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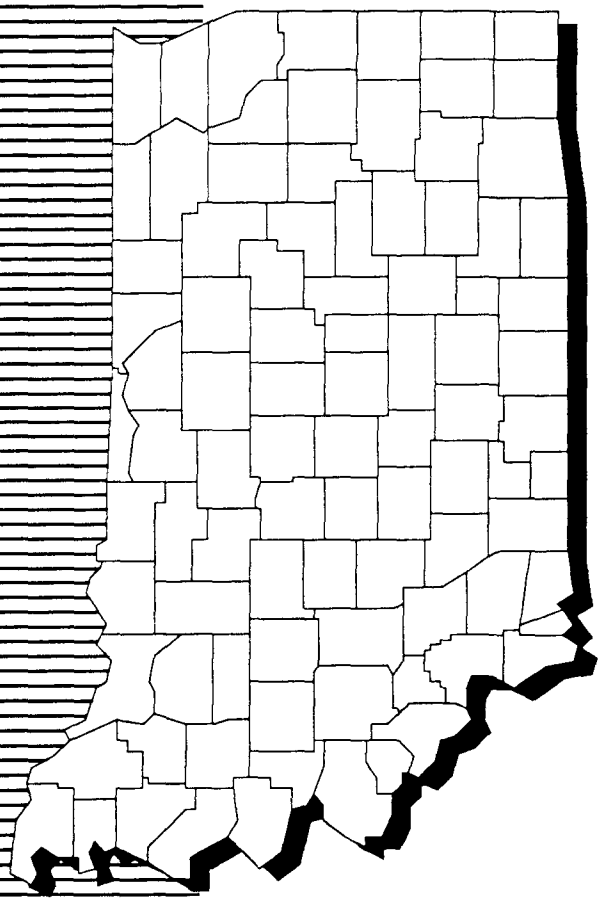

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National Technical Information Service (NTIS)
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The National Overview volume, **Superfund: Focusing on the Nation at Large (1991),** may be ordered as PB92-963253.

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.

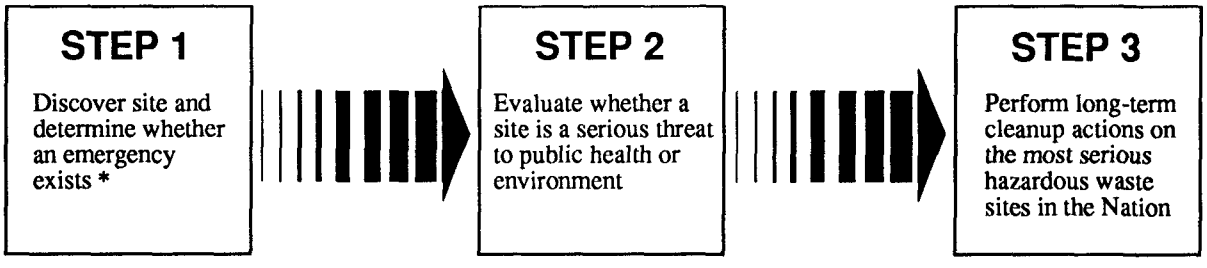
This volume compiles site summary fact sheets on each State or Territorial site being cleaned up under the Superfund program. These sites represent the most serious hazardous waste problems in the Nation and require the most complicated and costly site solutions yet encountered. Each book gives a "snapshot" 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.

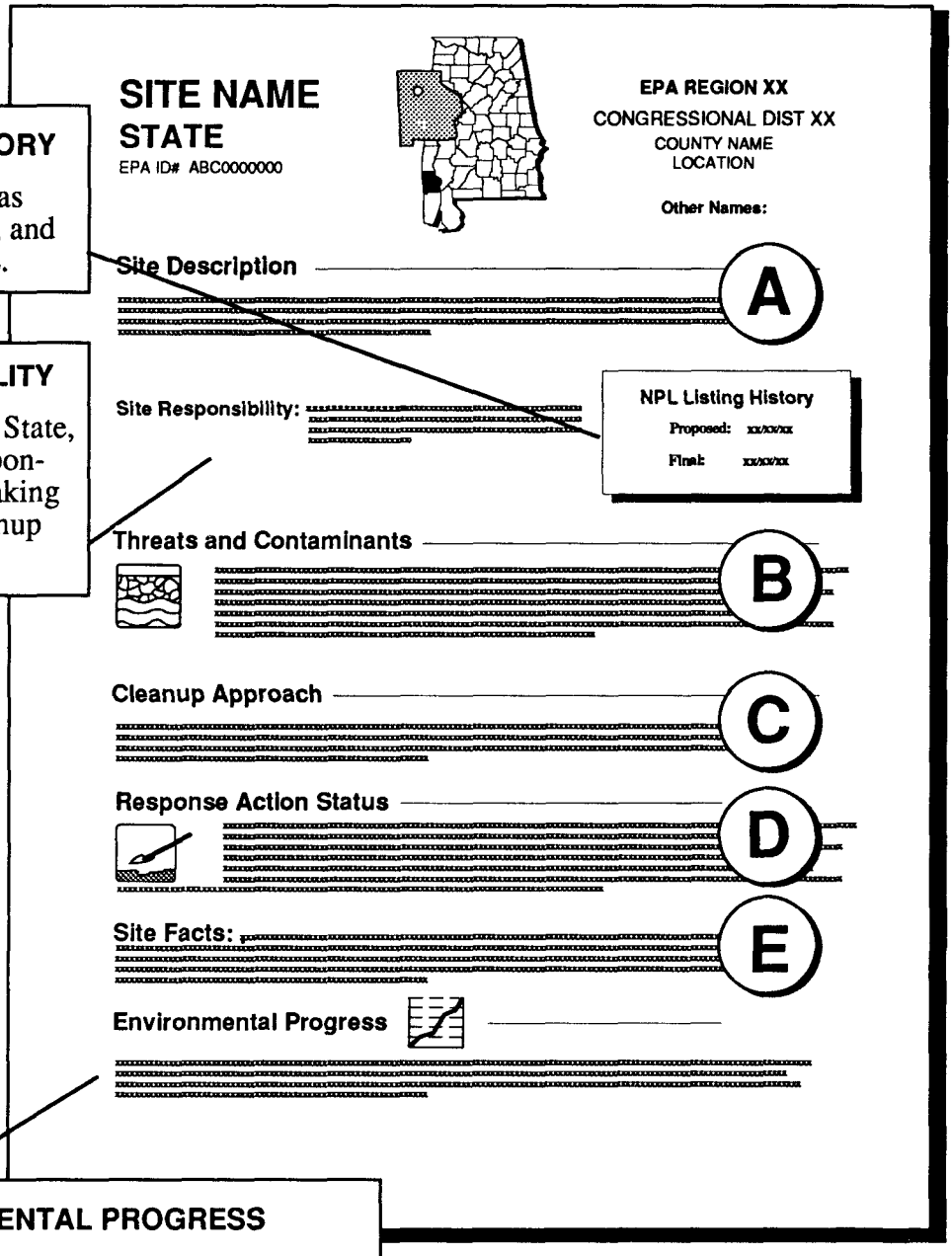
THE VOLUME

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

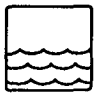
Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by the EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

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.)

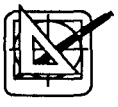
Threatened or contaminated *Environmentally Sensitive Areas* in the vicinity of the site. (Examples include wetlands and coastal areas or critical habitats.)

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.

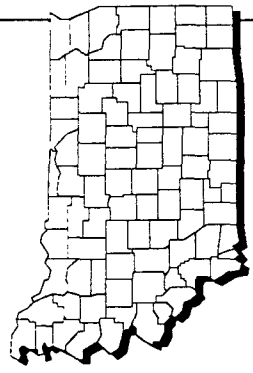


Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.

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 Indiana

Indiana is located in EPA's Region 5, which includes the six midwestern states boarding the Great Lakes. Situated on the southern edge of Lake Michigan, Indiana covers 36,185 square miles and consists of a hilly southern region, fertile rolling plains in the central region, and a flat, heavily glaciated northern region with dunes along Lake Michigan. Indiana experienced a 1% increase in population between 1980 and 1990 and currently has approximately 5,544,000 residents, ranking 14th in U.S. populations, according to the 1990 Census. Manufacturing is one of the principal industries with primary and fabricated metals, transportation equipment, electrical and electronic equipment, non-electrical machinery, plastics, chemical products, and foods as the principal manufactured goods. Other principal industries include wholesale and retail trade, agriculture, and services.

How Many NPL Sites Are in the State of Indiana?

Proposed	0
Final	33
Deleted	2
	35

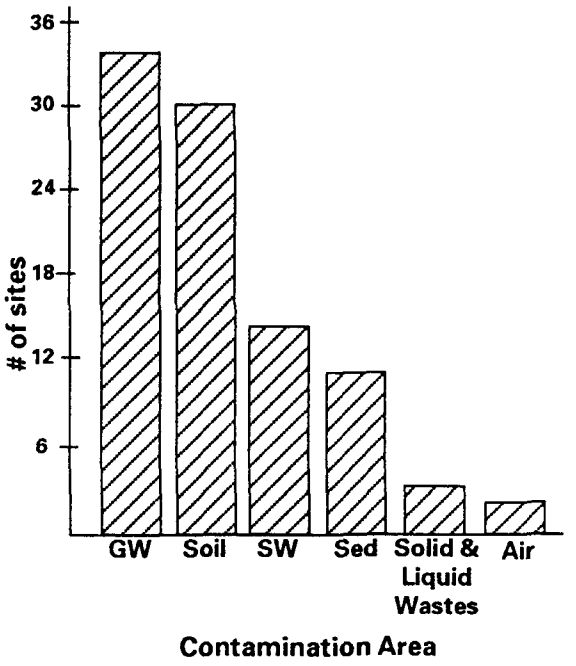
Where Are the NPL Sites Located?

Congressional Districts 2, 10, 11	1 site
Congressional Districts 4, 5	2 sites
Congressional Districts 7, 8	3 sites
Congressional District 9	4 sites
Congressional Districts 1, 6	5 sites
Congressional District 3	8 sites

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

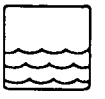
# of sites	type of sites
12	Municipal & Industrial Landfills
5	Storage Facilities
5	Waste Disposal Facilities
4	Recyclers
2	Chemicals & Allied Products
7	Other (Lumber & wood products, metals & allied products, electroplating, battery manufacture, rail yard, various manufacturers)

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



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

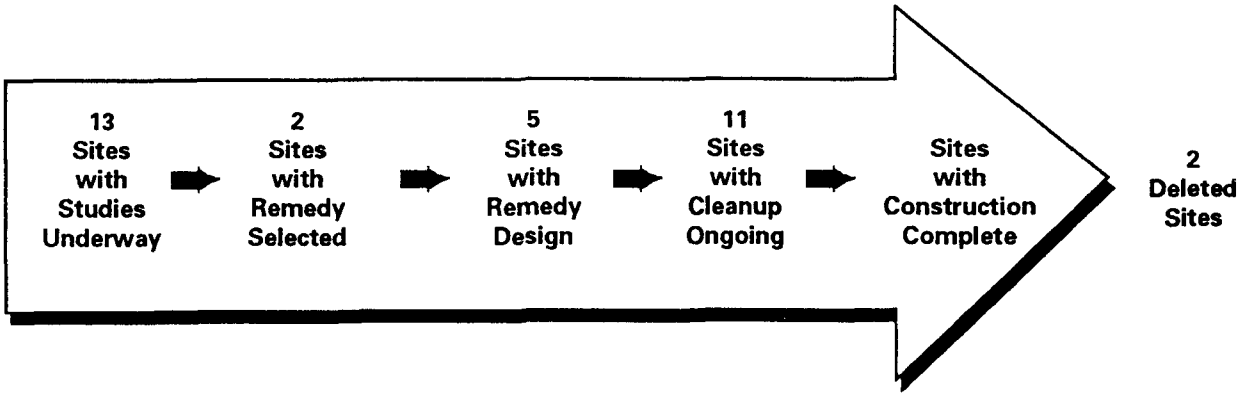
Soil, Solid and Liquid Waste: Volatile organic compounds (VOCs), heavy metals (inorganics), polychlorinated biphenyls (PCBs), creosotes (organics), and other inorganics.



Surface Water and Sediments: Heavy metals (inorganics), volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), creosotes (organics), and pesticides.

Air: Heavy metals (inorganics) and polychlorinated biphenyls (PCBs).

Where Are the Sites in the Superfund Cleanup Process?†



In addition to the activities described above, initial actions have been taken at 24 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 Indiana

Page	Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
25	AMERICAN CHEMICAL SERVICE, INC.	LAKE	Final	09/21/84	⇨	⇨					
27	BENNETT STONE QUARRY	MONROE	Final	09/21/84	⇨	⇨	⇨	⇨	⇨		
29	CARTER LEE LUMBER COMPANY	MARION	Final	03/31/89							
31	COLUMBUS OLD MUNICIPAL LDFL #1	BARTHOLOMEW	Final	06/10/86		⇨					
33	CONRAIL RAIL YARD (ELKHART)	ELKHART	Final	08/30/90	⇨	⇨					
35	CONTINENTAL STEEL CORPORATION	HOWARD	Final	03/31/89	⇨	⇨					
37	DOUGLAS ROAD/UNIROYAL, INC. LDFL	ST. JOSEPH	Final	03/31/89		⇨					
39	ENVIROCHEM CORPORATION	BOONE	Final	09/08/83	⇨	⇨	⇨	⇨			
41	FISHER-CALO	LA PORTE	Final	09/08/83	⇨	⇨	⇨				
43	FORT WAYNE REDUCTION DUMP	ALLEN	Final	06/10/86		⇨	⇨	⇨	⇨		
45	GALEN MEYERS DUMP/DRUM SALVAGE	ST. JOSEPH	Final	03/31/89	⇨						
47	HIMCO DUMP	ELKHART	Final	02/21/90	⇨	⇨					
49	IMC (TERRE HAUTE EAST PLANT)	VIGO	Deleted	02/11/91		⇨	⇨			⇨	✓
51	LAKE SANDY JO (M & M LANDFILL)	LAKE	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
53	LAKELAND DISPOSAL SERVICE INC.	KOSCIUSKO	Final	03/31/89		⇨					
55	LEMON LANE LANDFILL	MONROE	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
57	MAIN STREET WELL FIELD	ELKHART	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
59	MARION (BRAGG) DUMP	GRANT	Final	09/08/83		⇨	⇨	⇨	⇨		
61	MIDCO I	LAKE	Final	09/08/83	⇨	⇨	⇨	⇨			
63	MIDCO II	LAKE	Final	06/10/86	⇨	⇨	⇨	⇨			
65	NEAL'S DUMP (SPENCER)	OWEN	Final	06/10/86	⇨	⇨	⇨	⇨			
67	NEAL'S LANDFILL (BLOOMINGTON)	MONROE	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
69	NINTH AVENUE DUMP	LAKE	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
71	NORTHSIDE SANITARY LANDFILL, INC.	BOONE	Final	09/21/84		⇨	⇨	⇨			

Page	Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
73	POER FARM	HANCOCK	Deleted	02/11/91	⇨	⇨	⇨			⇨	✓
75	PRESTOLITE BATTERY DIVISION	KNOX	Final	10/04/89	⇨	⇨					
77	REILLY TAR & CHEMICAL CORP.	MARION	Final	09/21/84		⇨					
79	SEYMOUR RECYCLING CORPORATION	JACKSON	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
81	SOUTHSIDE SANITARY LANDFILL	MARION	Final	03/31/89	⇨	⇨					
83	TIPPECANOE SANITARY LANDFILL	TIPPECANOE	Final	08/30/90		⇨					
85	TRI-STATE PLATING	BARTHOLOMEW	Final	06/10/86	⇨	⇨	⇨	⇨	⇨		
87	WASTE, INC. LANDFILL	LA PORTE	Final	07/21/87		⇨					
89	WAYNE WASTE OIL	WHITLEY	Final	09/08/83	⇨	⇨	⇨				
91	WEDZEB ENTERPRISES, INC.	BOONE	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
93	WHITEFORD SALES & SERVICE	ST. JOSEPH	Final	08/30/90	⇨	⇨					

Summary of Site Activities

EPA REGION 5

Who Do I Call with Questions?

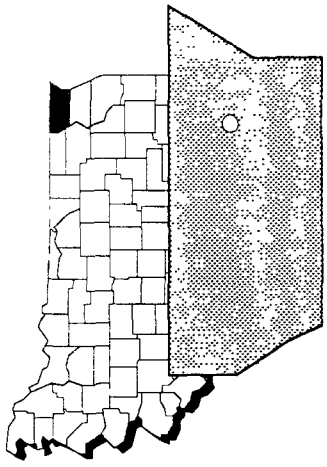
The following pages describe each NPL site in Indiana, providing specific information on threats and contaminants, cleanup activities, and environmental progress. Should you have questions, please call the EPA's Region 5 Office in Chicago, Illinois or one of the other offices listed below:

EPA Region 5 Superfund Community Relations Office	(312) 353-2073
EPA Region 5 Superfund Office	(312) 886-7456
EPA Superfund Hotline	(800) 424-9346
EPA Headquarters Public Information Center	(202) 260-2080
Indiana Superfund Office	(317) 243-5015

AMERICAN CHEMICAL SERVICE, INC.

INDIANA

EPA ID# IND016360265



EPA REGION 5
CONGRESSIONAL DIST. 01
Lake County
Griffith

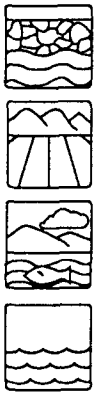
Site Description

American Chemical Service (ACS), Inc. recycled chemicals on 21 acres along South Colfax Avenue in Griffith from 1958 until 1975, when it voluntarily stopped using two disposal areas on site and covered them. The site contains an estimated 35,000 buried drums and pigment and resin sludges. The site operated until 1990 as a hazardous waste recycler with interim status under the Resource Conservation and Recovery Act (RCRA). The site previously contained three different operations: the American Chemical Service operated on 19 acres; Kapica Drum used 2 acres; and an inactive portion of the adjacent Griffith Sanitary Landfill. ACS began operation in 1955 as a solvent recovery firm and later began a chemical manufacturing operation. From 1955 until at least 1975, ACS disposed of a variety of hazardous wastes produced during company operations in an area known as the off-site containment area on the property. ACS also disposed of numerous drums and stillbottoms in portions of the currently operating facility. Some waste was accepted from outside sources for incineration in an on-site incinerator, and the ash was disposed of on ACS property. In 1972, the Indiana State Board of Health (ISBH) responded to residents' complaints and inspected the ACS facility. From 1972 to 1973, ISBH attempted to achieve improved waste handling, spill prevention measures, and site maintenance. In 1974 and 1975, ISBH also responded to reports that ACS was discharging chemicals to the sanitary sewer and dumping chemicals on site. Approximately 10,000 people live within 3 miles of the site, the closest being less than 1/4 mile away. Located in the immediate vicinity of the site are a few residences, railroad tracks, drainage ditches, and marshy areas. More than 2,000 private wells are in use in the area of the site.

