

Health Consultation

NORTHEAST DREAM CENTER
(AKA FORMER WEBSTER RUBBER SITE)
SABATTUS, ANDROSCOGGIN COUNTY, MAINE

EPA FACILITY ID: MED051429587

SEPTEMBER 25, 2009

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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HEALTH CONSULTATION

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Prepared By:

U.S. Department of Health and Human Services
Agency for Toxic Substances and Disease Registry

Statement of Issues

The U.S. Environment Protection Agency (EPA) Region I requested the Agency for Toxic Substances and Disease Registry (ATSDR) evaluate environmental data collected at the Northeast Dream Center site (former Webster Rubber site) located at 10 Greene Street, Sabattus, Maine [ATSDR 2009]. Specifically, EPA requested ATSDR review only the levels of polycyclic aromatic hydrocarbons (PAHs) in soil samples and determine whether the levels pose a health hazard to trespassers.

This EPA request is being managed by ATSDR under the “Strike” process, which is a rapid-response, focused effort that does not include comprehensive review of the technical memorandum, site contaminants, and exposure pathways.

Site Description and History

Due to a complaint that on-site containers of hazardous materials were leaking, the Maine Department of Environmental Protection (MEDEP) conducted a site inspection in January 2009 [MEDEP 2009].

Webster Rubber notified the Environmental Protection Agency (EPA) in 1980 that it was a small quantity generator of hazardous waste. A subsequent notification was filed with EPA in 1995 indicating that the facility was no longer a generator of hazardous waste. MEDEP’s hazardous waste manifest databases were searched by MEDEP staff and no record of hazardous waste being shipped from the facility was found. The facility manufactured rubber products including shoe soles.

In 1986, the property was sold to Bee Bee Rubber who presumably continued manufacturing operations. In 1995, the property was sold to Showme Inc. who according to the Town of Sabattus, ran a puppet theater in the facility [MEDEP 2009]. In 1989, the site was listed on the National Registry of Historic Places. In 2006, the property was gifted to the Northeast Dream Center.

The Northeast Dream Center is an organization that works with former prisoners, teaching them woodworking skills. They had plans to use the manufacturing area for a woodworking shop. The Northeast Dream Center is listed with the Secretary of State as an administratively dissolved non profit corporation. Showme Inc. is listed as a company in good standing.

In January 2009 (at the time of the inspection), MEDEP reported the site was not being used or occupied. The site has several buildings located directly adjacent to the Sabattus River. A large brick building contained several floors of former manufacturing space. The brick building was connected, via a covered elevated walkway, to a wooden structure located closer to the road [Attachment 1]. Adjacent to the wooden structure was a smaller free standing garage structure. Due to the heavy snow the garage structure and the perimeter of the site could not be inspected. MEDEP reported that the buildings at the site are in poor condition and made the following observations:

- Many broken windows
- Evidence of numerous roof leaks and widespread water damage

- Raccoons living in the buildings
- Evidence of homeless inside the buildings
- Products associated with rubber manufacturing
- Miscellaneous equipment and debris
- Containers used to collect roof leaks
- Roofing repair products
- An old X-ray machine (labeled “Caution X-ray No Smoking”)
- Many containers of enamels and latex (Approximately 35 gallons of waste paint)
- Approximately 175 gallons of boiler treatment chemicals
- Seven boxes of unknown material (all leaking -“sludge-like mass of brown/black material”) and
- Eighteen garbage bags of fibrous solid material, possible asbestos.

Discussion

The Northeast Dream Center site is in the process of being prioritized by the EPA for a removal action this fiscal year. The site is located in a residential neighborhood and is easily accessible to the public [Attachment 1]. The on-site buildings were locked (at the time of the MEDEP inspection), but there have been signs of trespassers in the buildings. The site is lightly vegetated with some gravel and grass covered areas.

EPA collected 10 composite surface (0-3 inches) soil samples around the south, southwest, and west perimeters of the buildings [Attachment 1]. Each sampling point is a five point composite soil sample. These soil samples were analyzed for many different compounds but this document will only evaluate PAHs.

PAHs include hundreds of different chemicals that commonly occur as mixtures in the environment. The most potent and best studied PAH is benzo(a)pyrene (B(a)P). Therefore, B(a)P was used as a surrogate to assess the relative toxicity of PAHs in soil. In determining the toxicity of a mixture of PAHs, the concentration of each PAH is multiplied by a Toxic Equivalency Factor (TEF) which relates its toxicity to that of B(a)P. The sum of all weighted concentrations is used to assess the potential health risks of the PAH mixture and for this site, that concentration is 73.3 milligrams per kilogram (mg/kg) [EPA 1993, Cal EPA 2005].

