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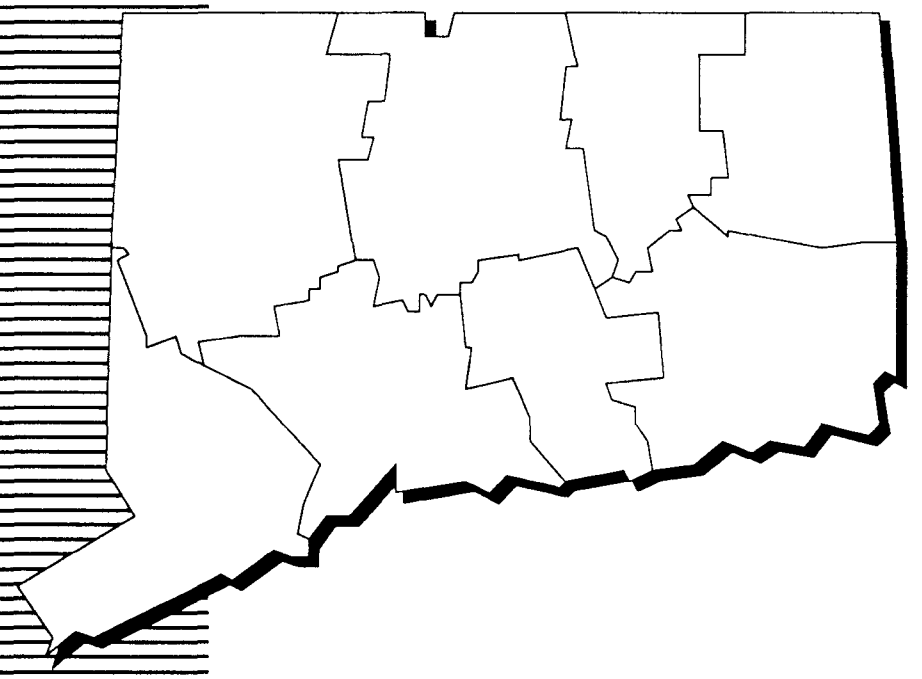

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The National Overview volume, **Superfund: Focusing on the Nation at Large (1991),** may be ordered as PB92-963253.

The complete set of the overview documents, plus the 49 state reports may be ordered as PB92-963253.

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A Brief Overview

WHY THE SUPERFUND PROGRAM?

As the 1970s came to a close, a series of headline stories gave Americans a look at the dangers of dumping industrial and urban wastes on the land. First there was New York's Love Canal. Hazardous waste buried there over a 25-year period contaminated streams and soil, and endangered the health of nearby residents. The result: evacuation of several hundred people. Then the leaking barrels at the Valley of the Drums in Kentucky attracted public attention, as did the dioxin-tainted land and water in Times Beach, Missouri.

In all these cases, human health and the environment were threatened, lives were disrupted, and property values were reduced. It became increasingly clear that there were large numbers of serious hazardous waste problems that were falling through the cracks of existing environmental laws. The magnitude of these emerging problems moved Congress to enact the Comprehensive Environmental Response, Compensation, and Liability Act in 1980. CERCLA — commonly known as Superfund — was the first Federal law established to deal with the dangers posed by the Nation's hazardous waste sites.

After Discovery, the Problem Intensified

Few realized the size of the problem until the Environmental Protection Agency (EPA) began the process of site discovery and site evaluation. Not hundreds, but thousands of potential hazardous waste sites existed, and they presented the Nation with some of the most complex pollution problems it had ever faced.

Since the Superfund program began, hazardous waste has surfaced as a major environmental concern in every part of the United States. It wasn't just the land that was contaminated by past disposal practices. Chemicals in the soil were spreading into the groundwater (a source of drinking water for many) and into streams, lakes, bays, and wetlands. Toxic vapors contaminated the air at some sites, while improperly disposed or stored wastes threatened the health of the surrounding community and the environment at others.

The EPA Identified More than 1,200 Serious Sites

The EPA has identified 1,245 hazardous waste sites as the most serious in the Nation. These sites comprise the National Priorities List; sites targeted for cleanup under Super-fund. But site discoveries continue, and the EPA estimates that, while some will be deleted after lengthy cleanups, this list, commonly called the NPL, will continue to grow by approximately 50 to 100 sites per year, potentially reaching 2,100 sites by the year 2000.

THE NATIONAL CLEANUP EFFORT IS MUCH MORE THAN THE NPL

From the beginning of the program, Congress recognized that the Federal government could

not and should not address all environmental problems stemming from past disposal practices. Therefore, the EPA was directed to set priorities and establish a list of sites to target. Sites on the NPL (1,245) thus are a relatively small subset of a larger inventory of potential hazardous waste sites, but they do comprise the most complex and compelling cases. The EPA has logged more than 35,000 sites on its national inventory of potentially hazardous waste sites and assesses each site within one year of being logged.

THE EPA IS MAKING PROGRESS ON SITE CLEANUP

The goal of the Superfund program is to tackle immediate dangers first and then move through the progressive steps necessary to eliminate any long-term risks to public health and the environment.

Superfund responds immediately to sites posing imminent threats to human health and the environment at both NPL sites and sites not on the NPL. The purpose is to stabilize, prevent, or temper the effects of a release of hazardous substances, or the threat of one, into the environment. These might include tire fires or transportation accidents involving the spill of hazardous chemicals. Because they reduce the threat a site poses to human health and the environment, immediate cleanup actions are an integral part of the Superfund program.

Immediate response to imminent threats is one of Superfund's most noted achievements. Where imminent threats to the public or environment were evident, the EPA has initiated or completed emergency actions that attacked the most serious threats of toxic exposure in more than 2,700 cases.

The ultimate goal for a hazardous waste site on the NPL is a permanent solution to an environmental problem that presents a serious threat to the public or the environment. This often requires a long-term effort. The EPA has aggressively accelerated its efforts to perform these long-term cleanups of NPL sites. More cleanups were started in 1987, when the Superfund law was amended, than in any previous year. By 1991, construction had started at more than four times as many sites as in 1986! Of the sites currently on the NPL, more than 500 — nearly half — have had construction cleanup activity. In addition, more than 400 more sites presently are in the investigation stage to determine the extent of site contamination and to identify appropriate cleanup remedies. Many other sites with cleanup remedies selected are poised for the start of cleanup construction activity. In measuring success by "progress through the cleanup pipeline," the EPA clearly is gaining momentum.

THE EPA MAKES SURE CLEANUP WORKS

The EPA has gained enough experience in cleanup construction to understand that environmental protection does not end when the remedy is in place. Many complex technologies — like those designed to clean up groundwater — must operate for many years in order to accomplish their objectives.

The EPA's hazardous waste site managers are committed to proper operation and maintenance of every remedy constructed. No matter who has been delegated responsibility for monitoring the cleanup work, the EPA will assure that the remedy is carefully followed and that it continues to do its job.

Likewise, the EPA does not abandon a site even after the cleanup work is done. Every five years, the Agency reviews each site where residues from hazardous waste cleanup still remain to ensure that public and environmental

health are being safeguarded. The EPA will correct any deficiencies discovered and will report to the public annually on all five-year reviews conducted that year.

CITIZENS HELP SHAPE DECISIONS

Superfund activities also depend upon local citizen participation. The EPA's job is to analyze the hazards and to deploy the experts, but the Agency needs citizen input as it makes choices for affected communities.

Because the people in a community where a Superfund site is located will be those most directly affected by hazardous waste problems and cleanup processes, the EPA encourages citizens to get involved in cleanup decisions. Public involvement and comment does influence EPA cleanup plans by providing valuable information about site conditions, community concerns, and preferences.

The State and U.S. Territories volumes and the companion National overview volume provide general Superfund background information and descriptions of activities at each NPL site. These volumes clearly describe what the problems are, what the EPA and others participating in site cleanups are doing, and how we, as a Nation, can move ahead in solving these serious problems.

USING THE STATE AND NATIONAL VOLUMES TOGETHER

To understand the big picture on hazardous waste cleanup, citizens need to hear about both environmental progress across the country and the cleanup accomplishments closer to home. Citizens also should understand the challenges involved in hazardous waste cleanup and the decisions we must make, as a Nation, in finding the best solutions.

The National overview, *Superfund: Focusing on the Nation at Large (1991),* contains important information to help you understand the magnitude and challenges facing the Superfund program, as well as an overview of the National cleanup effort. The sections describe the nature of the hazardous waste problem nationwide, threats and contaminants at NPL sites and their potential effects on human health and the environment, vital roles of the various participants in the cleanup process, the Superfund program's successes in cleaning up the Nation's serious hazardous waste sites, and the current status of the NPL. If you did not receive this overview volume, ordering information is provided in the front of this book.

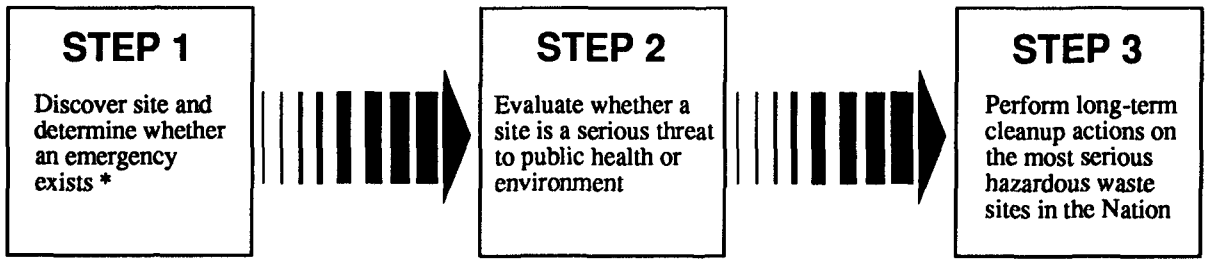
This volume compiles site summary fact sheets on each State or Territorial site being cleaned up under the Superfund program. These sites represent the most serious hazardous waste problems in the Nation and require the most complicated and costly site solutions yet encountered. Each book gives a "snapshot" of the conditions and cleanup progress that has been made at each NPL site. Information presented for each site is current as of April 1991. Conditions change as our cleanup efforts continue, so these site summaries will be updated annually to include information on new progress being made.

To help you understand the cleanup accomplishments made at these sites, this volume includes a description of the process for site discovery, threat evaluation, and long-term cleanup of Superfund sites. This description, *How Does the Program Work to Clean Up Sites?,* will serve as a reference point from which to review the cleanup status at specific sites. A glossary defining key terms as they apply to hazardous waste management and site cleanup is included as Appendix A in the back of this book.

How Does the Program Work to Clean Up Sites?

The diverse problems posed by hazardous waste sites have provided the EPA with the challenge to establish a consistent approach for evaluating and cleaning up the Nation's most serious sites. To do this, the EPA has had to step beyond its traditional role as a regulatory agency to develop processes and guidelines for each step in these technically complex site cleanups. The EPA has established procedures to coordinate the efforts of its Washington, D.C. Headquarters program offices and its front-line staff in ten Regional Offices, with the State and local governments, contractors, and private parties who are participating in site cleanup. An important part of the process is that any time during cleanup, work can be led by the EPA or the State or, under their monitoring, by private parties who are potentially responsible for site contamination.

THREE-STEP SUPERFUND PROCESS



** Emergency actions are performed whenever needed in this three-step process.*

The process for discovery of the site, evaluation of threat, and the long-term cleanup of Superfund sites is summarized in the following pages. The phases of each of these steps are highlighted within the description. The flow diagram above provides a summary of the three-step process.

Although this book provides a current "snapshot" of site progress made only by emergency actions and long-term cleanup actions at Superfund sites, it is important to understand the discovery and evaluation process that leads to identifying and cleaning up these most serious uncontrolled or abandoned hazardous

waste sites in the Nation. The discovery and evaluation process is the starting point for this summary description of Superfund involvement at hazardous waste sites.

STEP 1: SITE DISCOVERY AND EMERGENCY EVALUATION

How does the EPA learn about potential hazardous waste sites?

Site discovery occurs in a number of ways. Information comes from concerned citizens. People may notice an odd taste or foul odor in their drinking water or see half-buried leaking barrels; a hunter may come across a field where waste was dumped illegally. There may be an explosion or fire, which alerts the State or local authorities to a problem. Routine investigations by State and local governments and required reporting and inspection of facilities that generate, treat, store, or dispose of hazardous waste also help keep the EPA informed about actual or potential threats of hazardous substance releases. All reported sites or spills are recorded in the Superfund inventory (CERCLIS) for further investigation to determine whether they will require cleanup.

What happens if there is an imminent danger?

As soon as a potential hazardous waste site is reported, the EPA determines whether there is an emergency requiring an immediate cleanup action. If there is, they act as quickly as possible to remove or stabilize the imminent threat. These short-term emergency actions range from building a fence around the contaminated area to keep people away, or temporarily relocating residents until the danger is addressed, to providing bottled water to residents while their local drinking water supply is being cleaned up or physically removing wastes for safe disposal.

However, emergency actions can happen at any time an imminent threat or emergency warrants them. For example, if leaking barrels are found when cleanup crews start digging in the ground or if samples of contaminated soils or air show that there may be a threat of fire or explosion, an immediate action is taken.

STEP 2: SITE THREAT EVALUATION

If there isn't an imminent danger, how does the EPA determine what, if any, cleanup actions should be taken?

Even after any imminent dangers are taken care of, in most cases, contamination may remain at the site. For example, residents may have been supplied with bottled water to take care of their immediate problem of contaminated well water, but now it's time to determine what is contaminating the drinking water supply and the best way to clean it up. The EPA may determine that there is no imminent danger from a site, so any long-term threats need to be evaluated. In either case, a more comprehensive investigation is needed to determine if a site poses a serious, but not imminent, danger and whether it requires a long-term cleanup action.

Once a site is discovered and any needed emergency actions are taken, the EPA or the State collects all available background information not only from their own files, but also from local records and U.S. Geological Survey maps. This information is used to identify the site and to perform a preliminary assessment of its potential hazards. This is a quick review of readily available information to answer the questions:

- Are hazardous substances likely to be present?

- How are they contained?
- How might contaminants spread?
- How close is the nearest well, home, or natural resource area such as a wetland or animal sanctuary?
- What may be harmed — the land, water, air, people, plants, or animals?

Some sites do not require further action because the preliminary assessment shows that they do not threaten public health or the environment. But even in these cases, the sites remain listed in the Superfund inventory for record-keeping purposes and future reference. Currently, there are more than 35,000 sites maintained in this inventory.

If the preliminary assessment shows a serious threat may exist, what's the next step?

Inspectors go to the site to collect additional information to evaluate its hazard potential. During this *site inspection*, they look for evidence of hazardous waste, such as leaking drums and dead or discolored vegetation. They may take some samples of soil, well water, river water, and air. Inspectors analyze the ways hazardous materials could be polluting the environment, such as runoff into nearby streams. They also check to see if people (especially children) have access to the site.

How does the EPA use the results of the site inspection?

Information collected during the site inspection is used to identify the sites posing the most serious threats to human health and the environment. This way, the EPA can meet the requirement that Congress gave them to use Superfund monies only on the worst hazardous waste sites in the Nation.

To identify the most serious sites, the EPA developed the Hazard Ranking System (HRS). The HRS is the scoring system the EPA uses to assess the relative threat from a release or a potential release of hazardous substances from a site to surrounding groundwater, surface water, air, and soil. A site score is based on the likelihood that a hazardous substance will be released from the site, the toxicity and amount of hazardous substances at the site, and the people and sensitive environments potentially affected by contamination at the site.

Only sites with high enough health and environmental risk scores are proposed to be added to the NPL. That's why 1,245 sites are on the NPL, but there are more than 35,000 sites in the Superfund inventory. Only NPL sites can have a long-term cleanup paid for from Superfund, the national hazardous waste trust fund. Superfund can, and does, pay for emergency actions performed at any site, whether or not it's on the NPL.

Why are sites proposed to the NPL?

Sites proposed to the NPL have been evaluated through the scoring process as the most serious problems among uncontrolled or abandoned hazardous waste sites in the U.S. In addition, a site will be proposed to the NPL if the Agency for Toxic Substances and Disease Registry issues a health advisory recommending that people be moved away from the site. The NPL is updated at least once a year, and it's only after public comments are considered that these proposed worst sites officially are added to the list.

Listing on the NPL does not set the order in which sites will be cleaned up. The order is influenced by the relative priority of the site's health and environmental threats compared to other sites, and such factors as State priorities, engineering capabilities, and available tech-

nologies. Many States also have their own list of sites that require cleanup; these often contain sites that are not on the NPL and are scheduled to be cleaned up with State money. And, it should be noted again that any emergency action needed at a site can be performed by the Superfund, whether or not a site is on the NPL.

