Superfund Program
Fact Sheet

Peterson/Puritan, Inc. Superfund Site
Cumberland, Rhode Island

August 2003

EPA Begins Field Investigation

INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has begun a ***Remedial Investigation and Feasibility Study (RI/FS)*** at the Peterson/Puritan, Inc. ***Superfund*** Site ***Operable Unit*** #2 in Cumberland Rhode, Island. The ***RI/FS*** is being conducted to document the nature and extent of ***groundwater***, surface water, soil, ***sediment***, and air contamination at the Site so that appropriate measures for site cleanup can be determined. The ***RI/FS*** is being conducted by Shield Environmental Assoc. Inc. of Lexington, KY for the ***Potentially Responsible Parties (PRPs)*** with oversight from EPA Region I. This fact sheet provides a history of Site and related enforcement activities, an overview of the ***RI/FS*** process, a description of ongoing activities, and information on the site community relations activities.

Public Informational Meeting
Date: **Tuesday, August 26, 2003**
Time: **7:00 p.m.**
Location: **Edward J. Hayden Public Library**
1464 Diamond Hill Road
Cumberland, RI

EPA is holding this meeting to discuss the upcoming site investigations. There will be a short presentation followed by a question and answer period. EPA and RIDEM representatives will be available to answer questions.

SITE OVERVIEW

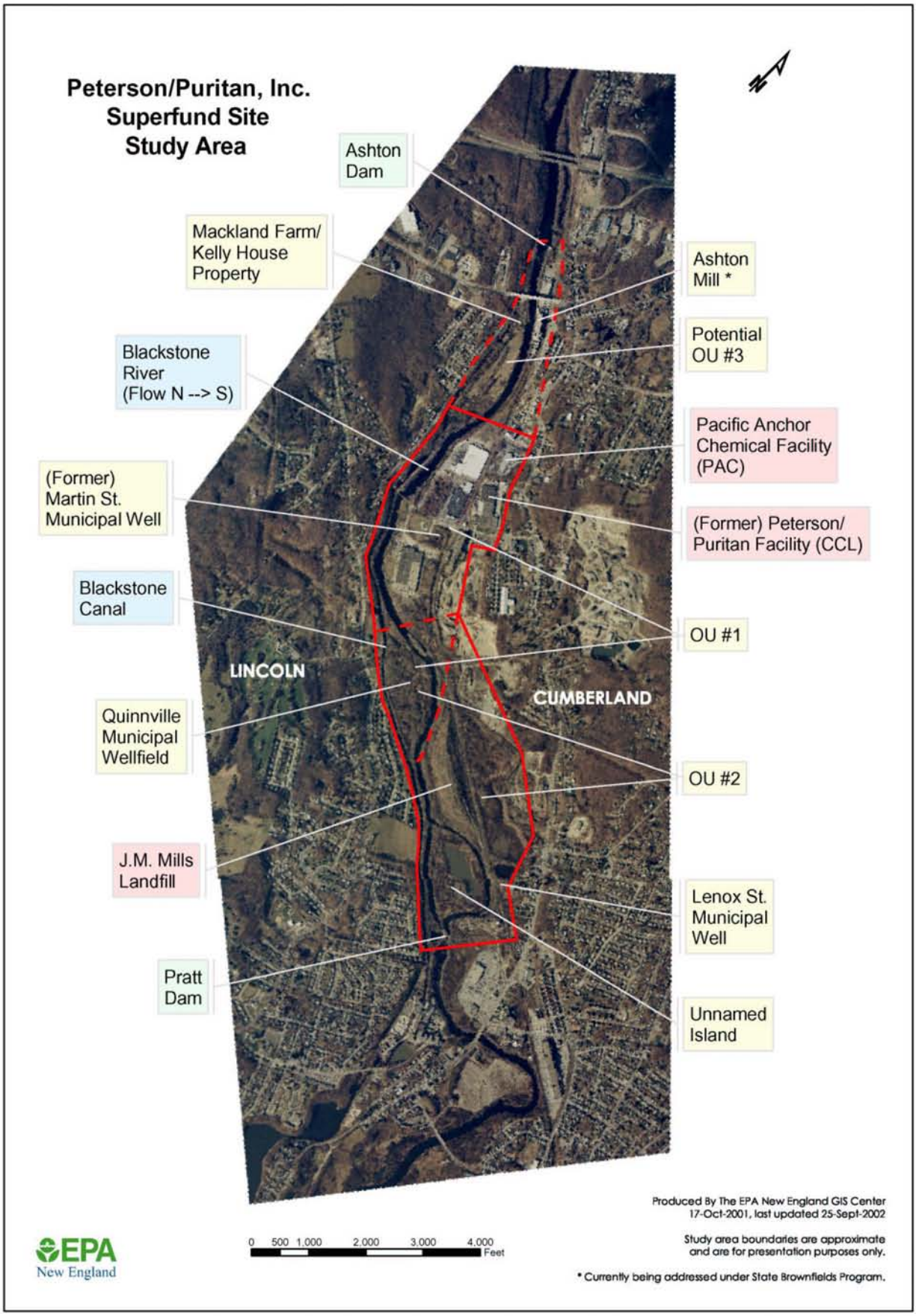
Location

The Peterson/Puritan, Inc. ***Superfund*** Site is located in the towns of Cumberland and Lincoln, Rhode Island. The Site occupies 500 acres, is approximately two miles long, and extends 2,000 feet to the east and west of the Blackstone River. The site includes an industrial park, the J.M. Mills Landfill, an inactive solid waste transfer station, a sand quarry, the Blackstone River State Park, impacted municipal supply wells, and undeveloped land including flood plains and wetlands along the Blackstone River.

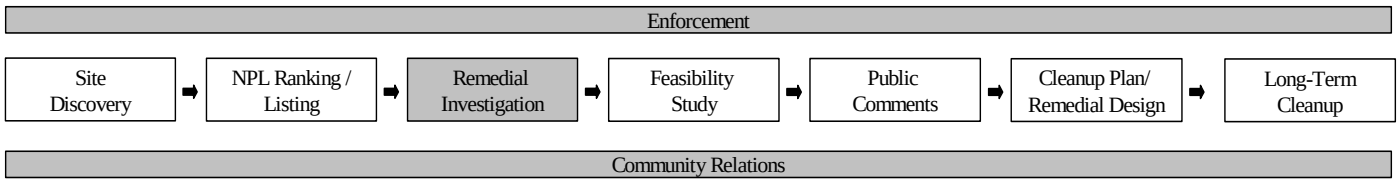
The Blackstone Valley ***aquifer*** is currently providing drinking water to the towns of Cumberland and Lincoln from the Manville and Lonsdale well fields. The Manville Wells #1 and #2 provide water to approximately 12,000 residents of Cumberland, while the Lonsdale well #4 contributes water to service the town of Lincoln.

Site History