The most significant exposure route at this site is incidental ingestion of soil. Using the exposure scenario for an adult trespasser (70 kilogram (kg) adult ingesting 100 milligrams soil per day (mg/day) for 3 days a week for 28 weeks, and 73.3 mg/kg of PAHs), the estimated exposure dose of PAHs was 0.000024 mg/kg/day. Because the site is located in a residential area, ATSDR also calculated the exposure dose for an elementary-aged child. Using the exposure scenario of a 35.6 kg child ingesting 200 mg/day for 3 days a week for 28 weeks, and 73.3 mg/kg of PAHs, the estimated exposure

dose of PAHs was 0.000094 mg/kg/day. Although no MRL or RfD has been derived for PAHs, there are lowest-observed-adverse-effect-levels (LOAELs) and no-observed-adverse-effect-level (NOAELs) available [ATSDR 1995]. An intermediate NOAEL of 1.3 mg/kg/day was observed for mice exposed to B(a)P. The LOAEL (2.6 mg/kg/day) is based upon the appearance of gastric tumors. Systemic effects occurred at much higher exposure doses in acute and intermediate duration exposures [ATSDR 1995]. The estimated exposure doses for both adults and elementary-aged children of PAHs in soil are several orders of magnitude below the NOAEL and LOAEL for B(a)P. Based on the exposure scenarios specific to this site, ATSDR does not expect exposure to PAHs in the soil to result in non-cancer adverse health effects.

B(a)P, along with several other PAHs, have been classified by the EPA as a “probable human carcinogen” [ATSDR 1995]. Human data specifically linking B(a)P, or any other PAHs, to a carcinogenic effect are lacking. Although lung cancer has been found in humans who had received exposure to various mixtures of PAHs known to contain B(a)P – including cigarette smoke, roofing tar, and coke oven emissions – it is not possible to conclude from this information that B(a)P, or any other of the PAHs, is the responsible agent [ATSDR 1995].

Ingestion of soil is not a chronic exposure pathway (365 days per year, for life); therefore no significant increase in cancer risk is expected.

Other Hazards

Although an evaluation of other hazards is outside the purview of this Strike Team response, ATSDR notes that several physical hazards inside the buildings exist (e.g. extensive water damage, X-ray machine, and unknown chemicals).

Conclusions and Recommendations

Based on the surface soil samples and exposure scenarios evaluated, ATSDR concludes that exposure to PAHs in soil at the Northeast Dream Center site does not pose a public health hazard to trespassers.

ATSDR recommends the current site owners continue to lock on-site buildings to protect trespassers from entering and being exposed to the physical hazards inside the buildings.

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References

- [ATSDR] Agency for Toxic Substances and Disease Registry. 1995. Toxicological profile for polycyclic aromatic hydrocarbons. August 1995. Atlanta: US Department of Health and Human Services.
- [ATSDR] Agency for Toxic Substances and Disease Registry. 2009. August 19th electronic mail from Gary Perlman, ATSDR, to Danielle Langmann, ATSDR, regarding a Strike Team Request submitted by the US Environmental Protection Agency for the Northeast Dreams Center (former Webster Rubber Site) that included data tables and site maps. Boston, MA.
- [Cal EPA] California Environmental Protection Agency. 2005. Air toxics hot spots program, risk assessment guidelines, Part II, technical support document for describing available cancer slope factors. Available from:
http://oehha.ca.gov/air/hot_spots/pdf/May2005Hotspots.pdf.
- [EPA] Environmental Protection Agency. 1993. Provisional guidance for quantitative risk assessment of polycyclic aromatic hydrocarbons. Available from:
<http://cfpub.epa.gov/ncea/raf/recordisplay.cfm?deid=49732>
- [MEDEP] Maine Department of Environmental Protection. 2009. Hazardous Waste Inspection Report for the Former Webster Rubber Site. February 3rd report sent by Chris Redmond to Michael Hudson, Supervisor, Hazardous Waste Enforcement Unit. Boston, MA.

Attachment 1



Figure 3

Sample Location Diagram

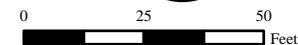
**Northeast Dream Center
10 Greene Street
Sabattus, Maine**

**EPA Region I
Superfund Technical Assessment and
Response Team (START) III
Contract No. EP-W-05-042**

TDD Number: 09-03-0012
Created by: L. BOLTE
Created on: 29 JUNE 2009
Modified by: L. BOLTE
Modified on: 29 JUNE 2009

LEGEND

-  Composite Samples
-  Site Boundary



Data Sources:

Imagery: ME GIS Aerials (hf411_4885)
Topos: MicroPath
All other data: START