A detailed description of the current progress in cleaning up NPL sites is found in the section of the 1991 National overview volume entitled *Cleanup Successes: Measuring Progress.*

How do people find out whether the EPA considers a site a national priority for cleanup under the Superfund Program?

All NPL sites, where Superfund is responsible for cleanup, are described in the State and Territorial volumes. The public also can find out whether other sites, not on the NPL, are being addressed by the Superfund program by calling their Regional EPA office or the Superfund Hotline at the numbers listed in this book.

STEP 3: LONG-TERM CLEANUP ACTIONS

After a site is added to the NPL, what are the steps to cleanup?

The ultimate goal for a hazardous waste site on the NPL is a permanent, long-term cleanup. Since every site presents a unique set of challenges, there is no single all-purpose solution. A five-phase "remedial response" process is used to develop consistent and workable solutions to hazardous waste problems across the Nation:

1. *Remedial Investigation*: investigate in detail the extent of the site contamination
2. *Feasibility Study*: study the range of possible cleanup remedies
3. *Record of Decision or ROD*: decide which remedy to use
4. *Remedial Design*: plan the remedy
5. *Remedial Action*: carry out the remedy

This remedial response process is a long-term effort to provide a permanent solution to an environmental problem that presents a serious threat to the public or environment.

The first two phases of a long-term cleanup are a combined *remedial investigation and feasibility study* (RI/FS) that determine the nature and extent of contamination at the site and identify and evaluate cleanup alternatives. These studies may be conducted by the EPA or the State or, under their monitoring, by private parties.

Like the initial site inspection described earlier, a remedial investigation involves an examination of site data in order to better define the problem. However, the remedial investigation is much more detailed and comprehensive than the initial site inspection.

A remedial investigation can best be described as a carefully designed field study. It includes extensive sampling and laboratory analyses to generate more precise data on the types and quantities of wastes present at the site, the type of soil and water drainage patterns, and specific human health and environmental risks.

The result of the remedial investigation is information that allows the EPA to select the cleanup strategy that is best suited to a particular site or to determine that no cleanup is needed.

Placing a site on the NPL does not necessarily mean that cleanup is needed. It is possible for

a site to receive an HRS score high enough to be added to the NPL, but not ultimately require cleanup actions. Keep in mind that the purpose of the scoring process is to provide a preliminary and conservative assessment of *potential* risk. During subsequent site investigations, the EPA may find either that there is no real threat or that the site does not pose significant human health or environmental risks.

How are cleanup alternatives identified and evaluated?

The EPA or the State or, under their monitoring, private parties identify and analyze specific site cleanup needs based on the extensive information collected during the remedial investigation. This analysis of cleanup alternatives is called a *feasibility study*.

Since cleanup actions must be tailored exactly to the needs of each individual site, more than one possible cleanup alternative is always considered. After making sure that all potential cleanup remedies fully protect human health and the environment and comply with Federal and State laws, the advantages and disadvantages of each cleanup alternative are compared carefully. These comparisons are made to determine their effectiveness in the short and long term, their use of permanent treatment solutions, and their technical feasibility and cost.

To the maximum extent practicable, the remedy must be a permanent solution and must use treatment technologies to destroy principal site contaminants. Remedies such as containing the waste on site or removing the source of the problem (like leaking barrels) often are considered effective. Often, special pilot studies are conducted to determine the effectiveness and feasibility of using a particular technology to clean up a site. Therefore, the combined remedial investigation and feasibility study can take between 10 and 30 months to complete, depending on the size and complexity of the problem.

Does the public have a say in the final cleanup decision?

Yes. The Superfund law requires that the public be given the opportunity to comment on the proposed cleanup plan. Their concerns are considered carefully before a final decision is made.

The results of the remedial investigation and feasibility study, which also point out the recommended cleanup choice, are published in a report for public review and comment. The EPA or the State encourages the public to review the information and take an active role in the final cleanup decision. Fact sheets and announcements in local papers let the community know where they can get copies of the study and other reference documents concerning the site. Local information repositories, such as libraries or other public buildings, are established in cities and towns near each NPL site to ensure that the public has an opportunity to review all relevant information and the proposed cleanup plans. Locations of information repositories for each NPL site described in this volume are given in Appendix B.

The public has a minimum of 30 days to comment on the proposed cleanup plan after it is published. These comments can be written or given verbally at public meetings that the EPA or the State are required to hold. Neither the EPA nor the State can select the final cleanup remedy without evaluating and providing written answers to specific community comments and concerns. This "responsiveness summary" is part of the EPA's write-up of the final remedy decision, called the Record of Decision, or ROD.

The ROD is a public document that explains the cleanup remedy chosen and the reason it

was selected. Since sites frequently are large and must be cleaned up in stages, a ROD may be necessary for each contaminated resource or area of the site. This may be necessary when contaminants have spread into the soil, water, and air and affect such sensitive areas as wetlands, or when the site is large and cleaned up in stages. This often means that a number of remedies, using different cleanup technologies, are needed to clean up a single site.

? If every cleanup action needs to be tailored to a site, does the design ofthe remedy need to be tailored, too?

Yes. Before a specific cleanup action is carried out, it must be designed in detail to meet specific site needs. This stage of the cleanup is called the *remedial design*. The design phase provides the details on how the selected remedy will be engineered and constructed.

Projects to clean up a hazardous waste site may appear to be like any other major construction project but, in fact, the likely presence of combinations of dangerous chemicals demands special construction planning and procedures. Therefore, the design of the remedy can take anywhere from six months to two years to complete. This blueprint for site cleanup includes not only the details on every aspect of the construction work, but a description of the types of hazardous wastes expected at the site, special plans for environmental protection, worker safety, regulatory compliance, and equipment decontamination.

? Once the design is completed, how long does it take to actually clean up the site, and how much does it cost?

The time and cost for performing the site cleanup, called the *remedial action*, are as varied as the remedies themselves. In a few cases, the only action needed may be to remove drums of hazardous waste and to decontaminate them, an action that takes limited time and money. In most cases, however, a remedial action may involve different and expensive cleanup measures that can take a long time.

For example, cleaning polluted groundwater or dredging contaminated river bottoms can take several years of complex engineering work before contamination is reduced to safe levels. Sometimes the selected cleanup remedy described in the ROD may need to be modified because of new contaminant information discovered or difficulties that were faced during the early cleanup activities. Taking into account these differences, each remedial cleanup action takes an average of 18 months to complete and ultimately costs an average of $26 million to complete all necessary cleanup actions at a site .

? Once the cleanup action is completed, is the site automatically "deleted" from the NPL?

No. The deletion of a site from the NPL is anything but automatic. For example, cleanup of contaminated groundwater may take up to 20 years or longer. Also, in some cases, *long-term monitoring* of the remedy is required to ensure that it is effective. After construction of certain remedies, operation and maintenance (e.g., maintenance of ground cover, groundwater monitoring, etc.), or continued pumping and treating of groundwater may be required to ensure that the remedy continues to prevent future health hazards or environmental damage and ultimately meets the cleanup goals specified in the ROD. Sites in this final monitoring or operational stage of the cleanup process are designated as "construction complete."

It's not until a site cleanup meets all the goals and monitoring requirements of the selected

remedy that the EPA can officially propose the site for *deletion* from the NPL, and it's not until public comments are taken into consideration that a site actually can be deleted from the NPL. All sites deleted from the NPL and sites with completed construction are included in the progress report found later in this book.

Can a site be taken off the NPL if no cleanup has taken place?

Yes. But only if further site investigation reveals that there are no threats present at the site and that cleanup activities are not necessary. In these cases, the EPA will select a "no action" remedy and may move to delete the site when monitoring confirms that the site does not pose a threat to human health or the environment.

In other cases, sites may be "removed" from the NPL if new information concerning site cleanup or threats show that the site does not warrant Superfund activities.

A site may be removed if a revised HRS scoring, based on updated information, results in a score below the minimum for NPL sites. A site also may be removed from the NPL by transferring it to other appropriate Federal cleanup authorities, such as RCRA, for further cleanup actions.

Removing sites for technical reasons or transferring sites to other cleanup programs preserves Superfund monies for the Nation's most pressing hazardous waste problems where no other cleanup authority is applicable.

Can the EPA make parties responsible for the contamination pay?

Yes. Based on the belief that "the polluters should pay," after a site is placed on the NPL, the EPA makes a thorough effort to identify and find those responsible for causing contamination problems at a site. Although the EPA is willing to negotiate with these private parties and encourages voluntary cleanup, it has the authority under the Superfund law to legally force those potentially responsible for site hazards to take specific cleanup actions. All work performed by these parties is closely guided and monitored by the EPA and must meet the same standards required for actions financed through the Superfund.

Because these enforcement actions can be lengthy, the EPA may decide to use Superfund monies to make sure a site is cleaned up without unnecessary delay. For example, if a site presents an imminent threat to public health and the environment or if conditions at a site may worsen, it could be necessary to start the cleanup right away. Those responsible for causing site contamination are liable under the law (CERCLA) for repaying the money the EPA spends in cleaning up the site.

Whenever possible, the EPA and the Department of Justice use their legal enforcement authorities to require responsible parties to pay for site cleanups, thereby preserving Superfund resources for emergency actions and for sites where no responsible parties can be identified.

How to Use the State Book

The site fact sheets presented in this book are comprehensive summaries that cover a broad range of information. The fact sheets describe hazardous waste sites on the NPL and their locations, as well as the conditions leading to their listing ("Site Description"). The summaries list the types of contaminants that have been discovered and related threats to public and ecological health ("Threats and Contaminants"). "Cleanup Approach" presents an overview of the cleanup activities completed, underway, or planned. The fact sheets conclude with a brief synopsis of how much progress has been made in protecting public health and the environment. The summaries also pinpoint other actions, such as legal efforts to involve polluters responsible for site contamination and community concerns.

The fact sheets are arranged in alphabetical order by site name. Because site cleanup is a dynamic and gradual process, all site information is accurate as of the date shown on the bottom of each page. Progress always is being made at NPL sites, and the EPA periodically will update the site fact sheets to reflect recent actions and will publish updated State volumes. The following two pages show a generic fact sheet and briefly describe the information under each section.

HOW CAN YOU USE THIS STATE BOOK?

You can use this book to keep informed about the sites that concern you, particularly ones close to home. The EPA is committed to involving the public in the decision making process associated with hazardous waste cleanup. The Agency solicits input from area residents in communities affected by Superfund sites. Citizens are likely to be affected not only by hazardous site conditions, but also by the remedies that combat them. Site cleanups take many forms and can affect communities in different ways. Local traffic may be rerouted, residents may be relocated, temporary water supplies may be necessary.

Definitive information on a site can help citizens sift through alternatives and make decisions. To make good choices, you must know what the threats are and how the EPA intends to clean up the site. You must understand the cleanup alternatives being proposed for site cleanup and how residents may be affected by each one. You also need to have some idea of how your community intends to use the site in the future, and you need to know what the community can realistically expect once the cleanup is complete.

The EPA wants to develop cleanup methods that meet community needs, but the Agency only can take local concerns into account if it understands what they are. Information must travel both ways in order for cleanups to be effective and satisfactory. Please take this opportunity to learn more, become involved, and assure that hazardous waste cleanup at "your" site considers your community's concerns.

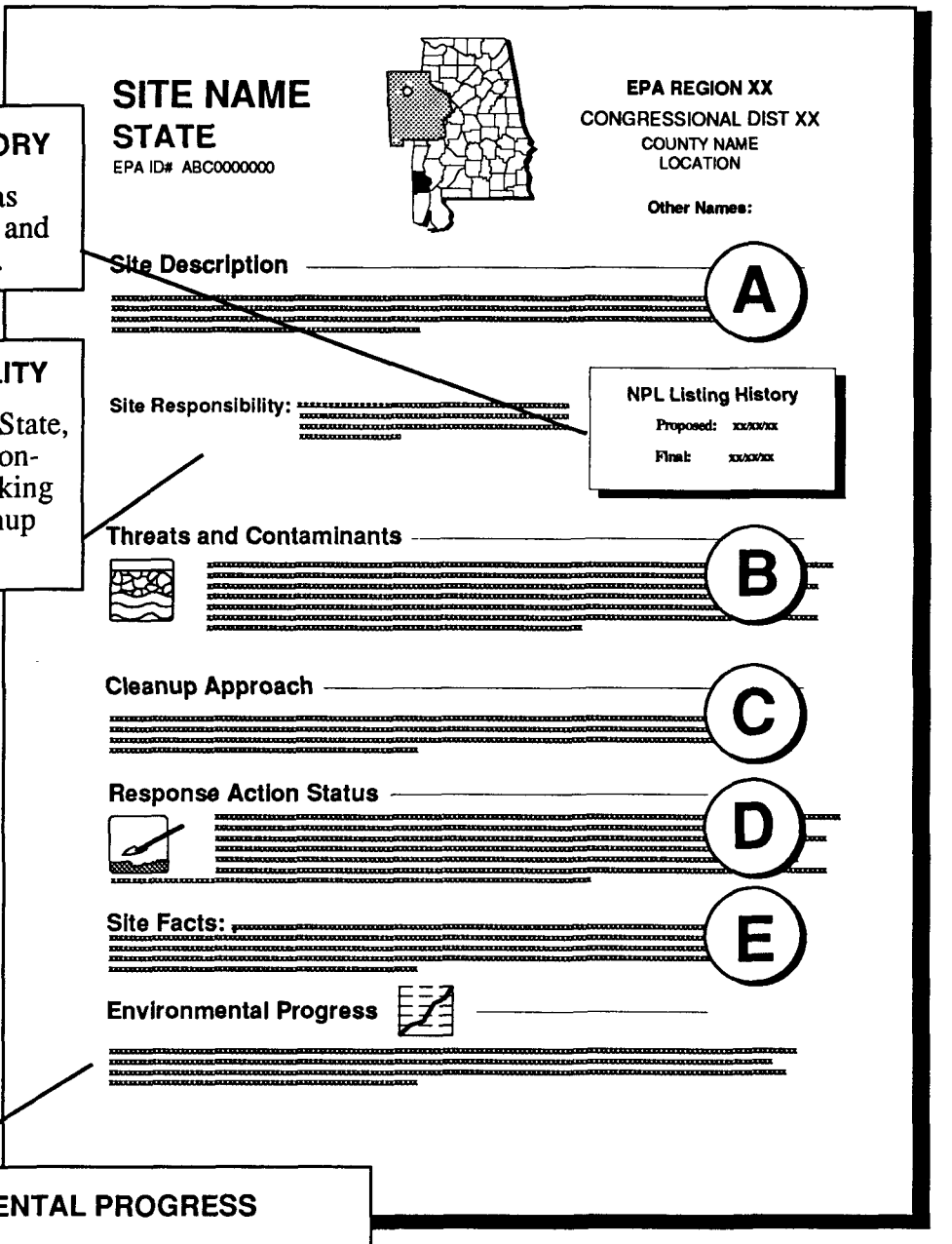
THE VOLUME

NPL LISTING HISTORY

Dates when the site was Proposed, made Final, and Deleted from the NPL.

SITE RESPONSIBILITY

Identifies the Federal, State, and/or potentially responsible parties that are taking responsibility for cleanup actions at the site.



ENVIRONMENTAL PROGRESS

A summary of the actions to reduce the threats to nearby residents and the surrounding environment; progress towards cleaning up the site and goals of the cleanup plan are given here.

A

SITE DESCRIPTION

This section describes the location and history of the site. It includes descriptions of the most recent activities and past actions at the site that have contributed to the contamination. Population estimates, land usages, and nearby resources give readers background on the local setting surrounding the site.

B

THREATS AND CONTAMINANTS

The major chemical categories of site contamination are noted, as well as which environmental resources are affected. Icons representing each of the affected resources (may include air, groundwater, surface water, soil, and contamination to environmentally sensitive areas) are included in the margins of this section. Potential threats to residents and the surrounding environments arising from the site contamination also are described.

C

CLEANUP APPROACH

This section contains a brief overview of how the site is being cleaned up.

D

RESPONSE ACTION STATUS

Specific actions that have been accomplished or will be undertaken to clean up the site are described here. Cleanup activities at NPL sites are divided into separate phases, depending on the complexity and required actions at the site. Two major types of cleanup activities often are described: initial, immediate, or emergency actions to quickly remove or reduce imminent threats to the community and surrounding areas; and long-term remedial phases directed at final cleanup at the site. Each stage of the cleanup strategy is presented in this section of the summary. Icons representing the stage of the cleanup process (initial actions, site investigations, EPA selection of the cleanup remedy, engineering design phase, cleanup activities underway, and completed cleanup) are located in the margin next to each activity description.

E

SITE FACTS

Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by the EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

THE VOLUME

The "icons," or symbols, accompanying the text allow the reader to see at a glance which environmental resources are affected and the status of cleanup activities at the site.

