

Berry's Creek (Ventron/Velsicol Superfund Site)

Site Description

The Ventron/Velsicol Superfund Site is located in a densely populated and industrialized area in Woodbridge Borough, Bergen County, New Jersey. Berry's Creek (a portion of the Ventron/Velsicol Site) runs from the Teterboro Airport, through the Meadowlands Sport Complex, and eventually flows into the Hackensack River. The Berry's Creek Study Area consists of the Berry's Creek Canal, the original natural course of Berry's Creek, all tributaries to Berry's Creek from the headwaters to the Hackensack River and wetlands connected to Berry's Creek.

In 2006 a Remedial Investigation and Feasibility Study (RI/FS) was conducted on the plant property and a Proposed Plan was released for public review. The United States Environmental Protection Agency (EPA) developed a framework for the investigations of Berry's Creek, provided it to the companies responsible for the studies and negotiated the work to be conducted. The investigative studies were anticipated to commence in summer 2007, but due to time constraints, the RI/FS has not started. Scoping activities are underway to collect observational data and bathymetry.

Site History

The Ventron/Velsicol Site was a chemical processing operation from 1929 until it closed in 1974. Discharges from the Ventron/Velsicol Facility are reported to have contaminated Berry's Creek with mercury and other chemicals.

According to the EPA, there may be buried process waste materials on the Ventron/Velsicol property near the creek, and mercury from these materials discharged into the creek and nearby lands via drainage ditches (EPA Region 2, 2006).

From circa 1929 until 1974, approximately 2 to 4 pounds of mercury drained from the facility into Berry's Creek each day (NJDEP, 2002).

Potential Responsible Parties (PRPs)

Ventron/Velsicol (now Morton International, Inc., a subsidiary of Rohm and Haas) was assigned responsibility for the contamination of Berry's Creek and the surrounding area in a recent court case (Malcolm Pirnie, 2005).

Threat and Contaminants

The sediments and surface water of Berry's Creek are contaminated with mercury.

- The concentration of mercury in Berry's Creek is among the highest known in freshwater ecosystems nationwide (EPA Region 2, 2006). This mercury is classified as methyl mercury.
- Studies conducted by the New Jersey Department of Environmental Protection (NJDEP) for the period 1978 to 1980 documented the presence of mercury in fish.
- Exposure to site-related contaminants could occur by ingestion of or direct contact with the water or sediments in the creek. Exposure to mercury via consumption of organisms in Berry's Creek may impact humans and wildlife.
- Site-related contaminants have migrated to the neighboring wetlands (EPA Website, 2006).

Cleanup Approach

The Ventron/Velsicol Site is being addressed as two operable units:

- The first phase will address the soils and groundwater on the 40-acre Ventron/Velsicol Site (Operable Unit 1 [OU1]).
- The second phase will address the marsh, wetlands areas and related waterways (OU2) (Malcolm Pirnie, 2005).

The remedy for the upland portion OU1 was selected by the EPA in the October 2006 ROD calling for:

- Installation of a vertical hydraulic barrier to address groundwater.
- Excavation and off-site disposal of soil with greater than 620 parts per million (ppm) of mercury.
- Capping of mercury-containing soil above NJDEP non-residential direct contact soil cleanup criteria (270 ppm).

- Deed restrictions on properties with mercury concentrations greater than the NJDEP residential soil cleanup criteria (14 ppm).
- Establishment of a clean buffer zone between capped areas and creeks or wetlands.

The total estimated capital cost of the remedy for OU1 is \$14,910,000. The total capital cost for the groundwater component is \$1,360,000, with annual operation and maintenance (O&M) costs of \$95,000 for Years 0-2 and \$24,000 for Years 2-50. The total capital cost for the soil component is \$13,550,000, with an annual O&M cost of \$37,000.

Future Activities

The RI/FS for Berry's Creek is anticipated to begin in summer 2008.

References

Patel, S. 2004. "Berry's Creek," Teterboro Online. (www.teterboro-online.com/park/hriver/berry.shtml)

Malcolm Pirnie. 2005. Framework Document – Berry's Creek Study Area. August 2005

EPA Region 2. 2006. NPL Site Fact Sheet. November 2006 (<http://www.epa.gov/region02/superfund/npl/0200674c.pdf>).

NJDEP. 2002. Mercury Task Force Report Volume 2: Chapter 8, Impacts of Mercury on NJ's Ecosystem. Division of Science and Technology, January 3, 2002. (http://www.state.nj.us/dep/dsr/mercury_task_force.htm)

NJDEP. 2006. Superfund Record of Decision, Ventron/Velsicol Site Wood-Ridge and Carlstadt Bergen County New Jersey. New Jersey Department of Environmental Protection Site Remediation and Waste Management Program Bureau of Case Management. October 2006.