



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I  
ONE CONGRESS STREET, SUITE 1100  
BOSTON, MA 02114

**DATE:** MAR 26 2008

**SUBJ:** Site Investigation Closure Memorandum  
Birch Swamp Road Site  
Birch Swamp Road  
Warren, Rhode Island 02885

**FROM:** Melanie Morash, On-Scene Coordinator *Melanie Morash*  
Emergency Response and Removal Section II  
Emergency Planning and Response Branch

**THRU:** Steven R. Novick, Chief *[Signature]*  
Emergency Response and Removal Section II  
Emergency Planning and Response Branch

**TO:** Birch Swamp Road Site File

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In accordance with section 300.410 of the National Contingency Plan (NCP), a Removal Site Evaluation, consisting of a Preliminary Assessment and Site Investigation (PA/SI), has been undertaken at the Birch Swamp Road Site (Site) in Warren, Rhode Island. The findings of the Removal Site Evaluation have been evaluated under the criteria set forth in section 300.415 of the NCP, section 104(a) and (b) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604(a) and (b) and Clean Water Act (CWA) § 311(c)(i) as amended by the Oil Pollution Act (OPA) § 4201(a). The Removal Site Evaluation has led to the determination that a Removal Action is appropriate at this time.

The findings of the Removal Site Evaluation are outlined below.

1. Source and nature of the release or threat of release
  - a. The Removal Site Evaluation consisted of the following actions.
    - i. An EPA Site Inspection (SI) on March 21, 2008, conducted with representatives from the Rhode Island Department of Environmental Management (RIDEM), United States Coast Guard (USCG), and EPA's Superfund Technical Assessment and Response Team (START) contractor, Weston Solutions, Inc.

- ii. Review of analytical results generated by EPA following a Site Investigation on July 3, 11, and 12, 2007.
  - iii. The Site Investigation on July 3, 11, and 12, 2007.
  - iv. Review of a report submitted by RIDEM to EPA entitled "Preliminary Assessment/Site Inspection Report for Bristol Sandblasting – Warren, RI" dated September 2005.
  - v. Generation of a Preliminary Assessment/Site Investigation (PA/SI) report by EPA's START contractor entitled "Removal Program Preliminary Assessment/Site Investigation Report for the Birch Swamp Site" dated December 2007.
- b. Based on the information available at this time, the principal hazardous substances or pollutants or contaminants that are being released or for which there is threat of release include but are not necessarily limited to the list below.

c.

Hazardous Substances or Pollutants or Contaminants	Media
metals (lead)	surface soil
polychlorinated biphenyls (PCBs)	surface soil

2. Evaluation of the threat to public health, welfare and the environment

a. Federal Agency for Toxic Substances and Disease Registry:

Threat \_\_\_\_\_ No Threat \_\_\_\_\_ Evaluation Not Necessary  X

b. Endangerment to the ecosystem:

Threat \_\_\_\_\_ No Threat \_\_\_\_\_ Evaluation Not Necessary  X

3. The Removal Site Evaluation was terminated pursuant to section 300.410(f) of the NCP for the following reason(s).

- ( ) There is no release.
- ( ) The source is neither a "vessel" nor a "facility" as defined in section 300.5 of the NCP.
- ( ) The release involves neither a hazardous substance, nor a pollutant or contaminant that may present an imminent and substantial danger to public health or welfare of the United States.

- It is subject to the limitations on response specified in §300.400(b)(1) through (3). The release is
    - of a naturally occurring substance in its unaltered form, or altered solely through naturally occurring processes or phenomena, from a location where it is naturally found.
    - from products that are part of the structure of, and result in exposure within, residential buildings or businesses or community structures.
    - into public or private drinking water supplies due to deterioration of the system through ordinary use.
  - The amount, quantity, or concentration released does not warrant a Federal response.
  - A party responsible for the release, or any other person, is providing appropriate response, and on-scene monitoring by EPA is not required.
  - The Removal Site Evaluation is complete.
4. As reflected in Section 3, above, the Removal Site Evaluation was terminated due to its completion, and not for other reasons.
- a. The factors listed below, found in Section 300.415(b)(2) of the NCP, are applicable to this Site.
    - Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.
    - Actual or potential contamination of drinking water supplies or sensitive ecosystems.
    - Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.
    - High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.
    - Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.
    - Threat of fire or explosion.
    - The availability of other appropriate Federal or State response mechanisms to respond to the release.

- ( ) Other situations or factors that may pose threats to public health or welfare of the United States or the environment.

The existence of the conditions specified in Section 4.a., above, indicate that a Removal Action under section 300.415 of the NCP is necessary.

At the request of the Rhode Island Department of Environmental Management (RIDEM), EPA's Emergency Planning and Response Branch (EPRB) conducted a Removal Site Investigation (SI) at the Birch Swamp Road Site (Site) on July 3, 11, and 12, 2007. The property was operated as an automotive salvage yard and subsequently as a military surplus salvage yard for an unknown period of time, until at least the late 1980's.