Icons in the Threats and Contaminants Section

Contaminated *Groundwater* resources in the Contaminated *Groundwater* in the vicinity or underlying the site. (Groundwater is often used as a drinking water source.)

Contaminated *Surface Water and Sediments* on or near the site. (These include lakes, ponds, streams, and rivers.)

Contaminated *Air* in the vicinity of the site. (Air pollution usually is periodic and involves contaminated dust particles or hazardous gas emissions.)

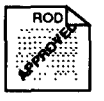
Contaminated *Soil and Sludges* on or near the site. (This contamination category may include bulk or other surface hazardous wastes found on the site.)

Threatened or contaminated *Environmentally Sensitive Areas* in the vicinity of the site. (Examples include wetlands and coastal areas or critical habitats.)

Icons in the Response Action Status Section

Initial Actions have been taken or are underway to eliminate immediate threats at the site.

Site Studies at the site to determine the nature and extent of contamination are planned or underway.



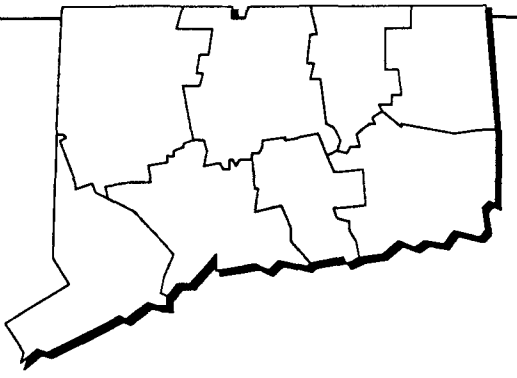
Remedy Selected indicates that site investigations have been concluded, and the EPA has selected a final cleanup remedy for the site or part of the site.

Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.

Cleanup Ongoing indicates that the selected cleanup remedies for the contaminated site, or part of the site, currently are underway.

Cleanup Complete shows that all cleanup goals have been achieved for the contaminated site or part of the site.

Environmental Progress summarizes the activities taken to date to protect human health and to clean up site contamination.



The State of Connecticut

Located in EPA Region 1, which includes the six northeastern states, Connecticut is the third smallest state in the nation, covering 5,018 square miles. The state's topography consists of western uplands in the northwestern part of the state, narrow central lowlands in the north and south, and hilly eastern uplands drained by rivers. Ranked 27th in the U.S. populations, Connecticut experienced a 6% increase in population between 1980 and 1990 and currently has approximately 3,287,000 residents, according to the 1990 Census. Principal state industries include manufacturing, retail, government, and services. Livestock, aircraft engines and parts, submarines, copper, helicopters, and electrical equipment are some of the products of Connecticut.

How Many NPL Sites Are in the State of Connecticut?

Proposed	0
Final	14
Deleted	0
	14

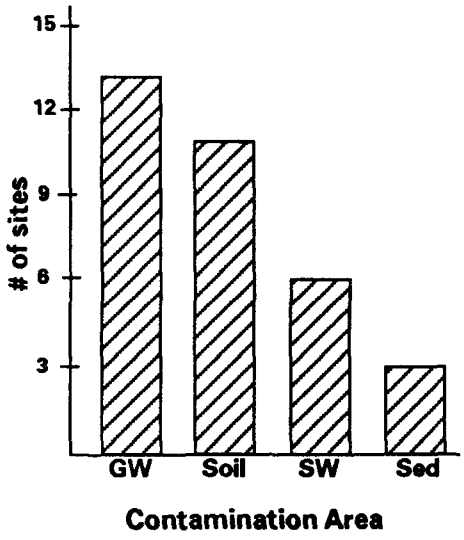
Where Are the NPL Sites Located?

Congressional District 1, 4	1 site
Congressional District 2	6 sites
Congressional District 5, 6	3 sites

What Type of Sites Are on the NPL in the State of Connecticut?

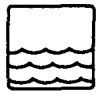
# of sites	type of sites
5	Municipal & Industrial Landfills
2	Metals & Allied Products
1	Electronics & Electrical Equipment
1	Electroplating
1	Textil Mill Products
4	Other (Quarry, manufactures, treatment and storage facility).

How Are Sites Contaminated and What Are the Principal* Chemicals?



Groundwater: Volatile organic compounds (VOCs) and heavy metals (inorganics).

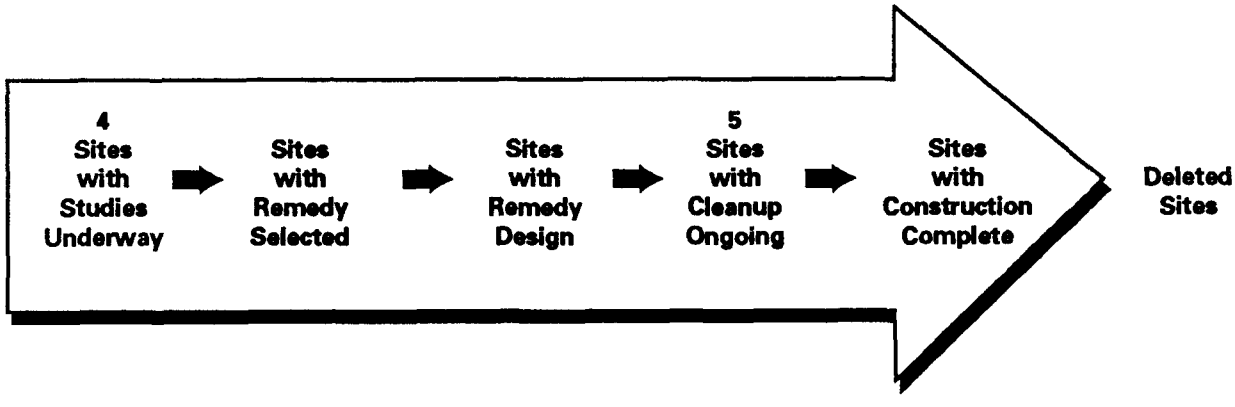
Soil: Volatile organic compounds (VOCs), heavy metals (inorganics), polychlorinated biphenyls (PCBs), and creosote (organics).



Surface Water and Sediments: Volatile organic compounds (VOCs), heavy metals, and pesticides.

*Appear at 20% or more sites

Where Are the Sites in the Superfund Cleanup Process?†



In addition to the activities described above, initial actions have been taken at 8 sites as interim cleanup measures.

†Cleanup status reflects phases of site activities rather than administrative accomplishments.

Progress To Date

The following Progress Report lists all sites currently on, or deleted from, the NPL and briefly summarizes the status of activities for each site at the time this report was prepared. The steps in the Superfund cleanup process are arrayed across the top of the chart, and each site's progress through these steps is represented by an arrow (⇨) indicating the current stage of cleanup.

Large and complex sites often are organized into several cleanup stages. For example, separate cleanup efforts may be required to address the source of the contamination, hazardous substances in the groundwater, and surface water pollution, or to clean up different areas of a large site. In such cases, the chart portrays cleanup progress at the site's *most advanced* stage, reflecting the status of site activities rather than administrative accomplishments.

- An arrow in the "Initial Response" category indicates that an emergency cleanup or initial action has been completed or currently is underway. Emergency or initial actions are taken as an interim measure to provide immediate relief from exposure to hazardous site conditions or to stabilize a site to prevent further contamination.

- A final arrow in the "Site Studies" category indicates that an investigation to determine the nature and extent of the contamination at the site currently is ongoing.

- A final arrow in the "Remedy Selection" category means that the EPA has selected the final cleanup strategy for the site. At the few sites where the EPA has determined that initial response actions have eliminated site contamination, or that any remaining contamination will be naturally dispersed without further cleanup activities, a "No Action" remedy is selected. In these cases, the arrows are discontinued at the "Remedy Selection" step and resume in the "Construction Complete" category.

- A final arrow at the "Remedial Design" stage indicates that engineers currently are designing the technical specifications for the selected cleanup remedies and technologies.

- A final arrow in the "Cleanup Ongoing" column means that final cleanup actions have been started at the site and currently are underway.

- A final arrow in the "Construction Complete" category is used only when all phases of the site cleanup plan have been performed, and the EPA has determined that no additional construction actions are required at the site. Some sites in this category currently may be undergoing long-term operation and maintenance or monitoring to ensure that the cleanup actions continue to protect human health and the environment.

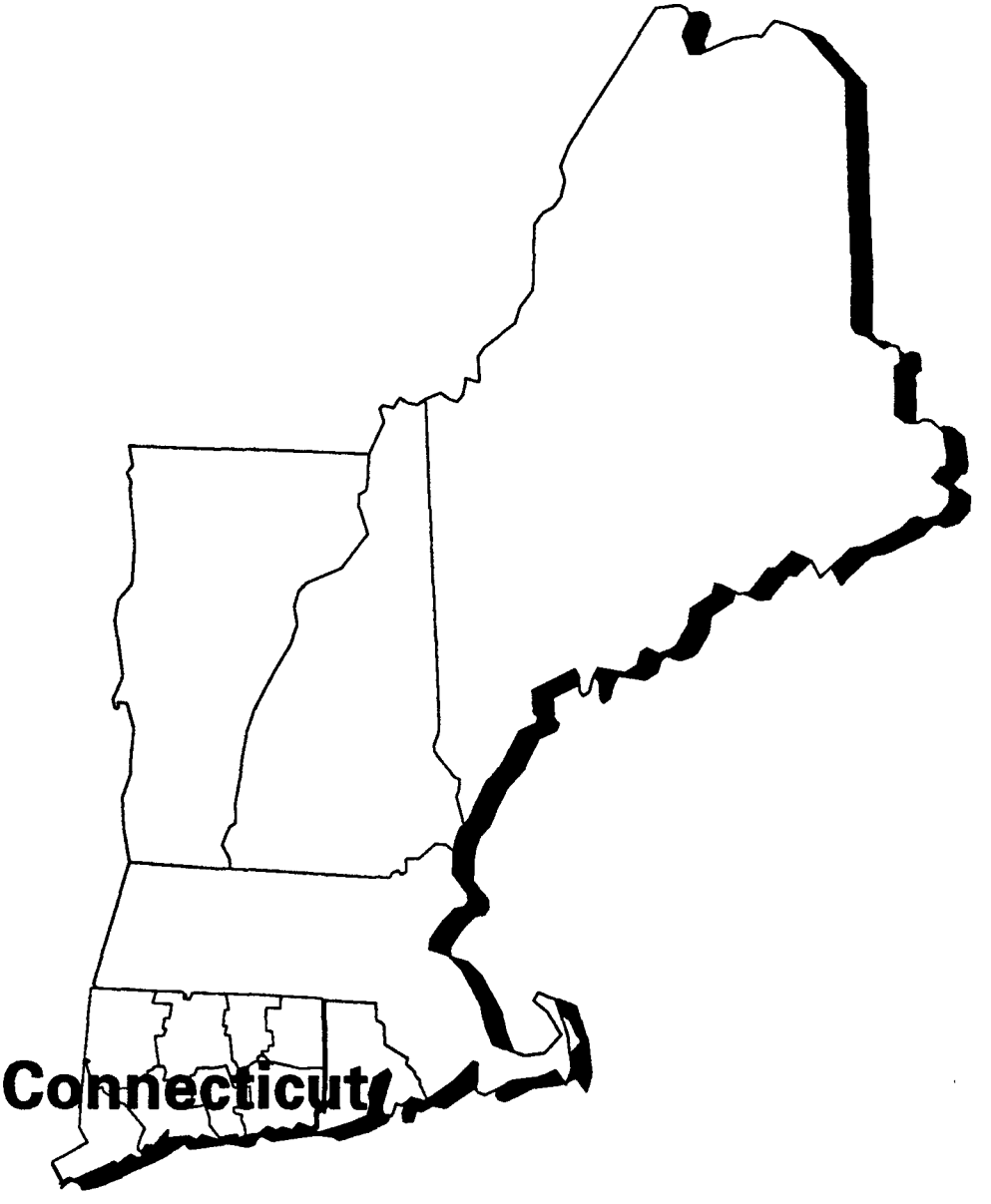
- A check in the "Deleted" category indicates that the site cleanup has met all human health and environmental goals and that the EPA has deleted the site from the NPL.

Further information on the activities and progress at each site is given in the site "Fact Sheets" published in this volume.

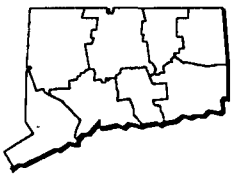
Progress Toward Cleanup at NPL Sites in the State of Connecticut

Page	Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
23	BARKHAMSTED-NEW HARTFORD LNDF	LITCHFIELD	Final	10/04/89							
25	BEACON HEIGHTS LANDFILL	NEW HAVEN	Final	09/08/83		⇨	⇨	⇨	⇨		
27	CHESHIRE GW CONTAMINATION	NEW HAVEN	Final	08/30/90	⇨						
29	DURHAM MEADOWS	MIDDLESEX	Final	10/04/89	⇨						
31	GALLUP'S QUARRY	WINDHAM	Final	10/04/89	⇨						
33	KELLOGG-DEERING WELL FIELD	FAIRFIELD	Final	09/01/84		⇨	⇨	⇨	⇨		
35	LAUREL PARK, INC.	NEW HAVEN	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
37	LINEMASTER SWITCH CORPORATION	WINDHAM	Final	02/21/90	⇨	⇨					
39	NEW LONDON SUBMARINE BASE	NEW LONDON	Final	08/30/90		⇨					
41	NUTMEG VALLEY ROAD	NEW HAVEN	Final	03/31/89	⇨						
43	OLD SOUTHINGTON LANDFILL	HARTFORD	Final	09/21/84		⇨					
45	PRECISION PLATING CORP.	TOLLAND	Final	10/04/89	⇨						
47	REVERE TEXTILE PRINTS CORPORATION	WINDHAM	Final	07/01/87	⇨	⇨					
49	SOLVENTS RECOVERY SERVICE OF NE	HARTFORD	Final	09/01/83		⇨	⇨	⇨	⇨		
51	YAWORSKI WASTE LAGOON	WINDHAM	Final	09/01/83		⇨	⇨	⇨	⇨		

Summary of Site Activities



EPA REGION 1



Who Do I Call with Questions?

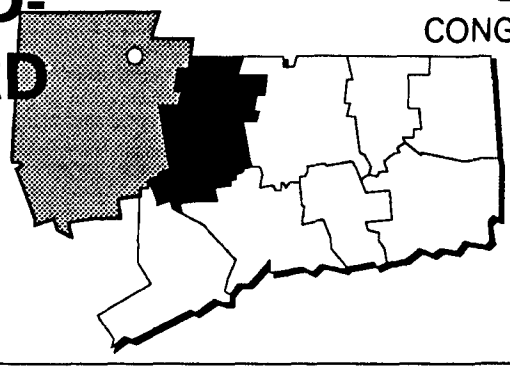
The following pages describe each NPL site in Connecticut, providing specific information on threats and contaminants, cleanup activities, and environmental progress. Should you have questions, please call the EPA's Region 1 Office in Boston, Massachusetts or one of the other offices listed below:

EPA Region 1 Superfund Community Relations Office	(617) 565-3425
EPA Region 1 Superfund Office	(617) 573-9645
EPA Superfund Hotline	(800) 424-9346
EPA Headquarters Public Information Center	(202) 260-2080
Connecticut Superfund Office	(203) 566-5486

BARKHAMSTED-NEW HARTFORD LANDFILL

CONNECTICUT

EPA ID# CTD980732333



EPA REGION 1
CONGRESSIONAL DIST. 06
Litchfield County
Barkhamsted

Site Description

The Barkhamsted-New Hartford Landfill encompasses 98 acres near the Barkhamsted and New Hartford town line. Since 1974, it has been owned and operated by the Regional Refuse Disposal District One. The landfill is unlined and accepts municipal and industrial wastes, including oily metal grindings and sludge containing heavy metals. A barrel-crushing operation to reclaim metals also is on site. In 1983, leaking drums containing hazardous solvents were observed on site during a State inspection. Tests indicated volatile organic compounds (VOCs) were present in shallow and deep wells on site. An unnamed brook borders the site to the southwest and the north and flows through a wetland to the Farmington River. The surrounding area is rural and residential. Many private wells and a municipal supply well serving an estimated 4,800 people are within 3 miles of the site.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 06/21/88
Final Date: 10/04/89

Threats and Contaminants

The groundwater underlying the site is contaminated with VOCs including xylene, toluene, and vinyl chloride, all of which are present in shallow and deep wells on site. The site is not completely fenced, making it possible for people and animals to come into contact with hazardous substances. Potential human health threats include accidentally ingesting or coming in direct contact with the groundwater or surface wastes.

Cleanup Approach

The site is being addressed in a single long-term remedial phase aimed at cleanup of the entire site.