The Site is divided into two ***operable units***. ***Operable Unit*** #1 (OU1) encompasses an industrial park and ***Operable Unit*** #2 (the focus of this investigation) is downstream of OU1 and includes the J.M. Mills Landfill, the transfer station, debris fields, the wetlands, and the Blackstone River to the Pratt Dam. EPA believes the most contaminated parcel is the privately owned approximately 36-acre J.M. Mills Landfill, which accepted mixed municipal and industrial waste from 1954 through 1986. Adjacent to the J.M. Mills Landfill is a privately owned 30-acre unnamed island located in the Blackstone River. EPA recently discovered solid waste on the island and believes the island's soils were used to provide daily cover for the landfill and perhaps served as an additional disposal location during landfill operations. The Site also includes the 24-acre Lincoln Quinnville Wellfield and Cumberland Lenox Street municipal well. These wells were used as water supply wells until 1979, when they were closed by the Rhode Island Department of Health due to the presence of ***volatile organics (VOCs)*** in the water. The Providence and Worcester Railroad line runs through OU2 and forms the eastern extent of the landfill slope, while the river provides the western boundary.



The Superfund Process



This is a simplified explanation of how a long-term ***Superfund*** response works. After a site is discovered, it is investigated and ranked using a system that takes into account:

- ❏ Possible health risks to human population.
- ❏ Potential hazards (e.g., from direct contact, inhalation, fire and/or explosion) of the substances at the site.
- ❏ Potential for substances at the site to contaminate drinking water supplies.
- ❏ Potential for substances at the site to pollute or harm the environment.

If the site's problems are serious enough, it will be listed on the ***National Priorities List (NPL)***, a roster of the nation's worst hazardous waste sites. Sites on the ***NPL*** are eligible for federal ***Superfund*** money. Negotiations take place to encourage the ***potentially responsible parties (PRPs)*** to pay for and conduct site studies.

Next EPA or the ***PRPs*** conduct a ***remedial investigation (RI)*** to assess the extent of contamination, the type of contamination present, and the potential risks to the environment. **The second Operable Unit of the Peterson Puritan site is currently in the RI phase of investigation.** The ***RI*** is followed by a ***Feasibility Study (FS)*** which examines the feasibility of various clean-up alternatives. Following public comment on the ***FS***, a specific clean-up plan is then chosen and designed. The choice of cleanup plan is documented in the ***Record of Decision***. After the project is designated the actual cleanup can begin.

