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**NATIONAL PRIORITIES LIST SITES:
Georgia**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Emergency & Remedial Response
Office of Program Management
Washington, D.C. 20460

If you wish to purchase copies of any additional State volumes or the National Overview volume, **Superfund: Focusing on the Nation at Large**, contact:

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TABLE OF CONTENTS

	PAGE
INTRODUCTION:	
A Brief Overview.....	iii
SUPERFUND:	
How Does the Program Work to Clean Up Sites	vii
How To:	
Using the State Volume	xvii
NPL SITES:	
A State Overview.....	xxi
THE NPL PROGRESS REPORT	xxiii
NPL: Site Fact Sheets	1
<hr/>	
GLOSSARY:	
Terms Used in the Fact Sheets	G-1

INTRODUCTION:

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, property values depreciated. 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 the 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 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.

In the 10 years 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 at others improperly disposed or stored wastes threatened the health of the surrounding community and the environment.

EPA Identified More than 1,200 Serious Sites

EPA has identified 1,236 hazardous waste sites as the most serious in the Nation. These sites comprise the "National Priorities List": sites targeted for cleanup under the Superfund. But site discoveries continue, and

EPA estimates that, while some will be deleted after lengthy cleanups, this list, commonly called the NPL, will continue to grow by approximately 100 sites per year, 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 (1,236) are thus a rela-

A BRIEF OVERVIEW



INTRODUCTION

tively small subset of a larger inventory of potential hazardous waste sites, but they do comprise the most complex and environmentally compelling cases. EPA has logged more than 32,000 sites on its National hazardous waste inventory, and assesses each site within one year of being logged. In fact, over 90 percent of the sites on the inventory have been assessed. Of the assessed sites, 55 percent have been found to require no further Federal action because they did not pose significant human health or environmental risks. The remaining sites are undergoing further assessment to determine if long-term Federal cleanup activities are appropriate.

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.

The 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 hazardous release, or the threat of one. 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 the Superfund's most noted achievements. Where imminent threats to the public or environment were evident, EPA has completed or monitored emergency actions that attacked the most serious threats to toxic exposure in more than 1,800 cases.

The ultimate goal for a hazardous waste site on the NPL is a permanent solution to an environmental problem that presents a serious (but not an imminent) threat to the public or environment. This often requires a long-term effort. In the last four years, 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. And in 1989 more sites than ever reached the construction stage of the Superfund cleanup process. Indeed construction starts increased by over 200 percent between late 1986 and 1989! Of the sites currently on the NPL, more than 500 — nearly half

— have had construction cleanup activity. In addition, over 500 more sites are presently 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. Measuring success by "progress through the cleanup pipeline," EPA is clearly gaining momentum.

EPA MAKES SURE CLEANUP WORKS

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.

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, 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 still being safeguarded. EPA will correct any deficiencies discovered and 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. EPA's job is to analyze the hazards and deploy the experts, but the Agency needs citizen input as it makes choices for affected communities.

Because the people in a community with a Superfund site will be those most directly affected by hazardous waste problems and cleanup processes, 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.

This State volume and the companion National Overview volume provide general Superfund background information and descriptions of activities at each State NPL site. These volumes are

intended to clearly describe what the problems are, what 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 IN TANDEM

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. The public 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 volume — *Superfund: Focusing on the Nation at Large* — accompanies this State volume. The National Overview 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, the Superfund program's successes in cleaning up the Nation's

serious hazardous waste sites, and the vital roles of the various participants in the cleanup process.

This State volume compiles site summary fact sheets on each State 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 State book gives a "snapshot" of the conditions and cleanup progress that has been made at each NPL site in the State through the first half of 1990. Conditions change as our cleanup efforts continue, so these site summaries will be updated periodically to include new information on progress being made.

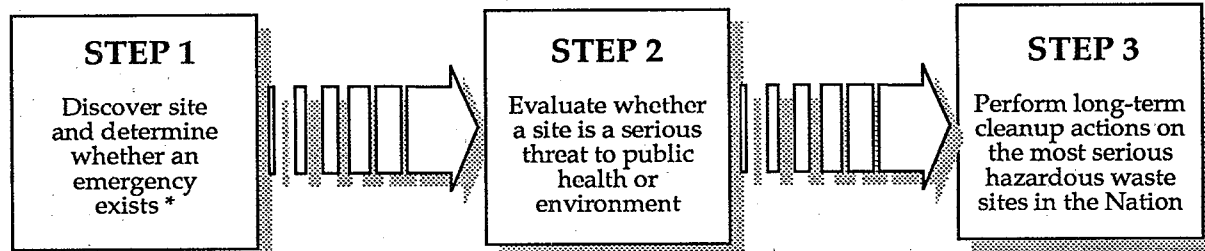
To help you understand the cleanup accomplishments made at these sites, this State volume includes a description of the process for site discovery, threat evaluation and long-term cleanup of Superfund sites. This description — *How Does the Program Work to Clean Up Sites?* — will serve as a good reference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

SUPERFUND:

HOW DOES THE PROGRAM WORK TO CLEAN UP SITES?

The diverse problems posed by the Nation's hazardous waste sites have provided EPA with the challenge to establish a consistent approach for evaluating and cleaning up the Nation's most serious sites. To do this, EPA 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. EPA has established procedures to coordinate the efforts of its Washington, D.C. Headquarters program offices and its front-line staff in 10 Regional Offices with the State 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 EPA or the State or, under their monitoring, by private parties who are potentially responsible for site contamination.

The process for discovery of the site, evaluation of threat, and 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 below provides a summary of this three step process.



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

FIGURE 1

Although this State 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 up to identifying and cleaning up these most serious uncontrolled or abandoned hazardous waste sites in the Nation. This discovery and evaluation process is the starting point for this summary description.

How does EPA learn about potential hazardous waste sites?

What happens if there is an imminent danger?

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

STEP 1: SITE DISCOVERY AND EMERGENCY EVALUATION

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. Or 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 EPA informed about either 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.

As soon as a potential hazardous waste site is reported, 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

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 figure out what is contaminating the drinking water supply and the best way to clean it up. Or

EPA may determine that there is no imminent danger from a site, so now 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 requires a long-term cleanup action.

Once a site is discovered and any needed emergency actions are taken, 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 like 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 don't 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 32,000 sites maintained in this inventory.

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.

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 EPA can meet the

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

How does EPA use the results of the site inspection?

How do people find out whether EPA considers a site a national priority for cleanup using Superfund money?

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, EPA developed the Hazard Ranking System (HRS). The HRS is the scoring system 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 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 EPA's **National Priorities List (NPL)**. That's why there are 1,236 sites on the NPL, but there are more than 32,000 sites in the Superfund inventory. Only NPL sites can have a long-term cleanup paid for from the national hazardous waste trust fund — the Superfund. But the Superfund can and does pay for emergency actions performed at any site, *whether or not it's on the NPL*.

The public can find out whether a site that concerns them is on the NPL by calling their Regional EPA office at the number listed in this book.

The proposed NPL identifies sites that 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 added 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. Updated at least once a year, it's only after public comments are considered that these proposed worst sites are officially added to the NPL.

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

STEP 3: LONG-TERM CLEANUP ACTIONS

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. So a five-phase "remedial response" process is used to develop consistent and workable solutions to hazardous waste problems across the Nation:

1. Investigate in detail the extent of the site contamination: **remedial investigation**,
2. Study the range of possible cleanup remedies: **feasibility study**,
3. Decide which remedy to use: **Record of Decision or ROD**,
4. Plan the remedy: **remedial design**, and
5. Carry out the remedy: **remedial action**.

This remedial response process is a long-term effort to provide a permanent solution to an environmental problem that presents a serious, but not an imminent 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 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. But 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 is information that allows EPA to select the cleanup strategy that is best suited to a particular site or to determine that no cleanup is needed.

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

How are cleanup alternatives identified and evaluated?

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.

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 carefully compared. 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 use treatment technologies to destroy principal site contaminants. But remedies such as containing the waste on site or removing the source of the problem (like leaking barrels) are often 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 carefully considered 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. 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.

The public has a minimum of 30 days to comment on the proposed cleanup plan after it is published. These comments can either be written or given verbally at public meetings that EPA or the State are required to hold. Neither 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 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.