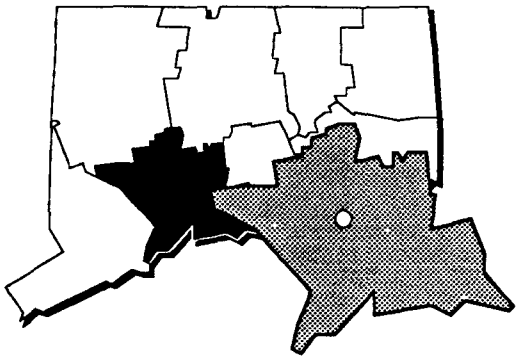
Response Action Status

Entire Site: The Farmington Valley Health District shut down the on-site well serving the landfill office due to VOC contamination. An investigation into the nature and extent of site contamination is planned to begin in late 1991.

Environmental Progress

The EPA has studied the conditions at the Barkhamsted-New Hartford Landfill site and has determined that since the contaminated water source has been removed from service, no other immediate actions are required while waiting for cleanup actions to begin.

BEACON HEIGHTS LANDFILL
CONNECTICUT
EPA ID# CTD072122062



EPA REGION 1
CONGRESSIONAL DIST. 05
New Haven County
Southeast of the intersection of
Blackberry Hill Road and Skokorat Road

Other Names:
Betkoski's Dump

Site Description

The Beacon Heights Landfill site covers 30 acres on an 83-acre property. Between 1920 and 1979, the landfill was used for the disposal of industrial and municipal waste, including oils, chemical liquids, sludges, solvents, rubber, and plastics. Landfill operations included open burning, along with burial of non-combustibles. During an investigation conducted by the EPA in 1984, benzene and several other solvents were detected in two private wells on Skokorat Road at levels that exceeded drinking water standards set by the State of Connecticut. Hockanum Brook, located 1/2 mile northwest of the landfill, flows into the Naugatuck River 2 miles northwest of the site. Approximately 44 homes are within 1/2 mile of the site along Skokorat and Blackberry Hill Road. The nearest residences are approximately 1,000 feet to the north and west of the site. Eight hundred people live within a mile of the site. Local residences used groundwater as the drinking water supply source. The local surface water is used for recreational purposes. An apple orchard is located approximately 600 feet northwest of the landfill.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants

The groundwater underlying the site was found to be contaminated with volatile organic compounds (VOCs) including methylene chloride. The on-site leachate and soils are contaminated with VOCs, as well as lead. The on-site surface water has been shown to be contaminated with VOCs. People are at risk by coming into direct contact with or drinking contaminated surface water or groundwater, breathing potentially contaminated air, or by accidentally ingesting soil on the site.

Cleanup Approach

The site is being addressed in two long-term remedial phases focusing on control of contamination sources and cleanup of the entire site.

Response Action Status

Source Control: In 1985, the EPA chose the following remedies, which the potentially responsible parties agreed to carry out: (1) excavating Betkoski's Dump and other contaminated soils for consolidation with the main landfill prior to closing it down; (2) covering the consolidated wastes to prevent contaminant migration; (3) providing gas venting and stormwater management controls; and (4) installing a system to collect leachate along the perimeter of the site. The potentially responsible parties also fenced the site and State and local control of use of groundwater in the area is being enforced. Connection to the municipal water line was made available, and 49 residences elected to connect to it. Three pumping stations and a reservoir have been built to accommodate the additional water service.

Entire Site: Under the EPA's guidance, a study for leachate disposal has been completed by the potentially responsible parties. The EPA decided that the area should be capped; after the design is finalized, which is scheduled for completion in the fall of 1991, the potentially responsible parties will construct the cap and collect leachate for off-site disposal or on-site treatment, followed by discharge to surface water. A more extensive groundwater monitoring system also is planned.

Site Facts: In 1987, 32 of the more than 70 companies identified by the EPA as potentially responsible parties agreed to pay for a substantial portion of the site cleanup.

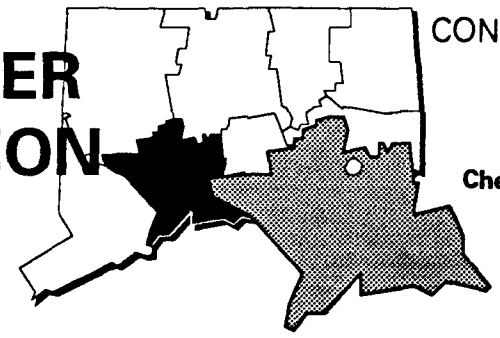
Environmental Progress

Excavating contaminated soil, covering wastes, installing gas venting and leachate collection systems, and connecting residences to the municipal water line have provided a safe drinking water supply and reduced the potential for exposure to contamination, making the Beacon Heights Landfill site safer while it awaits completion of the cap design and the start of final cleanup activities.

CHESHIRE GROUND WATER CONTAMINATION

CONNECTICUT

EPA ID# CTD981067317



EPA REGION 1

CONGRESSIONAL DIST. 01

New Haven County
Cheshire

Other Names:
Cheshire Associates Property

Site Description

The 15-acre Cheshire Ground Water Contamination site in Cheshire has been leased by a variety of tenants that have conducted various manufacturing processes. A major portion of the site has been owned by Cheshire Associates, a New York-based partnership, since 1966. The company leased the property to Valley National Corporation from 1966 to 1979 and to Cheshire Molding Co. from 1979 to 1980. Both companies manufactured plastic molding at the site; neither kept records of disposal practices or waste quantities. Airpax Corporation Plant 2, the current lessee, manufactured electrochemical and electronic devices, beginning in 1983, and disposed of its wastes in accordance with the existing State regulations. The wastes of principal concern at the site include organic chemicals and solvents. Both soil and groundwater on the site are contaminated with volatile organic compounds (VOCs), as are residential wells both on and off site, on-site shallow wells, and an off-site bedrock well. The area is residential and industrial. About 330 people living within a mile of the site use private wells for drinking water. Cheshire municipal wells, serving 22,900 people, lie 2 miles southeast of the site.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 06/21/88
Final Date: 08/30/90

Threats and Contaminants

The groundwater is contaminated with VOCs from the organic chemicals and solvents formerly used at the site. Wells are polluted with VOCs, including high levels of trichloroethane, dichloroethylene, tetrachloroethylene, and xylenes. VOCs contaminating the soil also include trichloroethane, dichloroethylene, and tetrachloroethylene. People drinking contaminated groundwater are at risk from exposure to contaminants. The site is in a low-lying freshwater wetland bordered by two ponds.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase aimed at cleanup the entire site.

Response Action Status

Initial Actions: In October 1983, in compliance with a State Consent Agreement, Cheshire Associates removed 20 cubic yards of contaminated soil to an EPA-regulated landfill. Municipal water has been provided to the residences that had contaminated wells.

Entire Site: A thorough investigation of the site to assess the type and extent of contamination and to identify cleanup strategies is scheduled to begin in 1992.

Site Facts: In 1983, the Connecticut Department of Environmental Protection signed a Consent Agreement with Cheshire Associates, requiring the company to remove contaminated on-site soil and to monitor VOCs in the two private wells for five years.

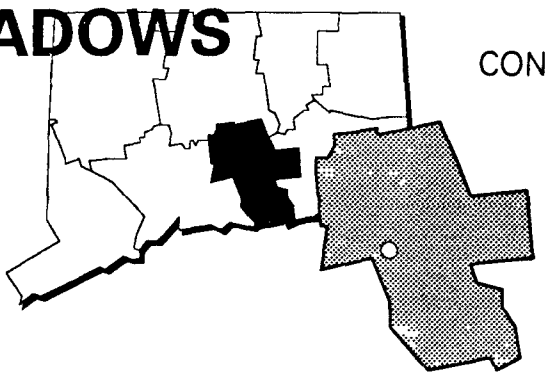
Environmental Progress

The removal of contaminated soil and the provision of a safe drinking water supply have reduced the potential for exposure to contaminated drinking water at the Cheshire Ground Water Contamination site, making it safer while it awaits further cleanup activity.

DURHAM MEADOWS

CONNECTICUT

EPA ID# CTD001452093



EPA REGION 1

CONGRESSIONAL DIST. 02

Middlesex County

Main Street in Durham

Other Names:
Merriam Mfg.

Site Description

Investigations at the Durham Meadows site center around the Merriam Manufacturing Company, which occupies 5 acres on Main Street. Established in 1851, the company makes metal products, primarily boxes for files, security, tools, and fishing supplies. Merriam disposed of contaminated wastewater and sludges on its property in two unlined and undiked lagoons built in 1973. Before that, waste apparently was put into the facility's septic system. The owner ceased dumping in the lagoons in 1982. In another area, paint wastes and degreasing solvents were stored on the ground in drums. Some were in poor condition or were leaking during a State inspection in 1981. In early 1983, after an EPA/State inspection, the EPA ordered the owner to correct several violations of State hazardous waste management regulations. In response, Merriam removed drums and supplied bottled water to affected residents. Durham has a population of approximately 5,600 residents, all using private wells. The nearest resident lives only 10 feet away from the site border. The site is less than 1/2 mile from the Coginchaug River, which eventually drains into the Connecticut River. A freshwater wetland is within 1,500 feet of the site.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/21/88

Final Date: 10/04/89

Threats and Contaminants

Wastewater and sludges from manufacturing processes at the site contained paint waste and organic solvents. In 1982, the State Department of Environmental Protection detected volatile organic compounds (VOCs), including methylene chloride, in private wells in the Durham area. Drinking contaminated groundwater could threaten the health of nearby residents. The site currently lacks any security or physical barrier to prevent direct contact with contaminated wastes. The nearby freshwater wetlands potentially could become polluted from the contaminants migrating from the site.

Cleanup Approach

The site is being addressed in two-stages: initial actions and a long-term remedial phase focusing on developing cleanup alternatives for contamination at the entire site.

Response Action Status

Initial Actions: Under State order, Merriam removed drums containing hazardous wastes to an EPA-approved facility and supplied bottled water to residents in the vicinity of the site after the private wells were found to be contaminated. Carbon filters since have been installed in affected homes.

Entire Site: The EPA will perform a detailed site investigation to determine the extent and nature of groundwater contamination and to recommend strategies for cleanup. The study is scheduled to begin in 1992. Once the investigation is completed, scheduled for 1993, the EPA will evaluate the study findings and will select the final cleanup remedies for site contamination.

Site Facts: The State ordered Merriam Manufacturing to supply bottled water to residents in the vicinity of the site. The EPA issued an Administrative Order, requiring Merriam to correct several violations of State hazardous waste management regulations.

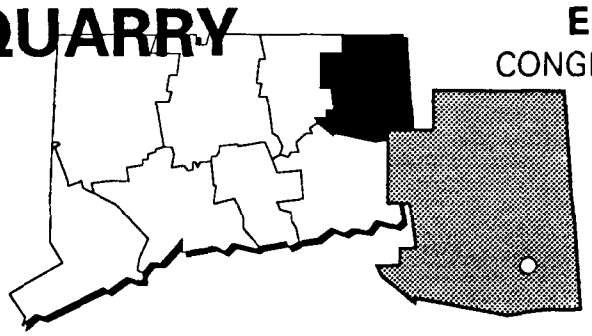
Environmental Progress

The provision of an alternate drinking water source and the removal of some hazardous materials have reduced the potential for exposure to contaminated drinking water and soil from the Durham Meadows site, making it safer while awaiting completion of site studies and selection of remedies.

GALLUP'S QUARRY

CONNECTICUT

EPA ID# CTD108960972



EPA REGION 1

CONGRESSIONAL DIST. 02

Windham County

Plainfield

Site Description

Gallup's Quarry is a 22-acre abandoned gravel pit located in a rural area on Tarbox Road, 1 mile south of Plainfield's business district. In the 1970s, the owner accepted chemical wastes without a permit. Drums and free liquids were dumped at the site, including wastes containing volatile organic compounds (VOCs) and heavy metals. Several of these contaminants have been detected in on-site monitoring wells operated by the State from 1980 to 1981 and by the EPA in 1986. In 1989, the EPA sampled private drinking water wells and found no contamination. The area is rural and residential. Approximately 6,500 people rely on wells within 3 miles of the site as their sole source of drinking water. A community well is 4,000 feet away, and a private well is 1,160 feet from the site.

Site Responsibility: The site is being addressed through combined State and Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/21/88

Final Date: 10/04/89

Threats and Contaminants

The groundwater is contaminated with VOCs and heavy metals, including copper, nickel, and chromium. Ketone and hydrocarbons have been found in the soil. The site currently is unrestricted. Direct contact with hazardous substances on site may pose a health threat. Mill Brook and associated wetlands, located 500 feet downgradient of the site, are threatened by site contamination. Local residents use these resources for swimming and recreational purposes.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase aimed at cleanup of the entire site.

Response Action Status

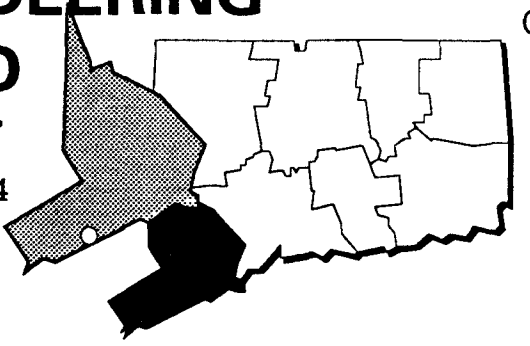
Initial Actions: In 1978, the site was evaluated by the Connecticut Department of Environmental Protection. The State environmental staff and the State Police supervised removal of waste drums and contaminated soil. The owner agreed to reimburse the State for the removal activities at Gallup's Quarry and at another property he owned. However, limited soil analyses conducted by the State in 1981 indicated that soil contaminated with ketone and hydrocarbons still remained on the site.

Entire Site: The EPA has scheduled an in-depth investigation at Gallup's Quarry for 1992. The study will explore the extent and nature of soil and groundwater contamination and will recommend cleanup strategies for the site. Completion of the study and final selection of a cleanup method is planned for 1994.

Environmental Progress

The EPA assessed conditions at Gallup's Quarry and determined that the site does not pose an immediate threat to public health or the surrounding environment. The initial actions described above have reduced the risk of accidental exposure to contamination and have made the site safer while it awaits further cleanup activities.

KELLOGG-DEERING WELL FIELD
CONNECTICUT
EPA ID# CTD980670814



EPA REGION 1
CONGRESSIONAL DIST. 04
Fairfield County
Western bank of the Norwalk River

Other Names:
Smith Well Field

Site Description

The Kellogg-Deering Well Field site consists of an approximately 10-acre municipal well field and adjacent areas that contribute to the well field contamination. Groundwater sampling data indicated that a significant source area of contamination exists below the Elinco/Pitney Bowes/ Matheis Court Complex located at the eastern edge of the site. The well field supplies approximately 25% of the drinking water for 45,000 residents in the city of Norwalk. The primary source of public water supply to the Norwalk First Taxing District (NFTD) Water Department is surface water from four reservoirs. Reservoir water is blended with well field water at varying ratios, depending on reservoir storage and distribution system location. The well field is adjacent to residential and industrial areas.

Site Responsibility: The site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 09/01/83
Final Date: 09/01/84

Threats and Contaminants

The groundwater and soil are contaminated with volatile organic compounds (VOCs), primarily trichloroethylene (TCE) and perchloroethylene (PCE). People could be exposed to chemical contaminants by drinking contaminated water if no treatment were provided; however, the water department is treating and blending water from the wells and reservoir to provide safe drinking water.

Cleanup Approach

The site is being addressed in three long-term remedial phases focusing on wellhead treatment, source control, and downgradient aquifer managment.

Response Action Status

Wellhead Treatment: The water department installed an aerator in 1981 at one of the wells. The aerator consistently removes 65% of the volatile organics in the groundwater. In 1984, the utility installed an air stripper on another well, bringing the removal of VOCs to 99%. The air filtering actions were completed in 1988. The air stripper is part of the water treatment plant and will remain in operation. Contaminants are removed from the water by air filtering the volatile contaminants to a gas. The treated water is discharged into the existing conventional water treatment plant and distribution system.

Source Control: The remedy selected by the EPA for controlling the source of contamination involves removing contaminants from the soil with vacuum extraction; treatment and discharge of contaminated groundwater; and institutional controls to prevent exposure during the time that the remedy is being conducted. Air and groundwater monitoring also will be provided. Planning activities for the remedy began in 1991.

Downgradient Area: In 1990, the EPA began an investigation into the nature and extent of contamination of areas downgradient from the source and above the well field. The study will examine the possible effects of discharge to the Norwalk River and Deering Pond.