The Birch Swamp Road Site was identified during a 2005 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Pre-Remedial Preliminary Assessment/Site Inspection (PA/SI) of an adjacent site, the Bristol Sandblasting Site, during which polychlorinated biphenyl (PCB)-, lead-, mercury- and semi-volatile organic compound (SVOC)-contaminated sediments of the Kickemuit River were identified. Due to the proximity of the Birch Swamp property to the Bristol Sandblasting Site, and the fact that the Kickemuit River (which borders the Birch Swamp Road Site to the east) is a public drinking water supply, RIDEM identified the Birch Swamp Road Site as another potential source of the sediment contamination, and requested the EPA Removal Program's help with investigating the Birch Swamp Road Site.

Surface soil samples collected during the PA/SI in July 2007 indicate elevated levels of metals (including, but not limited to, lead) and polychlorinated biphenyls (PCBs), exceeding RIDEM's Residential Direct Exposure Criteria (R-DEC) for soil.[1] The maximum concentration of lead detected was 7,000 ppm,[2] while the maximum concentration of PCBs detected was 59 ppm of Aroclor-1248.

RIDEM has requested EPA's assistance in removing the contamination present at the Site and conducting further investigation activities to fully characterize the extent of contamination on the property. The state does not possess the funding to initiate a removal action at the Site and has indicated to EPA that any wastes generated pursuant to a Superfund-lead removal action would be exempt from the RIDEM's Hazardous Waste Generation fees under the state's Hazardous Waste Regulations.

Access to the area of contamination, which is comprised of an open field and wooded and wetland areas, is unrestricted to both pedestrian and vehicular traffic. The Site appears to be used as a bike path to the adjacent Kickamuit river and as an area to drive all-terrain vehicles (ATVs). Residential properties border the Site to the north and south. Contaminated soils are exposed to the environment and may serve as a source of contamination to individuals who access the Site. According to the 2000 census, 179 people live within 1/4 mile of the Site, and 2,454 people are located within 1 mile of the Site.

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[1] The Rhode Island Department of Environmental Management Office of Waste Management's *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (as amended February 2004) lists the following Residential Direct Exposure Criteria: Lead in soil (150 ppm); PCBs in soil (10 ppm).

[2] ppm = parts per million

The Kickemuit River, which is a tributary of the Kickemuit (Warren) Reservoir drinking water supply – managed by the Bristol County Water Authority (BCWA) – flows along the eastern border of the Site. The source water protection area for this public water supply includes the land occupied by the Birch Swamp Road Site. The Kickemuit Reservoir accounts for approximately 40 percent of the overall system and serves an estimated 22,000 people. Annual precipitation in the area is at least 3 feet[3] and seasonal and weather-related changes in precipitation levels likely affect the volume and rate of drainage flow from the upland and wetland areas on the property to the river. A stream was observed during the March 21, 2008 Site Inspection, flowing overland from an apparent man-made pond on the property in a southeasterly direction to the Kickemuit River. This stream flows approximately 1,300 feet across the woodland area prior to draining into the river. Overland flow across the Site may direct contaminated drainage to the Kickemuit River, as well as the downstream drinking water reservoir.

According to RIDEM, the Birch Swamp Road area is not serviced by public water and residents utilize ground water for their drinking water supply. The majority of residents in the towns of Warren, Bristol and Barrington receive their drinking water BWCA, which operates the Kickemuit Reservoir. The public water supply intake for the Kickemuit Reservoir is less than ½ mile downstream from the Site. Thus the contamination present in surface soils at the Site poses a threat of contamination to local drinking water supplies.

- b. In light of the magnitude of the threat or potential threat to health, welfare, or the environment, the appropriate categorization of a Removal Action at this Site is:

Emergency\_\_\_ Time-Critical\_\_X\_\_ Non Time-Critical\_\_\_\_\_

5. As reflected in Section 3, above, the Removal Site Evaluation was terminated due to its completion, and not for other reasons.
- a. As found in section 300.410(e)(1) of the NCP, the OSC shall determine whether a release governed by CWA section 311(c)(1), as amended by OPA section 4201(a), has occurred.
- ( ) There is a release, or potential threat of release, as governed by the CWA as amended by OPA.
- (X) There is not a release, or potential threat of release, as governed by the CWA as amended by OPA.
- b. The absence of the conditions specified in Section 5.a., above, indicate that an Oil Spill Response under Appendix E to Part 300 of the NCP **is not** necessary. The available reports, data, and PA/SI did not indicate the presence of oil on the property. Therefore this site does not involve OPA at this time.

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[3] RIDEM report entitled *Preliminary Assessment/Site Inspection Report for Bristol Sandblasting, Warren, RI*, dated September 2005.

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