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 6 months to 2 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

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

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

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

site, special plans for environmental protection, worker safety, regulatory compliance, and equipment decontamination.

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 decontaminate them — an action that takes limited time and money. In most cases, however, a remedial action may involve different and expensive 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, a remedial cleanup action takes an average of 18 months to complete and costs an average of \$26 million per site.

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 the **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 completed".

It's not until a site cleanup meets all the goals and monitoring requirements of the selected remedy that 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 can actually be deleted from the NPL. Deletions that have occurred are included in the "Construction Complete" category in the progress report found later in this book.

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 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 EPA, and must meet the same standards required for actions financed through the Superfund.

Because these enforcement actions can be lengthy, 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 for repaying the money EPA spends in cleaning up the site.

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

Can EPA make parties responsible for the contamination pay?

HOW TO:

USING THE STATE VOLUME

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 National Priorities List (NPL) and their locations, as well as the conditions leading to their listing ("Site Description"). They 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 on 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 following two pages show a generic fact sheet and briefly describes the information under each section. The square "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.

Icons in the *Threats and Contaminants* Section



Contaminated Groundwater resources 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. (Pollution is usually periodic and involves contaminated dust particles or hazardous gas emissions.)

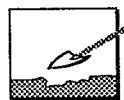


Contaminated Soil and Sludges on or near the site.



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

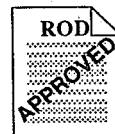
Icons in the *Response Action Status* Section



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



Site Studies at the site are planned or underway.



Remedy Selected indicates that site investigations have been concluded and 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 — are currently underway.



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

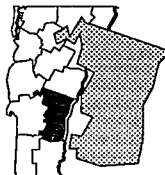
Site Responsibility

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

SITE NAME

STATE

EPA ID# ABC00000000



EPA REGION
CONGRESSIONAL DIST
County Name
Location

Aliases:

Site Description

NPL Listing History

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

Site Responsibility:

NPL LISTING HISTORY

Threats and Contaminants



Cleanup Approach

Response Action Status





Site Facts:

Environmental Progress



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.

WHAT THE FACT SHEETS CONTAIN

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. Throughout the site description and other sections of the site summary, technical or unfamiliar terms that are *italicized* are presented in the glossary at the end of the book. Please refer to the glossary for more detailed explanation or definition of the terms.

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 are also described. Specific contaminants and contaminant groupings are *italicized* and explained in more detail in the glossary.

Cleanup Approach

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

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 are often 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.

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 EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

How To

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 is always being made at NPL sites, and EPA will periodically update the Site Fact Sheets to reflect recent actions and publish updated State volumes.

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. EPA is committed to involving the public in the decisionmaking process associated with hazardous waste cleanup. The Agency solicits input

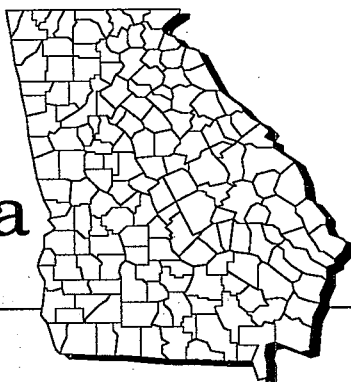
from area residents in communities affected by Superfund sites. Citizens are likely to be affected not only by hazardous site conditions, but also by the remedies that combat them. Site cleanups take many forms and can affect communities in different ways. Local traffic may be rerouted, residents may 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 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 to know what the community can realistically expect once the cleanup is complete.

EPA wants to develop cleanup methods that meet community needs, but the Agency can only 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.

NPL Sites in State of Georgia



Georgia is located on the eastern seaboard and bordered by Tennessee and North Carolina to the north, Tennessee and Alabama to the west, and Florida to the south. The State covers 58,910 square miles and consists of the Atlantic coastal plains and flatlands which give way to the Piedmont and the Blue Ridge Mountains in the central and northwest sections of the state. Georgia experienced a 16.1 percent increase in population during the 1980s and currently has approximately 6,342,000 residents, ranking 11th in U.S. populations. Principal State industries include manufacturing, forestry, agriculture, and chemicals. Georgia manufacturing produces electronic and electrical machinery, apparel, textiles, transportation equipment, food, lumber, and paper.

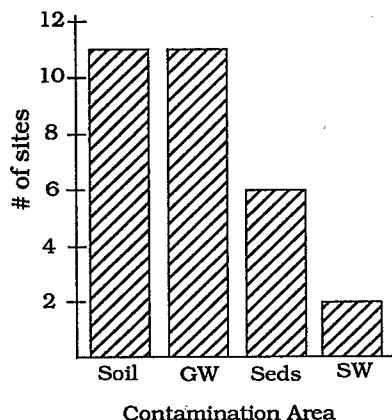
How Many Georgia Sites Are on the NPL?

Proposed	2
Final	11
Deleted	1
	14

Where Are the NPL Sites Located?

Cong. District 01, 08, 09, 10	1 site
Cong. District 03, 06	3 sites
Cong. District 02	4 sites

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



Soil: Heavy metals (inorganics), volatile organic compounds (VOCs), pesticides, and radiation.



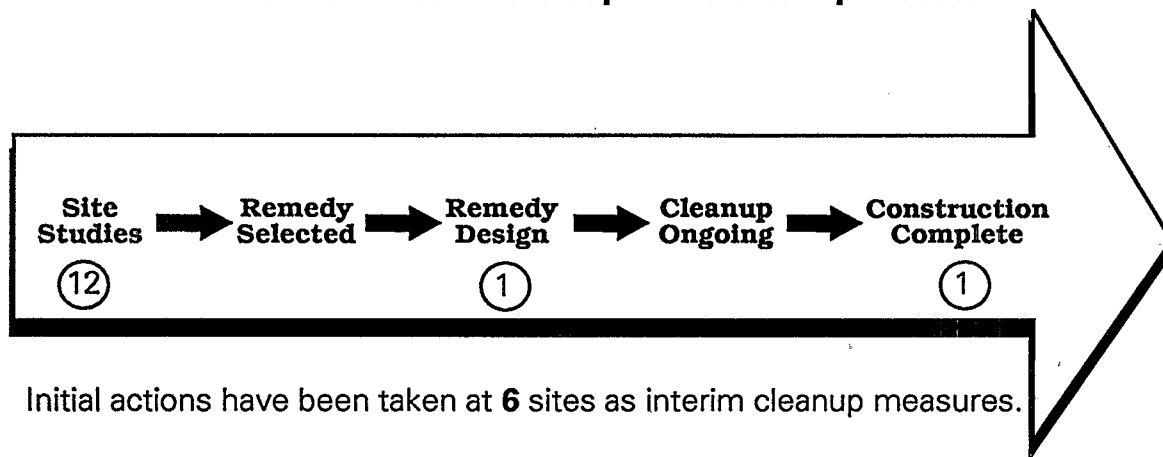
Groundwater: Volatile organic compounds (VOCs), heavy metals (inorganics), and pesticides.



Surface Water and Sediments: Heavy metals (inorganics) and pesticides.

*Appear at 20% or more sites

Where are the Sites in the Superfund Cleanup Process* ?



Who Do I Call with Questions?

The following pages describe each NPL site in Georgia, providing specific information on threats and contaminants, cleanup activities, and environmental progress. Should you have questions, please call one of the offices listed below:

Georgia Superfund Office	(404) 656-7404
EPA Region IV Superfund Office	(404) 347-2234
EPA Public Information Office	(202) 477-7751
EPA Superfund Hotline	(800) 424-9346
EPA Region IV Superfund Public Relations Office	(404) 347-3004

* Cleanup status reflects phase of site activities rather than administrative accomplishments.



The NPL Progress Report

The following Progress Report lists the State 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 (➡) which indicates the current stage of cleanup at the site.

Large and complex sites are often 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 is currently 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.
- ➡ An arrow in the "Site Studies" category indicates that an investigation to determine the nature and extent of the contamination at the site is currently ongoing or planned to begin in 1991.
- ➡ An 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 in the Progress Report are discontinued at the "Remedy Selection" step and resume in the final "Construction Complete" category.
- ➡ An arrow at the "Remedial Design" stage indicates that engineers are currently designing the technical specifications for the selected cleanup remedies and technologies.
- ➡ An arrow marking the "Cleanup Ongoing" category means that final cleanup actions have been started at the site and are currently underway.
- ➡ A 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 may currently be undergoing long-term pumping and treating of groundwater, operation and maintenance or monitoring to ensure that the completed cleanup actions continue to protect human health and the environment.