Site Facts: An EPA Administrative Order was signed with the parties potentially responsible for the site contamination in 1989 concerning the wellhead treatment. A Consent Decree from the EPA covering design and implementation of cleanup activities was issued in 1991 to the potentially responsible parties. The EPA recognizes that some groundwater cleanup efforts are being undertaken by the owners, under an order by the Connecticut Department of Environmental Protection, and will evaluate these efforts during the technical design phase to determine whether these actions are consistent with the overall cleanup of the aquifer.

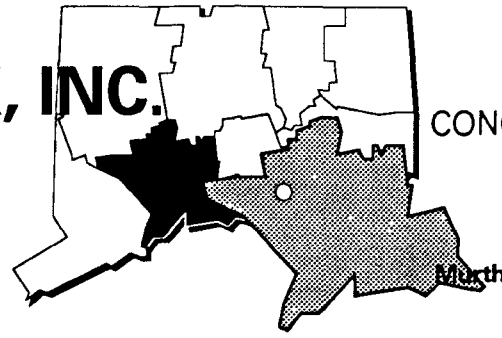
Environmental Progress

The wellhead treatment actions described above have eliminated the potential of exposure to hazardous substances in the drinking water and will continue to protect the households until planned cleanup activities at the Kellogg-Deering site are completed.

LAUREL PARK, INC.

CONNECTICUT

EPA ID# CTD980521165



EPA REGION 1

CONGRESSIONAL DIST. 05

New Haven County

Naugatuck

Other Names:

Murthas Hunter Mountain Landfill

Laurel Park Landfill

Site Description

The Laurel Park, Inc. site is a landfill that occupies approximately 20 acres of a 35-acre parcel of land. The landfill has been in existence since the late 1940s, and several industries disposed of solvents, oils, hydrocarbons, chemical and liquid sludge, chemical solids, tires, and rubber products there. The facility continued to operate as a municipal landfill until 1987. The central developed portion of the town of Naugatuck, which has an estimated population of 26,500 people, is located approximately 1 mile northeast of the site. Homes are located around three sides of the landfill. Approximately 50 homes are located within a 1/4-mile radius of the site, with the closest residents being about 1,000 feet from the site. The nearest homes used groundwater from individual wells as a drinking water supply source, but have been connected to the public water supply. The homes at the bottom of Huntington Hill, downslope of the landfill, are on a public water supply line. Most of the area immediately bordering the site is forested.

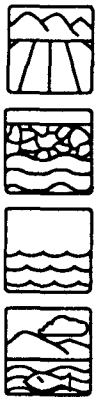
Site Responsibility: This site is being addressed through a combination of Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



The on-site soil and leachate are contaminated with inorganic and organic chemicals including dichloroethane and benzene. Groundwater and surface water are contaminated with heavy metals, including calcium and magnesium, and volatile organic compounds (VOCs) such as toluene and acetone. The health threats include direct contact with, drinking, or accidental ingestion of contaminated groundwater, surface water, soils, and leachate. Forested areas surrounding the site may be threatened by runoff of site contamination.

Cleanup Approach

The site is being addressed in three stages: initial actions and two long-term remedial phases concentrating on fencing, water line installation, and sewer treatment and source control and groundwater treatment.

Response Action Status

Initial Actions: A leachate collection system was constructed in 1984, under a court order, to capture contaminants leaching from the landfill area into the groundwater and other site areas. Additionally, the potentially responsible parties provided bottled water to area residents affected by a contaminated drinking water supply.

Fencing, Water Line, and Sewer Treatment: The potentially responsible parties fenced a leachate seep in 1986 and installed a water supply line in 1989. The water line is completed, except for surface landscaping. All of the homes are hooked up, with the exception of three residences whose owners refused hookup to the system. There is no hook-up fee, but the homeowners have to pay for municipal water use. The potentially responsible parties constructed a sewer line in 1990 to carry leachate from the site to the Naugatuck Water Pollution Control facility for treatment.

Source Control and Groundwater Treatment: The remedy selected by the EPA to control the source of contamination and to treat groundwater includes: (1) installation of a cover over all waste disposal areas to prevent contact with surface water and groundwater; (2) rehabilitation of the existing leachate collection system, including the addition of a system consisting of french drains and groundwater extraction wells, followed by off-site treatment and discharge at the Naugatuck Water Pollution Control Facility; and (3) monitoring of the air, water, soils, and groundwater at the site. Preparation of the technical specifications and design for the selected remedy is underway and is expected to be completed in 1992.

Site Facts: In the early 1960s, citizens began to complain about odors, fires, spills, and runoff from the site. In 1985, Uniroyal Chemical Company, Inc., a potentially responsible party, entered into an Administrative Consent Order with the EPA to conduct an investigation into the type and extent of contamination at the site. In 1989, the State and Uniroyal agreed to equally fund the installation of a sewer line to convey leachate from the landfill. In 1991, 19 potentially responsible parties signed a Consent Decree and the accompanying Administrative Order to conduct the technical design of the remedy.

Environmental Progress

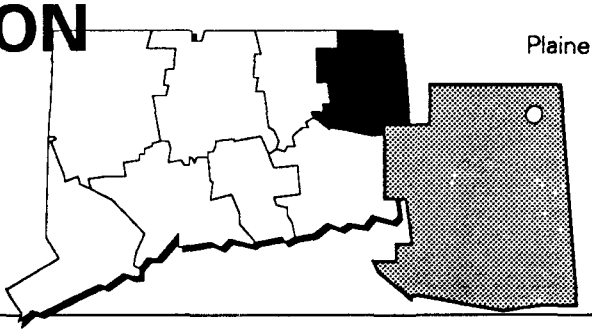
Initial actions to provide safe drinking water and to control leachate from the landfill have reduced the immediate threats at the Laurel Park, Inc. site. Additional cleanup actions and the planned groundwater treatment will continue to reduce contamination levels at the site, making it safe to the nearby residents and the environment.

LINEMASTER SWITCH CORPORATION

CONNECTICUT

EPA ID# CTD001153923

EPA REGION 1
CONGRESSIONAL DIST. 02
Windham County
Plaine Hill Road in Woodstock



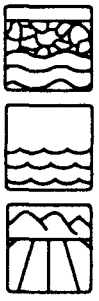
Site Description

The 45-acre Linemaster Switch Corporation site has been used for the manufacturing of electrical and pneumatic foot switches and wiring harnesses since 1952. Facility operations involve the use of trichloroethylene (TCE), paint, and thinners. Wastes are stored in barrels in sheds near the factory building. The site boundary has been expanded to 92 acres, due to the spread of contamination, extending to Route 171 to the south, Plaine Hill Road to the west, and Route 169 to the north and east. Approximately 2,100 people live, and obtain drinking water from wells drawing on the contaminated groundwater, within 3 miles of the site. An on-site well supplies drinking water to the factory and its offices. The site is surrounded by the Town of Woodstock, a rural community of approximately 5,300 people. Artificial ponds located on the site are used for boating.

Site Responsibility: This site is being addressed through a combination of Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 02/21/90

Threats and Contaminants



Groundwater, sediments, surface water, and soils are contaminated with TCE. TCE also was detected in Linemaster's main pump house well, which supplies drinking water to the factory and its offices. Solvents were detected in the artificial ponds. The site is unfenced, making it possible for people and animals to come into direct contact with hazardous substances. Other human health threats include drinking contaminated groundwater or coming into direct contact with the soil, surface water, or sediments.

Cleanup Approach

The site is being addressed in two stages: an initial action and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Initial Action: Linemaster began providing bottled water to its employees in 1986. Also in 1986, the EPA began to provide bottled water to off-site residents whose wells are contaminated. Presently, all bottled water is provided by Linemaster.

Entire Site: Linemaster's main production well has been equipped with an air stripper to remove contaminants, and the well now supplies potable water to the factory and one on-site residence. Several other contaminated wells, both on and off site, have been equipped with carbon treatment systems to remove contaminants. A water supply monitoring program has been established for on- and off-site wells. Monitoring wells have been drilled to determine the extent of site contamination and to aid in developing a remedy. A small pilot study of vapor extraction as a means to clean up contaminants proved ineffectual due to the high water table. Other alternatives currently are being developed. The parties potentially responsible for the site contamination currently are conducting a hydrogeological investigation to determine appropriate actions to eliminate the contamination threat. A decision is expected in 1992.

Site Facts: In 1986, the Connecticut Department of Environmental Protection issued an Abatement Order, requiring Linemaster to develop a plan for a hydrological study to determine the extent and degree of contamination on the site. In 1987, Linemaster and the EPA entered into a Consent Order to provide bottled water off site, monitor residential wells, and conduct a hydrogeologic study.

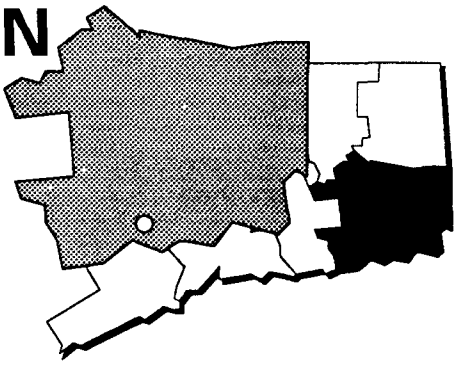
Environmental Progress

Supplying bottled water to affected residents has reduced the potential for exposure to hazardous substances in the drinking water and will continue to protect surrounding households and Linemaster Switch Corporation employees until planned cleanup activities are completed.

NEW LONDON SUBMARINE BASE

CONNECTICUT

EPA ID# CTD980906515



EPA REGION 1

CONGRESSIONAL DIST. 02

New London County

Groton

Other Names:
DOD/USN SB/Overbank Disp Area NW 3,
DOD/USN SB/DPDO Area Site #6,
DOD/USN SB/Area A Landfill #2

Site Description

The New London Submarine Base site covers 547 acres of the 1,412 acre base on the eastern bank of the Thames River in Groton. The base was established in 1916 as an operation and support base for submarine activities in the Atlantic Ocean. Areas of concern include the Area A Landfill, the Over Bank Disposal Area, the Defense Property Disposal Operations Areas, the Lower Submarine Base, and the Gosscove Landfill. From 1957 to 1973, volatile organic compounds (VOCs), pesticides, polychlorinated biphenyls (PCBs), spent battery acids, and other wastes were buried below the water table in the 24-acre Area A Landfill, which is situated on wetlands. The Over Bank Disposal Area operated from 1957 to the 1970s. The Defense Property Disposal Operations Area was used as a burning ground and landfill from 1950 to 1969. Inspection reports from 1982 recorded leaking containers and evidence of spills associated with containers stored directly on the ground. In 1983, approximately 40 gallons of PCB-contaminated oil was reported as having been spilled onto the ground. In 1988, Navy sampling revealed lead, cadmium, and various pesticides in sediments and surface water. The area around the base is mixed industrial, commercial, and residential property. Groundwater in some areas of the base is as shallow as 10 feet below the surface, with permeable soils. These conditions potentially threaten the area groundwater, which provides drinking water to 3,500 to 5,000 people living within 3 miles of the base. The population within 1 mile of the base is 4,000.

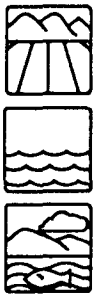
Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/26/89

Final Date: 08/30/90

Threats and Contaminants



The soil, sediments, and surface water are contaminated with pesticides and heavy metals including cadmium and lead. The soil also contains VOCs, PCBs and polycyclic aromatic hydrocarbons (PAHs). The site is an active, restricted-access Naval base, so the chance of direct contact with on-site sediments, soil, or surface water is minimal.

Cleanup Approach

The site is being addressed in five long-term remedial phases directed at cleanup of the Area A Landfill, the Over Bank Disposal Area, the DPDO Area, the Lower Sub Base, and other contaminated areas of the base.

Response Action Status

Area A Landfill: In 1990, the Navy began a study into the nature and extent of VOC, pesticide, battery acid, and other waste contaminations at the Area A Landfill. When the study is completed, cleanup alternatives will be identified and a cleanup approach will be chosen.

Over Bank Disposal Area: In 1990, the Navy began a study into the nature and extent of contamination at the Over Bank Disposal Area. Once the study is completed, alternatives will be identified and recommended for cleanup.

DPDO Area: In 1990, the Navy began a study into the nature and extent of contamination at the DPDO Area. Cleanup alternatives will be identified and a cleanup approach will be chosen, once the study has been completed.

Lower Sub Base: In 1990, the Navy began a study into the nature and extent of contamination at the Lower Sub Base. The EPA will choose the cleanup approach when the study is completed and the cleanup alternatives are identified.

Other Areas: In 1992, the Navy is expected to begin a study into the nature and extent of contamination in other site areas.

Site Facts: The base is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DoD) in 1978 to identify, investigate and control the migration of hazardous contaminants at military and other DoD facilities. Under the program, the Navy has identified 16 potential hazardous waste disposal areas and has extensively studied three of them.

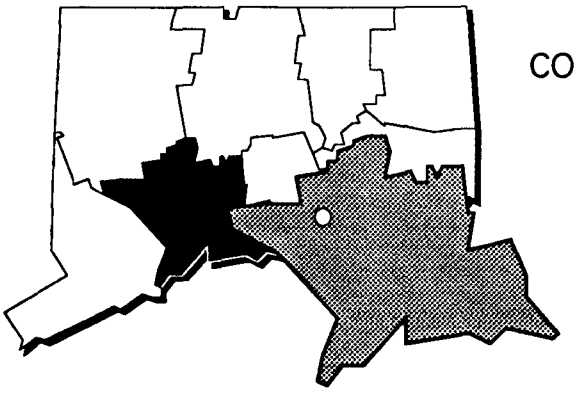
Environmental Progress

The Navy is in the process of conducting numerous investigations at all the discovered contaminated areas of the New London Submarine Base site. These investigations will lead to the identification and selection of the best cleanup alternatives for the base.

NUTMEG VALLEY ROAD

CONNECTICUT

EPA ID# CTD980669261



EPA REGION 1

CONGRESSIONAL DIST. 05

New Haven County

Wolcott

Other Names:
Nutmeg Screw Machine Products, Inc.

Site Description

The investigation of the Nutmeg Valley Road site centers around Nutmeg Screw Machine Products Company (NSMP), which covers 3 1/2 acres on Nutmeg Valley Road. The area around the site is both rural residential and light industrial, with several other metal-working and metal-finishing shops in the immediate vicinity, including Waterbury Heat Treating Corporation (WHTC) and Alpine Electronic Components, Inc. (AEC). WHTC is 300 feet to the northwest of NSMP and performs various heat-treating operations (annealing and hardening) on metal parts and degreasing, polishing, acid dipping, and assembly functions; AEC leases part of the NSMP building. The NSMP is a small metal-working and machine shop that has been in business since 1951. Substances used in the machining processes include a kerosene-like cutting oil, machine lubrication oils, and agents used for cleaning and degreasing (carbon tetrachloride). Carbon tetrachloride, cyanide wastes, and cutting oils were dumped onto the ground at an estimated rate of up to 15 gallons per day, according to the State. This practice was followed for approximately 14 to 20 years, ceasing by 1980. Approximately 10,500 people draw drinking water from private wells within 3 miles of the site. There are 43 industries and 25 residences using groundwater as a water source at this site. Within a 3-mile radius of the site lie the towns of Waterbury, with a population of approximately 103,800, and Wolcott, with a population of approximately 13,200.

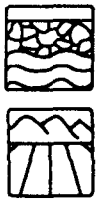
Site Responsibility: This site is being addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 01/23/87

Final Date: 03/31/89

Threats and Contaminants



Contamination has been documented in 25 industrial wells. The groundwater is contaminated with volatile organic compounds (VOCs), heavy metals, and high levels of cyanide. The soil also is contaminated with VOCs and heavy metals including lead and copper. Contamination has been documented in the groundwater beneath the site. The primary health threats to area residents are from ingesting or direct contact with contaminated water or soil.

Cleanup Approach

The site is being addressed in two stages: immediate actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Immediate Actions: The State has been supplying bottled drinking water to affected residents since 1987. Also, carbon filters have been installed on the industrial wells to reduce contamination levels. Interim measures have included the extension of public water supplies to the area.

Entire Site: The EPA plans to conduct an investigation into the soil and groundwater contamination at the site and develop strategies for final cleanup. The study is expected to start in 1992 and is scheduled for completion in 1994. Once completed, the EPA will evaluate the study findings and select the final cleanup remedies for the contamination at the site.