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 is contaminated with volatile organic compounds (VOCs) including benzene, toluene, chloroethane, xylene, vinyl chloride, pentachlorophenol (PCP), and phthalates. The shallow aquifer contains the highest amounts of organic contaminants. Soils are heavily contaminated with numerous substances including PCBs, heavy metals, semi- and non-volatiles, coal tar constituents, VOCs, and some pesticides. Evidence suggests that the heavily contaminated shallow aquifer discharges to the wetlands and surface water features, posing the potential for adverse effects. Past discharges by ACS previously had affected a major portion of the site's wetlands. Exposure to contaminants by accidently ingesting groundwater and surface water; direct contact with groundwater, surface water, soil, or sediments; or inhaling airborne VOCs could be potential health threats.

Cleanup Approach

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

Response Action Status

Initial Actions: In the early 1980s, American Chemical Service installed a clay wall to block the perceived flow direction of the groundwater and to control the environmental degradation due to surface water and leachate runoff. Initial cleanup efforts concentrated on identifying, staging, and segregating drums from construction debris in the building. Drums were labeled, sampled, overpacked, and staged in a nearby vacant building. Twenty-four-hour security was maintained throughout the removal. Construction debris was decontaminated and disposed of. The remaining building brick was scrubbed with a high pressure wash. All rinsate and decontamination water was collected and removed for treatment and disposal. Drums were grouped into three separate waste streams based on pH levels. All three waste streams were accepted at a facility for treatment and disposal. A total of 277 drums of waste and 23,154 gallons of water were shipped off site for treatment and disposal.

Entire Site: Approximately 150 potentially responsible parties have formed a group to conduct a study of site contamination. The investigation involves wetlands delineation; waste and soil borings; and groundwater, surface water, and sediment sampling to determine the nature and extent of site contamination. The scheduled completion date for the investigation is in 1992, when the EPA will select the remedies to clean up the site based on its results.

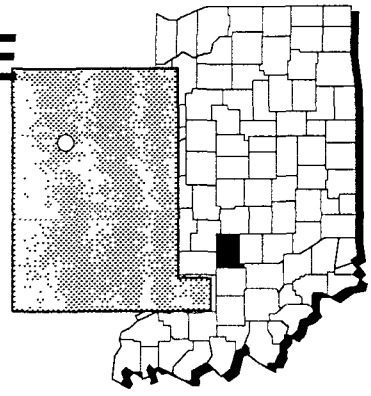
Environmental Progress

The early removal of drums and contaminated water and the installation of the clay barrier wall have reduced the potential for exposure to hazardous materials on the American Chemical Service, Inc. site while an investigation leading to the permanent remedies for the site contamination is taking place and final remedies are being planned.

BENNETT STONE QUARRY

INDIANA

EPA ID# IND006418651



EPA REGION 5

CONGRESSIONAL DIST. 08

Monroe County
Bloomington

Site Description

The Bennett Stone Quarry site consists of 2 1/2 acres and is located approximately 1 mile northwest of Bloomington. This limestone quarry was used as a dump for old electrical parts for approximately 20 years, before it was discovered by the Monroe County Health Department (MCHD) in 1983. The MCHD subsequently defined an area of several acres that had been used for dumping electrical parts, including a large number of capacitors contaminated with polychlorinated biphenyls (PCBs). Labels found on the capacitors during the MCHD investigation attributed them to the Westinghouse Corporation. Soils adjacent to the site are stained with oil, and the entire site is devoid of vegetation. Two ponds that drain into Stout Creek are located on the western end of the site and are coated with oily sheens. Five other PCB-contaminated sites are located in the Bloomington area, three of which are listed as separate sites on the NPL: Neal's Landfill, Neal's Dump, and Lemon Lane Landfill. Anderson Road, an authorized landfill, and Winston-Thomas Treatment Plant, an inactive City-owned wastewater treatment plant, are the other sites. The majority of the residents living near Bennett Stone Quarry and the adjoining property depend on private wells for their water supply. The land along Stout Creek is used for raising dairy and beef cattle. The quarries adjacent to the site are frequented by local residents and campers for recreational activities.

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

On-site groundwater, soils, sediments, and surface water were contaminated with PCBs. Off-site sediments located in Stout Creek also were contaminated with PCBs. Smaller amounts of PCBs were found in the waters of Stout Creek. Area residents could have been exposed to contaminants through direct contact with PCB-laden oil in the ponds and on-site PCB-contaminated soil. Should further migration of site-related contaminants enter Stout Creek, area residents could be at risk when drinking or touching contaminated surface water or sediments.

Cleanup Approach

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

Response Action Status

Emergency Actions: The EPA undertook an emergency cleanup in 1983 that included: (1) removal and disposal of capacitors on the surface and contaminated soils; (2) an aerial photographic survey, geophysical study, and soil sampling; (3) placement of an impervious cover over the site to prevent runoff of contaminants; and (4) construction of security fencing around the site. In 1987, contaminated sediments were excavated from Stout Creek.

Entire Site: Activities conducted to address contamination at the site include: (1) excavation of all refuse plus a 2-foot buffer zone around the known refuse; (2) incineration of excavated materials in an approved facility; (3) hydro-vacuuming contaminated sediments from the on-site ponds and Stout Creek and storing them off site until incineration and disposal can be conducted; and (4) regrading, covering, and revegetating the area of the site. Groundwater and surface water monitoring will be continued to ensure that water quality standards are maintained.

Site Facts: In 1985, the Westinghouse Corporation and the EPA signed a Consent Decree, under which Westinghouse agreed to perform the site cleanup.

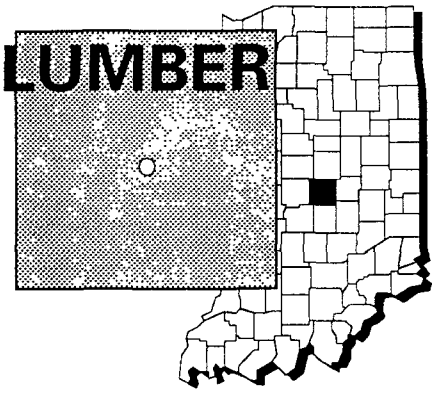
Environmental Progress

The excavation, removal, or incineration of hazardous materials and contaminated creek sediments, installation of a security fence, and other cleanup activities have reduced the potential for exposure to contamination from the Bennett Stone Quarry site. Continuing cleanup actions and groundwater and surface water monitoring will provide protection to nearby residents and the environment.

CARTER LEE LUMBER COMPANY

INDIANA

EPA ID# IND016395899



EPA REGION 5
CONGRESSIONAL DIST. 11
Marion County
Indianapolis

Site Description

Carter Lee Lumber Company has been selling lumber products at this 2-acre site since 1873. In 1971, Carter Lee bought land behind its original property from the Cleveland, Cincinnati, Chicago, and St. Louis Railway Corporation. Liquid wastes from tank trucks and railroad cars reportedly were dumped onto the ground and into a trench on the property. The EPA sampled the soil in 1985 and found it to be contaminated with heavy metals and polynuclear aromatic hydrocarbons (PNAs). The trench has been filled with clay and the property has been fenced, with access limited to employees of the lumber company. Approximately 710,000 people obtain drinking water from municipal wells within 3 miles of the site. These wells are supplied by surface water. The closest private drinking water well is upgradient from the property and approximately 3,500 feet away. The property is in the flood plain of the White River, which is located 1,500 feet from the site.

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

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 03/31/89

Threats and Contaminants

Soil is contaminated with heavy metals including arsenic, cadmium, chromium, and copper; as well as cyanide and various volatile organic compounds (VOCs). Presently, there is little threat to human health or the environment. Because the site is fenced, the only people coming into contact with contaminated soil are employees of the lumber company. If the cleanup workers were to dig or uncover the contamination in the trench, they may be exposed to pollutants.

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: An investigation into the nature and extent of the contamination is planned for the Carter Lee Lumber site. The investigation will identify cleanup alternatives for the final site cleanup approach.

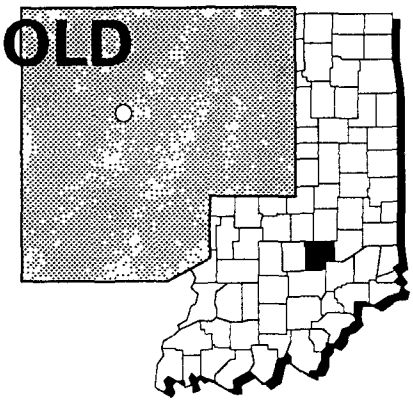
Environmental Progress

The Site has been fenced to limit access and the trenches have been filled to reduce the potential for exposure to contaminated soil at the Carter Lee Lumber site. The EPA assessed conditions at the site and determined that no immediate actions were required while studies and cleanup activities are being planned.

COLUMBUS OLD MUNICIPAL LANDFILL #1

INDIANA

EPA ID# IND980607626



EPA REGION 5

CONGRESSIONAL DIST. 09

Bartholomew County
Columbus

Other Names:
City Dump #1

Site Description

The City of Columbus operated the 12-acre Columbus Old Municipal Landfill #1 site without a permit from 1938 until 1966. The landfill reportedly accepted municipal and industrial wastes including solvents, acids, bases, paints, polychlorinated biphenyls (PCBs), and heavy metals. The landfill is unlined, but the top is covered with a layer of sand and gravel where grass has grown. Wastes were deposited on the surface of the landfill, and the site forms a low barrier between the farmlands that surround it and the East Fork of the White River. Testing has indicated groundwater contamination under the site area. Geologic conditions at the site make it easy for the groundwater to interact with and contaminate the surface waters in the area. The closest residence to the site is less than 1/2 mile away. Approximately 33,000 people live within a 3-mile radius of the site. There are private wells within 1/2 mile of the site, and public wells for water supply are within 3 miles.

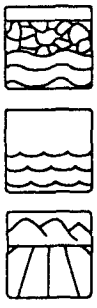
Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 09/18/85

Final Date: 06/10/86

Threats and Contaminants



Groundwater at the site contains lead and chromium from paint wastes. Other contamination found on site includes PCBs, acids, bases, and organic solvents; however, information currently is not available on the extent of contamination of surface water or soil. Possible health threats to people include drinking or coming in direct contact with contaminated groundwater or surface water or accidentally ingesting contaminated soil or sediments. The site is prone to flooding, increasing the chance for contaminants to reach surface waters in the area.

Cleanup Approach

This 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 began an investigation in 1987 to determine the nature and extent of contamination at the site. The investigation is scheduled for completion in late 1991 and will recommend cleanup alternatives.

Site Facts: In 1987, a Consent Order was signed between the EPA, the Indiana Department of Environmental Management, and three parties potentially responsible for the site contamination. Under the agreement, the parties agreed to study the site to determine the nature and extent of contamination at the landfill.

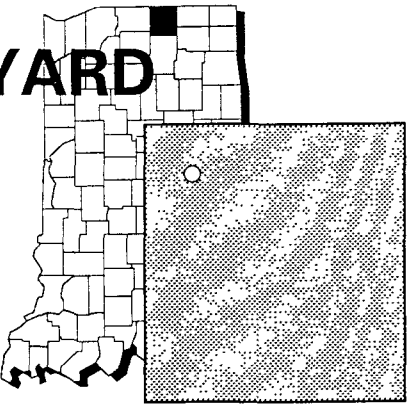
Environmental Progress

After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Columbus Old Municipal Landfill site while studies are taking place and cleanup activities are being planned.

CONRAIL RAIL YARD (ELKHART)

INDIANA

EPA ID# IND000715490



EPA REGION 5

CONGRESSIONAL DIST. 03

Elkhart County

Elkhart

Other Names:
County Road 1

Site Description

The Conrail Rail Yard (Elkhart) began operations in 1956 as part of the New York Central Railroad and continued operations as a subsidiary of the Penn Central Transportation Company until 1976. From 1962 to 1968, numerous citizen complaints regarding oil discharges from the rail yard to the nearby St. Joseph River were filed with State and local authorities. In 1976, Conrail took over the rail yard's functions. From 1976 to 1986, the rail yard experienced spills and releases of oil, diesel fuel, hydrochloric acid, caustic soda, and various petroleum-related substances. Also, track-cleaning fluids and engine degreasers were used and disposed of at the site. The site contains several ponds used to stabilize waste and separate oils and a disposal area, now covered, where rail yard wastes were discarded. In 1986, the EPA discovered volatile organic compounds (VOCs) in the groundwater near the site. Approximately 41,000 people live in Elkhart and the entire population obtains its drinking water from groundwater. The Elkhart Water Works serves approximately 41,000 persons living northeast of the site. The remaining population obtains drinking water from private residential wells.

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

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Threats and Contaminants

Groundwater and soil at the site contain VOCs. People could be exposed to hazardous substances from the site by accidentally coming into direct contact with or ingesting contaminated groundwater or soil.

Cleanup Approach

This site is being addressed in three stages: immediate actions and two long-term remedial phases focusing on cleanup of the entire site and of the source area.

Response Action Status

Immediate Actions: The EPA began a program to sample the groundwater off site in 1986. The EPA sampled 88 residential wells and detected various VOCs. The EPA provided bottled water to residents whose wells were affected. Also, the EPA installed 76 activated carbon filter units in residences. As part of the immediate action, the EPA also removed 28 drums containing waste paint from the nearby Martin property in 1987.

Entire Site: The EPA started an investigation of the nature and extent of contamination at the site in 1988. This study is defining the contaminants and recommending various cleanup alternatives. It is scheduled to be completed in 1991. Upon completion of the investigation, the EPA will select a remedy to provide a permanent safe drinking water source to residents and to contain the contaminated groundwater. Additional studies are planned to further characterize the extent of the groundwater contamination and to identify the source area. These studies are expected to be completed in 1992.

Source Area: In 1991, the EPA is scheduled to begin an investigation of the source of the contamination. The study is scheduled for completion in 1993.

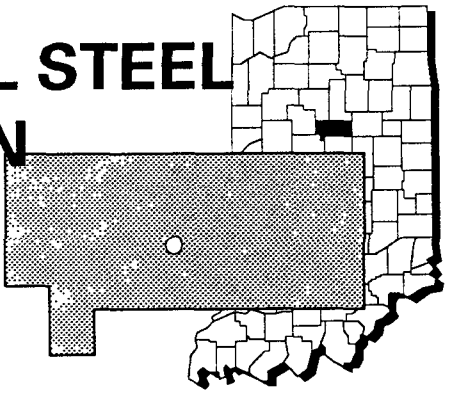
Environmental Progress

The immediate actions of providing bottled water, installing carbon filter units, and removing drums have reduced the potential for exposure to contaminated drinking water and continue to protect residents near the Conrail Rail Yard (Elkhart) site while cleanup actions are being planned and investigations are ongoing.

CONTINENTAL STEEL CORPORATION

INDIANA

EPA ID# IND001213503



EPA REGION 5
CONGRESSIONAL DIST. 05
Howard County
Kokomo

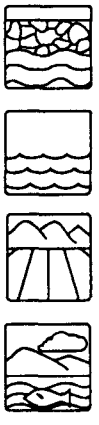
Site Description

Since 1914, the Continental Steel Corporation has produced rods and wire products from recycled steel scraps on this 200-acre site. The site includes the plant, a lagoon, and a quarry. Wastes were collected in a surface impoundment constructed in 1946 and were processed through a neutralization system and were discharged to Wildcat Creek. In 1984, 1985, and 1986, the Indiana Department of Environmental Management identified heavy metals in the impoundment and heavy metals and volatile organic compounds (VOCs) in the on-site groundwater. Operations at the site ended in 1986, when the facility went bankrupt. Approximately 1,600 people obtain drinking water from private wells within 3 miles of the site. The nearest well is 7,200 feet from the site. The site is situated above an aquifer.

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

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 03/31/89

Threats and Contaminants



The groundwater and surface water contain VOCs and heavy metals including chromium, cadmium, iron, and manganese. Liquids in the quarry pond and lagoon contain VOCs and heavy metals including copper, zinc, and mercury. Sludges and creek sediments contain heavy metals including cadmium, chromium, iron, and manganese; VOCs; and polychlorinated biphenyls (PCBs). Soils are contaminated with heavy metals, PCBs, phenols, phthalates, and VOCs. PCBs were found in fish caught in Kokomo and Wildcat Creeks. People could be exposed to contaminants by coming into direct contact with or accidentally ingesting contaminated groundwater, soil, sludge, surface water, liquids, or sediments. In addition, eating contaminated fish from the creeks could pose a health hazard.

Cleanup Approach

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

Response Action Status

Initial Actions: In 1990, the EPA began removing drums and visibly contaminated soil from a quarry area near the plant. Approximately 700 drums, 33 vats, and 55 tanks were found. All contained unknown materials. The EPA sampled the containers, and the results are being analyzed. The EPA also investigated the pond within the quarry area and found approximately 500 empty drums and three storage tanks. Initial cleanup actions are expected to be completed in late 1991.

Entire Site: In 1990, the State began a study into the nature and extent of contamination at the site to determine the best methods to address the problems. The State is scheduled to complete the study in 1994. This complex site will be divided into additional cleanup phases as studies progress and more is known about the site.

Site Facts: Continental Steel Corporation filed for bankruptcy in 1985 and ceased operations at the site in 1986.