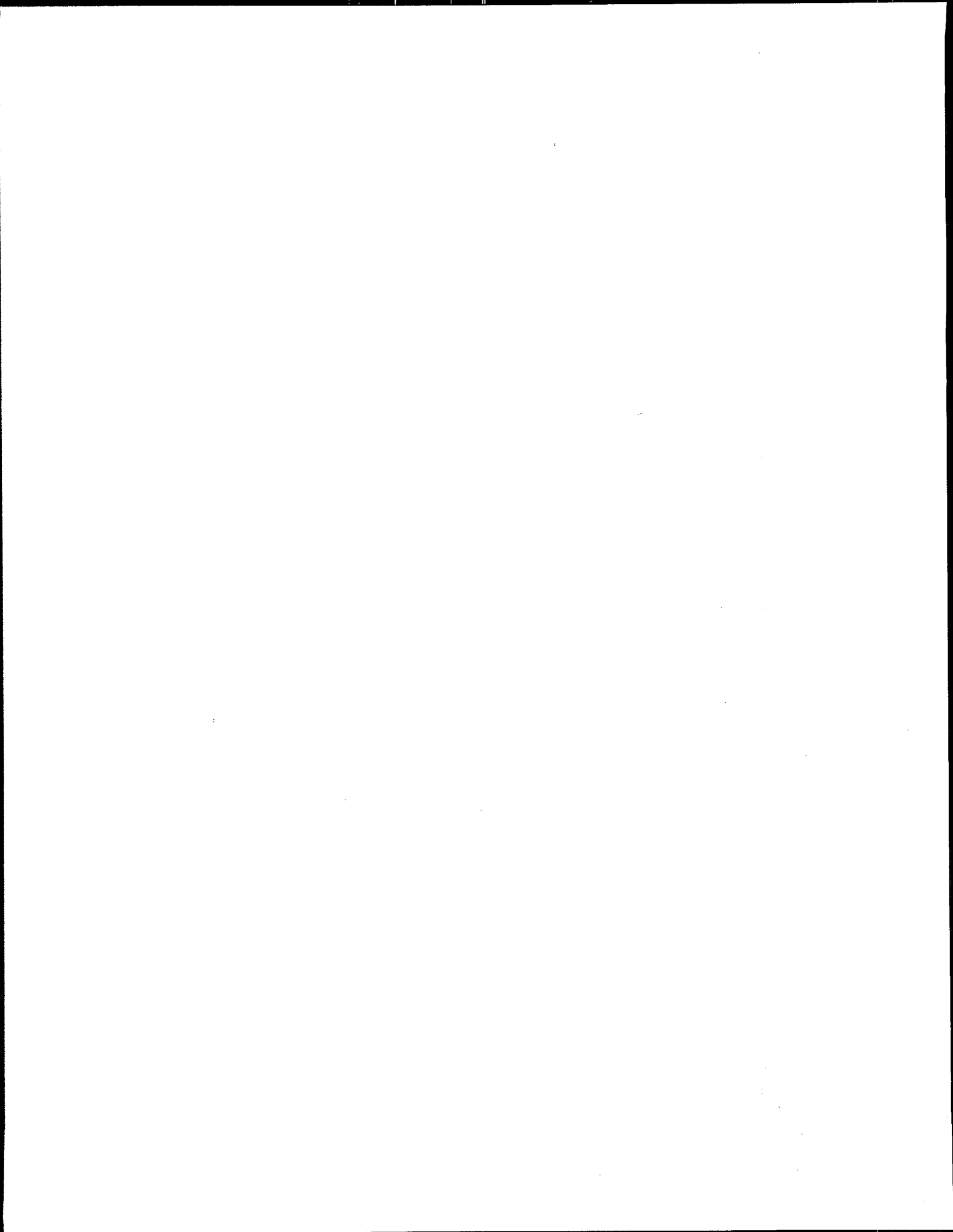
The sites are listed in alphabetical order. Further information on the activities and progress at each site is given in the site "Fact Sheets" published in this volume.

Progress Toward Cleanup at NPL Sites in the State of Georgia

Page	Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete
1	CEDARTOWN INDUSTRIES, INC.	POLK	Final	02/16/90	➡	➡				
3	CEDARTOWN MUNICIPAL LANDFILL	POLK	Final	03/31/89		➡				
5	DIAMOND SHAMROCK CORP. LDFL	POLK	Prop.	01/22/87		➡				
7	FIRESTONE TIRE AND RUBBER CO.	DOUGHERTY	Final	10/04/89		➡				
9	HERCULES, INC. 009 LANDFILL	GLYNN	Final	09/01/84		➡				
11	LUMINOUS PROCESSES	CLARKE	Delete	12/30/82			➡	➡	➡	➡
13	MARINE CORP LOGISTICS BASE	DOUGHERTY	Final	11/21/89	➡	➡				
15	MARZONE INC./CHEVRON CHEM. CO.	TIFT	Final	10/04/89	➡	➡				
17	MATHIS BROS. LDFL (S. MARBLE TOP RD)	WALKER	Final	03/31/89		➡				
19	MONSANTO CO.	RICHMOND	Final	09/01/84	➡	➡				
21	POWERSVILLE LANDFILL	PEACH	Final	09/01/84		➡	➡	➡		
23	T. H. AGRICULTURE & NUTRITION CO.	DOUGHERTY	Final	03/31/89	➡	➡				
25	USAF ROBINS AIR FORCE BASE	HOUSTON	Final	07/07/87		➡				
27	WOOLFOLK CHEMICAL WORKS INC.	PEACH	Prop.	06/24/88	➡	➡				

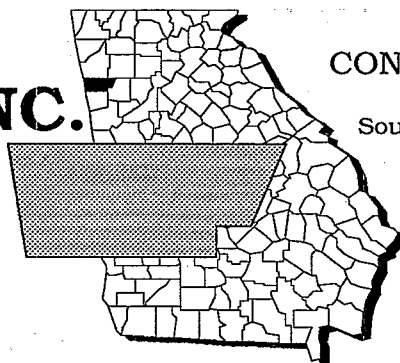
NPL:

SITE
FACT
SHEETS



CEDARTOWN INDUSTRIES, INC. GEORGIA

EPA ID# GAD095840674



REGION 4
CONGRESSIONAL DIST. 06
Polk County
Southwest section of Cedartown

Site Description

The Cedartown Industries, Inc. site covers 7 acres in the southwest section of Cedartown. Originally, the site was the location of a foundry and machine shop. From 1978 to 1980, Cedartown Industries operated a secondary lead smelter with lead from discarded automobile batteries that were stored on the site. In 1980, the company sold the property to H & M Transfer Co., which parks and repairs its vehicles on a portion of the site. Remaining on site when Cedartown Industries ceased operations, were an uncovered pile containing 5,000 cubic yards of slag and flue dust from the smelting operations and a 32,000-gallon lined surface *impoundment*. The Newala Limestone Formation underlies the site. It feeds a large spring that is the sole source of water for Cedartown's water system. This spring and a well that supplies the Polk County water system, both within 3 miles of the site, provide drinking water to an estimated 25,700 people. The site is adjacent to Cedar Creek, which is used for fishing and other recreational activities.

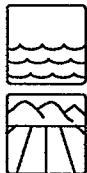
Site Responsibility: This site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/16/90

Threats and Contaminants



The *sediments* in the impoundment and the soil around the slag pile are contaminated with lead from former site operations. People on the site could be exposed to lead by touching or accidentally ingesting contaminated soil.

Cleanup Approach

The 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



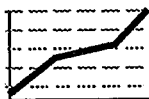
Initial Actions: Removal of the contaminated slag pile is being done under an *Administrative Order*.



Entire Site: A study by the parties potentially responsible for the site contamination is scheduled to begin in 1990. The study will determine the extent of the contamination and will identify alternative technologies for the cleanup.

Site Facts: Negotiations have been completed and the *Consent Order* has been signed with five parties potentially responsible for the site contamination to study the extent of the contamination and to identify alternative technologies for cleanup.