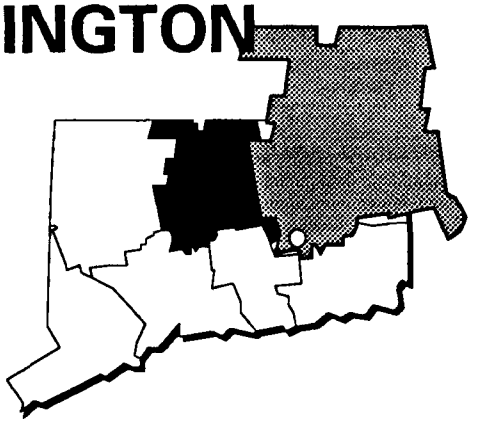
Environmental Progress

The initial actions described above have provided safe drinking water to affected residents and reduced contamination levels in the industrial water supply, limiting the threat of exposure while the investigation leading to final cleanup continues at the Nutmeg Valley Road site.

OLD SOUTHINGTON LANDFILL

CONNECTICUT

EPA ID# CTD980670806



EPA REGION 1
CONGRESSIONAL DIST. 06
Hartford County
Old Turnpike Road in Southington

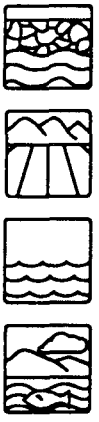
Site Description

The Old Southington Landfill is a 10-acre site that may have been used as early as the 1920s until 1967 as a municipal disposal area. During this time, the landfill was open to residents and businesses of the town. In 1967, the Town of Southington closed the landfill. Closure procedures included compacting loose refuse, covering the landfill with at least 2 feet of clean fill material, and reseeding the grasses. Between 1973 and 1980, parts of the landfill were subdivided and sold for commercial development. Several residential and commercial structures now occupy the closed landfill and adjacent areas. The former landfill is located approximately 700 feet southeast of the former municipal Well No. 5, which was installed in 1971 by the Town of Southington Water Department as a public water supply. In 1979, the municipal well was closed because groundwater analyses indicated the presence of volatile organic compounds (VOCs) at levels that exceeded State standards. The well has not been reopened. The site is located about 3,500 feet to the east of the Quinnipiac River.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 09/08/83
Final Date: 09/21/84

Threats and Contaminants



The groundwater, soil, and surface water are contaminated with VOCs including trichloroethane. On-site workers and trespassers could be threatened by coming in direct contact with or accidentally ingesting contaminants in the groundwater, surface water, or soil. Black Pond, used for recreation, hunting, and fishing, is threatened by site contaminants; ingestion of contaminated fish, waterfowl, and plants may pose a health threat.

Cleanup Approach

The site is being addressed in a single long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Entire Site: The potentially responsible parties currently are conducting an investigation into the contamination at the site. The investigation will define the contaminants and will recommend alternatives for the final cleanup. The investigation is planned to be completed in 1993.

Site Facts: In 1987, the EPA issued an Administrative Consent Order to three parties potentially responsible for the contamination of the site to perform a study to determine the nature and extent of contamination at the site.

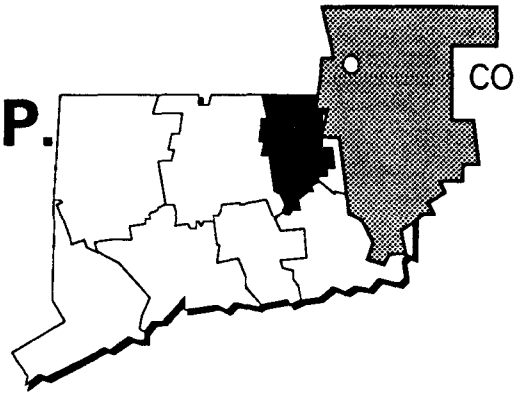
Environmental Progress

After adding this site to the NPL, the EPA assessed conditions at the site and determined that contamination from the Old Southington Landfill site currently does not pose an immediate threat to area residents and surrounding environments, and no emergency actions were required to make it safe while waiting for cleanup actions to begin.

PRECISION PLATING CORP.

CONNECTICUT

EPA ID# CTD051316313



EPA REGION 1
CONGRESSIONAL DIST. 02
Tolland County
Vernon

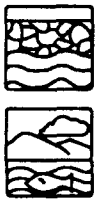
Site Description

Precision Plating Corporation has been chrome plating various metal parts and fixtures on this 3-acre site since 1970. The chrome plating process includes alkaline cleaning, chemical etching, rinsing, buffing, and polishing. Wastes generated during this process include rinse waters containing heavy metals, batch wastes of alkaline cleaner, and spent plating and etching acids. Before 1983, rinse waters were discharged to a storm drain outside the building. Process plating acids and chrome plating wastes were stored on the ground in drums and in a 500-gallon tank. In 1979, Vernon's Health Department found the well serving Hillside Industrial Park to be contaminated with hexavalent and trivalent chromium. The rupturing of drums and the tank by a snow plow was determined to be the cause of the contamination. The company, and later the EPA, confirmed that the groundwater underlying the site had become contaminated. An estimated 10,800 people obtain drinking water from public and private wells within 3 miles of the site. Surface waters in the area are used for recreational fishing. The site is within 1 mile of a freshwater wetland.

Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 06/21/88
Final Date: 10/04/89

Threats and Contaminants



The groundwater underlying the Precision Plating site is contaminated with hexavalent and trivalent chromium as a result of the spillage of contaminants at the site. The site is unfenced, making it possible for people and animals to come into direct contact with hazardous substances. The health of people who use contaminated groundwater as a water supply may be threatened.

Cleanup Approach

This site is being addressed in two stages: initial actions and a single long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Initial Actions: The State issued orders to the owners of Hillside Industrial Park and Precision Plating to study and clean up the site. Precision Plating complied with the orders by installing five shallow monitoring wells on site, sampling surface water, and removing 20 cubic yards of contaminated soil. In addition, Precision Plating and Hillside Industrial Park are providing alternate drinking water supplies to the High Manor Mobile Home Park.

Entire Site: In 1992, the parties potentially responsible for the site contamination are expected to begin a study of sources and the extent of contamination at the site. Once the investigation has been completed and reviewed by the EPA, a final cleanup remedy for the site will be selected.

Site Facts: In 1986, the State issued orders requiring Precision Plating and Hillside Industrial Park to provide drinking water to affected residents.

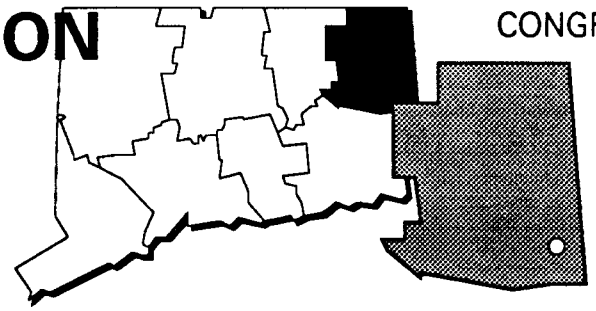
Environmental Progress

By providing drinking water to nearby residents, the potential of exposure to hazardous substances has been reduced, and these households will continue to be protected until cleanup activities are completed at the Precision Plating Corp. site.

REVERE TEXTILE PRINTS CORPORATION

CONNECTICUT

EPA ID# CTD004532610



EPA REGION 1

CONGRESSIONAL DIST. 02

Windham County

Sterling

Site Description

The Revere Textile Prints Corporation site covers 2 acres in Sterling. The textile processing facility first operated over 50 years ago as the U.S. Finishing Company. In 1978, a town employee allegedly observed Revere Textile employees dumping barrels of wastes into the Moosup River. The facility was destroyed by fire in 1980. Following the fire, a number of drums were evident in the ruins of two buildings on site. The property was sold in 1980. On site at the time were over 1,500 drums leaking dyes, paints, solvents, and heavy metals onto the ground. The State detected over 30 compounds in the drums and soil on site and issued an order against the new owner to clean up the site. In 1982, ownership of the site was transferred to Sterling Industrial Park Corporation. After several State inspections and rounds of sampling, the drums were removed in 1983 by the new owner. An unknown quantity of contaminated soil also was removed. On-site monitoring wells were sampled in 1984 and found to be contaminated. Approximately 350 people live within 1 mile of the site, while 4,500 people live within a 3-mile radius. The Moosup River is downgradient of the site and also is contaminated. This river is used for recreational purposes.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/01/86

Final Date: 07/01/87

Threats and Contaminants

Groundwater is contaminated with antimony, methanol, and volatile organic compounds (VOCs) including toluene and trichloroethylene (TCE). The soil is contaminated with barium and VOCs including ethyl benzene and xylene. Surface water is contaminated with TCE and magnesium. People who accidentally come in direct contact with, or ingest contaminated groundwater, surface water, or soil may be at risk. Residents in the area depend on the groundwater as their sole source of drinking water.

Cleanup Approach

This site is being addressed in two stages: immediate actions and a single long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Immediate Actions: In 1990, the town of Sterling removed six drums and paint cans from the site. This was a small removal involving solvents, oils, naphthalene, and VOCs.

Entire Site: The EPA is currently studying the contamination at the site. The investigation will define the contaminants and will recommend alternatives for the final cleanup remedy. Once the investigation is completed, expected in 1991, the EPA will review the study findings and select the final cleanup strategies for site contamination.

Site Facts: In 1980, the State issued an order against the owner to clean up the site. A new owner, Sterling Industrial Park Corporation, complied with the order in 1983.

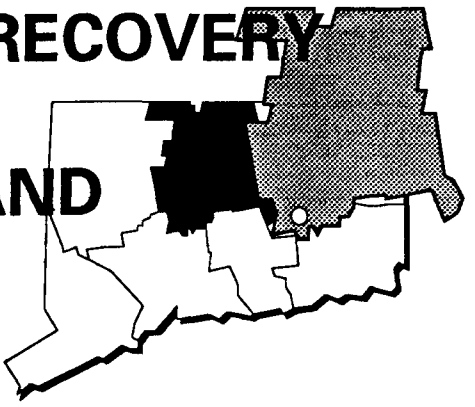
Environmental Progress

The initial actions to remove drums and contaminated soils from the site have reduced the potential for accidental exposure to hazardous wastes, while studies are ongoing to identify final cleanup remedies for the Revere Textile site.

SOLVENTS RECOVERY SERVICE OF NEW ENGLAND

CONNECTICUT

EPA ID# CTD009717604



EPA REGION 1
CONGRESSIONAL DIST. 06
Hartford County
Southington

Other Names:
Solvents Recovery, Inc.

Site Description

Solvents Recovery Services of New England is a fenced 2 1/2-acre facility in the town of Southington. The facility operated as an EPA-approved hazardous waste treatment and storage facility. The facility received various waste industrial solvents that are blended for use as a fuel product. From 1957 to 1967, stillbottom sludges were disposed of in two unlined lagoons. In 1967, sludge disposal was discontinued, and the lagoons were drained and covered with fill. After the lagoons were closed, wastes were burned in an open pit on site or disposed of off site. In the 1970s, the State ordered that the incineration practice be discontinued. Other past and present operating practices on site, such as accidental spills or poor housekeeping, may have constituted additional sources of contamination. No hazardous waste disposal currently takes place at the site. In 1991, all activities at the site ceased in preparation for closure under the Resource Conservation and Recovery Act (RCRA). The Town of Southington Well #4 is approximately 2,000 feet south of the site, and Well #6 is located 1,300 feet to the south of the site. Both of these wells were closed in 1979 because of contamination. The population of Southington is 38,000. The area near the site is a mixture of commercial, light industrial, residential, and some agricultural uses. The facility is located approximately 500 feet to the west of the Quinnipiac River.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/01/82
Final Date: 09/01/83

Threats and Contaminants

The groundwater is contaminated with isopropyl alcohol, acetone, toluene, and other volatile organic compounds (VOCs). The soil is contaminated with lead, cadmium, polychlorinated biphenyls (PCBs), and VOCs. People who accidentally drink contaminated groundwater would be at risk. However, since the two municipal wells have been taken out of service, this health threat is reduced. In addition, direct contact with or accidental ingestion of contaminated soil may pose a health risk.

Cleanup Approach

The site is being addressed in three long-term remedial phases directed at cleanup of on-site and off-site groundwater and source control.

Response Action Status

On-site Groundwater: Under a 1983 Consent Decree, the parties potentially responsible for the site contamination agreed to pump and treat groundwater by air stripping the contaminants in the facility's cooling water tower. The treated water subsequently is discharged through a drainage ditch to the Quinnipiac River. Solvents Recovery Services has installed the on-site groundwater pumping system, which currently is operational.

Off-site Groundwater: Under a 1983 Consent Decree, the potentially responsible parties are conducting cleanup of off-site groundwater. The off-site system is similar to that constructed for on-site groundwater.

Source Control: The EPA is conducting an investigation into the sources and the nature and extent of site contamination to identify alternatives for cleanup. The study is expected to be completed in 1993.

Site Facts: In 1983, Solvents Recovery Service signed a Consent Decree with the EPA, requiring the installation of a system to recover groundwater on and off site and a plan for on-site storage and management of hazardous wastes. The EPA has sued the potentially responsible parties to enforce the Consent Decree and for violations of RCRA.

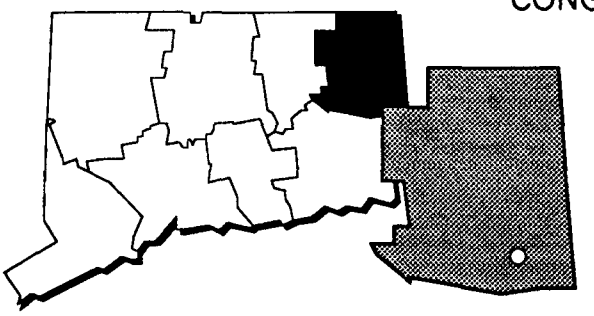
Environmental Progress

The closure of the contaminated drinking well has eliminated the threat of exposure to affected residences while pump and treat operations continue to reduce groundwater contamination to safe levels at the Solvents Recovery Service of New England site.

YAWORSKI WASTE LAGOON

CONNECTICUT

EPA ID# CTD009774969



EPA REGION 1
CONGRESSIONAL DIST. 02
Windham County
Canterbury Township

Site Description

The Yaworski Waste Lagoon is a dewatered and backfilled lagoon, approximately 800 feet by 300 feet and 12 feet deep. From about 1948 to 1973, drummed material and bulk wastes including textile dyes, solvents, resins, acids, caustics, stillbottom sludges, and solvent-soaked rags were disposed of in the lagoon. Periodically, flammable liquid waste was burned in several pits in the lagoon area until 1965, when the Connecticut Department of Health ordered a halt to on-site burning of waste. The combined efforts of local residents and State and local officials concerned about adverse human health and environmental effects from disposal operations at the site led to the end of all dumping at the site in 1973. In 1976, the Connecticut Department of Environmental Protection (CTDEP) directed James Yaworski, the site owner, to assess the environmental hazard posed by the site. Mr. Yaworski was required to install monitoring wells adjacent to the lagoon. Sampling of these wells detected contaminated groundwater. In 1980, the CTDEP ordered Mr. Yaworski to employ a professional engineering firm to conduct an environmental study of the property. The firm recommended closing the lagoon by covering the waste and, in 1982, the CTDEP ordered Mr. Yaworski to close the lagoon in accordance with the engineering firm's report. After a fire in 1982, the EPA decided that additional information was needed about the site to better assess the potential threat to human health and the environment. The population of Canterbury is approximately 1,600. The nearest residence that uses groundwater is 1,600 feet upgradient from the site and across the Quinebaug River. The site is surrounded by agricultural land and is bordered by the Quinebaug River. It lies within the 100-year flood plain.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/01/82
Final Date: 09/01/83

Threats and Contaminants

Groundwater samples taken from areas immediately adjacent to the lagoon revealed the presence of low levels of volatile organic compounds (VOCs) and heavy metals. Inorganic contaminants were found in the sediments in the wetlands area just south of the lagoon. The soil is contaminated with polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs), and soil samples taken from areas immediately adjacent to the lagoon revealed the presence of low levels of VOCs. The contaminants seeping through the dike into the wetlands pose a risk to people who come in direct contact with it. In addition, accidental ingestion of contaminated groundwater may pose a health risk.

Cleanup Approach

The site is being addressed through a single long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Entire Site: The parties potentially responsible for the site contamination are responsible for containing the waste in the lagoon by constructing an impermeable cover that complies with all environmental laws, improving the dike around the lagoon to ensure that it can withstand floods, establishing a groundwater protection standard known as an Alternate Concentration Limit (ACL), and monitoring the groundwater for 30 years to confirm that the ACL standard is met. Design of the technologies to be used in the remedy described above was completed in 1990. In 1991, the groundwater treatment installation began for groundwater that is contaminated above the established ACLs. In 1991, the lagoon cap was installed with the exception of the vegetative cover. The cover is expected to be completed later in 1991.

Environmental Progress

After adding this site to the NPL, the EPA assessed site conditions and determined that the site contamination currently does not pose an immediate threat to area residents and the surrounding environment while waiting for cleanup actions to be completed at the Yaworski Waste site. The cap has eliminated all threats of residents coming into contact with contaminants from the lagoon.