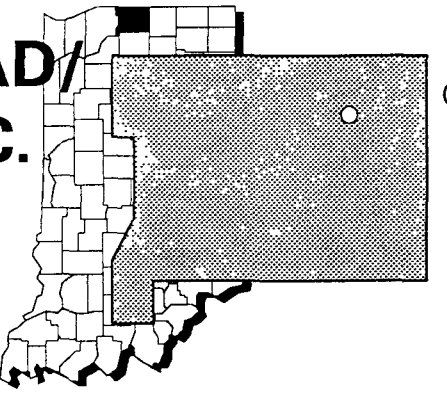
Environmental Progress

The ongoing removal of drums and contaminated soil is reducing the potential for exposure to contaminated materials at the Continental Steel Corporation site while studies are taking place and final cleanup activities are being planned.

DOUGLAS ROAD/ UNIROYAL, INC. LANDFILL

INDIANA

EPA ID# IND980607881



EPA REGION 5
CONGRESSIONAL DIST. 03
St. Joseph County
Mishawaka

Site Description

The 19-acre Douglas Road/Uniroyal, Inc. Landfill site is owned by Uniroyal and was operated between 1954 and 1979. From 1954 to 1971, solvents, fly ash, paper, wood stock, rubber, and plastic wrap were disposed of at the unlined landfill. After operations ceased, the landfill was covered with topsoil and seeded. According to Uniroyal, some 6,000 barrels of waste were disposed of at the landfill. The South Bend Water Department has seven wells within 3 miles of the site that serve approximately 120,000 people. Approximately 2,100 people live within a one mile radius of the site. Judy Creek is located approximately 2,000 feet from the site.

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

NPL LISTING HISTORY
Proposed Date: 06/10/86
Final Date: 03/31/89

Threats and Contaminants

The groundwater is contaminated with hydrocarbons. Potential health risks include touching or accidentally ingesting the contaminated groundwater. The site is secured, reducing the potential for direct access.

Cleanup Approach

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

Response Action Status

Entire Site: In 1989, Uniroyal, Inc. initiated an investigation to determine the type and extent of contamination at the landfill and to identify alternative cleanup remedies. The work is being conducted under the monitoring of the Indiana Department of Environmental Management (IDEM). Field work is scheduled to begin in 1991, and the site investigation is scheduled for completion in 1992.

Site Facts: In 1989, the IDEM signed a Consent Order under which Uniroyal is conducting an investigation to determine the type and extent of contamination at the site.

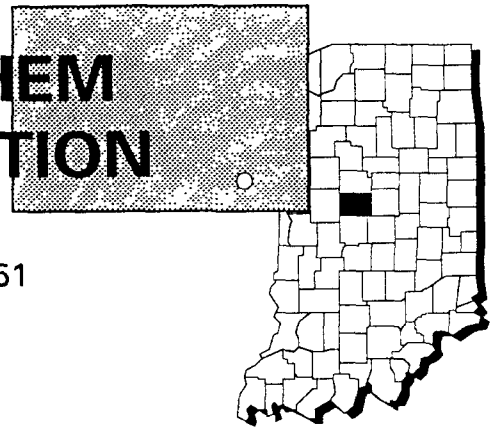
Environmental Progress

After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Douglas Road/Uniroyal, Inc. Landfill while studies are taking place and cleanup activities are being planned.

ENVIROCHEM CORPORATION

INDIANA

EPA ID# IND084259951



EPA REGION 5
CONGRESSIONAL DIST. 06
Boone County
10 miles northwest of Indianapolis

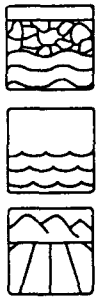
Site Description

The 6 1/2-acre Envirochem Corporation site is an inactive facility that processed and reclaimed solvents from 1977 until 1982, when the State closed the site. Wastes such as resins, paint sludges, waste oils, and flammable solvents were received in drums and bulk tankers and were stored on site in drums and storage tanks. On-site accumulation and unauthorized discharge of contaminated stormwater, poor management of drum inventory, unapproved burning of chlorinated hydrocarbons and other solvents, and several spills brought the State and the EPA to investigate the site. The State prohibited further shipment of waste to the site; however, over 20,000 drums and 400,000 gallons of waste remained on site. Additionally, contaminated underground and aboveground storage tanks and wastewater in holding ponds were present. Approximately 50 people live within 1 mile of the site. The city of Indianapolis uses the Eagle Creek Reservoir as its drinking water supply. A rainstorm caused a waste pond to overflow into an unnamed ditch on site and then to Finley Creek. In 1985, the State noted that runoff from the site enters the Eagle Creek Reservoir.

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

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

Threats and Contaminants



Groundwater is contaminated with volatile organic compounds (VOCs) and heavy metals including barium, lead, and nickel. Sediments contain lead. VOCs, polychlorinated biphenyls (PCBs), phenols, and phthalates are contaminating the soils. Surface water contains VOCs. People could be exposed to contaminants by coming into direct contact with or accidentally ingesting contaminated groundwater, soil, surface water, or sediments.

Cleanup Approach

This 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: In 1983 and 1984, the EPA and a group of parties potentially responsible for site contamination performed immediate actions that included removing and treating waste from on-site storage tanks, removing and treating 5,650 cubic yards of contaminated soils, and fencing the site. Actions also were taken to prevent contaminated water from overflowing into surface waters off site. Bulk tanks and treating water from cooling ponds were removed, in addition to 3,085 drums and 167,000 gallons of liquid waste. The EPA also removed two underground storage tanks, cleaned and disposed of bulk storage tanks and miscellaneous piping, and placed a clay cap on the surface of the site. The holding pond was drained and capped, and the water in the pond was sent off site to an approved facility for treatment. Tanks on site were sampled, and the contents were tested for compatibility. Tanks with compatible contents were combined and were then dried and cleaned. Sludge from the tanks was put into drums for off-site removal and treatment. Other underground tanks and pipes were located and recovered. The tanks containing PCBs were cleaned and rinsed. The transformer was drained and rinsed with fuel oil. The entire site was then capped and seeded, and drainages were set up to control the water that runs onto the site when it rains. In 1985, the EPA installed a sump to collect contaminated groundwater.

Entire Site: In 1987, the EPA completed a study of alternatives for addressing contamination at the site and selected the following cleanup measures: installing a permanent cap over the site to prevent contaminants in the soil from moving off site and installing a system to pump and treat groundwater under the site. In 1991, the EPA amended the selected remedy to include soil vapor extraction, with a granulated activated carbon system to treat extracted vapor from contaminated soils rather than groundwater collection and treatment. This new remedy is expected to significantly reduce the time required to clean up the site. The EPA has completed all of the field work necessary to design the cap, and final cleanup construction is expected to begin in 1992.

Site Facts: A Consent Decree was negotiated between the EPA, the State of Indiana, and 254 potentially responsible parties, which included the establishment of a fund to finance the removal work that the EPA began in 1983. The parties also agreed to perform final cleanup work at the site. Based on a demonstration pilot study, the potentially responsible parties entered into a 1991 Consent Decree to use vapor extraction technology to clean up the site.

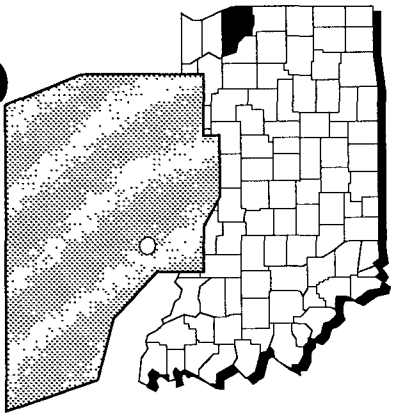
Environmental Progress

The removal of tanks, drums, liquid wastes, and contaminated soil, the securing of the site, and the additional immediate actions described above have greatly reduced the potential for exposure to hazardous substances at the Envirochem Corporation site while final cleanup activities are taking place.

FISHER-CALO

INDIANA

EPA ID# IND074315896



EPA REGION 5

CONGRESSIONAL DIST. 03

LaPorte County

1 1/2 miles northeast of Kingsbury Heights

Other Names:

Fisher-Calo Chemical and Solvents

Site Description

The 250-acre Fisher-Calo site consists of two separate tracts: a 10-acre portion of the site known as the "One Line Facility" and a 240-acre portion of the site known as the "Two Line Facility." The site is a former industrial chemical processing and distribution facility. The facility is located in an area that previously housed the Kingsbury Ordnance Plant, a U.S. military installation used to manufacture weapons. In the early 1960s, the ordnance plant was closed, and the land was purchased by a private developer who subdivided the property to form an industrial park. Sodium hypochlorite was produced and sulfur dioxide, chloride, ammonia, and various solvents were packaged at the site. For several years, a solvent reclamation facility that recovered paint and metal cleaning solvents for resale operated at the site. Cyanide, acids, and metal plating wastes were also accepted from other industries, stored in metal drums, and stockpiled on the site or dumped on the ground. In 1978, a fire broke out at the site's solvent reclamation facility, destroying several bulk storage tanks, trucks, and drums of chemical wastes and solvents. Later that year, buried drums were discovered on the property. In 1979 and 1980, drums containing chemicals and sludges were removed from the site. Waste materials, mostly stillbottoms, are stored in drums, tanks, and containers at the site. Some of the drums are reportedly leaking. The site is fenced, but only the main gate is guarded. Approximately 3,700 people live within 4 miles of the site. The nearest public water supply well is 1/2 mile from the site, and the closest residence using groundwater as a water source is 1 1/2 miles from the site.

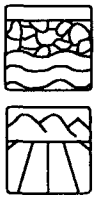
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



On-site groundwater and soils are contaminated with volatile organic compounds (VOCs). On-site soils also contain polychlorinated biphenyls (PCBs) and semi-volatiles. The greatest health risk to people is through drinking contaminated groundwater or touching contaminated soils.

Cleanup Approach

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

Response Action Status

Initial Actions: In 1989, the parties potentially responsible for site contamination, under EPA monitoring, fenced the site and staged and removed empty drums. The potentially responsible parties are sampling and disposing of the drums, tanks, and containers of hazardous waste and the visibly contaminated soil. These activities are nearly completed.

Entire Site: The EPA conducted an investigation into the nature and extent of contamination at the site. The remedy selected in 1990 includes several components. Soil contaminated with PCBs and semi-volatiles will be treated by excavation and on-site incineration, with soil flushing or soil vapor extraction planned to treat any VOC-contaminated soils remaining after excavation. Groundwater extraction wells will be installed from which the groundwater will be pumped and treated with air stripping; treated groundwater will be reinjected into the aquifer. Asbestos will be assessed and limited asbestos removal or repair of existing structures is planned. A new water supply will be installed. Soil gas testing and installation and upgrading of security fences around the site complete the planned cleanup. Once the design of the selected technologies is completed, site cleanup will begin.

Site Facts: Fisher-Calo entered into a Consent Agreement with the EPA in 1982, agreeing to conduct quarterly groundwater monitoring at the site to determine whether contaminants had dissipated to acceptable levels. In 1988, the EPA issued a Unilateral Order to the potentially responsible parties requiring them to conduct immediate activities at the site.

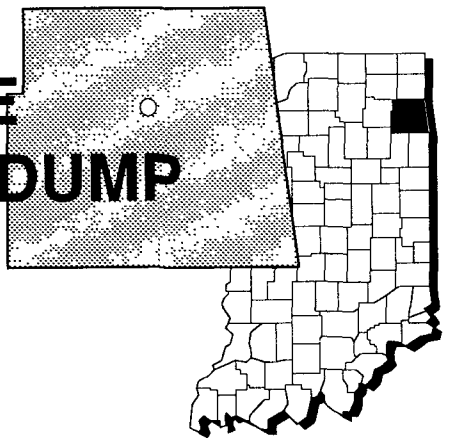
Environmental Progress

The fencing, removal of empty drums, and the ongoing disposal of hazardous waste and contaminated soils have greatly reduced the potential for exposure to contaminants at the Fisher-Calo site while cleanup technologies are being designed and cleanup activities are being planned.

FORT WAYNE REDUCTION DUMP

INDIANA

EPA ID# IND980679542



EPA REGION 5
CONGRESSIONAL DIST. 04
Allen County
Fort Wayne

Site Description

The 35-acre Fort Wayne Reduction Dump site is a former municipal landfill and waste disposal facility. Before 1967, the site was uncultivated farmland often used for the dumping of unknown waste. Between 1967 and 1976, the facility accepted wastes including residential garbage, sewage, industrial liquid waste, paper, and wood. Wastes were incinerated, and the residual ash was disposed of on the site. Volatile liquids were dumped from drums into a pit adjacent to the Maumee River. The site consists of two areas: the 15-acre eastern portion was used as the general refuse landfill, and a 5-acre western section was used for the disposal of industrial wastes, building debris, barrels of unidentified wastes, and residual ash from the incinerator. In 1970, Fort Wayne Reduction changed its name to National Recycling Corporation (NRC) and built a recycling plant for processing solid waste. The recycling stopped in 1975, and the building was torn down in 1985. NRC was acquired by Service Corporation of America (SCA) in 1973. SCA was denied a municipal refuse permit, and operations ceased in 1976. Waste Management acquired SCA in 1984. Two residential communities are located approximately 1/2 mile from the dump. The Maumee River borders the property, and the site is in the 100-year flood plain. Approximately 1,100 people use private wells as a source of drinking water. Two areas on the site are designated as wetlands.

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

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants

Groundwater is contaminated with volatile organic compounds (VOCs) and heavy metals. Heavy metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), phenols, and VOCs are present in the soil. People who come into direct contact with or accidentally ingest contaminated groundwater or soil may be at risk. Contaminants have migrated into the Maumee River through groundwater discharge. The wetlands on the site are an important habitat for many plants and animals. If contaminants seep into the wetlands, the wildlife may be harmed.

Cleanup Approach

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

Response Action Status

Entire Site: In 1988, the EPA selected a remedy to clean up the site by: (1) closing the eastern portion of the site to prevent erosion and eliminating potential direct contact threats; (2) monitoring the groundwater as it flows from the site to the Maumee River; (3) installing a system to collect groundwater between the site and the Maumee River and treating the groundwater, if necessary; (4) excavating 4,600 drums and incinerating their contents; (5) backfilling the excavated areas; (6) closing the western portion of the site to prevent erosion and eliminate potential direct contact threats; (7) constructing a fence around the site; (8) imposing deed restrictions on the use of the land; (9) protecting the wetlands during the cleanup activities; and (10) installing erosion mats and planting vegetation to reduce erosion during Maumee River floods. Waste Management, under EPA monitoring, designed the technical specifications for the cleanup. Construction of the remedy for the eastern portion is expected to be completed in the summer of 1991. The design of the cleanup measures for the western portion currently is underway, with the cleanup activities planned to commence in 1991.

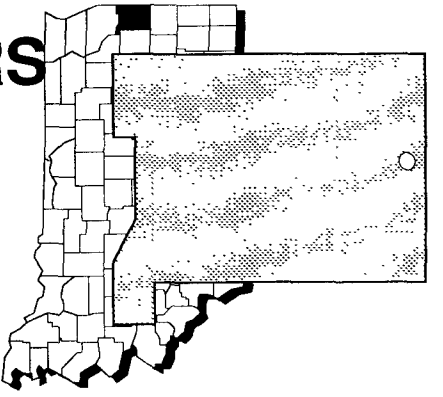
Environmental Progress

After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Fort Wayne Reduction Dump site. Cleanup actions in the eastern portion of the site currently are underway, while the design of the cleanup approach for the western site area is being completed.

GALEN MYERS DUMP/DRUM SALVAGE

INDIANA

EPA ID# IND980999635



EPA REGION 5
CONGRESSIONAL DIST. 03
St. Joseph County
Osceola

Site Description

From 1960 to 1982, drums from local industries were stored and recycled at the 5-acre Galen Myers Dump/Drum Salvage site. The tops were removed, the contents were dumped into a pit and driveway, and the drums were sold as trash containers. In 1984, the EPA found many leaking and deteriorating drums on the site and removed them in 1985. In 1986, the Indiana Department of Environmental Management (IDEM) found soil and private wells to be contaminated. Approximately 17,000 people obtain drinking water from wells located within 3 miles of the site. The St. Joseph River is located 1 mile from the site.

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

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 03/31/89

Threats and Contaminants

Groundwater and soil are contaminated with various volatile organic compounds (VOCs). The soil also contains phthalates, polychlorinated biphenyls (PCBs), and pesticides. Most area residents use private wells for drinking water. The municipal water supply is drawn from the same aquifer as the private wells. People who drink contaminated water or come into direct contact with the water or soils may be at risk.

Cleanup Approach

This 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

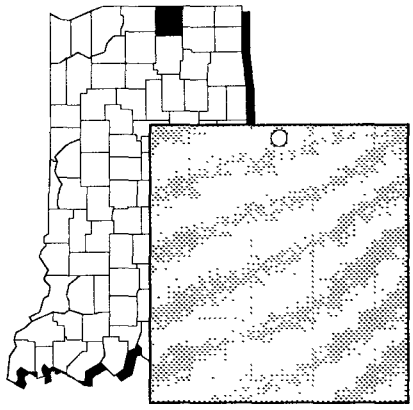
Immediate Actions: In 1985, the EPA removed 274 drums of waste and contaminated soils and transported them to a federally approved storage facility. In 1987, the EPA provided alternate drinking water to 10 residences. This involved installing a combination air stripping and carbon filtration system at two residences, whole-house clean carbon filters at three residences, and point of use filters on taps at eight residences.

Entire Site: In 1991, the State will begin a study to determine the extent of the groundwater and soil contamination at the site. Once the study is completed, final site cleanup measures will be recommended.

Environmental Progress

The removal of contaminated materials and the provision of an alternate source of drinking water to affected residences have eliminated the potential of exposure to contaminated drinking water and will continue to protect residents near the Galen Myers Dump site while studies leading to the selection of the final cleanup methods are being planned.