Environmental Progress



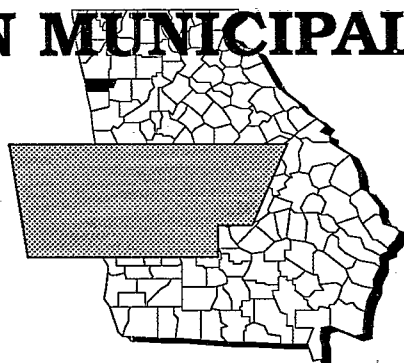
After adding the Cedartown Industries site to the NPL, the EPA determined that the site does not currently pose an immediate threat to the public or the environment, while further studies are made into the best alternatives for permanent clean up are taking place.



CEDARTOWN MUNICIPAL LANDFILL

GEORGIA

EPA ID# GAD980495402



REGION 4
CONGRESSIONAL DIST. 06
Polk County
Cedartown

Site Description

The Cedartown Municipal Landfill covers approximately 130 acres just outside of Cedartown. The area is an abandoned iron ore mine that was used as a municipal *landfill* by the City of Cedartown from the early 1960s until late in 1980. The City owns the land and had a permit from the Georgia Environmental Protection Division to operate it as a sanitary landfill, accepting industrial wastes from local industries. According to the City, the landfill was covered with soil after it was closed in 1981. The City periodically stockpiles construction rubble and soil on the site and uses it for fill material for other areas. Cedartown Spring, 8,500 feet from the site, serves as a water supply source for approximately 8,600 Cedartown residents. The Knox and Newala Geologic Formations, both within 3 miles of the site, provide drinking water to the 25,000 residents of Polk County.

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

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 03/31/89

Threats and Contaminants



On-site groundwater and soils are contaminated with *volatile organic compounds* (VOCs) including benzene and toluene from former waste disposal activities. Site contamination poses a risk to those individuals who accidentally ingest or make direct contact with the contaminated groundwater or soils.

Cleanup Approach

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

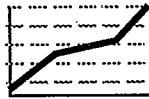
Response Action Status



Entire Site: The parties potentially responsible for the site contamination will begin a study, scheduled to start in 1990, to determine the extent of contamination at the site and to identify alternative technologies for the cleanup. Once completed, the EPA will evaluate the investigation findings and select the final cleanup strategy for contamination.

Site Facts: Negotiations have been completed and a *Consent Order* was signed on March 30, 1990 with 15 parties potentially responsible for the contamination of the site to conduct a study on the nature and extent of contamination.

Environmental Progress



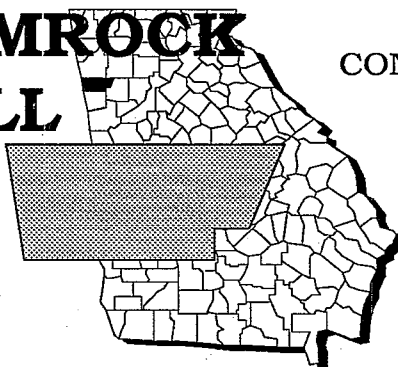
After adding the Cedartown Municipal Landfill site to the NPL, the EPA conducted preliminary investigations and determined that the site does not currently pose an immediate threat to the surrounding community or the environment while further studies into the best alternatives for permanent cleanup are taking place.



DIAMOND SHAMROCK CORP. LANDFILL GEORGIA

EPA ID# GAD990741092

REGION 4
CONGRESSIONAL DIST. 06
Polk County
West of Cedartown



Site Description

The Diamond Shamrock Corp. Landfill site is less than 1 acre in size and is located at the intersection of West Avenue and 10th Street in Cedartown. Between 1972 and 1977, the company buried drummed and bulk waste in five 6-foot deep trenches at the landfill. According to the company, the waste included fungicides, amides, oil, and oil sludges, esters, alcohols, and metallic salts. The trenches are unlined, in an area of permeable soils, and in the floodplain of Cedar Creek, which is a major tributary of the Coosa River. Area groundwater underlying the site is shallow. An estimated 25,000 people draw drinking water from public wells within 3 miles of the site. The Cedartown Spring is a sole source of water supply for the City of Cedartown, while Cave Springs well serves Polk County. Cedar Creek has been used for fishing and possibly for swimming.

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

NPL LISTING HISTORY

Proposed Date: 01/22/87

Threats and Contaminants



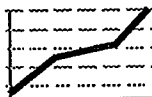
On-site groundwater and surface and subsurface soils are contaminated with heavy metals including cadmium, chromium, copper, and zinc from wastes deposited on the site. Potential health threats include direct contact with or accidental ingestion of contaminated groundwater, surface water, and soils as well as breathing of contaminated dust and particulates on the site.

Cleanup Approach

The site is being addressed in a single *long-term remedial phase* focusing on cleanup of the groundwater and soil.

Response Action Status

Groundwater and Soil: The party potentially responsible for the site contamination, Henkel Corporation, is planning to conduct an investigation into the nature and extent of the groundwater and soil contamination at the site in 1991. The investigation will define the nature and extent of the contamination and will recommend alternatives for final groundwater and soil cleanup. The investigation is planned to be completed in 1993. Henkel Corporation is presently conducting a limited investigation to identify areas where the study should focus and sources of contamination.

Environmental Progress

After adding the Diamond Shamrock Corp. Landfill site to the NPL, the EPA determined, after an initial evaluation, that the site does not currently pose an immediate threat to the surrounding community or the environment while studies into a permanent cleanup solution are being conducted by the Henkel Corporation.

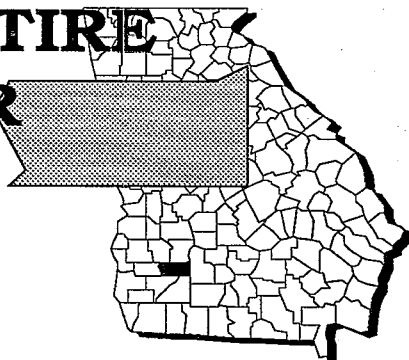


FIRESTONE TIRE AND RUBBER COMPANY

GEORGIA

EPA ID# GAD990855074

REGION 4
CONGRESSIONAL DIST. 02
Dougherty County
Albany



Site Description

Firestone Tire and Rubber Company has manufactured tires in this 330-acre site in Albany since 1968. Until 1980, drums of waste cement were stored on the ground in an area covering less than 1 acre. Wastes were buried in a pit on another area of the site during fire-training exercises. Groundwater in this area has been found to be contaminated. The facility received interim approval from the EPA for the management of hazardous wastes; however, the final permit application has been withdrawn. Approximately 400 people obtain drinking water from private wells within 3 miles of the site. Wells drawing on the contaminated groundwater are also used for irrigating 1,000 acres of cropland.

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

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



The groundwater is contaminated with *volatile organic compounds* (VOCs) including benzene and toluene from former waste disposal practices. Heavy metals including zinc also have been found in the groundwater underlying the site. Touching or drinking the contaminated groundwater on the site could threaten the health of residents using the resource. Use of contaminated water to irrigate crops could also expose people to chemicals.

Cleanup Approach

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

Response Action Status

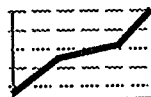


Entire Site: In 1990, parties potentially responsible for the site contamination are scheduled to begin a study to determine the type and extent of contamination and will also evaluate the cleanup alternatives.

Once completed, the EPA will evaluate the findings of the site investigators and select a final cleanup strategy to address groundwater contamination and any additional contamination areas identified in the study.

Site Facts: On March 28, 1990, the EPA sent a special *notice letter* requesting that the parties potentially responsible for the contamination conduct the investigation into contamination at the site.

Environmental Progress



After adding the Firestone Tire & Rubber Co. site to the NPL, and performing a preliminary investigation, the EPA determined that the site does not present an immediate threat to the neighboring community or the environment while further studies into the best possible method for permanent cleanup are taking place.

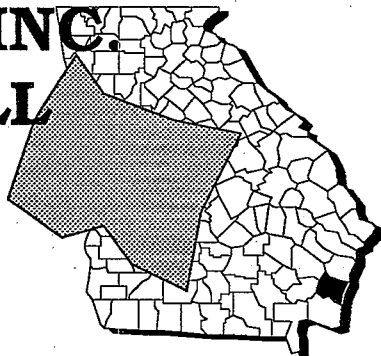


HERCULES, INC.

