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Agency

Solid Waste And
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December 1992
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SUPERFUND:

Progress at
National
Priority
List Sites



OHIO 1992 UPDATE



Printed on Recycled Paper

NATIONAL PRIORITIES LIST SITES:

Ohio

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Office of Emergency & Remedial Response

Office of Program Management

Washington, DC 20460

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INTRODUCTION

A BRIEF OVERVIEW OF SUPERFUND

During the second half of the Twentieth Century, the environmental consequences of more than 100 years of industrialization in the United States became increasingly clear. Authors such as Rachel Carson wrote passionately about the often-hidden environmental effects of our modern society's widespread use of chemicals and other hazardous materials. Their audience was small at first, but gradually their message spread. Growing concern turned to action, as people learned more about the environment and began to act on their knowledge

The 1970s saw environmental issues burst onto the national scene and take hold in the national consciousness. The first Earth Day was observed in 1970, the year that the U.S. Environmental Protection Agency (EPA) was founded. By the end of the 1970s, Love Canal in New York and the Valley of the Drums in



Kentucky had entered the popular lexicon as synonyms for pollution and environmental degradation.

Superfund Is Established

The industrialization that gave Americans the world's highest standard of living also created problems that only a national program could address. By 1980, the U.S. Congress had passed numerous environmental laws, implemented by the EPA, but many serious hazardous waste problems were slipping through the cracks.

Responding to growing concern about public health and environmental threats from uncontrolled releases of hazardous materials, the U.S. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Popularly known as Superfund, CERCLA had one seemingly simple job—to uncover and clean up hazardous materials spills and contaminated sites.

A Big Job

Few in Congress, the EPA, the environmental community, or the general public knew in 1980 just how big the nation's hazardous materials problem is. Almost everyone thought that Superfund would be a short-lived program requiring relatively few resources to clean up at most a few hundred sites. They were quite mistaken.

As the EPA set to work finding sites and gauging their potential to harm people and the environment, the number of sites grew. Each discovery seemed to lead to another, and today almost 36,000 hazardous waste sites have been investigated as potential hazardous waste sites. They are catalogued in the EPA's computerized database, CERCLIS (for the Comprehensive Environmental Re-

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sponse, Compensation, and Liability Information System).

The damage to public health and the environment that each site in CERCLIS might cause is evaluated; many sites have been referred to State and local governments for cleanup. The EPA lists the nation's most serious hazardous waste sites on the National Priorities List, or NPL. (These Superfund sites are eligible for federally-funded cleanup, but whenever possible the EPA makes polluters pay for the contamination they helped create.) The NPL now numbers 1,275 sites, with 50 to 100 added each year. By the end of the century, the NPL may reach as many as 2,100 sites.

Superfund faces some of the most complex pollution problems ever encountered by an environmental program. Improperly stored or disposed chemicals and the soil they contaminate are one concern. More difficult to correct are the wetlands and bays, and the groundwater, lakes, and rivers often used for drinking water that are contaminated by chemicals spreading through the soil or mixing with

storm water runoff. Toxic vapors contaminate the air at some sites, threatening the health of people living and working near by.

Superfund aims to control immediate public health and environmental threats by tackling the worst problems at the worst sites first. Wherever possible, Superfund officials use innovative treatment techniques—many developed or refined by the EPA—to correct hazardous materials problems once and for all. Many of the treatment techniques they use did not exist when the program was created.

The EPA Administrator had challenged Superfund to complete construction necessary for cleanup work at 130 NPL sites by the end of the 1992 federal fiscal year. By September 30, 1992, the end of fiscal year 1992, construction had been completed at a total of 149 NPL sites. Superfund is well on its way of meeting the Administrator's goal of completing construction at 200 NPL sites by the end of fiscal year 1993, and 650 sites by the end of fiscal year 2000.

Quick Cleanup at Non-NPL Sites

Long-standing hazardous waste sites are not Superfund's only concern. The EPA also responds to hazardous spills and other emergencies, hauling away chemicals for proper treatment or disposal. Superfund teams perform or supervise responses at rail and motor vehicle accidents, fires, and other emergencies involving hazardous substances. They also evacuate people living and working near by, if necessary, and provide clean drinking water to people whose own water is contaminated. Removal crews also post warning signs and take other precautions to keep people and animals away from hazardous substances.



Superfund employee prepares equipment for groundwater treatment.

Quick Cleanups, or Removals, are not limited to emergencies. When cleanup crews at contaminated sites find hazardous substances that immediately threaten people or the environment, they act right away to reduce the threat or to remove the chemicals outright. As the EPA implements the Superfund Accelerated Cleanup Model (SACM), more and more sites will undergo quick cleanups, and many of these will be cleaned up completely without ever being included on the NPL. (See "Streamlining Superfund: The Superfund Accelerated Cleanup Model.")

Some of Superfund's most significant gains in public health and environmental protection have been won by the removal program. As of March 31, 1992, the Emergency Response



Superfund employee removing drums from a Superfund site.

Program had logged more than 2,300 removal completions since Superfund was established.

The Public's Role

Superfund is unique among federal programs in its commitment to citizen participation. Although the EPA is responsible for determining how dangerous a site is and how best to clean it up, the Agency relies on citizen input as it makes these decisions.

Community residents are often invaluable sources of information about a hazardous waste site, its current and previous owners, and the activities that took place there. Such information can be crucial to experts evaluating a site and its potential dangers.

Residents also comment on EPA cleanup plans by stating their concerns and preferences at public meetings and other forums and in formal, written comments to Agency proposals. The EPA takes these comments and concerns seriously, and has modified many proposals in response to local concerns. For, ultimately, it is the community and its citizens that will live with the results of the EPA's decisions and actions; it is only fair that citizens participate in the process.

A Commitment to Communication

The Superfund program is very serious about public outreach and communication. Community relations coordinators are assigned to each NPL site to help the public understand the potential hazards present, as well as the cleanup alternatives. Local information repositories, such as libraries or other public buildings, have been established near each NPL site to ensure that the public has an opportunity to review all relevant information and the proposed cleanup plans.

The individual State volumes contain summary fact sheets on NPL sites in each State and territory. Together, the fact sheets provide a concise report on site conditions and the progress made toward site cleanups as of March 1992. The EPA revises these volumes periodically to provide an up-to-date record of program activities. A glossary of key terms relating to hazardous waste management and Superfund site cleanup is provided at the back of this book.

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Superfund is, of course, a public program, and as such it belongs to everyone of us. This volume, along with other State volumes, comprises the EPA's report on Superfund progress to the program's owners for the year 1992.