Glossary: Terms Used in the Fact Sheets

Terms Used in the NPL Book

This glossary defines terms used throughout the NPL Volumes. The terms and abbreviations contained in this glossary apply specifically to work performed under the Superfund program in the context of hazardous waste management. These terms may have other meanings when used in a different context.

Acids: Substances, characterized by low pH (less than 7.0), that are used in chemical manufacturing. Acids in high concentration can be very corrosive and react with many inorganic and organic substances. These reactions possibly may create toxic compounds or release heavy metal contaminants that remain in the environment long after the acid is neutralized.

Administrative Order On Consent: A legal and enforceable agreement between the EPA and the parties potentially responsible for site contamination. Under the terms of the Order, the potentially responsible parties (PRPs) agree to perform or pay for site studies or cleanups. It also describes the oversight rules, responsibilities, and enforcement options that the government may exercise in the event of non-compliance by potentially responsible parties. This Order is signed by PRPs and the government; it does not require approval by a judge.

Administrative Order [Unilateral]: A legally binding document issued by the EPA, directing the parties potentially responsible to perform site cleanups or studies (generally, the EPA does not issue Unilateral Orders for site studies).

Aeration: A process that promotes breakdown of contaminants in soil or water by exposing them to air.

Agency for Toxic Substances and Disease Registry (ATSDR): The Federal agency within the U.S. Public Health Service charged with carrying out the health-related responsibilities of CERCLA.

Air Stripping: A process whereby volatile organic chemicals (VOCs) are removed from contaminated material by forcing a stream of air through it in a pressurized vessel. The contaminants are evaporated into the air stream. The air may be further treated before it is released into the atmosphere.

Ambient Air: Any unconfined part of the atmosphere. Refers to the air that may be inhaled by workers or residents in the vicinity of contaminated air sources.

Aquifer: An underground layer of rock, sand, or gravel capable of storing water within cracks and pore spaces, or between grains. When water contained within an aquifer is of sufficient quantity and quality, it can be tapped and used for drinking or other purposes. The water contained in the aquifer is called groundwater. A sole source aquifer supplies 50% or more of the drinking water of an area.

Artesian (Well): A well made by drilling into the earth until water is reached, which, from internal pressure, flows up like a fountain.

GLOSSARY

Attenuation: The naturally occurring process by which a compound is reduced in concentration over time through adsorption, degradation, dilution, and/or transformation.

Background Level: The amount of a substance typically found in the air, water, or soil from natural, as opposed to human, sources.

Baghouse Dust: Dust accumulated in removing particulates from the air by passing it through cloth bags in an enclosure.

Bases: Substances characterized by high pH (greater than 7.0), which tend to be corrosive in chemical reactions. When bases are mixed with acids, they neutralize each other, forming salts.

Berm: A ledge, wall, or a mound of earth used to prevent the migration of contaminants.

Bioaccumulate: The process by which some contaminants or toxic chemicals gradually collect and increase in concentration in living tissue, such as in plants, fish, or people, as they breathe contaminated air, drink contaminated water, or eat contaminated food.

Biological Treatment: The use of bacteria or other microbial organisms to break down toxic organic materials into carbon dioxide and water.

Bioremediation: A cleanup process using naturally occurring or specially cultivated microorganisms to digest contaminants and break them down into non-hazardous components.

Bog: A type of wetland that is covered with peat moss deposits. Bogs depend primarily on moisture from the air for their water source, are usually acidic, and are rich in plant residue [see Wetland].

Boom: A floating device used to contain oil floating on a body of water or to restrict the potential overflow of waste liquids from containment structures.

Borehole: A hole that is drilled into the ground and used to sample soil or groundwater.

Borrow Pit: An excavated area where soil, sand, or gravel has been dug up for use elsewhere.

Cap: A layer of material, such as clay or a synthetic material, used to prevent rainwater from penetrating and spreading contaminated materials. The surface of the cap generally is mounded or sloped so water will drain off.

Carbon Adsorption: A treatment system in which contaminants are removed from groundwater and surface water by forcing water through tanks containing activated carbon, a specially treated material that attracts and holds or retains contaminants.

Carbon Disulfide: A degreasing agent formerly used extensively for parts washing. This compound has both inorganic and organic properties, which increase cleaning efficiency. However, these properties also cause chemical reactions that increase the hazard to human health and the environment.

Carbon Treatment: [see Carbon Adsorption].

Cell: In solid waste disposal, one of a series of holes in a landfill where waste is dumped, compacted, and covered with layers of dirt.

CERCLA: [see Comprehensive Environmental Response, Compensation, and Liability Act].

Characterization: The sampling, monitoring, and analysis of a site to determine the

extent and nature of toxic releases. Characterization provides the basis for acquiring the necessary technical information to develop, screen, analyze, and select appropriate cleanup techniques.

Chemical Fixation: The use of chemicals to bind contaminants, thereby reducing the potential for leaching or other movement.

Chromated Copper Arsenate: An insecticide/herbicide formed from salts of three toxic metals: copper, chromium, and arsenic. This salt is used extensively as a wood preservative in pressure-treating operations. It is highly toxic and water-soluble, making it a relatively mobile contaminant in the environment.

Cleanup: Actions taken to eliminate a release or threat of release of a hazardous substance. The term "cleanup" sometimes is used interchangeably with the terms remedial action, removal action, response action, or corrective action.

Closure: The process by which a landfill stops accepting wastes and is shut down, under Federal guidelines that ensure the protection of the public and the environment.

Comment Period: A specific interval during which the public can review and comment on various documents and EPA actions related to site cleanup. For example, a comment period is provided when the EPA proposes to add sites to the NPL. There is minimum 3-week comment period for community members to review and comment on the remedy proposed to clean up a site.

Community Relations: The EPA effort to establish and maintain two-way communication with the public. Goals of community relations programs include creating an understanding of EPA programs and related actions, assuring public input into decision-making processes related to affected communities, and making certain that the Agency is aware of, and responsive to, public concerns. Specific community relations activities are required in relation to Superfund cleanup actions [see Comment Period].

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Congress enacted the CERCLA, known as Superfund, in 1980 to respond directly to hazardous waste problems that may pose a threat to the public health and the environment. The EPA administers the Superfund program.

Confluence: The place where two bodies of water, such as streams or rivers, come together.

Consent Decree: A legal document, approved and issued by a judge, formalizing an agreement between the EPA and the parties potentially responsible for site contamination. The decree describes cleanup actions that the potentially responsible parties are required to perform and/or the costs incurred by the government that the parties will reimburse, as well as the roles, responsibilities, and enforcement options that the government may exercise in the event of non-compliance by potentially responsible parties. If a settlement between the EPA and a potentially responsible party includes cleanup actions, it must be in the form of a Consent Decree. A Consent Decree is subject to a public comment period.

Consent Order: [see Administrative Order on Consent].

Containment: The process of enclosing or containing hazardous substances in a structure, typically in a pond or a lagoon, to prevent the migration of contaminants into the environment.

Contaminant: Any physical, chemical, biological, or radiological material or substance whose quantity, location, or nature produces undesirable health or environmental effects.

Contingency Plan: A document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or other accident that releases toxic chemicals, hazardous wastes, or radioactive materials into the environment.

Cooperative Agreement: A contract between the EPA and the States, wherein a State agrees to manage or monitor certain site cleanup responsibilities and other activities on a cost-sharing basis.

Cost Recovery: A legal process by which potentially responsible parties can be required to pay back the Superfund program for money it spends on any cleanup actions [see Potentially Responsible Parties].

Cover: Vegetation or other material placed over a landfill or other waste material. It can be designed to reduce movement of water into the waste and to prevent erosion that could cause the movement of contaminants.

Creosotes: Chemicals used in wood preserving operations and produced by distillation of tar, including polycyclic aromatic hydrocarbons and polynuclear aromatic hydrocarbons [see PAHs and PNAs]. Contaminating sediments, soils, and surface water, creosotes may cause skin ulcerations and cancer through prolonged exposure.

Culvert: A pipe used for drainage under a road, railroad track, path, or through an embankment.

Decommission: To revoke a license to operate and take out of service.

Degradation: The process by which a chemical is reduced to a less complex form.

Degrease: To remove grease from wastes, soils, or chemicals, usually using solvents.

De minimis: This legal phrase pertains to settlements with parties who contributed small amounts of hazardous waste to a site. This process allows the EPA to settle with small, or *de minimis* contributors, as a single group rather than as individuals, saving time, money, and effort.

Dewater: To remove water from wastes, soils, or chemicals.

Dike: A low wall that can act as a barrier to prevent a spill from spreading.

Disposal: Final placement or destruction of toxic, radioactive, or other wastes; surplus or banned pesticides or other chemicals; polluted soils; and drums containing hazardous materials. Disposal may be accomplished through the use of approved secure landfills, surface impoundments, land farming, deep well injection, or incineration.

Downgradient: A downward hydrologic slope that causes groundwater to move toward lower elevations. Therefore, wells *downgradient* of a contaminated groundwater source are prone to receiving pollutants.

Effluent: Wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall. Generally refers to wastes discharged into surface waters.

Emission: Pollution discharged into the atmosphere from smokestacks, other vents, and surface areas of commercial or industrial facilities.

Emulsifiers: Substances that help in mixing materials that do not normally mix; e.g., oil and water.

Endangerment Assessment: A study conducted to determine the risks posed to public health or the environment by contamination at NPL sites. The EPA or the State conducts the study when a legal action is to be taken to direct the potentially responsible parties to clean up a site or pay for the cleanup. An endangerment assessment supplements an investigation of the site hazards.

Enforcement: EPA, State, or local legal actions taken against parties to facilitate settlements; to compel compliance with laws, rules, regulations, or agreements; and/or to obtain penalties or criminal sanctions for violations. Enforcement procedures may vary, depending on the specific requirements of different environmental laws and related regulatory requirements. Under CERCLA, for example, the EPA will seek to require potentially responsible parties to clean up a Superfund site or pay for the cleanup [see Cost Recovery].

Erosion: The wearing away of land surface by wind or water. Erosion occurs naturally from weather or surface runoff, but can be intensified by such land-related practices as farming, residential or industrial development, road building, or timber-cutting. Erosion may spread surface contamination to off-site locations.

Estuary (estuarine): Areas where fresh water from rivers and salt water from nearshore ocean waters are mixed. These areas may include bays, mouths of rivers, salt marshes, and lagoons. These water ecosystems shelter and feed marine life, birds, and wildlife.

Evaporation Ponds: Areas where sewage sludge or other watery wastes are dumped and allowed to dry out.

Feasibility Study: The analysis of the potential cleanup alternatives for a site. The feasibility study usually starts as soon as the remedial investigation is underway; together, they are commonly referred to as the RI/FS [see Remedial Investigation].

Filtration: A treatment process for removing solid (particulate) matter from water by passing the water through sand, activated carbon, or a man-made filter. The process is often used to remove particles that contain contaminants.

Flood Plain: An area along a river, formed from sediment deposited by floods. Flood plains periodically are innundated by natural floods, which can spread contamination.

Flue Gas: The air that is emitted from a chimney after combustion in the burner occurs. The gas can include nitrogen oxides, carbon oxides, water vapor, sulfur oxides, particles, and many chemical pollutants.

Fly Ash: Non-combustible residue that results from the combustion of flue gases. It can include nitrogen oxides, carbon oxides, water vapor, sulfur oxides, as well as many other chemical pollutants.

French Drain System: A crushed rock drain system constructed of perforated pipes, which is used to drain and disperse wastewater.

Gasification (coal): The conversion of soft coal into gas for use as a fuel.

Generator: A facility that emits pollutants into the air or releases hazardous wastes into water or soil.

Good Faith Offer: A voluntary offer, generally in response to a Special Notice letter, made by a potentially responsible party, consisting of a written proposal demonstrating a potentially responsible party's qualifications

and willingness to perform a site study or cleanup.

Groundwater: Underground water that fills pores in soils or openings in rocks to the point of saturation. In aquifers, groundwater occurs in sufficient quantities for use as drinking and irrigation water and other purposes.

Groundwater Quality Assessment: The process of analyzing the chemical characteristics of groundwater to determine whether any hazardous materials exist.

Halogens: Reactive non-metals, such as chlorine and bromine. Halogens are very good oxidizing agents and, therefore, have many industrial uses. They are rarely found by themselves; however, many chemicals such as polychlorinated biphenyls (PCBs), some volatile organic compounds (VOCs), and dioxin are reactive because of the presence of halogens.

Hazard Ranking System (HRS): The principal screening tool used by the EPA to evaluate relative risks to public health and the environment associated with abandoned or uncontrolled hazardous waste sites. The HRS calculates a score based on the potential of hazardous substances spreading from the site through the air, surface water, or groundwater and on other factors such as nearby population. The HRS score is the primary factor in deciding if the site should be on the NPL.

Hazardous Waste: By-products of society that can pose a substantial present or potential hazard to human health and the environment when improperly managed. It possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Hot Spot: An area or vicinity of a site containing exceptionally high levels of contamination.

Hydrogeology: The geology of groundwater, with particular emphasis on the chemistry and movement of water.

Impoundment: A body of water or sludge confined by a dam, dike, floodgate, or other barrier.

Incineration: A group of treatment technologies involving destruction of waste by controlled burning at high temperatures, e.g., burning sludge to reduce the remaining residues to a non-burnable ash that can be disposed of safely on land, in some waters, or in underground locations.

Infiltration: The movement of water or other liquid down through soil from precipitation (rain or snow) or from application of wastewater to the land surface.

Influent: Water, wastewater, or other liquid flowing into a reservoir, basin, or treatment plant.

Injection Well: A well into which waste fluids are placed, under pressure, for purposes of disposal.

Inorganic Chemicals: Chemical substances of mineral origin, not of basic carbon structure.

Installation Restoration Program: The specially funded program established in 1978 under which the Department of Defense has been identifying and evaluating its hazardous waste sites and controlling the migration of hazardous contaminants from those sites.

Intake: The source from where a water supply is drawn, such as from a river or water body.

Interagency Agreement: A written agreement between the EPA and a Federal agency that has the lead for site cleanup activities,

setting forth the roles and responsibilities of the agencies for performing and overseeing the activities. States often are parties to interagency agreements.

Interim (Permit) Status: Conditions under which hazardous waste treatment, storage, and disposal facilities, that were operating when regulations under the RCRA became final in 1980, are temporarily allowed by the EPA to continue to operate while awaiting denial or issuance of a permanent permit. The facility must comply with certain regulations to maintain interim status.

Lagoon: A shallow pond or liquid waste containment structure. Lagoons typically are used for the storage of wastewaters, sludges, liquid wastes, or spent nuclear fuel.

Landfarm: To apply waste to land and/or incorporate waste into the surface soil, such as fertilizer or soil conditioner. This practice commonly is used for disposal of composted wastes and sludges.

Landfill: A disposal facility where waste is placed in or on land. *Sanitary* landfills are disposal sites for non-hazardous solid wastes. The waste is spread in layers, compacted to the smallest practical volume, and covered with soil at the end of each operating day. Secure *chemical* landfills are disposal sites for hazardous waste. They are designed to minimize the chance of release of hazardous substances into the environment [see Resource Conservation and Recovery Act].

Leachate [n]: The liquid that trickles through or drains from waste, carrying soluble components from the waste. **Leach, Leaching [v.t.]:** The process by which soluble chemical components are dissolved and carried through soil by water or some other percolating liquid.

Leachate Collection System: A system that gathers liquid that has leaked into a landfill or other waste disposal area and pumps it to the surface for treatment.

Liner: A relatively impermeable barrier designed to prevent leachate (waste residue) from leaking from a landfill. Liner materials include plastic and dense clay.

Long-term Remedial Phase: Distinct, often incremental, steps that are taken to solve site pollution problems. Depending on the complexity, site cleanup activities can be separated into several of these phases.

Marsh: A type of wetland that does not contain peat moss deposits and is dominated by vegetation. Marshes may be either fresh or saltwater and tidal or non-tidal [see Wetland].

Migration: The movement of oil, gas, contaminants, water, or other liquids through porous and permeable soils or rock.

Mill Tailings: [See Mine Tailings].

Mine Tailings: A fine, sandy residue left from mining operations. Tailings often contain high concentrations of lead, uranium, and arsenic or other heavy metals.

Mitigation: Actions taken to improve site conditions by limiting, reducing, or controlling toxicity and contamination sources.

Modeling: A technique using a mathematical or physical representation of a system or theory that tests the effects that changes on system components have on the overall performance of the system.

Monitoring Wells: Special wells drilled at specific locations within, or surrounding, a hazardous waste site where groundwater can be sampled at selected depths and studied to obtain such information as the direction in

which groundwater flows and the types and amounts of contaminants present.