009 LANDFILL

GEORGIA

EPA ID# GAD980556906



REGION 4
CONGRESSIONAL DIST. 01
Glynn County
Brunswick

Alias:
009 Landfill

Site Description

The Hercules, Inc. 009 Landfill covers 7 acres on a 16 1/2-acre parcel of land. The company manufactured the insecticide toxaphene and disposed of approximately 19,300 tons of solid wastes from its Brunswick plant on this now inactive site. The landfill began operations in 1976 with a State permit, which was revoked in 1980 because of well contamination. Hercules fenced the landfill, covered the area with clean soil, contoured it to prevent runoff, and planted vegetation on it. The closest residence is 200 yards from the site. There are private wells within 1/4 mile of the site. Residential wells in the area generally tap the shallow aquifer underlying the site. The landfill is in a marshland and 1 mile from coastal wetlands.

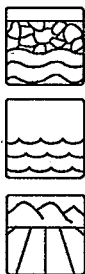
Site Responsibility: This site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY

Proposed Date: 09/01/83

Final Date: 09/01/84

Threats and Contaminants



The shallow and deep groundwater, *sediments* in a drainage ditch, and soil are contaminated with toxaphene. People who touch or accidentally ingest contaminated groundwater, sediments, or soil may be at risk. However, the levels of toxaphene found in private wells are below the EPA limit for this chemical in drinking water.

Cleanup Approach

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

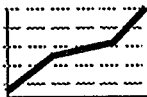
Response Action Status



Entire Site: Hercules is studying the type and extent of contamination at the site. Once the study is finished in 1991, the EPA will review the investigation findings and select final cleanup remedies for groundwater, sediment and soil contamination at the site.

Site Facts: Hercules and the EPA agreed, under a *Consent Order* in 1988, that the company would conduct a detailed study of the extent of contamination at the site.

Environmental Progress



Actions before NPL Listing to fence and cover the landfill reduced risks of direct contact and *migration* of contaminants. After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were needed at the Hercules Inc. 009 Landfill while further studies and cleanup actions are taking place.



LUMINOUS PROCESSES

GEORGIA

EPA ID# GAD990855819



REGION 4
CONGRESSIONAL DIST. 09
Clarke County
Athens

Site Description

The 1-acre Luminous Processes site is a defunct manufacturing plant. The company was operational from 1952 to 1978 and used radioactive isotopes to paint watch and clock dials. The site was abandoned by the owners in 1980. Radioactive contamination was left behind in the soil and the building on the site. The site was originally licensed by the U.S. Atomic Energy Commission.

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

NPL LISTING HISTORY

Deleted: 12/30/82

Threats and Contaminants



The soil was contaminated with radium-226 and tritium from former manufacturing processes.

Cleanup Approach

The site was addressed in a single *long-term remedial phase* that focused on cleanup of the entire site.

Response Action Status



Entire Site: Site cleanup began in June 1982. State workers excavated 18,015 cubic feet of contaminated soil, shipped 2,402 drums, and disposed of 482.7 millicuries of radium-226. They *backfilled* the excavated areas, seeded them with grass, and closed access to the public. The next step was removing contaminated structures from inside the building and cleaning up polluted areas outdoors that had not been previously identified. The site was also fenced, and warning signs were posted. The entire cleanup, including site restoration, was completed in 5 months.

Site Facts: In April 1982, the EPA and the State entered into a *Cooperative Agreement* for cleanup actions to be conducted in three phases. All cleanup actions at the site were completed prior to the initiation of the first final NPL list.

Environmental Progress

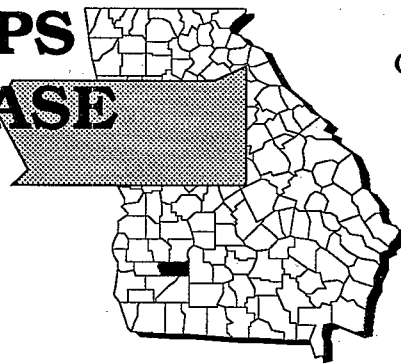


As a result of the cleanup activities described above, and based on subsequent sampling to ensure that all radiation sources and contaminated materials had been removed, the EPA and the State deleted the site from the NPL. The Luminous Processes site has been restored to a safe condition and no longer poses a threat to the neighboring community and surrounding environment.



MARINE CORPS LOGISTICS BASE GEORGIA

EPA ID# GA7170023694



REGION 4
CONGRESSIONAL DIST. 02
Dougherty County
5 miles southeast of Albany

Aliases:
USMC Logistics Base 555
MCLB

Site Description

The Marine Corps Logistics Base (MCLB) site is divided into three areas: MCLB (the facility), the Boyette Housing Area, and the Branch Clinic. Work in support of the base mission includes maintenance, repairs and rebuilding of ground combat and combat support equipment, fuel storage, and motor transport. Maintenance activities at MCLB over the years generated a variety of materials that were disposed of on the facility. These materials include construction debris; miscellaneous industrial wastes including waste fuel, oil paints, thinners, and solvents; and municipal wastewater treatment plant *sludge*. Current disposal practices are regularly monitored for conformance with local, State, and Federal regulations. Fourteen potential sources of contamination have been identified within the area of the site. The base is surrounded by agricultural, residential, and commercial lands. Four *aquifers* underlie MCLB and the Albany area. From shallow to deep they are: the Ocala, Tallahatta, Clayton, and Providence Aquifer. The 4,200 military personnel and dependants living on the base obtain drinking water from three multi-aquifer *artesian* wells tapping the three upper aquifers.

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

NPL LISTING HISTORY

Proposed Date: 07/14/89

Final Date: 11/21/89

Threats and Contaminants



In 1986, the Marine Corps found the pesticides DDE and DDT, and *polychlorinated biphenyls* (PCBs) in *sediments* from the bottom of a drainage ditch that had formerly received hazardous substances. A study completed in 1987 indicated high levels of arsenic, chromium, lead, methylene chloride, and *trichlorethylene* (TCE) in shallow soils. A 1989 sampling showed TCE and trace amounts of metals in monitoring wells near the sludge drying beds of the industrial waste treatment plant. There are currently no data which indicate immediate threats to the environment or human health; however, a risk assessment will be an initial step in the study to determine the nature and extent of contamination.

Cleanup Approach

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

Response Action Status



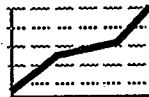
Initial Actions: The Marine Corps cleaned up the sludge drying beds in accordance with a permit issued under Federal regulation. Workers removed contaminated materials from the beds and transported them to an EPA-approved disposal facility. The beds were then covered with a 12-inch concrete cap in 1988. Part of the site *closure* plan requires that six test wells be installed to pump groundwater to the surface and treat it to remove contaminants. Three test wells have been installed to date, and additional wells will be installed based on the results from current treatment.



Entire Site: The Navy/Marine Corps have planned an intensive study of soil and groundwater contamination at the site for the beginning of 1990. This investigation, slated for completion in early 1992, will explore the nature and extent of pollution problems at the site and will recommend the best options for final cleanup.

Site Facts: A Federal Facilities Agreement for remedial action has been negotiated between the Navy/MCLB, the Georgia Environmental Protection Division, and the EPA. The Base is participating in the *Installation Restoration Program* (IRP), which seeks to identify, investigate, and control contamination from hazardous materials on DOD properties.

Environmental Progress



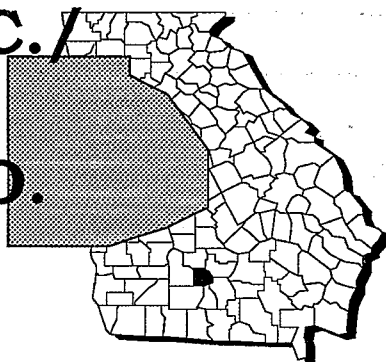
By removing the contaminated sludge from the drying beds, capping the beds, and installing monitoring wells, the Navy/Marine Corps has significantly reduced the potential for exposure to hazardous materials at the Marine Corps Logistics Base while further studies into potential health risks and cleanup strategies for the site are taking place.



MARZONE INC./ CHEVRON CHEMICAL CO.