STREAMLINING SUPERFUND: THE SUPERFUND ACCELERATED CLEANUP MODEL

Historically, critics and supporters alike have measured Superfund's progress by the number of hazardous waste sites deleted from the NPL. Although easy enough to tally, this approach is too narrow. It misses the major gains Superfund makes by reducing major risks at the nation's worst hazardous sites long before all clean-up work is done and the site deleted. It also ignores the Removal Program's contributions to meeting Superfund's twin mandates of maximizing public health and environmental protection.

Renewing Superfund's commitment to rapid protection from hazardous materials, the EPA is streamlining the program. The Superfund Accelerated Cleanup Model, or SACM, will take Early Actions, such as removing hazardous wastes or contaminated materials, while experts study the site. SACM also will combine similar site studies to reduce the time required to evaluate a site and its threats to people and the environment. This way, immediate public health and environmental threats will be addressed while long-term cleanups are being planned.

Emergencies such as train derailments and motor vehicle accidents will continue to be handled expeditiously. Teams of highly trained technicians will swing into action right away, coordinating the cleanup and removal of hazardous substances to ensure public safety as quickly as possible.

Breaking With Tradition

The traditional Superfund process begins with a lengthy phase of study and site assessment, but SACM will save time by combining separate, yet similar, activities. Each EPA Region will form a Decision Team of site managers,

risk assessors, community relations coordinators, lawyers, and other experts to monitor the studies and quickly determine whether a site requires Early Action (taking less than five years), Long-term Action, or both.

While the site studies continue, the Decision Team will begin the short-term work required to correct immediate public health or environmental threats from the site. Besides removing hazardous materials, Early Actions include taking precautions to keep contaminants from moving off the site and restricting access to the site. Early Actions could eliminate most human risk from these sites, and Superfund will further focus its public participation and public information activities on site assessment and Early Action.

Long-Term Solutions

While Early Actions can correct many hazardous waste problems—and provide the bulk of public health and environmental protection—some contamination will take longer to correct. Cleanups of mining sites, wetlands, estuaries, and projects involving incineration of contaminants or restoration of groundwater can take far longer than the three to five years envisioned for Early Actions. Under SACM, these sites will be handled much as they are now.

Also under SACM, the EPA will continue its pursuit of potentially responsible parties who may have caused or contributed to site contamination. Expedited enforcement and procedures for negotiating potentially responsible party settlements will secure their participation. Superfund personnel will continue to oversee clean-up work performed by potentially responsible parties.

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HOW SUPERFUND WORKS

Each Superfund site presents a different set of complex problems. The same hazardous materials and chemicals often contaminate many sites, but the details of each site are different. Almost always, soil is contaminated with one or more chemicals. Their vapors may taint the air over and around the site. Contaminants may travel through the soil and reach underground aquifers which may be used for drinking water, or they may spread over the site to contaminate streams, ponds, and wetlands. The contaminating chemicals may interact with each other, presenting even more complicated cleanup problems.

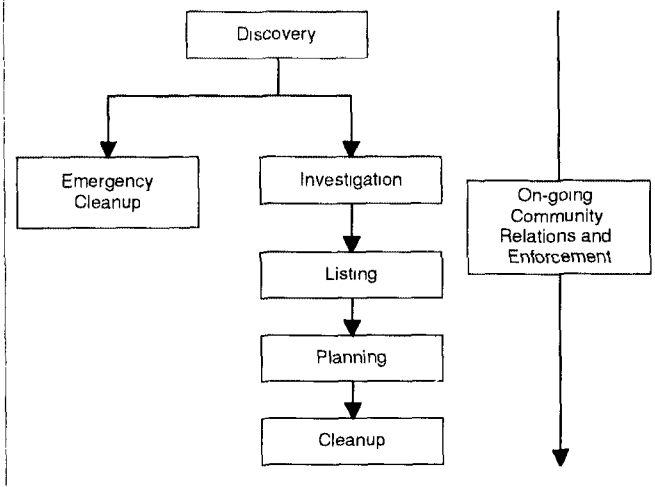
Superfund's cleanup process is arduous and exacting. It requires the best efforts of hundreds of experts in science and engineering, public health, administration and management, law, and many other fields.

The average NPL site takes from seven to ten years to work its way through the system, from discovery to the start of long-term cleanup. Actual cleanup work can take years, decades if contaminated groundwater must be treated. Of course, imminent threats to public health or the environment are corrected right away.

The diagram to the right presents a simplified view of the cleanup process. The major steps in the Superfund process are:

- Detailed studies to determine whether conditions are serious enough to add the site to the National Priorities List of sites eligible for federally funded cleanup under Superfund;
 - Selection, design, and implementation of a cleanup plan, after a thorough review of the most effective cleanup options, given site conditions, contaminants present, and their potential threat to public health or the environment.
 - Follow-up to ensure that the cleanup work done at the site continues to be effective over the long term.
- Site discovery and investigation to identify contaminants and determine whether emergency action is required;
 - Emergency site work such as removing contaminants for proper treatment or disposal, and securing the site to keep people and animals away, if warranted by conditions at the site;
 - Site evaluation to determine how people living and working nearby, and the environment, may be exposed to site contaminants;

The Superfund Process



From the earliest stages, EPA investigators work hard to identify those responsible for the contamination. As their responsibility is established, the EPA negotiates with these "responsible parties" to pay for cleaning up the problem they helped create. This "enforcement first" policy saves Superfund Trust Fund monies for use in cleanups where the responsible parties cannot be identified, or where they are unable to fund cleanup work.

THE VOLUME

How to Use the State Book

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

legal efforts to involve polluters responsible for site contamination and community concerns.

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

How Can You Use This State Book?

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

Definitive information on a site can help citizens sift through alternatives and make decisions. To make good choices, you must know what the threats are and how the EPA

intends to clean up the site. You must understand the cleanup alternatives being proposed for site cleanup and how residents may be affected by each one. You also need to have some idea of how your community intends to use the site in the future, and you need to know what the community can realistically expect once the cleanup is complete.