HIMCO DUMP
INDIANA
EPA ID# IND980500292



EPA REGION 5
CONGRESSIONAL DIST. 03
Elkhart County
Elkhart

Site Description

The 50-acre Himco Dump site, located in the town of Elkhart, operated as a dump from 1960 until 1976. During its operation, general refuse and medical, pharmaceutical, and industrial wastes were disposed of on the site. As waste was brought into the dump, marshy land was filled in and then covered with sand. The elevation at the center of the site is built up approximately 15 feet. Along the perimeter of the site, the elevation is 5 feet higher than the original levels. The disposal practices make it difficult to determine exact locations where the waste was buried; however, the present topography of the site suggests that waste may have been deposited over the entire 50 acres. Vegetation on the site appears to have been affected by the contamination. During a site inspection in 1984, the EPA observed several leachate streams at various locations, as well as strong sulfate and methane odors. The EPA also detected several contaminants in monitoring wells downgradient of the site. In 1974, the State Health Commissioner advised the site operator to drill deep wells to replace six contaminated shallow residential wells located adjacent to and just south of the site. A 1988 inspection of the site by the Indiana State Board of Health (ISBH) and the Department of Environmental Management identified disposal areas that were uncovered and exposed to the environment. Wells within 3 miles of the site serve at least 20,000 people. The closest residences to the site are located on the southern perimeter. A 200-home mobile home park is located downgradient of the site, to the south of the landfill. Several small industries, a residential area, and land used for agricultural purposes are located in the vicinity of the site.

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

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

Threats and Contaminants

Groundwater is contaminated with heavy metals including selenium and beryllium and the volatile organic compounds (VOCs) trichloroethylene (TCE) and toluene. The dump is located over a continuous portion of shallow groundwater that is the sole source of drinking water for the town of Elkhart. The drinking water supply for the town may be at risk if site-related contaminants migrate into this shallow groundwater aquifer under the site. The contamination on the site also could adversely affect the nearby wetlands.

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: In response to complaints of well contamination, the site operator installed deep wells to replace nearby contaminated residential drinking water wells.

Entire Site: In 1989, the EPA began a study into the nature and extent of site contamination and to identify alternative cleanup methods. The first phase of field work has been completed and is being evaluated. Additional field work will begin in mid-1991. The EPA expects to finish this study in 1993. Actual cleanup work is anticipated to begin in 1994.

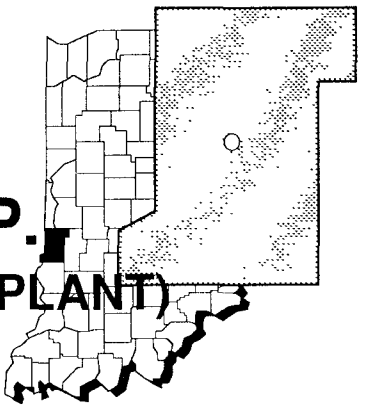
Site Facts: In 1975, the owner of the site signed a Consent Agreement with the Stream Pollution Control Board of Indiana that resulted in the closure of the site in 1976. Possible contamination of 6 residential shallow wells, ranging from 22 to 62 feet deep, was reported to the Elkhart County Health Department, the ISBH, and the EPA in 1974. In response to these complaints, the site operator drilled new water wells for these six individuals, and when these wells were sampled in 1984, they were not found to be contaminated.

Environmental Progress

New wells installed by the site operator for the six residences with contaminated wells reduced the potential for exposure to the contaminated groundwater. After listing the Himco Dump site on the NPL, the EPA performed preliminary evaluations and determined that the site does not pose an immediate threat to the surrounding community or the environment while investigations leading to the selection of a final cleanup remedy for the site are taking place.

INTERNATIONAL MINERALS & CHEMICAL CORP. (TERRE HAUTE EAST PLANT) INDIANA

EPA ID# INT190010876



EPA REGION 5
CONGRESSIONAL DIST. 07
Vigo County
Terre Haute

Other Names:
IMC (Terre Haute East Plant)

Site Description

The International Minerals & Chemical Corp. (Terre Haute East Plant) site consists of 6 acres of a 37-acre lot and is located in southeastern Terre Haute, about 2 miles east of the Wabash River. It is bordered on the east and west by various railroad facilities. From 1946 until 1954, the Commercial Solvents Corporation (CSC) manufactured and stored benzene hexachloride (BHC), a raw material used in the production of pesticides, at the facility. Wastes generated from the production of BHC were collected on the site property in a sump and eventually were disposed of at the Canal Road Dump, located a few miles south of the property. In 1975, International Minerals and Chemical Corporation (IMC) purchased the site. Beginning in 1979, IMC collected samples of soils from the East Plant facility and the Canal Road Dump and analyzed them for the presence of site-related contaminants. IMC also installed monitoring wells on and around the East Plant property to determine if contaminants were migrating from the site into the groundwater. The results of these studies confirmed the presence of BHC in soil samples and in samples collected from two of the groundwater monitoring wells. The EPA became involved in activities at the site in 1984, when contamination was detected in some of the monitoring wells. While residential wells were found to contain varying amounts of volatile organic compounds (VOCs), none of the samples taken contained BHC. The population of the City of Terre Haute is approximately 61,000. The majority of the residences within the vicinity of the site are connected to the municipal water supply system; the others depend on private wells for their drinking water supply. There are approximately 30 nearby residential wells located downgradient of the site.

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

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86
Deleted Date: 02/11/91

Threats and Contaminants

Groundwater and soils were contaminated with VOCs including low levels of BHC. Due to the nature of this chemical, it is unlikely that it migrated into the local water supply system. During sampling, three residential wells were found to contain chloroform and associated derivatives at or above the maximum contaminant level for safe drinking water. Potential health threats included direct contact with or inhalation of contaminated soils and accidental ingestion of contaminated groundwater.

Cleanup Approach

The site was addressed in two stages: immediate actions and a long-term remedial phase directed at cleanup of the entire site.

Response Action Status

Immediate Actions: IMC excavated approximately 18,500 cubic yards of contaminated soil, rubble, piping, and other debris. The debris was stockpiled in an on-site mound on the East Plant property. After the completion of this mound, concentrations of BHC in groundwater declined relatively quickly. The stockpile was covered with clay, common fill, and loam, then seeded in 1980 to prevent erosion that could result in exposure to contaminants. This cover included a surface drainage collection system and venting mechanisms that allow gas to escape from the soil. In 1981, IMC, under State and EPA supervision, installed additional groundwater monitoring wells uphill and downhill of the stockpile mound. From 1981 to the present, these wells have been sampled quarterly for the presence of BHC and other contaminants.

Entire Site: Because of the immediate actions conducted by IMC in 1980, a decision was reached in 1988 by the EPA that no further cleanup action was necessary at the site. However, the following maintenance activities are being conducted over a 30-year period: (1) inspection of the existing cover on a quarterly basis; (2) maintenance of the vegetation cover; (3) monitoring BHC in the groundwater semi-annually for 5 years and annually for the next 25 years; (4) annual reporting of monitoring results to the State; (5) restriction of access to the site; and (6) establishment of a contingency plan that provides appropriate cleanup measures to be taken if there is a chance that BHC may be released into the environment from the site. The parties potentially responsible for site contamination are conducting the maintenance activities as specified, under EPA monitoring. Both the EPA and the State of Indiana have determined that all appropriate responses at the IMC site have been completed and that no further cleanup actions are necessary. The site was deleted from the NPL in 1991.

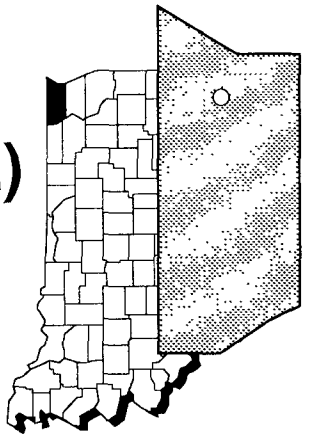
Environmental Progress

The party potentially responsible for the site contamination took immediate action to remove contaminated materials from the site, which significantly reduced the potential for exposure to hazardous substances and effectively controlled the movement of contaminants into the groundwater. The EPA determined that the site no longer poses a threat to human health or the environment and has deleted the International Minerals & Chemical Corp. site from the NPL.

LAKE SANDY JO (M & M LANDFILL)

INDIANA

EPA ID# IND980500524



EPA REGION 5
CONGRESSIONAL DIST. 01
Lake County
Gary

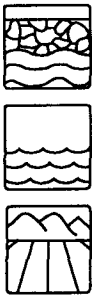
Site Description

The Lake Sandy Jo (M & M Landfill) site covers 40 acres in Gary. The site was a former water-filled borrow pit that was used as a landfill between 1971 and 1980. Various wastes, including construction and demolition debris, garage and industrial wastes, and drums, are believed to be buried on the site. The borrow pit originally was dug to support construction of I-90/84, which is adjacent to the site. In 1971, groundwater filled the pit, and it was used for a short time as a recreational lake. From 1971 until 1975, the pit was filled with various debris. Local residents became concerned over odors from the site, and, in 1976, the owners were ordered to drain the lake and to restrict fill to demolition debris only. Later in 1976, the site was sold to Glen and Gordon Martin, who continued filling operations without a license until the site was closed in 1980. Approximately 5,300 people live within 3 miles of the site and draw water from more than 1,400 wells.

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

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

Threats and Contaminants



Groundwater, sediments, surface water, and soils contain heavy metals such as arsenic, beryllium, cadmium, and silver; volatile organic compounds (VOCs) including methylene chloride and chloroform; polychlorinated biphenyls (PCBs); and the pesticide DDT. The soils also are contaminated with polycyclic aromatic hydrocarbons (PAHs), phthalates, and heavy metals. People who come in direct contact with or accidentally ingest contaminated groundwater, soil, surface water, or sediments may be at risk.

Cleanup Approach

The site is being addressed in three stages: immediate actions and two long-term remedial phases directed at cleanup of the soil and sediments and extension of the water line.

Response Action Status

Immediate Actions: In 1986, the EPA installed a 6-foot chain-link fence to restrict access to the site. An existing 4-foot fence on the swampy southern side of the site was deemed a sufficient barrier to complete the enclosure. Several days after the installation, vandals stole 100 feet of the fence. To discourage future vandalism, the fence was painted with fluorescent paint, reducing its resale value.

Soil and Sediments: Following the selection of cleanup activities in 1986, the EPA has: (1) consolidated all contaminated soil and sediments; (2) installed additional monitoring wells; and (3) covered the site with clean soil and reseeded. These actions were completed in 1990. A groundwater and surface water monitoring program, deed restrictions on the use of the land, and institutional controls on the use of the aquifer are expected to be in effect in 1992.

Water Line: Based on the 1986 decision on site cleanup, the EPA is extending a water line to residences affected by the site. The EPA anticipates completion of extension of the water main to approximately 80 residents in 1992.

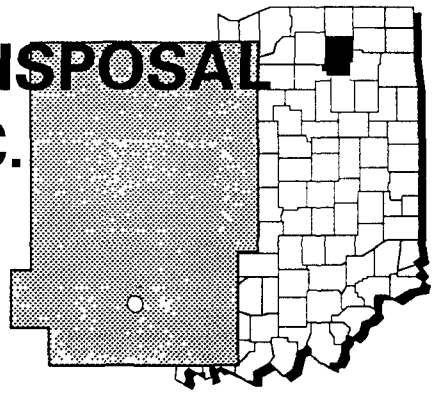
Environmental Progress

The installation of a security fence around the site and a cover over the site has significantly reduced threats posed by the Lake Sandy Jo (M & M Landfill) site to the surrounding community or the environment while final cleanup activities are being completed.

LAKELAND DISPOSAL SERVICE, INC.

INDIANA

EPA ID# IND064703200



EPA REGION 5
CONGRESSIONAL DIST. 02
Kosciusko County
Claypool

Site Description

Lakeland Disposal Service, Inc. operated a 39-acre sanitary landfill 3 1/2 miles northwest of Claypool. The landfill was licensed by the Indiana State Board of Health (ISBH) to accept municipal and certain industrial wastes from specific facilities. Beginning in 1974, general refuse and hazardous wastes including cyanide and sludges containing paint, hydroxides of aluminum, and heavy metals were disposed of at the site. In 1978, the Kosciusko County Circuit Court ordered the landfill closed as a result of improper operations. The same year, a new owner began subdividing and selling portions of the landfill to mobile home owners. In 1982, the State conducted a methane gas survey at the closed landfill and detected high concentrations of the gas beside one of the mobile homes. The State filed an injunction requesting that the residents move from the landfill property. In 1983, the Kosciusko County Board of Zoning Appeals ordered the residents to move off the landfill site. Currently, no one resides at the site. Sloan Adams Ditch runs through the site into Palestine Lake 2 miles away, which is used for recreational activities. There are approximately 1,100 residents within 2 miles of the site who rely on private wells for their water supply. Claypool's two municipal wells are within 3 miles of the site.

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

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 03/31/89

Threats and Contaminants

The groundwater is contaminated with heavy metals including arsenic, barium, and cadmium and volatile organic compounds (VOCs) including methyl isobutyl ketone and toluene. On-site soils are contaminated with heavy metals. Accidental ingestion of contaminated water from wells, direct contact with contaminated soil, and the risk of fire and explosion may pose health threats. The area has several wetlands, which could be affected by contaminated runoff from the site.

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 parties potentially responsible for the site contamination have begun an investigation to determine the nature and extent of contamination and to identify alternatives for long-term cleanup of the site. The first phase of the investigation is completed. Current activities under the second phase include installation of more monitoring wells, wetland delineation, and residential well sampling. The investigation is scheduled for completion in 1993.

Site Facts: In 1989, Dana Corporation, General Motors Corporation, United Technologies Automotive, Inc., and Warsaw Black Oxide, Inc. signed a Consent Order with the EPA to conduct an investigation of site contamination.

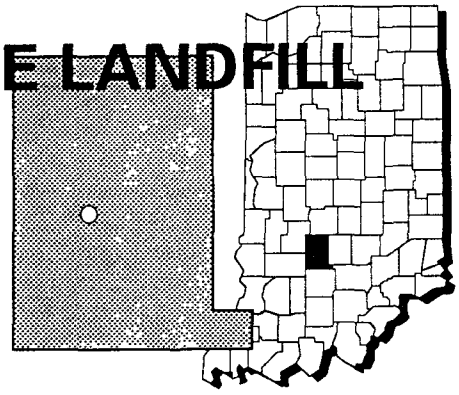
Environmental Progress

After adding the Lakeland Disposal site to the NPL, the EPA determined that the site does not pose an imminent threat to the surrounding community and the environment while the investigations leading to the selection of a final cleanup remedy for the site are taking place.

LEMON LANE LANDFILL

INDIANA

EPA ID# IND980794341



EPA REGION 5
CONGRESSIONAL DIST. 09
Monroe County
Bloomington

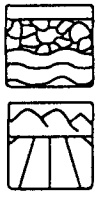
Site Description

The Lemon Lane Landfill site is located on the western edge of Bloomington. The site encompasses 10 acres, 3 of which are owned by a private citizen. From 1950 to 1964, the landfill, which had no liner or runoff controls, accepted both municipal and industrial wastes. Allegedly, wastes were incinerated on site. No records were kept of the types or quantities of wastes received. Of primary concern were large quantities of exposed and leaking capacitors containing polychlorinated biphenyls (PCBs). Starting in 1980, the State of Indiana and the EPA sampled the area several times. No PCBs were detected in nearby residential wells at the time, nor were any surface discharges observed. However, the geology of the area suggests that groundwater contamination is possible. Westinghouse Electric Corporation, the party potentially responsible for contamination at the site, is handling cleanup of Lemon Lane Landfill, as well as three other NPL sites, one authorized landfill, and an inactive, City-owned wastewater treatment plant in the Bloomington area (Neal's Landfill, Neal's Dump, Bennett Stone Quarry, the Anderson Road Landfill, and the Winston-Thomas Treatment Plant). Westinghouse is planning to construct an incinerator that will comply with all applicable local, State, and Federal laws.

Site Responsibility: This 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 and soils are contaminated with PCBs. Direct contact with and accidental ingestion of contaminated soil or groundwater are potential health threats. Capping the landfill has reduced the opportunity for contaminants to reach the groundwater.

Cleanup Approach

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

Response Action Status

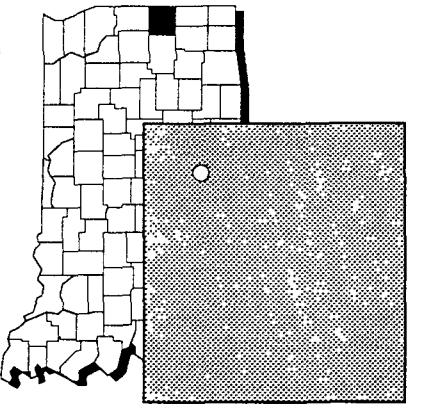
Immediate Actions: In 1983, the EPA constructed a fence around the site to prevent access to the area. The EPA also removed exposed PCB capacitors, graded and covered the southern slopes of the site, regraded and contoured the land to prevent ponding or erosion, and capped the site. In 1988, a low-flow dye trace study of the groundwater system around the landfill was conducted to determine the hydrologic connection of springs to the site and to better define the groundwater system. On the basis of this study, the EPA concluded that effects on the local groundwater wells are minimal.

Entire Site: An alternate water supply was provided to a resident whose wells showed signs of contamination. One nearby residence was connected to the city water supply in 1988, after the dye trace study determined that its well water supply was contaminated. A synthetic cap was placed on the landfill in 1988. In 1990, Westinghouse concluded high-flow dye trace studies of the flow and presence of contaminated groundwater. Westinghouse will conduct the remaining remedies for the site: (1) excavation of approximately 176,000 cubic yards of soil and material from the landfill to a pre-Westinghouse depth plus 3 feet of buffer zone; (2) incineration of excavated materials in an approved facility; and (3) periodic groundwater monitoring. The excavation and incineration activities are contingent on the approval of the permit applications for the incinerator and a landfill for ash disposal. The permit applications are expected to be submitted in 1991.

Environmental Progress

By constructing a fence to restrict site access, removing the PCB capacitors, and grading and installing a synthetic liner cap over the site to limit movement of contaminants from the property, the potential for exposure to hazardous materials at the Lemon Lane Landfill site has been greatly reduced while cleanup activities continue.