GEORGIA

EPA ID# GAD991275686



REGION 4
CONGRESSIONAL DIST. 02
Tift County
Tifton

Site Description

The now-defunct Marzone, Inc. pesticide plant was established in 1950 at this 3-acre site in Tifton, at the junction of Golden Road and the Georgia Southern and Florida Railroad line. The facility operated until 1982, when a new owner began using its warehouse as a distribution center. Chevron Chemical Co. started blending dry powders at the site in the 1950s and constructed a building for formulating liquids some time during 1963 through 1964. This owner also added a drum storage facility, three 10,000-gallon solvent tanks, one 12,000-gallon toxaphene (insecticide) tank, and a wastewater pond. The site has changed ownership five times since 1970; four of these owners were agricultural chemical companies. The Georgia Environmental Protection Division's records show numerous environmental problems at the site starting in 1973. In May 1984, the EPA and the State inspected the site and found that pesticides were present in the soils and groundwater. Within 3 miles of the site are 28 private wells tapping the shallow, contaminated *aquifer*. These wells are the sole source of drinking water for the residents in the area.

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

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



The groundwater and soils have been contaminated with pesticides including toxaphene, lindane, and endrin from the site disposal areas. Discoloration of the soil and numerous dead birds on the site indicated the spread of contamination. Imminent threats to public health that existed at the site from direct contact with and inhalation of pesticide residues found in the groundwater and soils have since been removed. Gum Creek, located 250 yards south of the site, receives the bulk of the drainage from the site and could potentially be polluted.

Cleanup Approach

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

Response Action Status



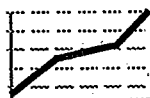
Emergency Actions: In 1984, EPA emergency workers conducted an extensive cleanup to eliminate the immediate threats at the site. The actions performed were: (1) removal and disposal of stored wastes; (2) decontamination of buildings and equipment; (3) excavation of contaminated surface soils; (4) draining water and accumulated *sediments* in a truck-loading area near the railroad tracks; and (5) transport of 1,700 tons of waste materials to an EPA-regulated disposal facility. Chevron Chemical Co., responding to a 1985 agreement with the EPA, agreed to help clean up the site. The company subsequently excavated the wastewater *lagoon*, a drainage ditch, and a railroad ditch; filled them in; and transported the contaminated soil to an EPA-approved disposal facility. Other owners also undertook cleanup actions in the early 1980s, before the site came to EPA's attention. In 1984, Kova Fertilizer removed 49 drums of pesticide wastes. These initial actions have *stabilized* conditions at the site while the EPA pursues alternatives for final site cleanup.



Groundwater: Groundwater cleanup is required, and the EPA is seeking a party potentially responsible for the site contamination to perform an intensive study of groundwater problems. The study is planned to start in 1990 and end in mid-1992. It will explore the nature and extent of the contamination and will recommend the best alternatives for final cleanup of the groundwater.

Site Facts: Under a *Consent Agreement* with the EPA signed in April 1985, Chevron agreed to conduct initial cleanup actions to stabilize the site. *Notice letters* were sent on March 10, 1989 to the parties potentially responsible for the contamination of the site. The public is concerned about possible contamination of private water wells.

Environmental Progress



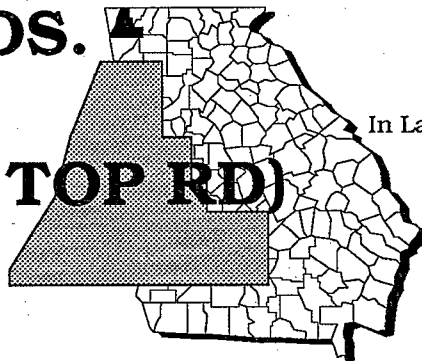
The emergency actions to remove wastes and excavate soils and sediments from the Marzone/Chevron site have greatly reduced the immediate threats to the surrounding community and the environment until final cleanup actions can be performed.



MATHIS BROS. LANDFILL (S. MARBLE TOP RD)

GEORGIA

EPA ID# GAD980838619



REGION 4

CONGRESSIONAL DIST. 08

Walker County

In Lafayette, along the east side of S. Marble Top Rd.

Site Description

The privately owned Mathis Bros. Landfill operated on this 20-acre parcel on South Marble Top Road in Lafayette, 1 1/2 miles north-northwest of Kensington. Only 5 acres of the hilltop property were used for waste disposal. The *landfill* operated from 1974 to 1980 and had a permit from the Georgia Environmental Protection Division to accept nonhazardous wastes. Operators buried approximately 3,000 tons of hazardous wastes in unlined trenches while the landfill was in business. Records from one generator, Velsicol Chemical Corp., indicated that their wastes contained arsenic, organic chemicals, and herbicides. The landfill was abandoned some time after 1980. The landfill is unprotected from the elements, and rusted, leaking drums lie on the site surface. Most of the land use within a mile around the site is pasture and forest. The Kensington Water and Sewer Authority provides drinking water to approximately 4,300 people from wells 1 1/2 miles south of the site, and a private well lies 1,900 feet away. An estimated 75 people live within a 1-mile radius. Three homes are located within 1,000 feet of the site, and 25 are within 1/2 mile. Surface water within 3 miles downstream of the wastes is used for fishing and irrigation. The soil under the wastes is permeable, a condition that facilitates movement of contaminants into groundwater, 40 feet below the soil surface.

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

NPL LISTING HISTORY

Proposed Date: 01/22/87

Final Date: 03/31/89

Threats and Contaminants

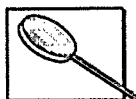


Lead from former waste disposal practices was found in *sediments* from a drainage route west of the site and in soils off the site. On-site contaminants found in the soil include lead and various residues from herbicide production and latex waste from carpet manufacture. To date, private wells have shown no evidence of contamination; however, as a result of the soil characteristics, the potential exists for the groundwater serving these wells to become polluted. Although preliminary sampling results have not revealed contamination in area water bodies, local residents have reported fish kills.

Cleanup Approach

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

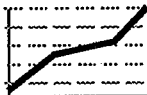
Response Action Status



Entire Site: The party potentially responsible for contamination at this site is conducting an intensive study of pollution problems. This investigation, conducted under EPA monitoring, will explore the nature and extent of contamination and will recommend the best strategies for final cleanup. It is slated for completion in mid-1991.

Site Facts: In 1988, the EPA signed a *Consent Decree* with the party potentially responsible for the contamination to accept financial responsibility for conducting the study of site contamination.

Environmental Progress



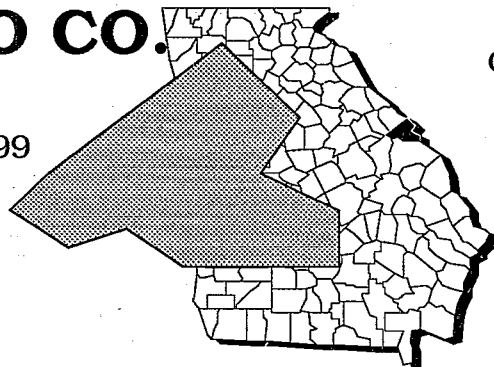
After adding the site to the NPL, the EPA determined that the Mathis Bros. Landfill does not pose an immediate threat to local residents or the environment while studies are being conducted to select the cleanup technologies for a permanent remedy at the site.



MONSANTO CO.

GEORGIA

EPA ID# GAD001700699



REGION 4

CONGRESSIONAL DIST. 10

Richmond County

In Augusta on Marvin Griffin Road

Site Description

Two small *landfills* are the areas of concern at the 75-acre Monsanto Co. site on Marvin Griffin Road in Augusta. The landfills, each about 6 feet deep, received hazardous waste containing about 5% arsenic trisulfide. Workers disposed of phosphoric acid *sludge* containing approximately 725 pounds of arsenic in the first landfill from 1966 to 1971, when the landfill was closed. The second landfill, active from 1972 to 1974, received plastic drums of sludge containing over 800 pounds of arsenic. The second landfill was closed in 1977. In 1979, the company began collecting data from two monitoring wells, one *downgradient* from each site, and detected arsenic contamination in the groundwater. The Tuscaloosa Aquifer, underlying the site, supplies most of the drinking water used by area residents. Most residents near the site use private wells. The Town of Gracewood, 2 1/2 miles from the site, uses the *aquifer* to supply the water for its population of 1,500. The closest home is a mile from the site. Butler Creek lies 1,180 feet southeast of the site, and Phinizy Swamp is 4,570 feet northeast of the landfills.