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

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SITE NAME STATE EPA ID# ABC0000000		EPA REGION XX COUNTY NAME LOCATION Other Names:
NPL LISTING HISTORY Provides the dates when the site was Proposed, made Final, and Deleted from the NPL.	Site Description	A
	Site Responsibility:	
SITE RESPONSIBILITY Identifies the Federal, State, and/or potentially responsible parties taking responsibility for cleanup actions at the site.	Threats and Contaminants	B
	Cleanup Approach	
ENVIRONMENTAL PROGRESS Summarizes the actions to reduce the threats to nearby residents and the surrounding environment and the progress towards cleaning up the site.	Response Action Status	D
	Site Facts:	E
	Environmental Progress	
Site Repository		

SITE REPOSITORY
Lists the location of the primary site repository. The site repository may include community relations plans, public meeting announcements and minutes, fact sheets, press releases, and other site-related documents.

A**SITE DESCRIPTION**

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

B**THREATS AND CONTAMINANTS**

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

C**CLEANUP APPROACH**

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

D**RESPONSE ACTION STATUS**

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

E**SITE FACTS**

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

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

Icons in the Threats and Contaminants Section



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



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



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



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



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

Icons in the Response Action Status Section



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



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



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



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

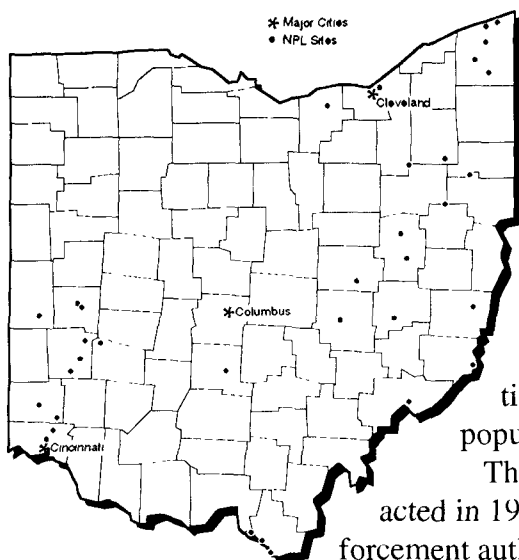


Cleanup Ongoing indicates that the selected cleanup remedies for the contaminated site, or part of the site, currently are underway.



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

A SUMMARY OF THE STATE PROGRAM



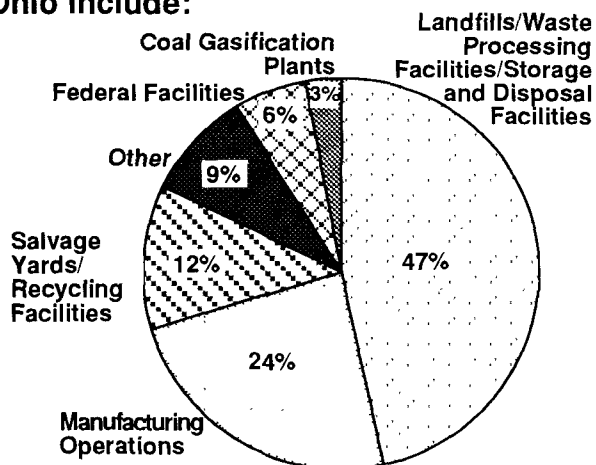
Superfund Activities in Ohio

The State of Ohio is located within EPA Region 5, which includes the six midwestern States. The State covers 41,330 square miles. According to the 1990 Census, Ohio experienced a slight increase in population between 1980 and 1990, and is ranked seventh in U.S. population with approximately 10,847,000 residents.

The Ohio Solid and Hazardous Waste Disposal Law, enacted in 1980 and amended in 1988, establishes funding and enforcement authorities for site cleanup. The statute grants the State the authority to compel polluters to conduct or pay for site cleanup, demand site access, issue civil and criminal penalties, recover the cost of State actions, allow citizen suits, and place a lien on property as a means of payment. In practice, the State must attempt to reach an agreement with the polluter before taking action; the State is prohibited from taking action where the EPA is pursuing a claim. The State maintains two funds which include the Hazardous Waste Cleanup Fund and the Hazardous Waste Facility Management Fund. The Hazardous Waste Cleanup Fund is used to fund day-to-day activities, build additional hazardous waste facilities, and to purchase sites. The Hazardous Waste Facility Management Fund provides the required 10 percent State contribution to the Federal Superfund program as well as funds for State level-of-effort contracts and non-investigatory emergency response actions. Currently, 33 sites in the State of Ohio have been listed as final on the NPL; one site has been deleted. No new sites have been proposed for listing in 1992.

The Ohio Environmental Protection Agency implements the Superfund Program in the State of Ohio

Activities responsible for hazardous waste contamination in the State of Ohio include:



Facts about the 34 NPL sites in Ohio:



Immediate Actions (such as removing hazardous substances or restricting site access) were performed at 18 sites.



Ten sites endanger sensitive environments.

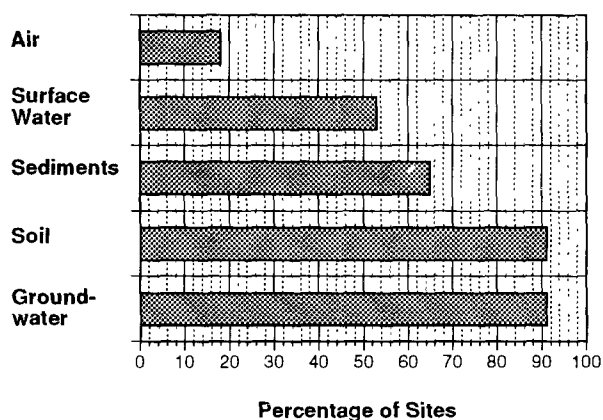


Twenty-seven sites are located near residential areas.

OHIO

Most Sites Have Multiple Contaminants and Contaminated Media:

Media Contaminated at Sites



Contaminants Found at Sites

Percentage of Sites	
VOCs	85%
Heavy Metals	79%
Creosotes	38%
PCBs	32%
Pesticides/Herbicides	21%
Plastics	21%
Petrochemicals/Explosives	15%
Other*	12%
Dioxin	9%
Radiation	9%
Cyanide	9%
Asbestos	6%
Fluoride	6%
Acids	3%
Gases	3%

The Potentially Responsible Party Pays...

In the State of Ohio, potentially responsible parties are paying for or conducting cleanup activities at 24 sites.

*Other contaminants include chloride, furans, nitrate, and sulfate.