National Priorities List (NPL): The EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup under Superfund. The EPA is required to update the NPL at least once a year.

Neutrals: Organic compounds that have a relatively neutral pH, complex structure and, due to their organic bases, are easily absorbed into the environment. Naphthalene, pyrene, and trichlorobenzene are examples of neutrals.

Nitroaromatics: Common components of explosive materials, which will explode if activated by very high temperatures or pressures; 2,4,6-Trinitrotoluene (TNT) is a nitroaromatic.

Notice Letter: A General Notice Letter notifies the parties potentially responsible for site contamination of their possible liability. A Special Notice Letter begins a 60-day formal period of negotiation during which the EPA is not allowed to start work at a site or initiate enforcement actions against potentially responsible parties, although the EPA may undertake certain investigatory and planning activities. The 60-day period may be extended if the EPA receives a good faith offer within that period.

On-Scene Coordinator (OSC): The predesignated EPA, Coast Guard, or Department of Defense official who coordinates and directs Superfund removal actions or Clean Water Act oil- or hazardous-spill corrective actions.

Operation and Maintenance: Activities conducted at a site after a cleanup action is completed to ensure that the cleanup or containment system is functioning properly.

Organic Chemicals/Compounds: Chemical substances containing mainly carbon, hydrogen, and oxygen.

Outfall: The place where wastewater is discharged into receiving waters.

Overpacking: Process used for isolating large volumes of waste by jacketing or encapsulating waste to prevent further spread or leakage of contaminating materials. Leaking drums may be contained within oversized barrels as an interim measure prior to removal and final disposal.

Pentachlorophenol (PCP): A synthetic, modified petrochemical that is used as a wood preservative because of its toxicity to termites and fungi. It is a common component of creosotes and can cause cancer.

Perched (groundwater): Groundwater separated from another underlying body of groundwater by a confining layer, often clay or rock.

Percolation: The downward flow or filtering of water or other liquids through subsurface rock or soil layers, usually continuing downward to groundwater.

Petrochemicals: Chemical substances produced from petroleum in refinery operations and as fuel oil residues. These include fluoranthene, chrysene, mineral spirits, and refined oils. Petrochemicals are the bases from which volatile organic compounds (VOCs), plastics, and many pesticides are made. These chemical substances often are toxic to humans and the environment.

Phenols: Organic compounds that are used in plastics manufacturing and are by-products of petroleum refining, tanning, textile, dye, and resin manufacturing. Phenols are highly poisonous.

Physical Chemical Separation: The treatment process of adding a chemical to a substance to separate the compounds for further treatment or disposal.

Pilot Testing: A small-scale test of a proposed treatment system in the field to determine its ability to clean up specific contaminants.

Plugging: The process of stopping the flow of water, oil, or gas into or out of the ground through a borehole or well penetrating the ground.

Plume: A body of contaminated groundwater flowing from a specific source. The movement of the groundwater is influenced by such factors as local groundwater flow patterns, the character of the aquifer in which groundwater is contained, and the density of contaminants [see Migration].

Pollution: Generally, the presence of matter or energy whose nature, location, or quantity produces undesired health or environmental effects.

Polycyclic Aromatic Hydrocarbons or Polyaromatic Hydrocarbons (PAHs): PAHs, such as pyrene, are a group of highly reactive organic compounds found in motor oil. They are a common component of creosotes and can cause cancer.

Polychlorinated Biphenyls (PCBs): A group of toxic chemicals used for a variety of purposes including electrical applications, carbonless copy paper, adhesives, hydraulic fluids, microscope immersion oils, and caulking compounds. PCBs also are produced in certain combustion processes. PCBs are extremely persistent in the environment because they are very stable, non-reactive, and highly heat resistant. Chronic exposure to PCBs is believed to cause liver damage. It also is known to bioaccumulate in fatty tissues. PCB use and sale was banned in 1979 with the passage of the Toxic Substances Control Act.

Polynuclear Aromatic Hydrocarbons (PNAs): PNAs, such as naphthalene, and biphenyls, are a group of highly reactive organic compounds that are a common component of creosotes, which can be carcinogenic.

Polyvinyl Chloride (PVC): A plastic made from the gaseous substance vinyl chloride. PVC is used to make pipes, records, raincoats, and floor tiles. Health risks from high concentrations of vinyl chloride include liver cancer and lung cancer, as well as cancer of the lymphatic and nervous systems.

Potable Water: Water that is safe for drinking and cooking.

Potentially Responsible Parties (PRPs): Parties, including owners, who may have contributed to the contamination at a Superfund site and may be liable for costs of response actions. Parties are considered PRPs until they admit liability or a court makes a determination of liability. PRPs may sign a Consent Decree or Administrative Order on Consent to participate in site cleanup activity without admitting liability.

Precipitation: The removal of solids from liquid waste so that the solid and liquid portions can be disposed of safely; the removal of particles from airborne emissions. Electrochemical precipitation is the use of an anode or cathode to remove the hazardous chemicals. Chemical precipitation involves the addition of some substance to cause the solid portion to separate.

Preliminary Assessment: The process of collecting and reviewing available information about a known or suspected waste site or release to determine if a threat or potential threat exists.

Pump and Treat: A groundwater cleanup technique involving the extracting of contaminated groundwater from the subsurface and the removal of contaminants, using one of several treatment technologies.

Radionuclides: Elements, including radium and uranium-235 and -238, which break down and produce radioactive substances due to their unstable atomic structure. Some are man-made, and others are naturally occurring in the environment. Radon, the gaseous form of radium, decays to form alpha particle radiation, which cannot be absorbed through skin. However, it can be inhaled, which allows alpha particles to affect unprotected tissues directly and thus cause cancer. Radiation also occurs naturally through the breakdown of granite stones.

RCRA: [See Resource Conservation and Recovery Act].

Recharge Area: A land area where rainwater saturates the ground and soaks through the earth to reach an aquifer.

Record of Decision (ROD): A public document that explains which cleanup alternative(s) will be used to clean up sites listed on the NPL. It is based on information generated during the remedial investigation and feasibility study and consideration of public comments and community concerns.

Recovery Wells: Wells used to withdraw contaminants or contaminated groundwater.

Recycle: The process of minimizing waste generation by recovering usable products that might otherwise become waste.

Remedial Action (RA): The actual construction or implementation phase of a Superfund site cleanup following the remedial design [see Cleanup].

Remedial Design: A phase of site cleanup, where engineers design the technical specifications for cleanup remedies and technologies.

Remedial Investigation: An in-depth study designed to gather the data necessary to determine the nature and extent of contamination at a Superfund site, establish the criteria for cleaning up the site, identify the preliminary alternatives for cleanup actions, and support the technical and cost analyses of the alternatives. The remedial investigation is usually done with the feasibility study. Together they are customarily referred to as the RI/FS [see Feasibility Study].

Remedial Project Manager (RPM): The EPA or State official responsible for overseeing cleanup actions at a site.

Remedy Selection: The selection of the final cleanup strategy for the site. At the few sites where the EPA has determined that initial response actions have eliminated site contamination, or that any remaining contamination will be naturally dispersed without further cleanup activities, a "No Action" remedy is selected [see Record of Decision].

Removal Action: Short-term immediate actions taken to address releases of hazardous substances [see Cleanup].

Residual: The amount of a pollutant remaining in the environment after a natural or technological process has taken place, e.g., the sludge remaining after initial wastewater treatment, or particulates remaining in air after the air passes through a scrubbing, or other, process.

Resource Conservation and Recovery Act (RCRA): A Federal law that established a regulatory system to track hazardous substances from the time of generation to disposal. The law requires safe and secure

procedures to be used in treating, transporting, storing, and disposing of hazardous substances. RCRA is designed to prevent new, uncontrolled hazardous waste sites.

Retention Pond: A small body of liquid used for disposing of wastes and containing overflow from production facilities. Sometimes retention ponds are used to expand the capacity of such structures as lagoons to store waste.

Riparian Habitat: Areas adjacent to rivers and streams that have a high density, diversity, and productivity of plant and animal species relative to nearby uplands.

Runoff: The discharge of water over land into surface water. It can carry pollutants from the air and land and spread contamination from its source.

Scrubber: An air pollution device that uses a spray of water or reactant or a dry process to trap pollutants in emissions.

Sediment: The layer of soil, sand, and minerals at the bottom of surface waters, such as streams, lakes, and rivers, that absorbs contaminants.

Seeps: Specific points where releases of liquid (usually leachate) form from waste disposal areas, particularly along the lower edges of landfills.

Seepage Pits: A hole, shaft, or cavity in the ground used for storage of liquids, usually in the form of leachate, from waste disposal areas. The liquid gradually leaves the pit by moving through the surrounding soil.

Septage: Residue remaining in a septic tank after the treatment process.

Sinkhole: A hollow depression in the land surface in which drainage collects; associated with underground caves and passages that facilitate the movement of liquids.

Site Characterization: The technical process used to evaluate the nature and extent of environmental contamination, which is necessary for choosing and designing cleanup measures and monitoring their effectiveness.

Site Inspection: The collection of information from a hazardous waste site to determine the extent and severity of hazards posed by the site. It follows, and is more extensive than, a preliminary assessment. The purpose is to gather information necessary to score the site, using the Hazard Ranking System, and to determine if the site presents an immediate threat that requires a prompt removal action.

Slag: The fused refuse or dross separated from a metal in the process of smelting.

Sludge: Semi-solid residues from industrial or water treatment processes that may be contaminated with hazardous materials.

Slurry Wall: Barriers used to contain the flow of contaminated groundwater or subsurface liquids. Slurry walls are constructed by digging a trench around a contaminated area and filling the trench with an impermeable material that prevents water from passing through it. The groundwater or contaminated liquids trapped within the area surrounded by the slurry wall can be extracted and treated.

Smelter: A facility that melts or fuses ore, often with an accompanying chemical change, to separate the metal. Emissions from smelters are known to cause pollution.

Soil Gas: Gaseous elements and compounds that occur in the small spaces between particles of soil. Such gases can move through

or leave the soil or rock, depending on changes in pressure.

Soil Vapor Extraction: A treatment process that uses vacuum wells to remove hazardous gases from soil.

Soil Washing: A water-based process for mechanically scrubbing soils in-place to remove undesirable materials. There are two approaches: dissolving or suspending them in the wash solution for later treatment by conventional methods, and concentrating them into a smaller volume of soil through simple particle size separation techniques [see Solvent Extraction].

Stabilization: The process of changing an active substance into inert, harmless material, or physical activities at a site that act to limit the further spread of contamination without actual reduction of toxicity.

Solidification/Stabilization: A chemical or physical reduction of the mobility of hazardous constituents. Mobility is reduced through the binding of hazardous constituents into a solid mass with low permeability and resistance to leaching.

Solvent: A substance capable of dissolving another substance to form a solution. The primary uses of industrial solvents are as cleaners for degreasing, in paints, and in pharmaceuticals. Many solvents are flammable and toxic to varying degrees.

Solvent Extraction: A means of separating hazardous contaminants from soils, sludges, and sediment, thereby reducing the volume of the hazardous waste that must be treated. It generally is used as one in a series of unit operations. An organic chemical is used to dissolve contaminants as opposed to water-based compounds, which usually are used in soil washing.

Sorption: The action of soaking up or attracting substances. It is used in many pollution control systems.

Stillbottom: Residues left over from the process of recovering spent solvents.

Stripping: A process used to remove volatile contaminants from a substance [see Air Stripping].

Sumps: A pit or tank that catches liquid runoff for drainage or disposal.

Superfund: The program operated under the legislative authority of the CERCLA and Superfund Amendments and Reauthorization Act (SARA) to update and improve environmental laws. The program has the authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health, welfare, or the environment. The "Superfund" is a trust fund that finances cleanup actions at hazardous waste sites.

Surge Tanks: A holding structure used to absorb irregularities in flow of liquids, including liquid waste materials.

Swamp: A type of wetland that is dominated by woody vegetation and does not accumulate peat moss deposits. Swamps may be fresh or saltwater and tidal or non-tidal [see Wetlands].

Thermal Treatment: The use of heat to remove or destroy contaminants from soil.

Treatability Studies: Testing a treatment method on contaminated groundwater, soil, etc., to determine whether and how well the method will work.

Trichloroethylene (TCE): A stable, colorless liquid with a low boiling point. TCE has many industrial applications, including use as

a solvent and as a metal degreasing agent. TCE may be toxic to people when inhaled, ingested, or through skin contact and can damage vital organs, especially the liver [see Volatile Organic Compounds].

Unilateral [Administrative] Order: [see Administrative Order].

Upgradient: An upward hydrologic slope; demarks areas that are higher than contaminated areas and, therefore, are not prone to contamination by the movement of polluted groundwater.

Vacuum Extraction: A technology used to remove volatile organic compounds (VOCs) from soils. Vacuum pumps are connected to a series of wells drilled to just above the water table. The wells are sealed tightly at the soil surface, and the vacuum established in the soil draws VOC-contaminated air from the soil pores into the well, as fresh air is drawn down from the surface of the soil.

Vegetated Soil Cap: A cap constructed with graded soils and seed for vegetative growth, to prevent erosion [see Cap].

Vitrification: The process of electrically melting wastes and soils or sludges to bind the waste in a glassy, solid material more durable than granite or marble and resistant to leaching.

Volatile Organic Compounds (VOCs): VOCs are manufactured as secondary petrochemicals. They include light alcohols, acetone, trichloroethylene, perchloroethylene, dichloroethylene, benzene, vinyl chloride, toluene, and methylene chloride. These potentially toxic chemicals are used as solvents, degreasers, paints, thinners, and fuels. Because of their volatile nature, they readily evaporate into the air, increasing the potential exposure to humans. Due to their low water solubility, environmental persistence, and widespread industrial use, they are commonly found in soil and groundwater.

Waste Treatment Plant: A facility that uses a series of tanks, screens, filters, and other treatment processes to remove pollutants from water.

Wastewater: The spent or used water from individual homes or industries.

Watershed: The land area that drains into a stream or other water body.

Water Table: The upper surface of the groundwater.

Weir: A barrier to divert water or other liquids.

Wetland: An area that is regularly saturated by surface or groundwater and, under normal circumstances, is capable of supporting vegetation typically adapted for life in saturated soil conditions. Wetlands are critical to sustaining many species of fish and wildlife. Wetlands generally include swamps, marshes, and bogs. Wetlands may be either coastal or inland. Coastal wetlands have salt or brackish (a mixture of salt and fresh) water, and most have tides, while inland wetlands are non-tidal and freshwater. Coastal wetlands are an integral component of estuaries.

Wildlife Refuge: An area designated for the protection of wild animals, within which hunting and fishing are either prohibited or strictly controlled.

Information Repositories for NPL Sites in Connecticut

Information Repositories for NPL Sites in the State of Connecticut

Repositories are established for all NPL sites so that the public can obtain additional information related to site activities. Some sites may have more than one repository location, however, the primary site repository is listed below. All public access information pertaining to the site will be on file at these repositories. The quantity and nature of the documentation found in the repositories depends on the extent of activity and cleanup progress for each site and may include some or all of the following: community relations plans, announcements for public meetings, minutes from public meetings, fact sheets detailing activities at sites, documents relating to the selection of cleanup remedies, press releases, locations of other public information centers, and any other documents pertaining to site activities.

Site Name	Site Repository
BARKHAMSTED-NEW HARTFORD LANDFILL	Not Established
BEACON HEIGHTS LANDFILL	Beacon Falls Town Hall, 10 Maple Avenue, Beacon Falls, CT 06403
CHESHIRE GROUNDWATER CONTAMINATION	Not Established
DURHAM MEADOWS	Not Established
GALLUP'S QUARRY	Not Established
KELLOGG-DEERING WELL FIELD	East Norwalk Public Library, 51 Vanzant Street, East Norwalk, CT 06770
LAUREL PARK, INC.	Howard Whittemore Library, 243 Church Street, Naugatuck, CT 06770
LINEMASTER SWITCH CORPORATION	Woodstock Town Hall, Route 169, Woodstock, CT 06281
NEW LONDON SUBMARINE BASE	Goodnow Library, 21 Concord Road, Sudbury, MA 01776
NUTMEG VALLEY ROAD	Not Established
OLD SOUTHINGTON LANDFILL	Southington Public Library, 225 Main Street, Southington, CT 06489
PRECISION PLATING	Not Established
REVERE TEXTILE PRINTS CORPORATION	Sterling Public Library, 1110 Plainfield Pike, Oneco, CT 06373
SOLVENTS RECOVERY SERVICE OF NEW ENGLAND	Southington Public Library, 225 Main Street, Southington, CT 06489
YAWORSKI WASTE LAGOON	Canterbury Public Library, 8 Library Road, Canterbury, CT 06331

*U.S. G.P.O. 1992-311-893:60628