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

NPL LISTING HISTORY

Proposed Date: 09/01/83

Final Date: 09/01/84

Threats and Contaminants



Groundwater is contaminated with arsenic from former disposal practices at the landfills on the site. Potential threats include direct contact with and drinking of contaminated groundwater.

Cleanup Approach

The 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



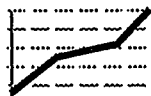
Initial Actions: Approximately 830 pounds of arsenic wastes from the landfills were excavated, deposited in steel-lined drums, and disposed of off site at a permitted waste management site. In 1983, Monsanto excavated the landfills, and the remaining waste material was removed off site to a permitted waste disposal site. The landfills were subsequently sampled, *backfilled* with clay, and replanted.



Entire Site: Under EPA monitoring, the parties potentially responsible for contamination at this site began an intensive study of site problems in 1989. This investigation, scheduled for completion in early 1991, will determine the nature and extent of the groundwater contamination and will recommend cleanup strategies. A draft report summarizing the results of the study for cleanup of the entire site is scheduled for submittal in 1990.

Site Facts: The party potentially responsible for the contamination at the site signed an *Administrative Order on Consent* on April 24, 1989, to perform the study of site contamination.

Environmental Progress

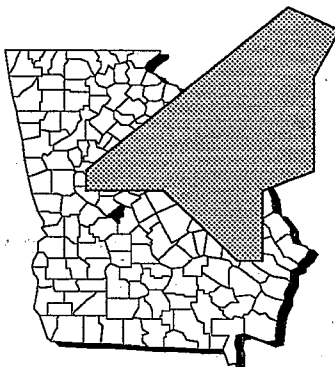


The actions taken to remove the arsenic wastes and to cover the landfills have reduced the potential for exposure to contaminated materials at the Monsanto Co. site while further investigations into the cleanup alternatives are being conducted.



POWERSVILLE LANDFILL GEORGIA

EPA ID# GAD980496954



REGION 4
CONGRESSIONAL DIST. 03
Peach County
Powersville

Site Description

The Powersville Landfill covers 15 acres in the community of Powersville. Beginning in the 1940s, the site was used as a *borrow pit* to provide sand and fill for local construction projects. In 1969, Peach County began using the pit and the surrounding area as a sanitary *landfill* for municipal and industrial waste. The County built a separate waste disposal area at the landfill for pesticides and other hazardous materials in 1973 under a request by the Georgia Environmental Protection Division. The landfill was closed in 1979, after State officials concluded that it was no longer an acceptable site for waste disposal. Residents became concerned about the unusual taste of their well water and, in 1983, groundwater from an adjacent church well was found to be contaminated. The landfill is situated in the recharge zone of three *aquifers*, one of which is a major source for local water supplies. Approximately 40 to 50 residences housing an estimated 150 people are within 1 mile of the site. The area is primarily agricultural, with general crop farming, cattle and dairy farms, and orchards.

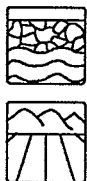
Site Responsibility: This site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY

Proposed Date: 09/01/83

Final Date: 09/01/84

Threats and Contaminants



The groundwater is contaminated with *volatile organic compounds* (VOCs) such as vinyl chloride; heavy metals, including copper, zinc, and lead; and pesticides such as dieldrin and lindane from the former waste disposal activities. Soil in the waste fill area is contaminated with heavy metals and pesticides such as alpha chlordane from the pesticide disposal activities. The site has numerous erosion channels and gullies. If erosion continues, contaminants may be transported to other areas and may pose a health hazard to those who touch the contaminated soil. Because the groundwater contains contaminants, people using well water may be at risk. In addition, cattle or crops may accumulate contaminants if farmers use well water for irrigation or watering livestock.

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 a remedy to clean up the site, which includes: (1) covering the hazardous waste and municipal fill areas with a synthetic material or clay to prevent rainwater from coming into contact with buried contaminants; (2) grading the area so water drains away from the cover into natural drainage channels; (3) closing the landfill according to Federal procedures; (4) installing additional monitoring wells to determine whether the contamination is moving from the covered areas; and (5) extending the municipal water supply to residences affected by contaminated well water. In addition, the site deed will include provisions to ensure that the cleanup is not affected by future construction and that water wells are not drilled near the site. The site will be inspected to ensure that erosion or settling is not occurring. The parties potentially responsible for the contamination are currently designing a plan to cover the landfill and extend the municipal water supply. Once the design phase is completed in 1991, cleanup activities will begin.

Site Facts: In 1988, a *Consent Decree* was lodged in the U.S. District Court calling for cleanup of the site, including placing a soil cover on the site and providing alternate water supplies for residential and industrial needs.

Environmental Progress



After placing the Powersville Landfill site on the NPL, the EPA conducted a preliminary evaluation and determined that the site did not currently pose an immediate threat to the community or the environment while detailed studies leading to the final cleanup activities were taking place.

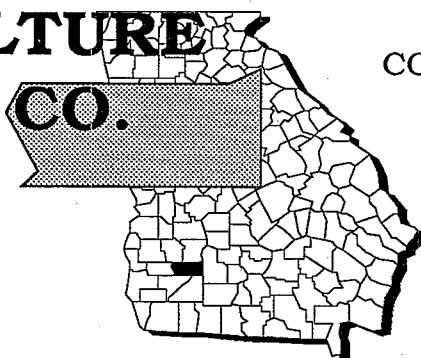


T. H. AGRICULTURE & NUTRITION CO.

GEORGIA

EPA ID# GAD042101261

REGION 4
CONGRESSIONAL DIST. 02
Dougherty County
In the suburbs of Albany



Site Description

The T. H. Agriculture & Nutrition Co. prepared and packaged pesticides on this 7-acre site in Albany. The site is in an agricultural area of the state. The company purchased the facility in 1966 from a previous operator. The company's operations continued until 1976. The facility served as a warehouse/distribution center until 1982, when it was closed. During the 1970s, and possibly in the late 1960s, the company operated under the name Thompson-Hayward Chemical Co. and took the present name in 1981. An estimated 3,300 Lee County residents within 3 miles of the site obtain drinking water from wells that are drilled into the shallow, contaminated *aquifer*.

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

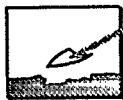


The groundwater and soil are contaminated with pesticides including toxaphene, lindane, DDT, and methyl parathion from former pesticide production and disposal activities at the site. The health of people who drink or touch the contaminated groundwater could be adversely affected. Kinchafoonee Creek is less than 1 mile northeast of the site and joins Muchalee Creek and the Flin River, which are dammed to form Lake Worth. Lake Worth is used for recreational activities and to generate electricity.

Cleanup Approach

The 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



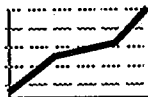
Initial Actions: In 1984, the T. H. Agriculture & Nutrition Co. transported contaminated soils, debris, and building rubble from the site to an approved hazardous waste facility. The Georgia Environmental Protection Division oversaw the action.



Entire Site: The EPA will conduct an investigation, scheduled to begin in 1990, to determine the type and extent of the contamination at the site and to identify measures for cleaning up the site. The work to clean up the site is expected to be completed in 1992.

Site Facts: The EPA sent out special notices on March 29, 1990 to the parties potentially responsible for the site contamination. The EPA invited them to participate and assume responsibility for the the site investigation process.

Environmental Progress

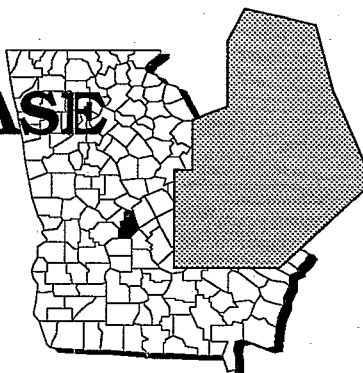


By removing contaminated materials from the T. H. Agriculture & Nutrition Co. site, the immediate threat of exposure to hazardous substances has been greatly reduced, while investigations into alternatives for a permanent cleanup are taking place.