For Further Information on NPL Sites and Hazardous Waste Programs in the State of Ohio Please Contact:

☎ EPA Region 5 Office of Public Affairs	For information concerning community involvement	(312) 353-2072
☎ National Response Center	To report a hazardous waste emergency	(800) 424-8802
☎ Ohio Environmental Protection Agency: Division of Emergency and Remedial Response	For information about the State's responsibility in the Superfund Program	(614) 644-2924
☎ EPA Region 5 Waste Management Division	For information about the Regional Superfund Program	(312) 353-9419
☎ EPA Superfund Hotline	For information about the Federal Superfund Program	(800) 424-9068

THE NPL REPORT

PROGRESS TO DATE

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

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

- ⇒ An arrow in the "Initial Response" category indicates that an emergency cleanup, immediate action, or initial action has been completed or currently is underway. Emergency or initial actions are taken as an interim measure to provide immediate relief from exposure to hazardous site conditions or to stabilize a site to prevent further contamination.
- ⇒ A final arrow in the "Site Studies" category indicates that an investigation to determine the nature and extent of the contamination at the site currently is ongoing or planned.
- ⇒ A final arrow in the "Remedy Selection" category means that the EPA has selected the final cleanup strategy for the site. At the few sites where the EPA has

determined that initial response actions have eliminated site contamination, or that any remaining contamination will be naturally dispersed without further cleanup activities, a "No Action" remedy has been selected. In these cases, the arrows are discontinued at the "Remedy Selection" step and resume in the "Construction Complete" category.

- ⇒ A final arrow at the "Remedial Design" stage indicates that engineers currently are designing the technical specifications for the selected cleanup remedies and technologies.
- ⇒ A final arrow in the "Cleanup Ongoing" column means that final cleanup actions have been started at the site and currently are underway.
- ⇒ A final arrow in the "Construction Complete" category is used only when all phases of the site cleanup plan have been performed, and the EPA has determined that no additional construction actions are required at the site. Some sites in this category currently may be undergoing long-term operation and maintenance or monitoring to ensure that the cleanup actions continue to protect human health and the environment.
- ✓ A check in the "Deleted" category indicates that the site cleanup has met all human health and environmental goals and that the EPA has deleted the site from the NPL.

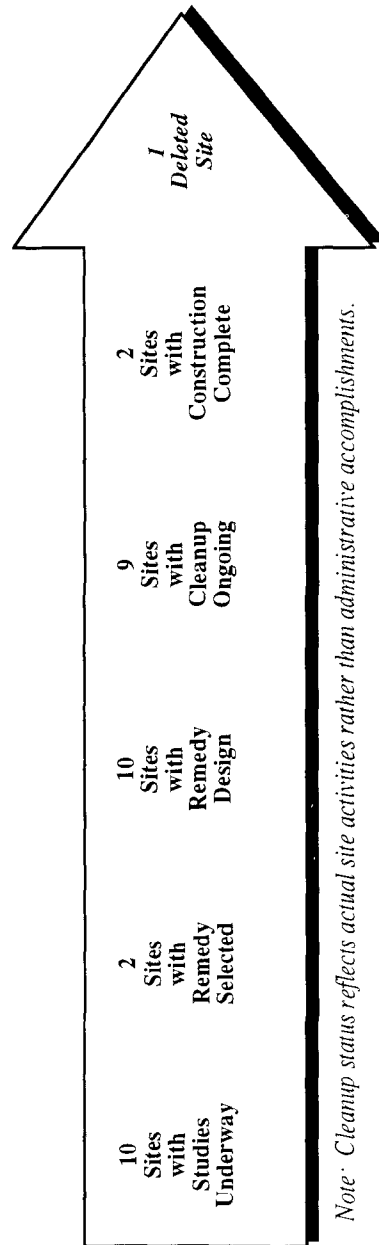
Further information on the activities and progress at each site is given in the site "Fact Sheets" published in this volume.

Progress Toward Cleanup at NPL Sites in the State of Ohio

Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
ALLIED CHEMICAL & IRONTON COKE	LAWRENCE	Final	09/08/83	⇨	⇨	⇨	⇨			
ALSCO ANACONDA	TUSCARAWAS	Final	06/10/86		⇨	⇨	⇨	⇨		
ARCANUM IRON & METAL	DARKE	Final	09/08/83	⇨	⇨	⇨	⇨			
BIG D CAMPGROUND	ASHTABULA	Final	09/08/83	⇨	⇨	⇨	⇨			
BOWERS LANDFILL	PICKAWAY	Final	09/08/83		⇨	⇨	⇨	⇨		
BUCKEYE RECLAMATION	BELMONT	Final	09/08/83		⇨	⇨	⇨			
CHEM-DYNE	BUTLER	Final	09/08/83	⇨	⇨	⇨	⇨	⇨	⇨	
CHEMICAL & MINERALS RECLAMATION, INC.	CUYAHOGA	Deleted	12/30/82	⇨					⇨	✓
COSHOCOTON LANDFILL	COSHOCOTON	Final	09/08/83	⇨	⇨	⇨	⇨			
E. H. SCHILLING LANDFILL	LAWRENCE	Final	09/08/83		⇨	⇨	⇨	⇨		
FEED MATERIALS PRODUCTION CENTER (US DOE)	HAMILTON/BUTLER	Final	11/24/89	⇨	⇨					
FIELDS BROOK	ASHTABULA	Final	09/08/83		⇨	⇨	⇨			
FULTZ LANDFILL	GUERNSEY	Final	09/08/83		⇨	⇨	⇨			
INDUSTRIAL EXCESS LANDFILL	STARK	Final	06/10/86	⇨	⇨	⇨	⇨	⇨		
LASKIN/POPLAR OIL CO.	ASHTABULA	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
MIAMI COUNTY INCINERATOR	MIAMI	Final	09/21/84	⇨	⇨	⇨	⇨			
MOUND PLANT (US DOE)	MONTGOMERY	Final	11/24/89		⇨					
NEASE CHEMICAL	COLUMBIANA	Final	09/08/83	⇨	⇨					
NEW LYME LANDFILL	ASHTABULA	Final	09/08/83		⇨	⇨	⇨	⇨		
OLD MILL	ASHTABULA	Final	09/08/83	⇨	⇨	⇨	⇨	⇨	⇨	
ORMET CORP.	MONROE	Final	07/21/87		⇨					
POWELL ROAD LANDFILL	MONTGOMERY	Final	09/21/84		⇨					
PRISTINE, INC.	HAMILTON	Final	09/08/83	⇨	⇨	⇨	⇨	⇨		
REILLY TAR AND CHEMICAL CORP.	TUSCARAWAS	Final	08/30/90	⇨	⇨					
REPUBLIC STEEL CORP. QUARRY	LORAIN	Final	06/12/86		⇨	⇨	⇨	⇨		

Progress Toward Cleanup at NPL Sites in the State of Ohio (Continued)

Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
SANITARY LANDFILL CO. (INDUSTRIAL WASTE DISPOSAL CO., INC.)	MONTGOMERY	Final	06/10/86		⇒					
SKINNER LANDFILL	BUTLER	Final	09/08/83		⇒	⇒				
SOUTH POINT PLANT	LAWRENCE	Final	09/21/84		⇒					
SUMMIT NATIONAL	PORTAGE	Final	09/08/83	⇒	⇒	⇒	⇒			
TRW, INC. (MINERVA PLANT)	STARK	Final	03/31/89	⇒	⇒	⇒	⇒			
UNITED SCRAP LEAD CO., INC.	MIAMI	Final	09/21/84	⇒	⇒	⇒	⇒			
VAN DALE JUNKYARD	WASHINGTON	Final	06/10/86		⇒					
WRIGHT-PATTERSON AIR FORCE BASE	GREENE	Final	10/04/89	⇒	⇒					
ZANESVILLE WELL FIELD	MUSKINGUM	Final	09/08/83		⇒	⇒				



Note: Cleanup status reflects actual site activities rather than administrative accomplishments.

ALLIED CHEMICAL & IRONTON COKE OHIO

EPA ID# OHD043730217



EPA REGION 5

Lawrence County
Ironton

Site Description

The 95-acre Allied Chemical & Ironton Coke site is bordered by the Ohio River and Ice Creek. It includes two industrial facilities that formerly used on-site lagoons to hold hazardous wastes. There are four major areas of concern on this site: the coke plant, the coke plant lagoons, the tar plant, and the Goldcamp disposal area. Manufacturing operations at the coke plant began in 1917. From 1920 to the late 1960s, wastewater and solid wastes generated in the coking process were discharged into the area east of the plant, which drained toward Ice Creek. In the early 1970s, a series of lagoons were constructed on site for treatment of plant process wastewater. The lagoons were constructed by building dikes with site materials, including soil and solid wastes. In 1982, the coke plant, including the lagoon system, was shut down. In 1945, the tar plant was constructed across from the coke plant. The purpose of the tar plant was to manufacture products from the tar produced in the coking process. The tar plant currently is operating. Some of the process wastes for the tar plant were disposed of in an adjacent sand and gravel pit called the Goldcamp disposal site, which has been owned by the Allied Chemical and Dye Company since 1955. In the late 1970s, the Goldcamp Disposal site was closed by removing standing water, filling, and capping with imported clay soil. Underlying the Goldcamp Disposal Area (GDA), contaminants have migrated downward through the aquifer to the surface of the underlying impermeable bedrock. The surface of the GDA also is a source of contamination, because many substances have oozed up through the existing cap. Approximately 14,000 people live in Ironton. Groundwater is the main source of municipal water for the city. The Ohio River and Ice Creek are used for recreational activities including fishing.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



The groundwater, soil, and sediments are contaminated with volatile organic compounds (VOCs), phenols, polycyclic aromatic hydrocarbons (PAHs), inorganics including cyanide, and the heavy metal arsenic. Potential health threats include direct contact or accidental ingestion of these contaminants in the soil, sediments, or groundwater, which is used as a source of drinking water in the Village of Coal Grove, approximately 2,000 feet from the site.

Cleanup Approach

This site is being addressed in three stages: an initial action and two long-term remedial phases focusing on cleanup of the Goldcamp Disposal Area and cleanup of the Coke Plant/Lagoon area.

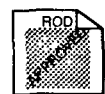
Response Action Status



Initial Action: The parties potentially responsible for site contamination are dismantling the coke plant located on the site in preparation for the site cleanup. Cleanup of the coke plant area will be completed under another phase as described below.



Goldcamp Disposal Area: Based on the results of the Goldcamp Disposal Area investigation, the EPA selected the following cleanup actions: construction of a slurry wall around the disposal area; installation of a cover over the surface of the disposal area; extraction and on-site treatment of groundwater from inside and outside the containment system; provision of an alternate water supply for the Iron-ton Iron Company until groundwater cleanup levels are met; imposition of deed restrictions to limit future uses of the property; and preparation of a supplemental pre-design investigation. The pre-design investigation was completed in 1991, at which time the design of the remedies began. Cleanup is scheduled to begin in 1993.



Coke Plant/Lagoon Area: Based on the results of the Coke Plant/Lagoon Area investigation, the EPA selected the following cleanup actions: on-site incineration of approximately 122,000 cubic yards of lagoon waste materials; in-place bioremediation of approximately 457,000 cubic yards of lagoon waste material; bioremediation of approximately 40,000 cubic yards of soil on a prepared surface; and pumping and on-site treatment of groundwater. In addition, groundwater will be monitored downgradient of Ice Creek; a contingency plan will be prepared; fencing, security, and deed restrictions will be put in place; and the effectiveness of in-situ bioremediation, with a contingency for development of an alternative cleanup action for Lagoons 1 through 4, will be evaluated. The parties potentially responsible for site contamination, under EPA monitoring, began designing the technologies to be used in the cleanup in 1991. Cleanup activities are scheduled to begin in late 1992.

Site Facts: The EPA issued a Unilateral Administrative Order in 1989 for partial cleanup of the site. The order calls for Allied-Chemical, Inc. and the AMCAST Industrial Corporation to design and conduct cleanup of the Goldcamp Disposal Area on the site.

Environmental Progress



The dismantling of the coke plant and continuous site security, along with the earlier actions taken to close the disposal area, have reduced the potential for exposure to hazardous substances at the Allied Chemical & Ironton Coke site while further cleanup activities are being planned.