MAIN STREET WELL FIELD
INDIANA
EPA ID# IND980794358



EPA REGION 5
CONGRESSIONAL DIST. 03
Elkhart County
Elkhart

Other Names:
Elkhart Main Street Wellfield

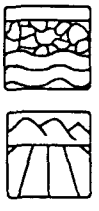
Site Description

The Main Street Well Field site consists of 15 wells on 10 acres of land in Elkhart. This well field is the largest of three municipal well fields and supplies about 70% of the drinking water for 40,000 residents of Elkhart. In 1981, during an EPA National Groundwater Supply Survey, the well field was found to be contaminated with volatile organic compounds (VOCs). The EPA resampled water from the well field a month later and discovered elevated concentrations of VOCs in the water used for consumption and in three production wells. Monitoring wells were installed by the City, and sampling indicated that two industries on the eastern boundary of the well field were potential sources of groundwater contamination. In 1982, the City installed two interceptor wells to help prevent further migration of the contaminant plume. At first the contaminant levels decreased, but between 1983 and 1985, they gradually increased.

Site Responsibility: The site is being addressed through a combination of Federal and State action.

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

Threats and Contaminants



Groundwater and soils contain VOCs including trichloroethylene (TCE). People who come in direct contact with or accidentally ingest contaminated groundwater or soil may be at risk.

Cleanup Approach

The site is being addressed in four stages: immediate actions and three long-term remedial phases focusing on cleanup of the groundwater, the aquifer contamination, and the contaminated soil.

Response Action Status

Immediate Actions: In 1987, the EPA provided drinking water to approximately 300 residents and extended the water main to 6 businesses, a church, and 293 homes. Carbon filters were installed in 11 homes.

Groundwater: In 1985, the EPA selected a remedy to provide an alternate water supply by constructing air stripping facilities to remove the contaminated flow from the Main Street Well Field. Contaminated water is pumped from the aquifer, treated, and discharged to the existing water treatment plant and distribution system. The EPA completed all actions involving the installation of the air stripper in 1987.

Aquifer: Based on the results of an investigation of the contaminated aquifer, the EPA has proposed the following remedies: vacuum extraction of VOCs in the contaminated soil; removal and disposal of contaminants; installation of new well interceptors to prevent continued plume migration; continued use of the air stripper and groundwater monitoring, as well as imposing deed restrictions to limit future uses of the site. The technical design of the approved remedies is expected to begin in 1992.

Soil: The EPA will conduct an investigation into the type and extent of remaining soil contamination from the multiple sources contributing to the well field contamination. Once the investigation is completed, scheduled for 1993, the most appropriate methods for soil cleanup will be recommended.

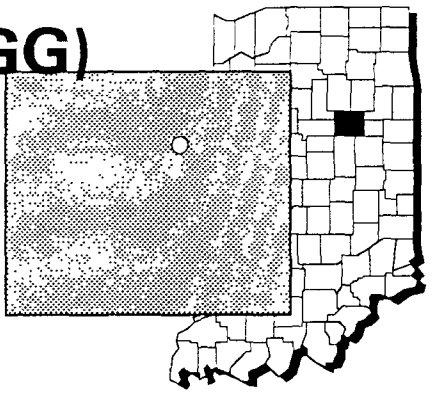
Environmental Progress

An alternate water supply has been provided to the communities served by the Main Street Well Field, thereby eliminating the potential for exposure to contaminated groundwater. Further investigations are being conducted to determine the sources of soil contamination while the selected remedies are designed to address contamination of the underlying aquifer.

MARION (BRAGG) DUMP

INDIANA

EPA ID# IND980794366



EPA REGION 5
CONGRESSIONAL DIST. 05
Grant County
Marion

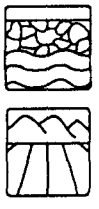
Site Description

The Marion (Bragg) Dump covers 72 acres along Central Avenue, just outside of Marion. The area is relatively flat, with the Mississinewa River running along two sides of the site. The landfill, originally used as a gravel pit, was leased by the Radio Corporation of America and the Bragg Construction Company for the disposal of various wastes. It was closed and covered in 1975. Later that year, Waste Reduction Systems constructed a station on the site to transfer solid wastes to an approved landfill. The transfer station was closed in 1977. The Marion Dump contains approximately 1,100,000 cubic yards of wastes, some of which are hazardous, including solvents, plasticizers, lead, and cadmium. An estimated 9,000 people reside in the area around the site. Residents in the area depend on groundwater from private and municipal wells for their supply of water. A 15-acre pond, located in the center of the site, is connected to the upper aquifer. The northern portion of the site is within the 100-year flood plain of the Mississinewa River.

Site Responsibility: This 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 is contaminated with volatile organic compounds (VOCs) including benzene and trichloroethene. The soil is contaminated with polycyclic aromatic hydrocarbons (PAHs) and arsenic. People who come in direct contact with or accidentally ingest contaminated groundwater or soil may be at risk, although the wells in the immediate area, which draw on the aquifer, have not been found to contain contaminants.

Cleanup Approach

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

Response Action Status

Entire Site: In 1987, the EPA selected the following remedy for the site: (1) regrading and capping of the site to promote runoff, reduce infiltration, eliminate leachate seepage and prevent direct contact with surface soils and exposed waste; (2) providing for and maintaining flood control measures to protect the portions of the site in the flood plain; (3) constructing and maintaining a fence around the site; (4) replacing private drinking water wells in the deep aquifer for users within a specified boundary; (5) sealing shallow wells; (6) conducting supplemental studies to complete investigations of the groundwater and pond; and (7) operation and maintenance of the site. Some of the potentially responsible parties installed a fence around the site, drilled new monitoring wells, and began capping the site. Completion is expected in 1991. The investigation of the groundwater and on-site pond, to determine if further action is needed will continue for two or three years.

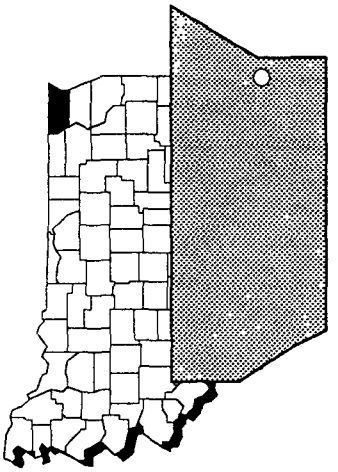
Environmental Progress

By constructing a fence around the site and a cap over the site, the potential for exposure to hazardous materials from the Marion (Bragg) Dump site has been greatly reduced. Further cleanup activities currently are underway and groundwater studies are ongoing.

MIDCO I

INDIANA

EPA ID# IND980615421



EPA REGION 5

CONGRESSIONAL DIST. 01

Lake County

Gary

Other Names:
Midwest Solvents Recovery

Site Description

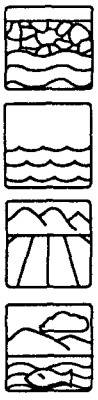
The Midwest Solvent Recovery Company (MIDCO) I site is a 4-acre, abandoned industrial waste recycling, storage, and disposal facility in Gary. Recycling, storing, and disposing of industrial wastes began at the site some time before 1973. In 1973, approximately 6,000 to 7,000 drums were observed on the site. Later, four bulk tanks, each with a capacity of 4,000 to 10,000 gallons, were found on the site. In 1976, a fire burned approximately 14,000 drums of chemical waste. Operations resumed in 1977 under new management, but by 1979, the facility was abandoned, leaving an estimated 14,000 drums stockpiled on site. In 1981, severe flooding caused water in the area to drain into a neighboring city to the west; contact with the flood water reportedly resulted in skin burns. Following a fire in 1976, MIDCO I moved to a new location, known as MIDCO II, which also is on the NPL. Residential neighborhoods are near the site, with one resident living as close as 900 feet from the site. Twelve drinking water wells have been identified in the Calumet Aquifer, within approximately a mile from the site, in the downgradient groundwater flow direction. The Calumet Aquifer is highly susceptible to contamination from surface sources. The area surrounding the site is mixed light industrial, commercial, residential, and wetlands.

Site Responsibility: This 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



Groundwater contains volatile organic compounds (VOCs) including trichloroethylene (TCE), methylene chloride, semi-volatile compounds, metals, and cyanide. Sediments and soils are contaminated with VOCs, semi-volatiles, polychlorinated biphenyls (PCBs), metals, and chlordane, a pesticide. VOCs, chromium, lead, cadmium, and cyanide were detected in surface waters northeast of the site. Sodium and chloride were the most concentrated contaminants found in the groundwater and surface water. These contaminants may have migrated from the nearby salt depot of the Indiana Highway Department. Contaminants in the soil are leaching into the groundwater. The contaminated groundwater in turn is migrating off site and eventually may affect downgradient drinking water wells. People who come in direct contact with or accidentally ingest contaminated groundwater, surface water, sediments, or soil may be at risk. The contamination also could adversely affect wildlife and plants in or around the wetlands.

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: A security fence was installed around the site in 1981. In 1982, to address the immediate threats to the public, the EPA removed extensive surface wastes, an underground tank, drums, and the top 1 foot of contaminated soil. Much of the site was then covered with a temporary clay cover.

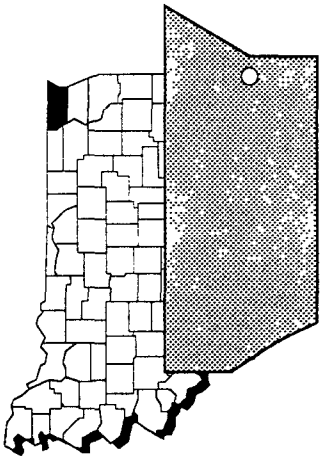
Entire Site: To address the contaminated subsurface soil, sediment, and groundwater, the EPA selected the following cleanup actions in 1989: (1) treatment of approximately 12,400 cubic yards of contaminated soil and subsurface materials using a combination of soil vapor extraction and solidification/stabilization, followed by on-site disposal; (2) excavation and on-site solidification/stabilization of approximately 1,200 cubic yards of contaminated sediment from surrounding wetlands; (3) installation of a final site cover; (4) installation and operation of a deep underground injection well for disposal of the contaminated groundwater; (5) installation and operation of a treatment system to remove hazardous substances from the contaminated groundwater, followed by deep well injection of the salt-contaminated water; or (6) installation and operation of a treatment system, followed by reinjection of the salt-contaminated groundwater into the Calumet Aquifer in a manner that will prevent spreading of the salt plume; (7) groundwater monitoring; and (8) implementation of deed and access restrictions. The EPA is designing the technical specifications for the cleanup. Once the design phase is completed, the cleanup activities will begin.

Site Facts: In June 1985, a group of potentially responsible parties agreed to reimburse the EPA for past cleanup action costs and to perform the site investigation. This Consent Decree became effective in August 1985. The parties also have agreed to perform final cleanup activities at the site. The EPA issued an Administrative Order in 1989, instructing the potentially responsible parties to conduct the remaining site cleanup.

Environmental Progress

The removal of the contaminated materials and soils from the site and the installation of a fence and a temporary cover have significantly reduced the threat of exposure to hazardous materials while cleanup actions for the MIDCO I site are being planned.

MIDCO II
INDIANA
EPA ID# IND980679559



EPA REGION 5
CONGRESSIONAL DIST. 01
Lake County
Gary

Other Names:
Midwest Industrial Waste Disposal Company

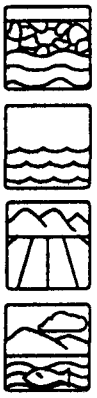
Site Description

The Midwest Industrial Waste Disposal Company (MIDCO) II site is an abandoned, industrial waste recycling/disposal facility covering 7 acres in Gary. The operators of the MIDCO I facility, another NPL site, relocated to the MIDCO II location after a fire in 1976. Operations at MIDCO II began in 1976 and included temporary bulk liquid and drum storage of waste and recyclable materials, neutralization of acids and caustics, and on-site dumping of waste into pits, which allowed wastes to percolate into the groundwater. One of these pits had an overflow pipe leading into a ditch that drains into the Grand Calumet River. In 1977, a fire at MIDCO II destroyed equipment, buildings, and an estimated 50,000 to 60,000 drums. The site was abandoned after the fire. Burned-out drums, drums containing chemical wastes, 12 aboveground tanks with 10,000-gallon capacity, and one underground tank were abandoned on the site. Approximately 479,000 people live within 3 miles of the site.

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

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants



Contaminants affecting the groundwater include volatile organic compounds (VOCs) such as benzene, toluene, and trichloroethylene (TCE); other organics including isoporone; cyanide; and arsenic, lead, and other heavy metals. The groundwater also is highly contaminated with sodium and potassium chloride. Sediments and soils are contaminated with similar substances and polychlorinated biphenyls (PCBs). Potential health risks exist for individuals accidentally ingesting or coming into direct contact with the contaminated soil, sediment, or groundwater. Migration of contaminants through the groundwater may threaten the off-site aquifer and downstream wetlands.

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: From 1984 to 1989, the EPA repaired and extended the site fence; sampled and removed all of the remaining drums, tanks, and debris from the site's surface; and excavated the sludge pits and filter pit contents. The resulting PCB-contaminated pile was removed and disposed of in an off-site hazardous waste landfill in early 1986, and most of the cyanide-contaminated pile also was removed.

Entire Site: The major components of the remedies selected by the EPA in 1989 are: on-site treatment of an estimated 35,000 cubic yards of contaminated soil and waste material by solidification/stabilization, with the solidified material remaining on site; excavation and on-site solidification/stabilization of approximately 500 cubic yards of contaminated sediments in the ditch adjacent to the northeastern boundary of the site; installation and operation of a groundwater pump and treat system to intercept and treat contaminated groundwater; installation and operation of injection wells for disposal of the treated water; installation of a conduit in the ditch along the site and a final site cover; restriction of site access and imposition of deed restrictions as appropriate; and related testing and long-term monitoring. The EPA is designing the technical specifications for the cleanup. Once the design phase is completed, the cleanup activities will begin.

Site Facts: In June 1985, a group of potentially responsible parties agreed to reimburse the EPA for past cleanup action costs and to perform the site investigation. This Consent Decree became effective in August 1985. In December 1989, the EPA issued an Administrative Order to the parties to perform the cleanup actions at the MIDCO I and II sites.

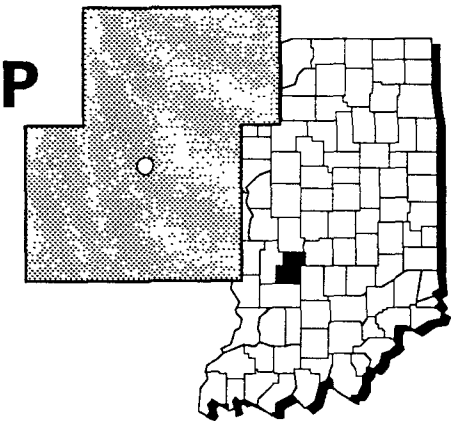
Environmental Progress

By fencing the MIDCO II site and removing drums, tanks, and debris, the potential for exposure to hazardous materials has been greatly reduced. The technical specifications for the remedies selected for the permanent site cleanup currently are being prepared by the EPA.

NEAL'S DUMP (SPENCER)

INDIANA

EPA ID# IND980794549



EPA REGION 5
CONGRESSIONAL DIST. 07
Owen County
Spencer

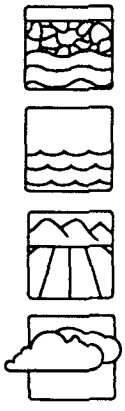
Site Description

The Neal's Dump site covers approximately 1/2 acre in Spencer. The dump operated from 1967 until 1971, when it was closed. During its operation, the owner accepted electrical capacitors, oil-stained rags, and sawdust from the Westinghouse facility nearby. The Westinghouse Electric Corporation, the party potentially responsible for the contamination at the site, is treating Neal's Dump, as well as three other NPL sites, an inactive city-owned wastewater treatment plant, and an authorized landfill in the Bloomington area. These sites are: Neal's Landfill, Lemon Lane Landfill, Bennett Stone Quarry, Winston-Thomas Treatment Plant, and Anderson Road Landfill. Westinghouse is planning to construct an incinerator that will comply with all applicable local, State, and Federal laws to begin burning municipal solid waste. After incineration of all of the materials removed from the sites, Westinghouse and the City of Bloomington will determine whether the incinerator should continue to operate as a municipal solid waste facility or be dismantled. Approximately 175 people live within 1 mile of the site, and 954 people live within 3 miles. Forty-nine wells are located within a mile of the site. Located adjacent to the site are natural springs, a stream, and a river.

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

NPL LISTING HISTORY
Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants



The groundwater, surface water, soils, and air are contaminated with polychlorinated biphenyls (PCBs). Potential health risks exist for individuals who accidentally ingest or come into direct contact with the contaminants or for those who inhale contaminated particulates in the air on the site.

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: In the mid-1980s, under the EPA's monitoring, the parties potentially responsible for the contamination installed a cap and constructed a security fence and a surface drainage control system. The work was completed in 1990.

Entire Site: The Westinghouse Electric Corporation, under monitoring by the EPA, will conduct the following cleanup actions: (1) excavate all contaminated materials plus a 2-foot buffer zone; (2) incinerate excavated materials in an approved facility; and (3) monitor groundwater. The Westinghouse Electric Company has begun designing the technologies to be used in the cleanup and is expected to submit permit applications for constructing the incinerator and for landfilling its waste by-product ash. Construction of a high-temperature incinerator for the excavated materials is expected to begin in 1993. Upon receipt of the appropriate permits and completion of the incinerator construction, the Lemon Lane Landfill, Neal's Dump, Neal's Landfill and Bennett's Dump sites will be excavated in a prescribed order.

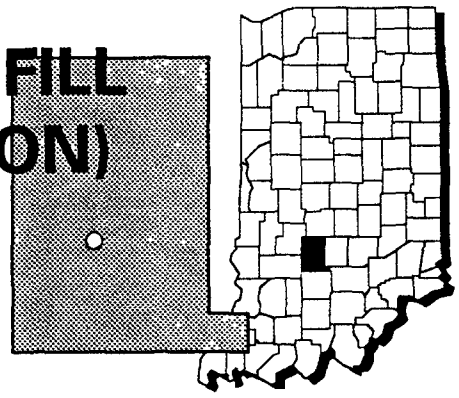
Environmental Progress

By constructing a security fence, capping the site, and installing a drainage control system, the potential for exposure to hazardous materials at the Neal's Dump site is being greatly reduced while final cleanup actions are implemented.