The time it takes to complete each of these steps varies with every site. In general, an ***RI/FS*** takes from one to two years. Designing the cleanup plan may take six to twelve months. Implementing the remedy – the actual containment or removal of the waste – may take from one to three years. If ***groundwater*** is involved, the final cleanup may take several more years.

Ongoing activities during a cleanup include:

☐ **Periodic Monitoring of site conditions**.
If a site becomes an imminent threat to public health or the environment during the normal course of an ***RI/FS***, EPA may conduct an emergency cleanup called either an immediate removal or an initial remedial measure.

☐ **Public Meetings and other community**
relations activities to keep citizens and officials informed and encourage public input are conducted throughout the remedial; cleanup process. Specific activities vary from site to site depending on the level and nature of community concerns.

☐ **Enforcement.**
Once a site is identified as an ***NPL*** site, EPA undertakes a thorough investigation of who may be responsible for the waste contamination problem. The search for the ***potentially responsible parties*** often continues throughout the ***RI/FS*** process. The nature and extent of a ***PRP's*** involvement in a cleanup action can be determined through negotiations with EPA or a court action.

EPA ENFORCEMENT ACTIVITIES

EPA listed the Peterson/Puritan, Inc. Site on the ***Superfund National Priorities*** List on September 8, 1983. EPA conducted a removal action at the OU2 area in 1992. During the removal action, a fence was constructed around the former J.M. Mills Landfill and drums containing contaminated materials were removed from the base of the landfill. In November 1997, a second removal action was conducted at J.M. Mills to address recently disposed ***asbestos***-containing wastes and the security fence was extended to limit further dumping and restrict access to OU2. The current ***remedial investigation /feasibility study (RI/FS)*** at OU2 was initiated in January 2001 with the signing of the ***Administrative Order on Consent***. Work Plans have been completed and the investigation is beginning in August. Following completion of the study, EPA will issue a proposed plan for cleanup. When the plan is released, the public will have an opportunity to comment. EPA will select a final cleanup remedy in late 2004.

GLOSSARY

Administrative Order on Consent: A legal agreement between EPA and the Potentially Responsible parties (PRPs), whereby the PRPs agree to perform or pay for costs of the cleanup.

Aquifer: A layer of rock or soil below he ground surface with voids or spaces that can supply usable quantities of ***groundwater*** to wells and springs. Aquifers are potential sources of drinking water.

Asbestos: A fibrous mineral that has been processed and is used to fire proof buildings, insulate electrical wires and make brake linings in cars. ***Asbestos*** can cause cancer if inhaled or ingested.

Bedrock: Solid rock that lies beneath soils, loose ***sediment***, or unconsolidated materials.

Feasibility Study (FS): A focused study that determines and recommends the most appropriate methods for cleaning up contaminated sites.

Geophysical Surveys: The use of sound and radio waves and electric current to determine the physical properties of subsurface materials.

Groundwater: The water beneath the earth's surface that fills pore spaces in soils and fractured ***bedrock***. ***Groundwater*** often serves as a principal source of drinking water.

National Priorities List (NPL): EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup using funds allocated by the U.S. Congress through the ***Superfund*** Trust Fund.

Operable Unit: A discreet portion of an entire response action (at a site) that, by itself, manages migration or eliminates or mitigates a release, threat of release, or pathway of concern.

Piezometer: A non-pumping well, generally of small diameter, for measuring the elevation of a water able.

Polychlorinated Biphenyls (PCBs): A family of compounds used in electrical transformers, lubricants, and adhesives. PCBs are extremely persistent in the environment. In 1979, EPA banned the use of PCBs because long-term exposure can cause liver damage and other adverse human health effects.

Polynuclear Aromatic Hydrocarbons (PAHs): A family of compounds that are components of crude and refined petroleum products, coal, and creosote. PAHs can accumulate in aquatic organisms and several have been classified as possible cancer causing compounds in humans.

Potentially Responsible Party: Individuals or companies potentially responsible for contributing to contamination of a ***Superfund*** site. PRPs can include owners, operators, transporters, or generators of the hazardous waste. EPA takes administrative and legal action whenever possible to require PRPs to pay for and/or conduct the cleanup of hazardous wastes at sites which they may have contaminated.

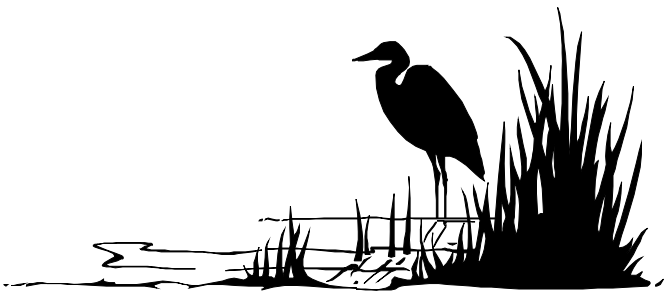
Record of Decision: The Record of Decision (ROD) is a public document that explains which cleanup alternatives will be used to clean up a ***Superfund*** site. The ROD for sites listed on the NPL is created from information generated during the ***RI/FS***.