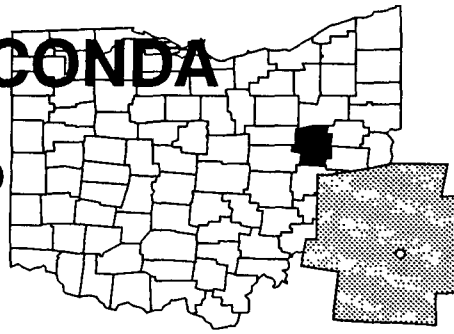
Site Repository



Briggs Lawrence County Public Library, 321 South 4th Street, Ironton, OH 45638

ALSCO ANACONDA OHIO

EPA ID# OHD057243610



EPA REGION 5

Tuscarawas County
Gnadenhutten

Site Description

The 4 3/4-acre AlSCO Anaconda site is owned by the ARCO Chemical Company, a division of Atlantic Richfield. From 1965 to 1978, the site was used for the disposal of wastewater and wastewater treatment sludge that were generated by the production of aluminum products. The sludge was disposed of in two unlined lagoons and a sludge pit. From 1971 to 1978, the company disposed of the equivalent of approximately 18,000 drums of waste. The lagoons and sludge pit contain contaminants including chromium and cyanide. A wooded low-lying area near the river received overflow from the lagoons. The remaining wastewater was discharged into the Tuscarawas River. Since 1978, sludge has been disposed of at an off-site facility. However, over 4,800 tons of sludge remain on the property, spread across most of the site. Approximately 3,100 people live within 3 miles of the site. These individuals depend on city and private drinking water wells drawn from groundwater aquifers, as there are no alternative sources of drinking water. Contaminated groundwater from the site generally flows toward the Tuscarawas River, and away from the city water supply wells. The site is located within both the 50 and 100-year flood plains of the Tuscarawas River, which is used for various recreational activities.

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

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



The groundwater, soil, and surface water are contaminated with heavy metals including cyanide and chromium. The soil in the wooded area also is contaminated with polychlorinated biphenyls (PCBs). Possible health threats include accidentally ingesting or coming in direct contact with contaminated groundwater or soil. If a flood of the Tuscarawas River should occur, substantial amounts of contaminants could be washed into the river.

Cleanup Approach

This site is being addressed in two long-term remedial phases focusing on cleanup of the sludge and soil and cleanup of the groundwater and surface water.

Response Action Status



Sludge and Soil: In 1989, based on the results of the site investigation, the EPA selected the following methods for cleanup of contaminated sludge and soil: highly contaminated sludge from the wooded area will be excavated, drummed, and hauled to a facility for incineration; the remaining wastes from the wooded area, the lagoons, and the sludge pit will be excavated and hauled to a licensed landfill or treatment facility and treated prior to disposal, as necessary; and the excavated lagoons and sludge pit will be filled with clean fill. The excavation of the sludge began in the spring of 1992. Cleanup is planned for completion in late 1992.



Groundwater and Surface Water: The parties potentially responsible for site contamination have conducted a supplemental study to determine the nature and extent of groundwater and surface water contamination. The final study and risk assessment are scheduled for completion in late 1992.

Site Facts: A 1987 agreement between the EPA, the Ohio EPA, and ARCO provided for a site investigation to be completed by the company, under EPA monitoring. In 1989, the EPA issued a Unilateral Administrative Order to both Harvard Industries and ARCO to clean up the source materials found on site.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Alsco Anaconda site while further studies were taking place and final cleanup activities are underway.

Site Repository



Gnadenhutten Public Library, 160 North Walnut Street, Gnadenhutten, OH 44629

ARCANUM IRON & METAL OHIO

EPA ID# OHD017506171



EPA REGION 5

Darke County
Arcanum

Site Description

The 4 1/2-acre Arcanum Iron and Metal (AIM) site operated as a lead battery reprocessing facility from the early 1960s until 1982. During this operation, battery casings were split to extract lead cores for smelting. Battery acids generated from this operation were dumped in a large steel trough and allowed to drain to a low area. Reprocessing of the plastic and black rubber battery casings generated lead oxide sludge that collected on the ground and surface ponds on site. Past practices at the facility included burial of some materials in on-site pits. The State of Ohio investigated a fish kill in Sycamore Ditch and Painter Creek near the site in 1964. Testing of groundwater was not performed until the 1970s. The City of Arcanum's water supply is furnished by wells within 1 mile of the site, and private wells also are nearby.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater on the site contains lead. Lead, antimony, and arsenic have been detected in the sediments and soil. Potential risks may exist for individuals ingesting or coming in direct contact with contaminated groundwater or soils.

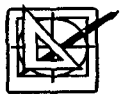
Cleanup Approach

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

Response Action Status



Immediate Action: To reduce public access to the contaminated site areas, the parties potentially responsible for the contamination constructed a fence around the entire site in 1984.



Entire Site: In 1986, the EPA determined the following actions would be necessary to clean up the site: excavation of on-site contaminated soils and battery casings with off-site disposal in a federally approved landfill; excavation and disposal of off-site soils exceeding human health standards in a federally approved facility; improvement of site drainage; demolition or cleaning of contaminated on-site facilities; implementation of deed restrictions for land and aquifer use; continuance of semi-annual groundwater monitoring; and conducting site treatability studies. The EPA intends to combine cleanup of the site with the United Scrap Lead site, another NPL site located approximately 30 miles away that is similarly contaminated. Contaminated soils will be removed to the United Scrap Lead site for treatment and returned to the AIM site. Revisions to the initially proposed cleanup actions include placing a soil cover over the excavated areas and recovery of lead from contaminated soil. A study began in 1987 to address the appropriateness of potential contaminant recovery and cleanup methods as part of the remedy design. The design is scheduled to be completed in 1993.

Site Facts: In 1979, the State entered into a Consent Decree with the owner to clean up the site, but the results were unsatisfactory. The owner ceased operation in 1982, having never fully complied with the provisions of the State Consent Decree.

Environmental Progress



Fencing of the entire site has reduced the potential for exposure to contaminated materials at the Arcanum Iron & Metal site while further studies are taking place and cleanup activities are being designed.

Site Repository



Arcanum Public Library, 101 North Street, Arcanum, OH 45304

BIG D CAMPGROUND OHIO

EPA ID# OHD980611735



EPA REGION 5

Ashtabula County
1 1/2 miles northeast of Kingsville
Township

Site Description

The 7 1/2-acre Big D Campground site consists of a former sand and gravel quarry that was used between 1964 and 1976 for the disposal of a variety of industrial wastes. The Olin Chemical Corporation estimates that 25,000 to 30,000 cubic yards of industrial bulk wastes, drums, and soil were disposed of at the site. Olin investigated possible contamination problems at the site in 1978. As part of the investigation, Olin installed three groundwater monitoring wells on the north side of Conneaut Creek and collected water samples from the wells. The results of these sampling efforts indicated the presence of volatile organic compounds (VOCs) in the groundwater. In 1982, Olin reported the findings of its investigation to the EPA. Subsequent groundwater sampling conducted by the EPA in 1982 confirmed the presence of VOCs in the groundwater. Approximately 3,900 people live within a 3-mile radius of the site. The distance from the site to the nearest residence is approximately 500 feet.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater and soil are contaminated with VOCs and heavy metals including barium, chromium, lead, and nickel. Surface water and sediments in Conneaut Creek are contaminated with low concentrations of VOCs and heavy metals. At present, area residents are not exposed to site-related contaminants located in the on-site groundwater. Most residents receive drinking water from the municipal water supply system, and private wells located near the site are not contaminated. In addition, potential exposure to contaminated soil is limited by the clay and vegetation covering the landfilled area. However, the EPA is concerned about the potential for future exposure. Existing private wells could become contaminated if the area of groundwater contamination believed to have originated from the site migrates farther northward.