NEAL'S LANDFILL (BLOOMINGTON)

INDIANA

EPA ID# IND980614556



EPA REGION 5
CONGRESSIONAL DIST. 08
Monroe County
Bloomington

Site Description

The Neal's Landfill (Bloomington) site covers approximately 18 acres in Bloomington. The site was used as an industrial and municipal waste landfill from 1950 to 1972. The main fill area measures about 300 yards. Later, the landfill was used as a pasture for beef cattle. A number of springs surface near the site and flow to Richland Creek, a tributary of the White River. In 1966 and 1967, capacitors and arrestors containing polychlorinated biphenyls (PCBs), as well as PCB-contaminated capacitor insulation material, rags, and filter clay, were disposed of at the landfill. Capacitors and other contaminated materials are visible on the surface. PCBs have been found in surface soils in the northeast portion of the landfill, the springs near the site, and the sediments of Richard Creek. The Westinghouse Electric Corporation, the party potentially responsible for the contamination at the site, is treating Neal's Landfill (Bloomington) site, as well as three other NPL sites, an inactive City-owned wastewater treatment plant, and an authorized landfill in the Bloomington area. These areas are Neal's Dump, Lemon Lane Landfill, Bennett's Dump, Winston-Thomas Treatment Plant, and Anderson Road Landfill. Approximately 121 people live within a mile of the site, and about 1,085 people live within 3 miles of the site. Conard's Branch and Richland Creek are nearby.

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

NPL LISTING HISTORY
Proposed Date: 10/22/81
Final Date: 09/08/83

Threats and Contaminants

Groundwater, surface water, sediments, and soils are contaminated with PCBs from materials dumped at the landfill. Potential health risks exist for individuals who accidentally ingest or come into direct contact with these contaminants.

Cleanup Approach

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

Response Action Status

Immediate Actions: Under the EPA's monitoring, the parties potentially responsible for the contamination installed a cap, erosion control fences, a security fence, and drainage control trenches. Warning signs have been posted along Conard's Branch and Richland Creek. A sediment collection system also was installed at Conard's Branch. Westinghouse removed PCB-contaminated sediments from Richland Creek and Conard's Branch in late 1989. A treatment plant has been constructed by Westinghouse to treat spring water discharge from Neal's Landfill.

Entire Site: In 1988, Westinghouse began a cleanup program including excavating all 4,060 tons of sediment from Conard's Branch; storing excavated materials in an approved facility until an approved incinerator and by-product disposal area is developed; operating a carbon treatment system for spring water discharges; and monitoring the groundwater. Excavation and incineration of landfill materials will occur when the incinerator and ash landfill permits are issued. Westinghouse is conducting a dye trace study to investigate groundwater flow patterns from Neal's Landfill and is waiting for a sufficient rainfall to trigger a "high flow" in the water table to make this study as comprehensive as possible. Groundwater monitoring occurs on a quarterly basis for on-site wells.

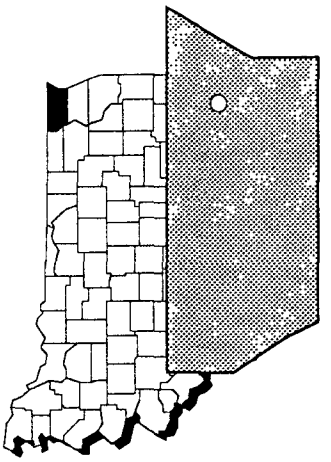
Environmental Progress

Immediate actions including capping and fencing the landfill and long-term activities including excavating sediment, treating the spring water, and groundwater monitoring have reduced the potential for exposure to hazardous materials at the Neal's Landfill (Bloomington) site while final cleanup actions are being completed.

NINTH AVENUE DUMP

INDIANA

EPA ID# IND980794432



EPA REGION 5
CONGRESSIONAL DIST. 01
Lake County
Gary

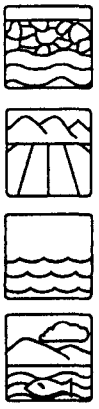
Site Description

The Ninth Avenue Dump site is located on 17 acres in an industrialized area within the city limits of Gary. From 1973 until 1975, the site was used for the disposal of liquid hazardous waste, with some dumping occurring until 1980. Disposal operations included dumping wood debris into marshy areas, pouring liquid waste onto the debris, and covering the area with fill material. During a site inspection conducted in 1975, the Indiana State Board of Health (ISBH) estimated that 500,000 gallons of liquid industrial waste had been dumped at the site. When operations ceased at the dump, several thousand drums and some tankers of waste remained on site. The owner began removing some site debris, but in the fall of 1980, disposal operations at the site were halted when the EPA filed suit against the site owners and operators under the Resource Conservation and Recovery Act (RCRA). In 1981, heavy rains caused severe flooding in the area surrounding the dump, and runoff from the site flowed into the Hessville neighborhood, flooding streets and basements of homes. In order to control surface water drainage from the site, Hammond City officials ordered the construction of a dirt dike. The dike currently remains intact and prevents water from flowing into Hammond from Gary. The Ninth Avenue Dump site lies approximately 700 feet north of the MIDCO I NPL site and is close to several other potential sources of contaminants. Approximately 33,000 people live within a 2-mile radius of the site, with the nearest residential area located approximately 800 feet west of the site. The site is adjacent to several ponds and a wetland area.

Site Responsibility: This 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



Groundwater is contaminated with volatile organic compounds (VOCs) including benzene, toluene, and xylenes; polycyclic aromatic hydrocarbons (PAHs); and heavy metals including nickel and silver. On-site groundwater contains a hydrocarbon layer containing polychlorinated biphenyls (PCBs), pesticides, VOCs, and PAHs. PAHs, toluene, cadmium, and lead were detected in off-site surface soil. On-site sediment samples contained PAHs and PCBs. Accidental ingestion of contaminated groundwater, surface water, soil, or sediments may present health risks. Groundwater monitoring at the nearest active private drinking well did not detect any site-related contaminants. The fence installed around the perimeter of the site has been vandalized, and trespassing occurs frequently, increasing the potential for individuals to come into direct contact with the contaminants. Migratory birds and other wildlife are abundant in the on- and off-site wetlands, and contamination could harm them.

Cleanup Approach

The site is being addressed in three stages: immediate actions and two long-term remedial phases focusing on cleanup of the oil layer and cleanup of the soil and groundwater.

Response Action Status

Immediate Actions: The site owner removed and disposed of 10,000 drums, tank cars, and the first foot of contaminated surface soils from the site from 1984 to 1985. The EPA fenced the site in 1987 to restrict public access.

Oil Layer: In 1988, the EPA selected cleanup actions to contain the oil-contaminated portion of the site and to extract the oil layer floating on the groundwater. The remedy includes: (1) construction of a soil-bentonite slurry wall to completely surround the oil layer; (2) installation of an oil/groundwater extraction and recharge system; (3) installation of an on-site groundwater treatment system to allow for dewatering of the slurry wall; (4) monitoring of groundwater inside and outside the slurry wall to ensure its effectiveness; and (5) installation of an on-site oil storage tank. The oil layer is estimated to be 250,000 to 700,000 gallons, of which 100,000 to 500,000 may be recoverable. The design of the slurry wall was completed by the potentially responsible parties in 1990. Preliminary site work is underway for its construction. The design for the oil recovery/groundwater treatment is underway and is expected to be approved by the EPA in mid-1991. Construction of the system is scheduled for fall 1991.

Soil and Groundwater: This phase addresses the remaining threats to the site, which include contaminated soil, sediment, fill material, groundwater, and oil collected and stored in the on-site storage tanks. In 1989, the EPA selected the following actions for cleanup of the site: (1) excavation of approximately 36,000 cubic yards of oil-contaminated waste and fill down to the native sand level; (2) thermal treatment of excavated fill and extracted oil, most likely in a mobile on-site incinerator; (3) removal of debris and contaminated sediments from on- and off-site surface water bodies; (4) filling the excavated area with treatment process residuals, trench spoils, pond sediments, and debris; (5) covering the area contained by the slurry wall with a cap; (6) extraction, treatment, and reinjection of contaminated groundwater inside the slurry wall to promote soil flushing; (7) discharge of a small quantity of treated groundwater outside the slurry wall to compensate for infiltration; (8) deed and access restrictions to prohibit the use of the groundwater under the site and to protect the cap; and (9) long-term groundwater monitoring. The potentially responsible parties began design of this remedy in 1989. Actual cleanup is scheduled to begin at the end of 1992.

Site Facts: A Consent Decree was signed by the owner and the EPA in December 1983, requiring the owner to remove wastes from the site and to determine the type and extent of site contamination. An order was issued by the EPA to the potentially responsible parties in December 1988, requiring cleanup of the oil-contaminated portions of the site and cleanup of the soil and groundwater. A second order was issued in August 1989, requiring the potentially responsible parties to perform additional design studies and cleanup of the soil and groundwater.

Environmental Progress

By removing the most heavily contaminated materials and fencing in the site to restrict access, the potential for exposure to hazardous materials on the Ninth Avenue Dump site has been greatly reduced, while final cleanup actions are being designed and completed.

NORTHSIDE SANITARY LANDFILL, INC.

INDIANA

EPA ID# IND050530872

EPA REGION 5
CONGRESSIONAL DIST. 06
Boone County
Zionsville

Site Description

The Northside Sanitary Landfill (NSL) covers approximately 70 acres of a 170-acre parcel of land. The site is located in Union Township, about 10 miles northwest of Indianapolis. Over 16 million gallons of hazardous wastes have been deposited in the landfill. The NSL opened in the 1950s as an open dump and was licensed by the State in 1971 to accept hazardous wastes. From 1972 to 1973, numerous operating deficiencies, including the failure to cover refuse, surface burning, underground fires, leachate, and vermin problems resulted in orders from the Indiana State Board of Health (ISBH) to cease operations. In 1982, the owner, at the direction of the ISBH, installed a leachate collection system and three submerged leachate collection tanks on the western side of the site. After the owner removed 400,000 gallons of leachate from the three tanks and disposed of it by spraying it on the landfill, the Indiana Division of Land Pollution Control advised the owner that leachate would have to be solidified prior to disposal. By early 1983, the State Environmental Management Board issued a notice of violation and ordered the owner to stop accepting hazardous waste. A small residential community, Northfield, is located to the north of the site. Approximately 50 residences are located within a mile of the site, and 1,750 residences within 3 miles of the site use wells for drinking water. An unnamed ditch runs along the western edge of the landfill and joins Finley Creek. Finley Creek flows into Eagle Creek about 1/2 mile downstream from the site. Eagle Creek flows south for 10 miles before it empties into Eagle Creek Reservoir, which supplies approximately 6% of the drinking water for the City of Indianapolis.

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

Groundwater, soils, surface water, and sediments are contaminated with pesticides, acids, oils, and volatile organic compounds (VOCs) including benzene and trichloroethylene (TCE). Potential health risks exist from accidental ingestion of contaminated soils and sediments. Drinking contaminated groundwater also may pose health risks, as may the consumption of fish from Finley Creek that have bioaccumulated contaminants in their tissues. Contamination in the creek may harm wildlife in or around the water.

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: In 1987, the EPA selected the following remedies to address the contamination at the site: (1) deed and access restrictions to prevent further development of the site; (2) installation of a multi-layer cap over the site; (3) re-routing of surface waters to reduce the potential for contamination migration; (4) leachate collection and treatment; (5) groundwater collection and treatment; and (6) monitoring to ensure treatment effectiveness. The EPA has completed most of the field work necessary to design the site cleanup activities. Once the design activities are completed, final cleanup will begin.

Site Facts: The EPA has reached an agreement with the potentially responsible parties to assume responsibility for the cleanup action. The Northside Sanitary Landfill Site is located near the Envirochem Corporation, another site on the NPL.

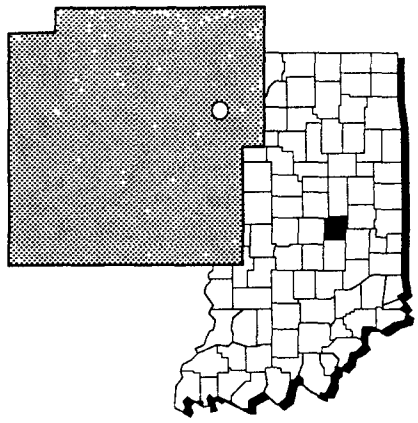
Environmental Progress

After adding the Northside Sanitary Landfill to the NPL, the EPA performed preliminary investigations and determined that the site does not pose an imminent threat to the surrounding communities or the environment while final cleanup remedies are being planned.

POER FARM

INDIANA

EPA ID# IND980684583



EPA REGION 5

CONGRESSIONAL DIST. 06

Hancock County

3 miles north of Wilkinson, 5 miles southeast of Knightstown

Other Names:
Norman Poer Farm

Site Description

Poer Farm is a 5-acre site located on a small hill between two streams and along East County Road about 3 miles north of Wilkinson. The site is an abandoned tract of land with a house and barn that have collapsed and have been vandalized. The surrounding area is open farmland that supports crops of soybeans and corn. The site consists of three separate areas where Norman Poer and Michael Coleman received and stored about 275 drums of solvents and paint resins from 1973 until 1983. The owners planned to blend these materials into low-quality paint for bridges and barns. They abandoned the project and left the 55-gallon drums on the site. The EPA inspected the site and found that the drums were leaking, and vegetation surrounding the area was damaged. The EPA analyzed the drums and soils underneath them and found volatile organic compounds (VOCs) and heavy metals. Agricultural lands completely surround the Poer Farm site, and the nearest residence is approximately 650 feet to the north. Approximately 500 people live 3 miles north of the site in Wilkinson, and approximately 2,300 people live 5 miles away in Knightstown.

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

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 10/21/84

Deleted Date: 02/11/91

Threats and Contaminants

Soils on site contained VOCs including toluene, xylene, and ethyl benzene and heavy metals such as cadmium, arsenic, and lead. The EPA sampled the entire site and found no significant levels of contamination that could pose a threat to the environment. Therefore, people near the site are not at risk from exposure to hazardous chemicals.

Cleanup Approach

The site was addressed in two stages: emergency actions and a long-term remedial phase directed at cleanup of the entire site.

Response Action Status

Emergency Actions: In 1983, the EPA removed all wastes and 6 to 8 inches of soils from the drum storage areas on site. All solid and liquid wastes from the drums were properly disposed of at EPA-regulated landfills. The well on site was sampled, and results showed that the levels of arsenic, cadmium, and lead were at or below the State and Federal standards for drinking water. The site was fenced, and signs to warn the public of contaminants were posted.

Entire Site: The EPA completed a study of the nature and extent of contamination at the site in 1985. The party potentially responsible for contamination at the site completed a second study in 1988, under the EPA's monitoring. The purpose of the second study was to determine if the immediate cleanup actions at the site were effective and to ensure that no significant contamination remained at the site that could threaten the health of people around it. Based on the results of the second study, the EPA determined that no further action is needed at the Poer Farm site and deleted the site from the NPL on February 11, 1991.

Site Facts: In 1985, a potentially responsible party signed a Consent Order with the EPA and the Indiana Department of Environmental Management, under which the party agreed to reimburse the EPA for past response action costs and to carry out the study of the nature and extent of contamination at the site.

Environmental Progress

The removal and disposal of hazardous waste and contaminated soils from the Poer Farm site have eliminated the threat to human health and the surrounding environment. The EPA, in conjunction with the State of Indiana, has deleted the Poer Farm site from the NPL.

PRESTOLITE BATTERY DIVISION

INDIANA

EPA ID# IND006377048

EPA REGION 5

CONGRESSIONAL DIST. 08

Knox County

Northeast of Vincennes

Other Names:

Eltra Corporation - Prestolite Battery Division

Site Description

The 17 1/2-acre Prestolite Battery Division site is an inactive facility that manufactured lead-acid batteries. The Autolite Battery Corporation set up the plant in 1945. Several companies owned and operated the facility until Allied Chemical Company, the latest owner of the site, ceased operations and closed the plant in 1985. Allied received a permit allowing it to temporarily operate the site, but decided to close before obtaining a long-term operating permit for the plant. Wastewaters from the plant's operations were contaminated with lead and sulfuric acid. Prior to 1978, the plant discharged its wastewaters directly to the Vincennes Sanitary Sewer System. From 1978 until the plant closed in 1985, the plant treated its wastewaters and then released them to a lagoon on site. The Vincennes Treatment Works accepted the overflow from the lagoon. The plant also released air contaminated with lead. Soil on site and in the area has been contaminated with lead, mainly from airborne particles. Malfunctions of equipment on site and accidental spills also have contributed to the contamination of soils. During the plant's operations, industrial sewer lines at the site became plugged with lead, and as a result of leaks and sewer line backups, the soil around some of these sewers and sumps became contaminated with lead. Soil on the site also was contaminated with polychlorinated biphenyls (PCBs). The manufacturing building on site remains intact, although all process equipment has been removed from inside the building. A fence encloses the site. The site is located within the flood plain of the Wabash River, which is 5,000 feet west of the site. Surface water from the site drains to Kelso Creek and Snapp Creek; both creeks are 3/4 mile from the site. The closest residence is 50 feet from the site, and there are approximately 500 people within a mile of the site. The city of Vincennes maintains seven wells for its supply, located 3 miles from the site. Private wells also are located in the area around the site.

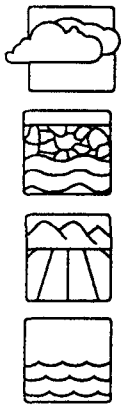
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 09/18/85

Final Date: 10/04/89

Threats and Contaminants



Air, groundwater, soils, and surface water are contaminated with lead. Soils also are contaminated with PCBs. People who come in direct contact with or accidentally ingest contaminated groundwater, soil, or surface water may suffer adverse health effects. People also may be exposed to contaminants by inhaling dust particles.

Cleanup Approach

This 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: In 1989, the party potentially responsible for site contamination removed more than 6,800 cubic yards of lead-contaminated sediment from the site. Soils from known areas of PCB contamination also have been excavated and removed from the site. A concrete-lined wastewater storage lagoon has been emptied and cleaned. The lagoon area is surrounded by a fence to limit access. Sewer lines that run under the manufacturing building have been capped. Disturbed soils and fill material remain where wastewater sewer lines and contaminated soils were excavated.