USAF ROBINS AIR FORCE BASE GEORGIA

EPA ID# GA1570024330



REGION 4
CONGRESSIONAL DIST. 03
Houston County
East of the City of Warner Robins

Site Description

Robins Air Force Base covers 8,855 acres and is situated east of the City of Warner Robins in the Coastal Plain of Georgia. The area includes a 1,200-acre *wetland*. Two distinct areas make up this NPL site; Landfill #4 and an adjacent *sludge lagoon*. Landfill #4 operated from 1965 to 1978, and the lagoon operated from about 1962 to 1978. General refuse, garbage, and industrial wastes were disposed of in the *landfill*. The lagoon received wastes from two industrial waste treatment plants and other waste chemicals. The water supplies for the base and the City of Warner Robins come from the Coastal Plain *aquifer*. More than 10,000 people could be affected, because contaminants have been detected in the groundwater near the site and in the surface water on site. However, the general groundwater flow is to the east, away from the City of Warner Robins and the base wells. The site is adjacent to a mixed hardwood swamp along the western border of the Ocmulgee River floodplains.

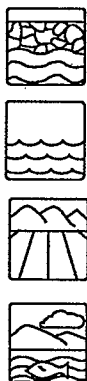
Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/01/84

Final Date: 07/07/87

Threats and Contaminants



Heavy metals including cadmium, lead, and cyanide and *volatile organic compounds* (VOCs) including *trichloroethylene* (TCE) and benzene from the former waste disposal practices have been detected in the groundwater. The *leachate* from the site also contains heavy metals and VOCs, along with the pesticide DDT, and *polychlorinated biphenyls* (PCBs). Pesticides such as chlordane, DDT, and dieldrin have been detected in the *sediments* from a drainage ditch. Heavy metals and VOCs have been detected in the soil, and TCE and *phenols* have been detected in the surface water on site. People could be exposed to the contaminants by accidentally coming into contact with contaminated surface and groundwater. People may also be exposed to toxic chemicals is by eating plants and animals that may contain *bioaccumulated* contaminants from the wastes on site. The spread of hazardous materials from the site could pose a threat to the adjacent wetland.

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 1986, the EPA directed work at the lagoon and the landfill, which included installing monitoring wells and sampling of the soils and streams. The results obtained from the sampling and monitoring program are being used to complete the contamination study reports. The proposed plan is scheduled to be submitted in 1990, and the EPA's final decision for a cleanup remedy is scheduled to be submitted in early 1991. As a result of the studies completed and the comments provided, the Air Force may propose two separate cleanup approaches. One approach may include the source materials and groundwater, and would maintain the current schedule. A second cleanup action may address associated surface water and wetlands with any necessary cleanup actions, which will be determined by future assessments.

Site Facts: Robins Air Force Base is participating in the *Installation Restoration Program (IRP)*, which is a program established by Congress in 1978 under the Department of Defense (DOD). Under this program, the Air Force completed a records search and a preliminary survey. A Federal Facility Agreement between the Air Force, the Georgia Environmental Protection Division, and the EPA was completed and executed on September 25, 1989. An agreement between the Air Force and the State to recover costs for the investigation was completed at the same time. The agreement contains schedules for conducting the current study to determine the nature and extent of contamination and to identify alternatives for cleanup.

Environmental Progress



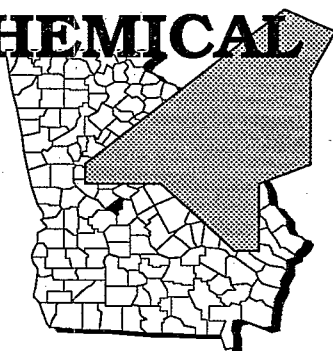
By installing a monitoring well system and by sampling soils and streams, the EPA and the Air Force have taken initial actions to ensure the safety of the drinking water supply and examine the potential for exposure to hazardous materials while the site undergoes further investigations into the alternatives for cleanup of the site.



WOOLFOLK CHEMICAL WORKS INC.

GEORGIA

EPA ID# GAD003269578



REGION 4
CONGRESSIONAL DIST. 03
Peach County
In the center of Fort Valley

Site Description

The Woolfolk Chemical Works, Inc. site covers 18 acres near the center of Fort Valley. The company began operation in 1910 as a lime-sulfur plant and has evolved into a full-line pesticide plant manufacturing pesticides in liquid, dust, and granular forms for the agricultural, lawn, and garden markets. The methods of handling these products over the years have resulted in extensive contamination at the site. State records indicate numerous instances of untreated industrial waste being discharged into surface waters. During a routine inspection in 1979, the EPA discovered that the facility was discharging unauthorized wastewater from the production of pesticides into Bay Creek. Records indicate that the majority of the wastewaters were discharged into a storm sewer on the site. The waste would flow into an open ditch located south of the plant and then into Big Indian Creek. Three of the five Fort Valley municipal water supply wells are within 1,000 feet of the facility. This system is the sole source of water in the area. Late in 1986, the EPA found arsenic and lead in two of the wells. The contamination did not, however, exceed Federal drinking water standards. An estimated 10,000 people obtain drinking water from municipal wells 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: 06/24/88

Threats and Contaminants



Contaminants in the groundwater and soil consist of heavy metals including lead and arsenic and pesticides including chlordane, DDT, lindane, and toxaphene from former process wastes. The surface water of the site was contaminated with arsenic, lindane, and toxaphene during a storm. The municipal wells near the site are potentially contaminated and may pose a possible health threat through the consumption of groundwater.

Cleanup Approach

The 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



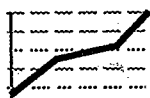
Initial Actions: In 1986 to 1987, a former owner *capped* an area of contamination, removed 3,700 yards of contaminated soils, and destroyed and removed major contaminated structures to an off-site disposal facility.



Entire Site: The parties potentially responsible for the site contamination will study the type and extent of groundwater contamination and will evaluate the cleanup alternatives. This evaluation is expected to be completed in 1992 at which time the EPA will select the appropriate remedies for final site cleanup.

Site Facts: In spring 1990, negotiations were taking place between the EPA and the parties potentially responsible for the contamination of the site to determine the characterization of the contamination at the site and to identify possible cleanup alternatives that would take place at the site.

Environmental Progress



The initial actions to remove contaminated soils and prevent further site contamination by capping the disposal areas have reduced the immediate threats to area residents and the surrounding environment. The EPA has determined that no additional actions are required to protect public health while further studies leading to selection of the final site remedy are conducted.



GLOSSARY:

TERMS USED IN THE FACT SHEETS

This glossary defines the italicized terms used in the site fact sheets for the State of Georgia. The terms and abbreviations contained in this glossary are often defined in the context of hazardous waste management as described in the site fact sheets, and apply specifically to work performed under the Superfund program. Therefore, these terms may have other meanings when used in a different context.

Administrative Order On Consent: A legal and enforceable agreement between EPA and the parties potentially responsible for site contamination. Under the terms of the Order, the potentially responsible parties 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 EPA directing the parties potentially responsible to perform site cleanups or studies (generally, EPA does not issue unilateral orders for site studies).

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.

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

Backfill: To refill an excavated area with removed earth; or the material itself that is used to refill an excavated area.

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.

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

GLOSSARY

from penetrating and spreading contaminated materials. The surface of the cap is generally mounded or sloped so water will drain off.

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

Consent Decree: A legal document, approved and issued by a judge, formalizing an agreement between 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 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].

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

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.

Good Faith Offer: A voluntary offer, generally in response to a Special Notice letter, made by a potentially responsible party that consists of a written proposal demonstrating a potentially responsible party's qualifications and willingness to perform a site study or cleanup.

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

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.

Lagoon: A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater. Lagoons are typically used for the storage of wastewaters, sludges, liquid wastes, or spent nuclear fuel.

Landfill: A disposal facility where waste is placed in or on land.

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.

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 a number of these phases.

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

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 EPA is not allowed to start work at a site or initiate enforcement actions against potentially responsible parties, although EPA may undertake certain investigatory and planning activities. The 60-day period may be extended if EPA receives a good faith offer [see Good Faith Offer] within that period.

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 and can make water taste and smell bad.

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

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. This means that PRPs may sign a consent decree or administrative order on consent [see Administrative Order on Consent] to participate in site cleanup activity without admitting liability.

Runoff: The discharge of water over land into surface water. It can carry pollutants from the air and land into receiving waters.

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

GLOSSARY

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

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.

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 also Volatile Organic Compounds].

Volatile Organic Compounds (VOCs): VOCs are made 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.

Wetland: An area that is regularly saturated by surface or groundwater and, under normal circumstances, 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.