Cleanup Approach

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

Response Action Status



Initial Actions: When erosion of the landfill soil cover exposed buried drums in 1983, Olin covered the surface of the landfill area with clay and took steps to control any further erosion of soil from the base of the slope. In addition, Olin installed a rainwater collection trench to remove rainfall runoff from the covered area and drilled 11 new groundwater monitoring wells on the site to expand its groundwater monitoring program.



Entire Site: As a result of the investigation completed by the EPA in 1989, the remedy selected to address site contamination includes the following activities: excavating drums and contaminated soils; burning excavated materials in an incinerator; filling the excavated area with soil and planting vegetation; constructing a fence around the excavated area and incinerator; installing two groundwater extraction trenches and 33 groundwater extractions wells near the site to withdraw contaminated groundwater; treating contaminated groundwater by passing it through a carbon filter system to remove contaminants and discharge of treated water to Conneaut Creek; deed restrictions on future site uses; and monitoring groundwater and surface water quality to assess the effectiveness of the cleanup. The parties potentially responsible for site contamination began developing a work plan to design the final remedies in 1990. The EPA installed additional monitoring wells to determine the extent of contaminated groundwater migration. Excavation and incineration of landfill contaminants will be the first cleanup activity.

Site Facts: After negotiating with the State, one of the potentially responsible parties has implemented a soil erosion control program.

Environmental Progress



The steps taken to control further erosion of contaminated soil from the Big D Campground site have reduced the potential of exposure to contaminants while activities leading to the final site cleanup are being completed.

Site Repository

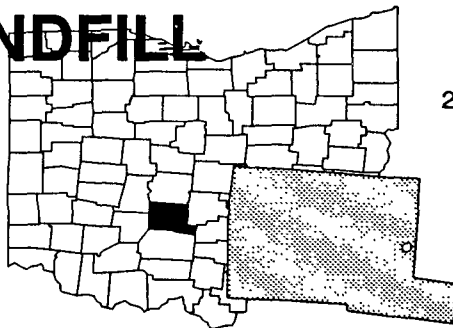


Kingsville Township Public Library, 6006 Academy Avenue, Kingsville, OH 44048

BOWERS LANDFILL

OHIO

EPA ID# OHD980509616



EPA REGION 5

Pickaway County
25 miles south of Columbus

Other Names:
Island Road Landfill

Site Description

The 12-acre Bowers Landfill site operated as a pit for gravel excavation operations beginning in 1958, but its owners subsequently converted it to a landfill, which at first accepted only domestic refuse. From 1958 to 1968, it accepted residential, grain elevator, and industrial wastes. Two local manufacturers of chemicals responded to a Congressional inquiry about the site and noted that they dumped approximately 7,500 tons of chemical waste at the landfill. Disposal practices frequently consisted of depositing the waste directly onto the ground and covering it with soil. Waste also was burned on site. Operations at the landfill ended in about 1968. In 1980, the EPA found that contaminants in the landfill were polluting nearby private wells with volatile organic compounds (VOCs). Approximately 60 people live within 1/2 mile of the site.

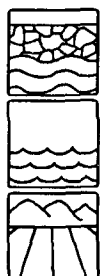
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater on site contains heavy metals including barium and manganese, VOCs, and phthalates. Sediments are contaminated with polychlorinated biphenyls (PCBs), petrochemicals, pesticides, VOCs, and lead. Contaminants in the soil include petrochemicals, lead, and PCBs. Off-site soils contain heavy metals including arsenic, as well as pesticides. Surface water is contaminated with VOCs, polycyclic aromatic hydrocarbons (PAHs), and heavy metals. Potential health risks exist for individuals who drink or come in direct contact with contaminated groundwater, inhale contaminated soil or sediment particles, or eat small animals, birds, fish or plants that are contaminated with chemicals from the site. The area between the landfill and the Scioto River generally floods twice a year, which further contributes to the threat of contaminant releases.

Cleanup Approach

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

Response Action Status



Entire Site: The EPA studied the nature and extent of contamination at the site from 1983 to 1989. The results of this study, along with a study by the parties potentially responsible for the site contamination, were used to prepare an analysis of the alternatives for addressing the threat the landfill poses to people and the environment. In 1989, the EPA recommended the following actions at the site to address the contamination problem: removing and disposing of all surface debris in an approved landfill; improving erosion control and drainage; installing a natural clay cover over the landfill; installing a topsoil layer over the clay cover; protecting the cap from flood damage; installing a limited number of new groundwater monitoring wells; taking samples of the groundwater and analyzing them to determine any increases in the level of contaminants; and installing a fence to prevent site entry. Cleanup work began in 1991, and is expected to be completed in 1993.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Bowers Landfill site while final cleanup activities were being planned.

Site Repository



Pickaway County District Library, 165 East Main Street, Circleville, OH 43113

BUCKEYE RECLAMATION OHIO

EPA ID# OHD980509657



EPA REGION 5

Belmont County
St. Clairsville

Other Names:
Buckeye Landfill
Belmont County Landfill

Site Description

The 50-acre Buckeye Reclamation site, a former disposal site for coal mine spoils, was licensed in 1971 by the Ohio Department of Health as a sanitary landfill. Between 1976 and 1979, the landfill also accepted industrial wastes, including sludges and liquids, without State approval. Industrial and asbestos wastes were dumped into a pond known as the Waste Pit. The slopes of the filled area are steep, and the mining wastes used for cover are eroding. Substantial amounts of contaminated leachate from the site have entered a stream adjacent to a private home. The site has polluted Little McMahon Creek, which may be used for drinking water and recreational purposes. The closest residence is 1/4 mile from the site. The population within a 2-mile radius of the site is approximately 100. There are private wells immediately downgradient from the site.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater is contaminated with volatile organic compounds (VOCs) and heavy metals. Nearby King's Run and Little McMahon Creek have been polluted by acid mine drainage from the mine wastes and contaminants from waste disposal practices at the site. High levels of VOCs and heavy metals have been detected in the Waste Pit. Potential health risks may exist for individuals who accidentally ingest or come in direct contact with contaminated groundwater, surface water, soil, and leachate.