Entire Site: In 1988, the EPA started an investigation to define the nature and extent of pollutants at the site. This study is examining the effectiveness of the immediate cleanup actions and is defining the threat that remaining contamination at the site poses to the health of people living and working in the area. The study also is evaluating the various options for addressing the final cleanup of the site. Field work is expected to begin in mid-1991. The EPA is scheduled to complete this study in 1993.

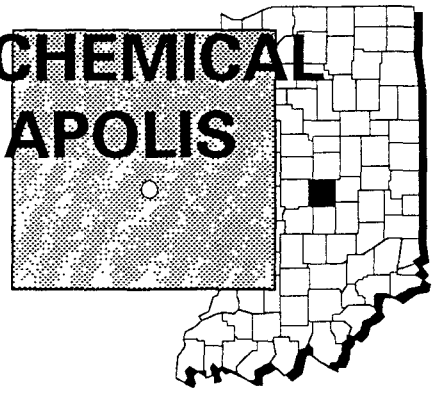
Environmental Progress

The removal of contaminated sediments and soils and the installation of a fence around the lagoon have greatly reduced the potential of exposure to hazardous materials at the Prestolite Battery Division site while studies are taking place and cleanup activities are being planned.

REILLY TAR & CHEMICAL CORP. (INDIANAPOLIS PLANT)

INDIANA

EPA ID# IND000807107



EPA REGION 5
CONGRESSIONAL DIST. 10
Marion County
Indianapolis

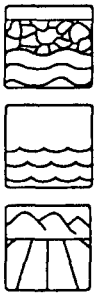
Site Description

The 120-acre Reilly Tar & Chemical Corporation site has been used for the production of specialty chemicals and related products since the early 1950s. Until 1972, a coal-tar refining and wood-treatment facility using creosote operated on the site. Located on site are a trench, a landfill, and several pits used to dispose of wastes. A lime pond received boiler cooling water. The site is fenced. There are approximately 5,200 residents within 3 miles of the site using groundwater for drinking water supplies. A residence is located less than 2,000 feet from the site. All residents now have city water available to them, although private wells still are in use.

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



Groundwater and surface water are contaminated with creosotes and ammonia. Soil is contaminated with volatile organic compounds (VOCs) including toluene. The potential health risks include coming in direct contact with or accidentally ingesting contaminated groundwater, surface water, or soil.

Cleanup Approach

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

Response Action Status

Entire Site: A potentially responsible party, Reilly Industries, Inc., currently is conducting an investigation, under EPA monitoring, into the nature and extent of contamination at the site. The investigation is defining the contaminants and will recommend alternatives for the final cleanup. The investigation is scheduled to be completed in late 1991.

Site Facts: Reilly Industries, Inc. has entered into a Consent Order with the EPA. The company agreed to conduct the study into the nature and extent of contamination at the site and to recommend alternatives for final cleanup.

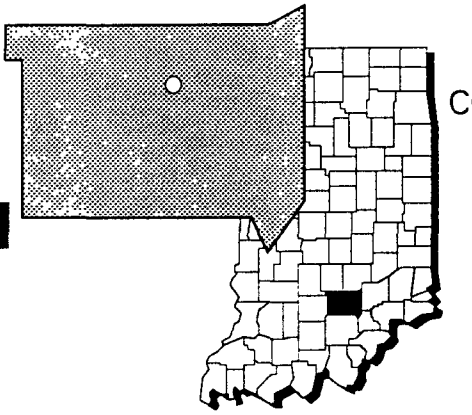
Environmental Progress

After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Reilly Tar and Chemical Corporation site while studies are taking place and cleanup activities are being planned.

SEYMOUR RECYCLING CORPORATION

INDIANA

EPA ID# IND040313017



EPA REGION 5
CONGRESSIONAL DIST. 09
Jackson County
2 miles southwest of Seymour

Site Description

The 14-acre Seymour Recycling Corporation site is made up of two parts: a 12-acre area surrounded by a berm and fence to confine rainwater and prevent access to the site, and a 2-acre area located directly to the northeast of the larger area. From 1970 to 1980, the site was operated as a processing center for waste chemicals. Wastes were accumulated on site in drums, bulk storage tanks, and tank trucks. By 1980, there were approximately 98 storage tanks and 50,000 drums on site. The majority of the drums were rusted and punctured, some were missing lids, and a large number leaked. The leaks caused contaminants to cover a widespread area, toxic vapors to be released from the site, and on-site fires. The facility closed in 1980. Surface drums and tanks and their contents were removed in 1981 and 1982. Contaminated soils continue to pollute the aquifers. The shallow aquifer is highly contaminated with various hazardous chemicals including volatile organic compounds (VOCs). Approximately 100 homes are located within 1 mile of the site. Most private water supply wells for these residences have been disconnected and replaced with water from the City of Seymour water supply system. Contaminated runoff from the site entered nearby drainage ditches that flow into the White River and then to the Ohio River. Releases of contaminants from the site resulted in fish kills.

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

NPL LISTING HISTORY
Proposed Date: 10/22/81
Final Date: 09/08/83

Threats and Contaminants

Groundwater contains VOCs, chloroform, phenols, and heavy metals including arsenic, barium, iron, and manganese. Soils are contaminated with high levels of beryllium, VOCs, and heavy metals. People could be exposed to contaminants by accidentally coming in direct contact with or ingesting contaminated groundwater or soil. People who eat contaminated fish may suffer adverse health effects.

Cleanup Approach

This site is being addressed in three stages: immediate actions and two long-term remedial phases focusing on groundwater cleanup and soil cleanup.

Response Action Status

Immediate Actions: As a result of a fire in 1980, chemical runoff from the site posed a risk to nearby residents. Approximately 300 people were temporarily relocated and the parties potentially responsible for site contamination removed several thousand drums from the site. In 1981, the EPA removed chemicals from tanks at the site and disposed of those wastes off site. A dike was installed around the site to prevent rainfall from mixing with wastes on the ground. The site fence was upgraded. The surface water treatment plant located on site was upgraded in 1982. From 1982 to 1984, potentially responsible parties removed approximately 50,000 drums, 100 storage tanks, and contaminated soil from 75% of the site's surface and partially covered the site with a temporary soil cap. Homes surrounding the site were connected to the city water distribution system in 1984 and 1985 due to the threat of groundwater contamination. A total of 177,500 gallons of flammable liquids were incinerated. Approximately 31,800 cubic yards of crushed drums, scrap metal, sludge, and contaminated soil and debris, 359 lab packs of sludge, and 296 drums of flammable solids were landfilled. Approximately 104,200 gallons of inert liquids were injected into a deep well. Warning signs have been posted, and a 24-hour guard will remain at the site throughout construction activities.

Groundwater: The selected cleanup remedy to address the groundwater plume includes implementation of a plume stabilization system that will extract, treat, and discharge contaminated groundwater to the Seymour Wastewater Treatment Plant. The potentially responsible parties have begun implementing the stabilization system, which is scheduled to be completed in mid-1991.

Soil: The selected cleanup remedies to address soil contamination include: (1) putting in place deed and access restrictions and other controls to prevent future development of the site and adjacent property; (2) breaking down hazardous components of the soil through bioremediation; (3) installing a soil vapor extraction system; (4) extracting and treating contaminated groundwater at and beyond the site boundaries; (5) installing a cap; (6) excavating contaminated sediment and consolidating sediment beneath the cap; and (7) regular monitoring to determine the effectiveness of these cleanup activities. The potentially responsible parties completed the soil cap. The vapor extraction system has been constructed and is planned to be operated for 2 to 5 years. The soil bioremediation has been completed. The groundwater extraction and pump and treat system is scheduled to be completed by mid-1991, and may have to be operated for up to 30 years.

Site Facts: In 1988, the EPA, the State, and potentially responsible parties entered into a Consent Decree. The Decree requires the parties to reimburse the Federal government for past cleanup costs and to perform and pay for future cleanup activities.

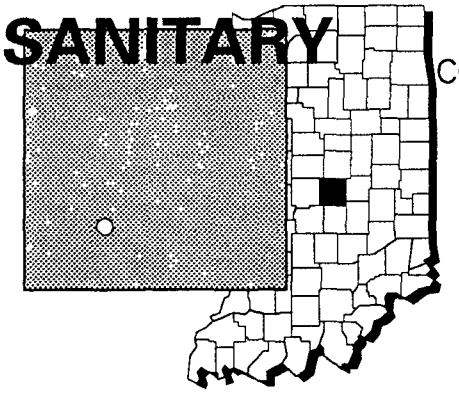
Environmental Progress

The removal of drums, soils, and storage tanks has greatly reduced the potential for exposure to contaminated materials at the Seymour Recycling Corporation site. Ongoing cleanup actions continue to reduce contamination levels in the soil while final groundwater cleanup activities are taking place.

SOUTHSIDE SANITARY LANDFILL

INDIANA

EPA ID# IND980607360



EPA REGION 5

CONGRESSIONAL DIST. 06

Marion County

Southwest of Indianapolis

Other Names:
Southside Sanitary Disposal & Transfer Co., Inc.

Site Description

The 160-acre Southside Sanitary Landfill is an active solid waste disposal facility that began landfilling activities in 1971. In 1974, the 34 acres on the northern side of the site were licensed by the County and the State for disposal of solid wastes. After the first excavated area was filled by dumping refuse and covered with a layer of dirt, a second area was excavated 150 feet to the south. After these areas were filled, the land between the two was excavated. In 1975, the site was expanded to 160 acres. An estimated 4 million cubic yards of waste including coal tar, asbestos, iron oxide and clarifier sludges, and paint waste have been buried at the landfill. Access to the site is restricted. Approximately 7,200 people within 3 miles of the site use groundwater for drinking water supplies. The distance from the site to the nearest residence is 1/2 mile. Approximately 2,000 private wells are located within 3 miles of the site. Nearby Eagle Creek, White River, and Fall River are used for recreational activities.

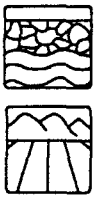
Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 03/31/89

Threats and Contaminants



Groundwater is contaminated with heavy metals including arsenic, chromium, cadmium, and nickel. On-site soils are contaminated with polycyclic aromatic hydrocarbons (PAHs). Potential health threats to people include coming in direct contact with or accidentally ingesting contaminated groundwater or soil.

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: In 1988, the operators of the Southside Landfill constructed a leachate collection system and an underground slurry wall to control the migration of contaminated groundwater.

Entire Site: The owners/operators of the Southside Landfill, under State monitoring, currently are conducting an investigation into the nature and extent of contamination at the site. The investigation is defining the contaminants and will result in recommended alternatives for the final cleanup. The investigation is scheduled to be completed in 1993.

Site Facts: In 1986, the State and Southside Landfill entered into an agreement, requiring that the company construct a leachate collection system and an underground slurry wall to control the migration of groundwater.

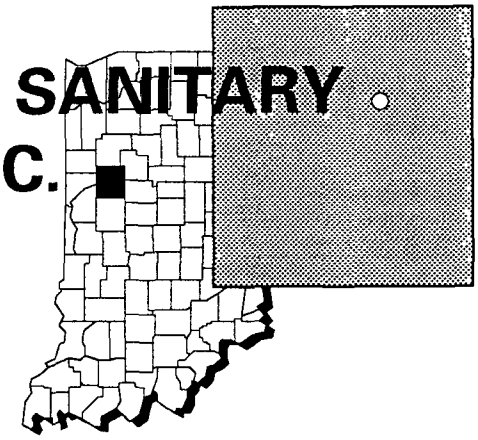
Environmental Progress

The construction of a leachate collection system and underground slurry wall has prevented the migration of contaminated groundwater at the Southside Sanitary Landfill site while studies are taking place and cleanup activities are being planned.

TIPPECANOE SANITARY LANDFILL, INC.

INDIANA

EPA ID# IND980997639



EPA REGION 5
CONGRESSIONAL DIST. 07
Tippecanoe County
Lafayette

Site Description

In 1971, the 70-acre Tippecanoe Sanitary Landfill received a permit from the State to accept municipal wastes. A variety of wastes generated by area residents, businesses, and industries were disposed of at the site. In 1978, the State did not renew the site's operating permit. A series of appeals followed, during which the landfill continued to operate. In 1979, ALCOA advised the State that the aluminum-lime sludge that had been disposed of at the site since 1973 contained significant levels of polychlorinated biphenyls (PCBs). Disposal of the sludge ceased, but considerable quantities already had been deposited at the site. In 1983, the Indiana State Board of Health found that a nearby well was contaminated. The facility discontinued accepting wastes in 1989. Approximately 81,000 people obtain drinking water from public and private wells within 3 miles of the site.

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

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 08/30/90

Threats and Contaminants

The groundwater is contaminated with volatile organic compounds (VOCs). Sludge buried at the site contains PCBs. The contaminated groundwater is a potential health threat to individuals if it is accidentally directly contacted or swallowed.

Cleanup Approach

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

Response Action Status

Entire Site: Some of the parties potentially responsible for site contamination agreed to conduct an investigation to determine the nature and extent of contamination and to identify alternative actions for the cleanup of the site. The work plan for the investigation is under review; field work will begin in 1991 and is expected to be completed in 1994.

Site Facts: A Consent Decree signed in 1988 ordered the owner to close the landfill by October 1989 and install a cover over the wastes. The owner filed for bankruptcy in 1989, and the cover was not fully installed. In March 1990, the EPA, the Indiana Department of Environmental Management, and 10 of the potentially responsible parties signed a Consent Order, requiring the parties to conduct site investigations.

Environmental Progress

After proposing this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Tippecanoe Sanitary Landfill site while studies are conducted and cleanup activities are being planned.

TRI-STATE PLATING

INDIANA

EPA ID# IND006038764

EPA REGION 5
CONGRESSIONAL DIST. 09
Bartholomew County
Columbus

Site Description

For approximately 35 years prior to 1981, the Tri-State Plating site was used by Hull Industries and Quality Plating Service Company. The site covers an area of approximately 16,000 square feet. In 1981, Tri-State Plating purchased the facility and began an electroplating operation. Contamination problems first were detected at the site when the Bartholomew County Health Department and the Indiana State Board of Health (ISBH) inspected the site and found that soils contained high concentrations of cyanide and heavy metals. In 1984, after finding that Tri-State Plating was discharging contaminated wastewater, the City of Columbus instructed the company to install a treatment system to control contaminated wastewater discharges to the city's sewers. Later in 1984, when a treatment system was not installed, the city blocked off sewers leading from the Tri-State Plating facility and shut off the company's water supply. Tri-State Plating discontinued operations in 1984. The nearest residence is adjacent to the site boundary. The City of Columbus has approximately 30,000 people, some of whom are served by a well field located near the site.

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

NPL LISTING HISTORY
Proposed Date: 09/18/85
Final Date: 06/10/86

Threats and Contaminants

The groundwater is contaminated with chromium. The soil was contaminated with heavy metals including cadmium, chromium, copper, lead, nickel, and arsenic. The contaminated groundwater could be hazardous to the health of individuals if it is accidentally directly contacted or swallowed. Haw Creek and the White River, which are located nearby, have a potential of being contaminated by the hazardous materials present at the site.

Cleanup Approach

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

Response Action Status

Initial Actions: In 1987, the EPA constructed a fence around the entire site and removed 27 barrels of waste to an off-site treatment facility. The EPA also took steps to decontaminate the electroplating process building and storage shed. In addition, a trench at the main electroplating process building and contaminated surface soil were excavated and disposed at an off-site landfill. After the soil was removed, the EPA covered excavated areas with clean soil. These actions have eliminated the sources of soil contamination. In 1989, the EPA took the following actions to remove the contaminants from the site: (1) decontaminated the walls and ceilings of the main process building and demolished the building; (2) transported the building debris to an off-site landfill; (3) excavated contaminated soil and the contaminated building foundation and disposed of excavated material at an off-site waste landfill; and (4) filled the excavated areas with clean soil, graded the surface of the ground, and reseeded the graded area. Upon completion of these events, the fence was removed.

Entire Site: The EPA completed an investigation in 1990 that determined the nature and extent of the site contamination and recommended that the contaminated groundwater be pumped and treated and then discharged to the publicly owned water treatment works. The pump and treat system design was approved in early 1991. Construction of the treatment system was started in 1991. During the course of the investigation and while demolishing the main building, the EPA found asbestos-bearing materials. These materials were removed and transferred to a licensed disposal facility.

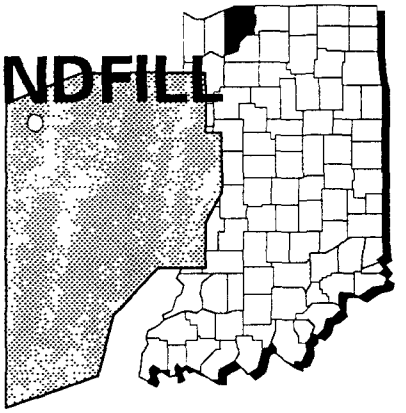
Environmental Progress

Pumping and treating groundwater, excavating contaminated soils and debris, and demolishing the contaminated building have greatly reduced the potential of exposure to contaminated materials at the Tri-State Plating site while final cleanup activities are being conducted.

WASTE, INC. LANDFILL

INDIANA

EPA ID# IND980504005



EPA REGION 5

CONGRESSIONAL DIST. 03

Laporte County
Michigan City

Site Description

The Waste, Inc. Landfill in Michigan City is composed of 32 acres situated on a former wetland area. From 1966 to 1982, the landfill accepted approximately 128,000 tons of industrial wastes. The landfill was unlined, and there were no dikes to control runoff. Originally, the site sloped down to a creek, but now the landfill rises 50 feet above the surrounding terrain. In 1983, the site was sampled by the EPA, and heavy metals, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and other organic compounds were found in the sediment of Trail Creek, which borders the landfill. Approximately 11,300 people live within a mile of the site, and about 2,100 people depend on private wells within 3 miles of the site for their drinking water. The site drains into Trail Creek, which is used for recreational purposes and discharges to Lake Michigan. The Michigan City Water Works, serving approximately 32,000 people, draws water from intakes in Lake Michigan less than 3 miles downstream from the site.

