Department, personal communication, February 14, 2014).

The Tacoma-Pierce County Health Department has been concerned since 2010 that the UST release poses a threat to Town of Eatonville’s water supply wells.(3)

Discussion

Results

Petroleum has been observed in shallow groundwater and available soil data indicate that diesel and oil range hydrocarbons have been released to deeper soils in the vicinity of the former UST (Table 1).

Table 1: Hamilton Centerpoint, Eatonville, Pierce County, Washington - September 2010 Soil Petroleum Sampling Results (5;6)

Sampling Date	Number of Soil Samples	Approximate Sample Depth (feet bgs)	Petroleum Hydrocarbon Range Tested	Concentration Range (mg/kg)	MTCA Method A Soil Cleanup Level(8) (mg/kg)
2006	4	10	Diesel	2,600 – 38,000	2,000
			Oil	1,500 - 31,000	2,000
2010	12	7- 20	Diesel	ND	2,000
			Oil	2,680 - 51,800	2,000

bgs – below ground surface, mg/kg – milligrams per kilogram, ND – not detected (the detection limits were not provided), MTCA – Model Toxics Control Act

DOH typically uses ATSDR screening values to assess the possible health threat posed by a site. However, ATSDR does not have soil screening values for assessing whether contaminant levels in soil could affect groundwater quality. As a result, DOH used the Washington Model Toxics Control Act (MTCA) Method A soil cleanup levels as screening levels for diesel and oil range hydrocarbons detected at the site. The Method A cleanup levels are based on preventing the accumulation of free petroleum in groundwater.(8)

Most of the soil samples collected in the vicinity of the former UST contained petroleum that exceed the MTCA Method A soil cleanup levels. Soil petroleum concentrations exceeding these levels, along with the free petroleum found in shallow groundwater, indicate the UST release poses an ongoing threat to groundwater. Additionally, some diesel and oil constituents (benzene compounds (e.g., n-butylbenzene), naphthalene, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) (e.g., chrysene)) were also detected in soil. These compounds may also pose a threat to groundwater.

Exposure Pathway

The petroleum contaminated soil and groundwater identified in the vicinity of the former UST are located in the Town of Eatonville’s well head protection area, posing a potential threat to the four shallow public water supply wells located on the town’s water department property, adjacent to the southeast corner of the site. Other contaminants may also exist at the site. The town’s public water supply wells serve the Eatonville community, including residents, businesses, schools, and daycares.(2)

Potential Diesel and Oil Health Effects

Diesel and oil range hydrocarbons contain hundreds of chemical compounds. The compounds found in these hydrocarbons can vary depending on the source of the crude oil used to create these products. Health effects from exposure to diesel and oil depend on many factors. These include the types of chemical compounds found in those products, how long the exposure lasts, and the amount of the chemicals someone might be exposed to.

Data Gaps

Two data gaps exist for this site:

- The nature and extent of soil and groundwater contamination associated with the former lumber company UST has not been determined.
- No analytical data are available to indicate whether other former lumber company or chicken farm activities conducted at the Hamilton Centerpoint site have resulted in the release of contaminants to soil and/or groundwater.

Conclusions

DOH cannot currently conclude whether the site could harm people's health. The information we need to make a decision is not available.

Recommendations

Because the site poses a potential threat to groundwater and some of the Town of Eatonville's public water supply wells, DOH recommends additional investigation including monitoring well installation and testing.

DOH appreciates the opportunity to assist Ecology with the Hamilton Centerpoint site. Please contact me at 360-236-3373 if you have any questions.

Sincerely,

Barbara Trejo
Health Assessor
Hydrogeologist LG, LHG
Site Assessments and Toxicology Section

cc: Joanne Snarski, Department of Health
Mike Means, Department of Health
Steve Hulsman, Department of Health
Tony Ohrazda, Tacoma Pierce County Health Department
Steve McKasson, Town of Eatonville Water Department