Remedial Investigation (RI): A comprehensive field investigation program that fully defines and characterizes the nature, extent, and distribution of contamination in all affected environmental media (i.e. soil, ***groundwater***, surface water, ***sediments***) at a site, identifies contaminant transport and potential exposure pathways, and assesses potential human health and ecological risk.

Sediments: The sand or mud that accumulates at the bottom of a stream, creek, lake or other surface water body. ***Sediments*** are deposits that typically consist of sand, silt, clay, gravel, and plant matter eroded from another location.

Superfund: The common name used for the Federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLA was passed in 1980 and modified in 1986 by the ***Superfund*** Amendments and Reauthorization Act (SARA). CERCLA created the Hazardous Substances Trust Fund, or "***Superfund***", which is financed by special taxes and general Federal revenues. The ***Superfund*** is used to investigate and clean up hazardous waste sites on the ***National Priorities List***.

Volatile Organic Compounds (VOCs): A class of carbon-containing chemicals which readily evaporate. VOCs are frequently used as solvents and degreasing agents in industrial applications.



PAST INVESTIGATION RESULTS

Preliminary samples collected at OU2 indicate the presence of ***volatile organics*** and metals in ***groundwater.*** In addition, samples of soil and ***sediment*** have indicated ***polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs)***, and heavy metals.

Contaminants originating on the Site may be moving off-site through surface water and ***groundwater*** flow and through the release of landfill generated gases. The Site was included on the ***NPL*** because of potential effects on humans and the environment through exposure to contaminated ***groundwater,*** surface water, ***sediments***, soil and air.

Photo of sand and gravel extraction and landfill operations at the Unnamed Island immediately south of the J.M. Mills Landfill and a part of OU2's investigation (circa 1987, looking east).

CURRENT RI ACTIVITIES

The ***Remedial Investigation (RI)*** will enable EPA to determine the degree to which contaminants have migrated both horizontally and vertically from the landfill, and to identify transport pathways involved in this contaminant migration. Data collected during the ***RI*** will also be used to evaluate future contaminant migration, and for the development of human health and ecological risk assessments and cleanup technologies.

The ***RI*** field activities will occur in three phases: Phase 1A, Phase 1B and Phase 2. In addition, in early summer 2002, a Preparatory Assessment was conducted, which consisted of an examination of surface water and wetlands, the collection of preliminary ***sediment*** samples, and the location of and inspection of existing monitoring wells and staff gauges. Phase 1A is scheduled to begin in August 2003. Field activities will include site survey, ***geophysical surveys***, soil trenching, installation of staff gauges, ***piezometers***, and monitoring wells, and the collection of ***groundwater,*** leachate, surface water, ***sediment***, surface and subsurface soil, and air samples for laboratory analysis. Phase 1B will be conducted in the spring or early summer and will consist of the collection of surface water, ***sediment***, leachate, ***groundwater,*** and air samples. Depending on the result of the Phase 1A and Phase 1B sampling , Phase 2 investigations may be conducted which could include more focused sampling or monitoring.

Human Health Risk Assessment

A human health risk assessment will be conducted to evaluate the risk posed at the Site for the surrounding community. The risk assessment will determine potential health effects of the contaminants at the Site and the possible ways humans could be exposed to these contaminants.

Ecological Risk Assessment

An ecological risk assessment will be conducted to evaluate the potential risks to terrestrial, wetland, and aquatic ecosystems at the Site to determine effects of the site contaminants on these ecological resources.

Looking south from OU1, towards the J.M. Mills Landfill (OU2), which rises from the Blackstone River's east bank.

On top of the J.M. Mills Landfill, OU2 (exceeding 80 ft. in elevation) looking north. Industrial park within OU1 in background (right center), Blackstone River in valley below (left).

Where you can go for more information on the environmental cleanup....

Site Contacts

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Providence, RI 02908
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Information Repositories

Lincoln Public Library
145 Old River Road
Lincoln, RI 02865
401/333-2422

Edward J. Hayden Public Library
1464 Diamond Hill Rd
Cumberland, RI 02864
401/333-2552

Internet users may visit the EPA Superfund Web at:
http://www.epa/gov/superfund

Visitor information concerning the Blackstone River Valley National Heritage Corridor is available through the Blackstone Valley Tourism Council at 401/724-2200

Overlooking the Pratt Dam from the bike path during a post flood event, this river control structure represents the approximate southern extent of the site.