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

NPL LISTING HISTORY

Proposed Date: 04/10/85

Final Date: 07/21/87

Threats and Contaminants

Groundwater and soils may be contaminated with volatile organic compounds (VOCs), PCBs, PAHs, various phthalates, and heavy metals. Sediments in Trail Creek contain heavy metals including arsenic, lead, and manganese; PAHs; PCBs; and other organic compounds. People may be exposed to contaminants by accidentally ingesting or coming in direct contact with contaminated soil, leachate, groundwater, surface water, or sediment. Eating fish, waterfowl, or locally grown vegetables containing accumulated contaminants may pose a health hazard.

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 parties potentially responsible for the contamination at the site are conducting an investigation, under EPA monitoring, to determine the type and extent of contamination. Sampling of the Trail Creek sediments and surface water and testing of the site soils have been completed. Groundwater and leachate sampling information currently is under review.

Site Facts: Under a Consent Order with the EPA, signed on March 31, 1987, nine potentially responsible parties agreed to undertake the investigation of the site contamination.

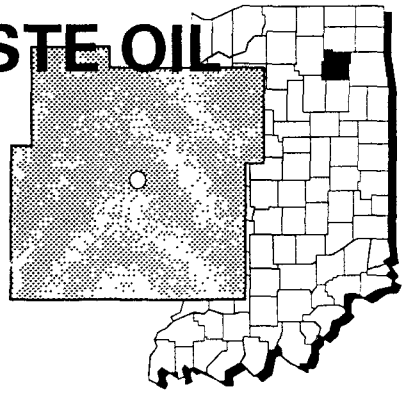
Environmental Progress

After listing the Waste, Inc. Landfill on the NPL, the EPA performed preliminary evaluations and determined that the site does not pose an immediate threat to the surrounding communities or the environment while the investigations leading to the selection of a final cleanup remedy are taking place.

WAYNE WASTE OIL

INDIANA

EPA ID# IND048989479



EPA REGION 5

CONGRESSIONAL DIST. 04

Whitley County
Columbia City

Other Names:
Wayne Reclamation and Recycling (WRR)

Site Description

The Wayne Waste Oil site is located on 35 acres in Columbia City. Wayne Waste Oil, a division of Wayne Reclamation and Recycling, Inc., deposited about a million gallons of oil waste on this site from 1975 to 1980. During its period of operation, oil wastes were disposed of on site by dumping them on surface soils, into unlined pits, and into a trench. The Indiana State Board of Health investigated the facility in 1980 and found hazardous wastes that were illegally deposited. As a result, the owner was ordered by the State of Indiana to clean up the site. The site contained opened, leaking drums, waste areas covered with sands, and disposal ponds. The area surrounding the site is used for residential, commercial, and agricultural purposes. The population of Columbia City was estimated to be 5,100 in 1988. All residences are connected to the municipal water supply.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants

Groundwater contains volatile organic compounds (VOCs) including benzene, trichloroethylene (TCE), and toluene and heavy metals including arsenic, barium, lead, and cyanide. Soil contains polycyclic aromatic hydrocarbons (PAHs), VOCs, heavy metals, phenols, and phthalates. On-site ponds and the adjacent Blue River contain cyanide, copper, and TCE. Currently, the city wells, which are located at the northern boundary of the site, are not contaminated. If migration of site-related contaminants through groundwater occurs, area residents could be exposed to these pollutants when consuming or using drinking water. On-site trespassers and workers could be exposed to site-related contaminants when coming into direct contact with the contaminated soils. The Blue River borders the site on two sides, and since no significant barrier between the site and the river exists, site-related contaminants in groundwater, surface water, and soils could migrate into the river.

Cleanup Approach

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

Response Action Status

Immediate Actions: In 1986, the potentially responsible parties, under EPA monitoring, excavated 7,500 tons of contaminated soil in the oil decanting pit, the tar pit, and the sludge ravine and disposed of it in a federally approved facility. Over 200 drums and soil from the buried barrel area were removed and disposed of off site. This area was then backfilled. In 1988, the parties excavated approximately 5,400 tons of contaminated soil from the discolored area, the acid pit, the ink sludge area, and the sludge ravine and disposed of the soil in a federally approved facility. An additional 125 drums were removed, as well as the contents of 23 horizontal tanks. A fence was constructed around the oil decanting pit, the sludge ravine, and the discolored area. The acid pit and the ink sludge areas were backfilled with off-site fill material. Four drums were left on site after these operations ceased in 1988 because of the difficulties involved with moving them. The remaining drums were removed from the site in 1989.

Entire Site: The EPA began an investigation into the nature and extent of site contamination in 1985 and completed it in 1989. The parties potentially responsible for site contamination have completed this investigation under EPA supervision. The remedy selected by the EPA in March 1990 involves cleaning up the site by: (1) constructing, operating, and maintaining a soil vapor extraction system in the VOC-contaminated soil areas; (2) delineating and cleaning the lead-contaminated soils by soil washing or immobilization/stabilization technologies; (3) constructing, operating, and maintaining a groundwater extraction, treatment (air stripping), and discharge system; (4) delineating the extent of the municipal landfill; (5) constructing and maintaining a cap over the municipal landfill; (6) covering PAH-contaminated soil or consolidating the soil under the municipal landfill cap; (7) removing and treating the contents of all above ground and underground tanks, and delineating the extent of contamination due to spills or leaks associated with the tanks; (8) removing and disposing of site debris; (9) installing an upgraded security fence around the site; (10) monitoring the groundwater and the air; and (11) implementing deed restrictions to ensure protection of the municipal landfill cap. The potentially responsible parties, under EPA monitoring, will begin designing the technical specifications in late 1991. Once the design phase is completed, the cleanup activities will begin.

Site Facts: In 1986, the EPA and the potentially responsible parties entered into an Administrative Order on Consent, under which the parties removed contaminated soil, drums, and tanks from the site. The EPA issued a Unilateral Administrative Order to five parties potentially responsible for the site contamination in 1988. The purpose of the Unilateral Order was to force these parties to remove drums, soils, debris, and tank contents.

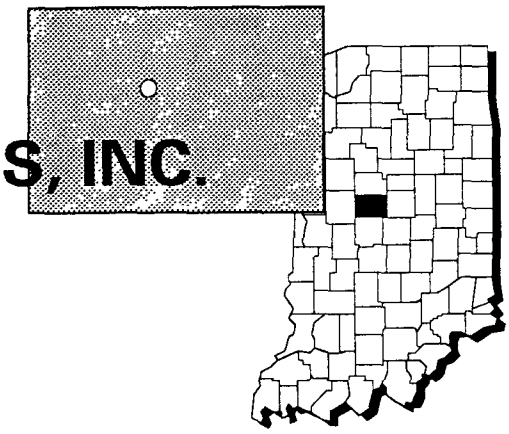
Environmental Progress

The removal of the contaminated soils and drums from the site and the construction of security fences around the areas of greatest contamination have reduced the potential for direct exposure to hazardous materials at the Wayne Waste Oil site while the specifications for the selected cleanup remedy are completed and the actual cleanup activities are started.

WEDZEB ENTERPRISES, INC.

INDIANA

EPA ID# IND980794374



EPA REGION 5
CONGRESSIONAL DIST. 06
Boone County
Lebanon

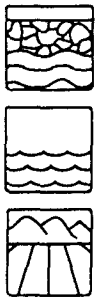
Site Description

The Wedzeb Enterprises site is situated on 3/4 acre and is located in Lebanon, about 30 miles northwest of Indianapolis. The site was owned by a succession of businesses prior to the late 1970s, when Wedzeb purchased it. Operating practices at Wedzeb consisted of buying used electrical equipment for resale and storing it on site in two warehouses. Various types of electrical equipment including electrical capacitors and transformers containing polychlorinated biphenyls (PCBs) were stored on site. A fire that completely destroyed one of the warehouses on the eastern side occurred at the Wedzeb site in 1981. According to Wedzeb's inventory records, this warehouse had contained 77 tons of electrical capacitors, some of which exploded during the fire. The water used to put out the fire mixed with contaminants from the capacitors and subsequently dripped onto the ground and flowed into a sanitary sewer line. PCBs may have been released into the environment as a result of the fire, and contaminants may have been washed to nearby ground surfaces as the fire was extinguished. Because of the potential health threat to nearby residents caused by harmful chemicals, the Indiana State Board of Health and the EPA collected samples in 1981 of on-site soil and debris, as well as soot, wastewater, and sanitary sewer sediment from areas located near the site. The results of these sampling activities showed concentrations of PCBs in sediment from the sanitary sewage treatment plant, as well as traces of dioxins and furans in the sediment and other soil samples from locations on and near the site. The EPA and the Indiana Environmental Management Board requested a cleanup plan from Wedzeb in 1982, but the company failed to submit one. Approximately 11,455 people live within a 3-mile radius of the site, and about 300 homes are located within 500 feet of the site. There are approximately 300 private wells and two municipal wells within the vicinity of the site.

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

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

Threats and Contaminants



Groundwater contained low levels of dioxins and furans. On-site sediments and sediments located in the sanitary sewer pipeline system near the site were contaminated with PCBs, dioxins, and furans. Soils contained low levels of PCBs, dioxins, furans, and other organic compounds. Low levels of PCBs were found in the interior warehouse surface samples. The site is now clean, and there is no threat to human health or the environment.

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: Wedzeb installed a fence and a windbreak around the site in 1985 to minimize migration of dust off site. The EPA removed 50 boxes containing contaminated on-site surface soils and debris from the area surrounding the warehouse on the eastern part of the site in 1987. The contaminated soils and debris were shipped to an EPA-approved disposal facility. The contaminated soil subsequently was replaced with clean fill. More than 250 drums of 3-pound capacitors were shipped off site for incineration.

Entire Site: The work plan for long-term cleanup of the sewers and soils was completed and approved by the EPA, and cleanup work began on the site in 1990. The EPA selected the following methods to address site contamination: (1) cleaning the sewer lines with hydraulic jets and vacuum pumping to remove contaminants; (2) inspection of the sewer pipe; (3) disposal or incineration of contaminated sediments; (4) filtering sewer sediments and discharging clean water to the publicly owned treatment works; and (5) removal and disposal of the wastes generated by the investigation into the nature and extent of contamination at the site. Cleanup activities were completed in late 1990, and the EPA is moving toward final deletion of the site from the NPL.

Site Facts: The EPA and the State of Indiana made repeated attempts to compel Wedzeb, the party potentially responsible for site contamination, to clean up the site between 1981 and 1985. Further enforcement efforts resulted in Wedzeb submitting a cleanup plan for the site in 1985; however, Wedzeb never initiated cleanup activities due to financial difficulties.

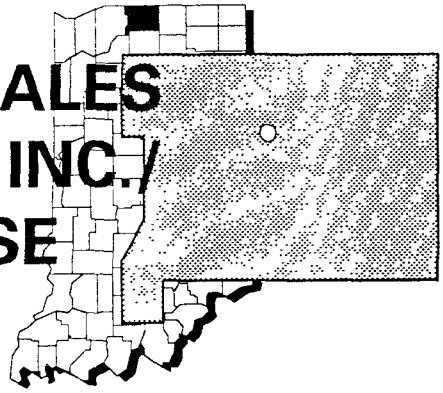
Environmental Progress

All cleanup activities have been completed at the Wedzeb Enterprises site. The EPA is taking steps to delete the site from the NPL.

WHITEFORD SALES AND SERVICE INC./ NATIONALEASE

INDIANA

EPA ID# IND980999791



EPA REGION 5

CONGRESSIONAL DIST. 03

St. Joseph County
South Bend

Other Names:
National Lease

Site Description

The Whiteford Sales and Service Inc./NationaLease site covers approximately 8 acres on Sample Street in South Bend. The site operated as Whiteford Sales and Services from 1960 to 1980 and as National Lease from 1980 to 1983. Both companies leased trucks and semitrailers. In 1980, St. Joseph County purchased the property from Whiteford Trucking; Whiteford then leased the property and structures from the County until 1983. Upon acquiring the property, the County began the demolition of all structures and construction of an overpass. During the excavation process, three dry wells were uncovered. It was later learned that unknown quantities of degreasing solvents and sludges, resulting from the cleaning of trucks and trailers, had been deposited into these three unlined dry wells, each approximately 6 feet in diameter and 6 feet deep. Tests conducted by the St. Joseph County Health Department found on-site soils to be contaminated with organic and inorganic compounds. The Whiteford site lies in an industrial area; however, residences are located approximately 1,000 feet due north of the site. There are approximately 10,000 people living within a 1-mile radius of the site. Approximately 237,000 people draw drinking water from public wells within 3 miles of the site. In 1980, the Olive Street Well Field, part of the municipal water system located west of the Whiteford Site, was shut down because of the presence of organic chemicals in the well water.

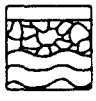
Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Threats and Contaminants



Groundwater off site was found to contain carbon tetrachloride, a substance used in dry cleaning operations, other volatile organic compounds (VOCs) including trichloroethylene (TCE), and vinyl chloride. Soils and sludges on site were found to be contaminated with heavy metals including arsenic, barium, cadmium, and chromium, and with VOCs. There is a potential for the migration of contaminated groundwater to the nearby municipal well field. If people should come in direct contact with or accidentally ingest the contaminated groundwater, they may be at risk. In addition, people who come into direct contact with or accidentally ingest contaminated soil may suffer adverse health effects.

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: An initial cleanup of the Whiteford property was implemented, and the three dry wells, in addition to a limited amount of contaminated soils, were removed and taken to a State-permitted sanitary landfill.

Entire Site: Under the direction of the EPA, an investigation into the type and extent of contamination is currently underway. The field work has been completed and a report detailing the alternatives for cleaning up the site is currently being prepared. The final selection of the cleanup strategy for the site is expected in 1993.

Environmental Progress

The removal of the contaminated dry wells and some of the contaminated soils from the Whiteford Sales and Service Inc./NationaLease site has reduced the potential for exposure to hazardous materials while the investigations leading to the selection of the final cleanup remedies are taking place.

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 Indiana

Information Repositories for NPL Sites in the State of Indiana

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
AMERICAN CHEMICAL SERVICE, INC.	Griffith Public Library, 940 North Broad Street, Griffith, IN 46319
BENNETT STONE QUARRY	Not Established
CARTER LEE LUMBER COMPANY	Not Established
COLUMBUS OLD MUNICIPAL LDFL #1	Bartholomew County Public Library, 536 Fifth Street, Columbus, IN 47201
CONRAIL RAIL YARD (ELKHART)	Elkhart Public Library, 300 South 2nd Street, Elkhart, IN 46516
CONTINENTAL STEEL CORPORATION	Kokomo-Howard County Public Library, 220 West Union Street, Kokomo, IN 46901
DOUGLAS ROAD/UNIROYAL, INC. LDFL	Mishawaka-Penn Public Library, 209 Lincoln Way, East, Mishawaka, IN 46544
ENVIROCHEM CORPORATION	Hussey Memorial Library, 225 West Hawthorne, Zionsville, IN 46077
FISHER-CALO	La Porte County Public Library, 904 Indiana Avenue, La Porte, IN 46350
FORT WAYNE REDUCTION DUMP	Allen County Public Library, 900 Webster Street, Forte Wayne, IN 46801
GALEN MEYERS DUMP/DRUM SALVAGE	Not Established
HIMCO DUMP	Elkhart Public Library, Pierre Moran Branch Library, 2400 Benham Avenue, Elkhart, IN 46517
IMC (TERRE HAUTE EAST PLANT)	Deleted from the NPL
LAKE SANDY JO (M & M LANDFILL)	Gary Public Library, 220 West 5th Avenue, Gary, IN 46402
LAKELAND DISPOSAL SERVICE INC.	Koscuisko County Health Department, 100 West Center Street, 3rd Floor, Room 2, Warsaw, IN 46580
LEMON LANE LANDFILL	Monroe County Public Library, 303 E. Kirkwood Ave., Bloomington, IN 47491
MAIN STREET WELL FIELD	Elkhart Public Library, 300 South 2nd Street, Elkhart, IN 46516
MARION (BRAGG) DUMP	Marion Public Library, 600 South Washington Street, Marion, IN 46953
MIDCO I	Gary Public Library, 220 West 5th Avenue, Gary, IN 46402
MIDCO II	Gary Public Library, 220 West 5th Avenue, Gary, IN 46402
NEAL'S DUMP (SPENCER)	Monroe County Public Library, 303 E. Kirkwood Ave., Bloomington, IN 47491
NEAL'S LANDFILL (BLOOMINGTON)	Monroe County Public Library, 303 E. Kirkwood Ave., Bloomington, IN 47491
NINTH AVENUE DUMP	Gary Public Library, 220 West 5th Avenue, Gary, IN 46402
NORTHSIDE SANITARY LANDFILL, INC.	Hussey Memorial Library, 225 West Hawthorne, Zionsville, IN 46077

Information Repositories for NPL Sites in the State of Indiana
(Continued)

Site Name	Site Repository
POER FARM	Deleted from the NPL
PRESTOLITE BATTERY DIVISION	Knox County Public Library, 502 North 7th Street, Vincennes, IN 47591
REILLY TAR & CHEMICAL CORP.	Indianapolis-Marion County Public Library, 40 East St. Clair Street, Indianapolis, IN 46206
SEYMOUR RECYCLING CORPORATION	Jackson County Public Library, 2nd & Walnut Streets, Seymour, IN 47274
SOUTHSIDE SANITARY LANDFILL	Indianapolis Public Library, 40 East St. Clair Street, Indianapolis, IN 46204
TIPPECANOE SANITARY LANDFILL	Tippecanoe County Public Library, 627 South Street, Lafayette, IN 47901
TRI-STATE PLATING	Bartholomew County Health Department, 440 3rd Street, Suite 303, Columbus, IN 47201
WASTE INC. LANDFILL	Michigan City Public Library, 100 East 4th Street, Michigan City, IN 46460
WAYNE WASTE OIL	Peabody Library, 203 North Main Street, Columbia City, IN 46725
WEDZEB ENTERPRISES, INC.	Lebanon Public Library, 104 East Washington Street, Lebanon, IN 46052
WHITEFORD SALES & SERVICE	St. Joseph County Public Library, 122 West Wayne Street, South Bend, IN 46601

* U.S. G.P.O.:1992-311-893-60431