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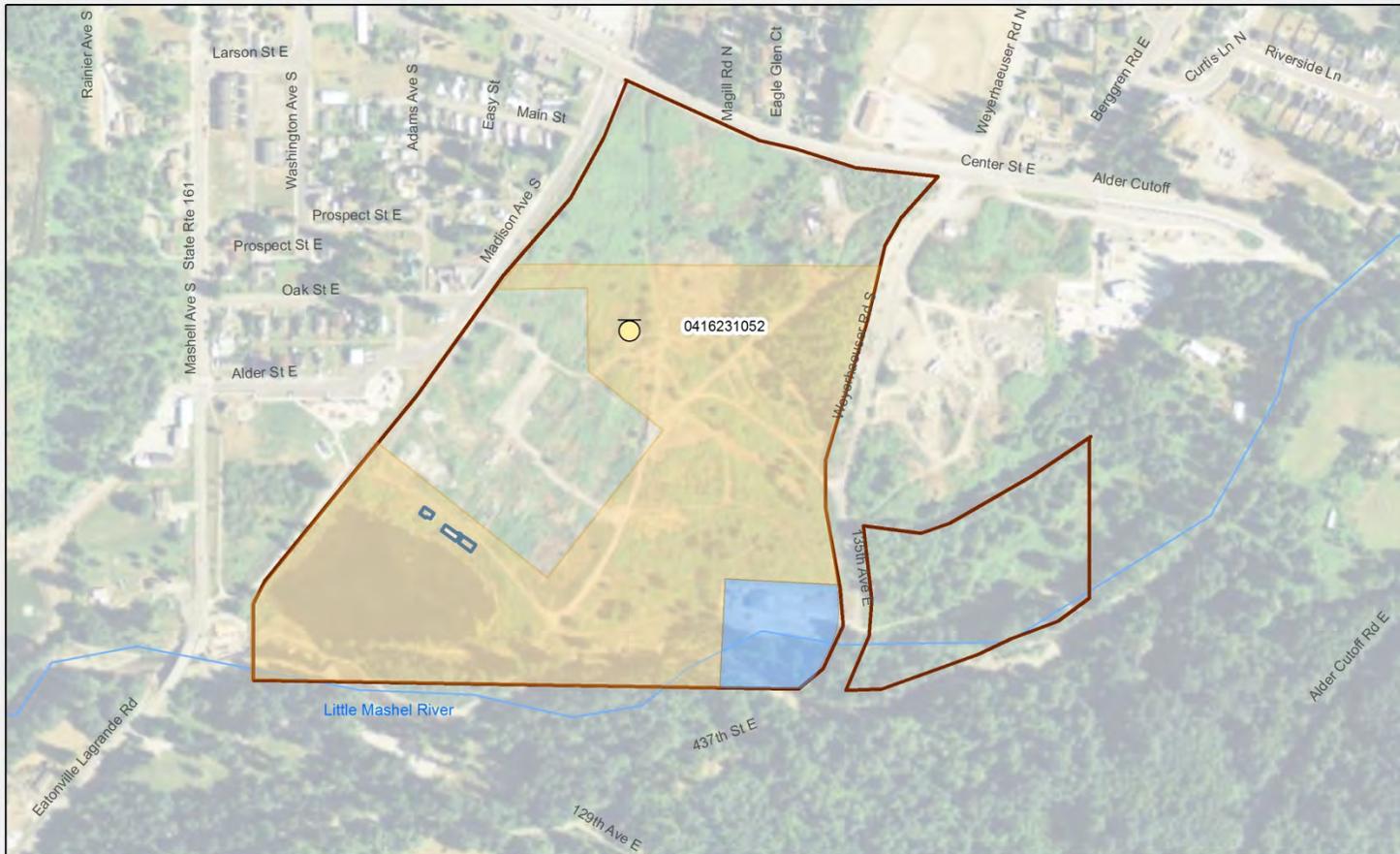


Legend

- Hamilton Centerpoint Site
 - Other Parcels
- 0 300 600
 Feet

Vicinity Map
 Hamilton Centerpoint Site
 Eatonville, WA

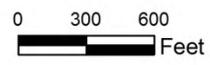
Figure
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2/26/2014 Background Imagery: AroGIS NAIP2011
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Legend

- Hamilton Centerpoint Site
- Town of Eatonville Water Department
- Other Parcels
- Approximate Former Eatonville Lumber Company Boundary
- Approximate Former Underground Storage Tank Location



Hamilton Centerpoint Site Eatonville, WA	Figure 3
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Reference List

1. Washington Department of Ecology and the Department of Social and Health Services. Procedural Agreement Regarding Health Activities Around Hazardous Waste Cleanup Sites. 1990 Mar 26.
2. Town of Eatonville. Water Facilities Inventory Form. 2013 Jul 1.
3. Washington Department of Ecology. Site Hazard Assessment (Worksheets 1, 2, and 6). 2013 Jun 10.
4. GeoEngineers. Phase I Environmental Site Assessment. 2003 Sep 12.
5. E3RA Inc. Limited Phase II Environmental Site Assessment. 2006 Apr 7.
6. Robinson Noble I. Madison Avenue Property Storage Tank, Contamination Investigation. 2010 Nov 23.
7. Town of Eatonville. Water Facilities Inventory. 2013 Jul 1.
8. Washington Department of Ecology. Model Toxics Control Act Statute and Regulation. 2007 Nov. Report No.: Publication Number 94-06.