Cleanup Approach

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

Response Action Status



Entire Site: The parties potentially responsible for the contamination initiated an investigation in 1985 to determine the type and extent of contamination at the site and to identify alternative remedies for the cleanup. The investigation, completed in 1991, resulted in the selection of the following remedies: capping the waste and surface area recharge areas, constructing a surface leachate and groundwater collection system, and treating leachate in the groundwater via constructed wetlands. Deed restrictions will be implemented on the future use of the site and the property will be fenced. The companies have begun designing the selected remedies. Actual cleanup activities are expected to begin in late 1993.

Site Facts: An agreement between the EPA, the State of Ohio, and six companies was reached in 1985, requiring the companies to investigate possible contamination at and around the landfill. The companies will carry out the project under EPA monitoring.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Buckeye Reclamation site. Cleanup remedies have been selected and are currently being designed.

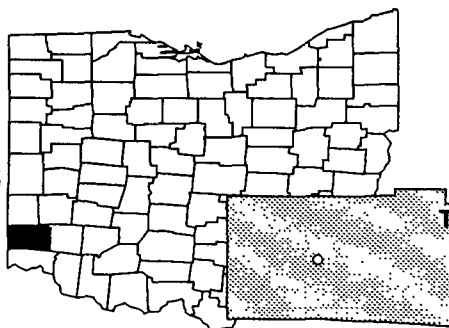
Site Repository



St. Clairsville Public Library, 108 West Main Street, St. Clairsville, OH 43950

CHEM-DYNE OHIO

EPA ID# OHD074727793



EPA REGION 5

Butler County
Hamilton

Other Names:

Transenvironmental Services

Site Description

The 10-acre Chem-Dyne site operated as an industrial chemical waste transfer, disposal, and storage facility. As early as 1974, chemical wastes may have been trucked to the site. In 1975, Spray-Dyne made antifreeze from recycled chemical wastes. The operation was expanded in 1976, and the Chem-Dyne Corporation was formed. Wastes that were unsuitable for recycling were stored in drums and tanks on the site or shipped to other disposal sites. More than 30,000 drums of waste and 300,000 gallons of bulk waste materials were on site when operations shut down in 1980. In the 5 years of operation, a number of environmental incidents were reported at the site. From 1976 to 1979, at least five fish kills in the Great Miami River were attributable to the Chem-Dyne facility; one fish kill stretched for 37 miles. Fires occurred at the site in 1976 and 1979. A residential area is located approximately 1,000 feet from the site. A storm sewer drained the site into the Ford Canal, which flows into the Great Miami River. The Ford Canal is used only for drainage and hydroelectric power generation. The Great Miami River is used for recreation. Water supplies in the area rely on groundwater as their source.

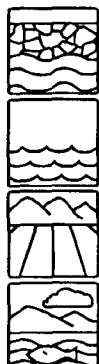
Site Responsibility: This site is being addressed through Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 10/21/81

Final Date: 09/08/83

Threats and Contaminants



Groundwater is contaminated with volatile organic compounds (VOCs) and heavy metals. Sediments in the Ford Canal contained low concentrations of organics. Soil was contaminated with VOCs, pesticides, other organic compounds, and heavy metals including mercury, arsenic, nickel, and beryllium. The on-site buildings were contaminated with polychlorinated biphenyls (PCBs). The site no longer poses a threat to human health or the environment as surface contamination has been cleaned up, the ongoing operation of a groundwater pump and treatment system is protecting nearby residents and the environment, and the State of Ohio is preventing the use of the contaminated aquifer for drinking water.

Cleanup Approach

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

Response Action Status



Immediate Actions: In 1980, the EPA stabilized, removed, and disposed of 17 potentially explosive drums at a federally approved treatment facility. Beginning in 1982, the EPA removed another 9,000 drums and solidified and removed 200,000 gallons of liquid and solid wastes in 33 storage tanks to a federally approved facility. Spilled materials were cleaned up and wastewater was treated and disposed of. The storm drain in the loading dock area was plugged to prevent the discharge of contaminated waste into Ford Canal. The site also was fenced to prevent access.



Entire Site: In 1985, a remedy to clean up the site was selected by the EPA which included installation of a system to extract the groundwater and treat it by air stripping. The contaminants are further treated with activated carbon before being released into the air. In addition, the buildings on the site were demolished, selected areas of soil were removed, and a synthetic cap with a clay layer was placed over the site. The parties potentially responsible for site contamination completed all surface cleanup activities in 1987. The groundwater pump and treatment system has been in operation since 1988 and must operate until at least 1998 to meet established cleanup standards.

Site Facts: In 1979, the State of Ohio required all materials to be removed from the Chem-Dyne site by 1980. In 1985, the EPA and 178 parties potentially responsible for site contamination signed a Consent Decree requiring the parties to conduct cleanup activities.

Environmental Progress



The treatment of contaminated groundwater, removal of contaminated soil, and placement of a cap over the site have addressed the potential for exposure to hazardous materials at the Chem-Dyne site. The operation of the groundwater pump and treatment system continues to provide protection to nearby residents and the environment.

Site Repository



City of Hamilton, Municipal Building, 20 High Street, Hamilton, OH 45011

CHEMICAL & MINERALS RECLAMATION, INC. OHIO

EPA ID# OHD980614549



EPA REGION 5

Cuyahoga County
Cleveland

Site Description

The Chemical Mineral Reclamation, Inc. site (CMR) covers a 3/4 acre area located on the north side of Cleveland, Ohio on the floodplain of the Cuyahoga River. The site is located in a metropolitan area surrounded by the Cleveland Memorial Shoreway to the south and west, the old Cuyahoga River bed to the north, and industrial property to the east. The owner of the area, Plain Dealer, leased this land to CMR in 1979. CMR planned to use the site as a recycling facility, but in the end only collected and stored wastes in vats and barrels. The vats and barrels contained miscellaneous wastes including flammable and non-flammable solvents, paints, tar, grease, and resins. These storage operations continued until July 2, 1980, when a fire occurred at the warehouse on site. As a result of the fire, the Cleveland Memorial Shoreway was closed temporarily, but no injuries were reported. On-site soil was suspected to be contaminated by possible leaking and overflowing of the vats and barrels. The population surrounding the site was the City of Cleveland with an estimated 573,822 people according to the 1980 census. The entrance to the Cuyahoga River and Lake Erie is approximately 1 1/2 miles from the site. A boat docking area and several homes are nearby. A marina is located in the general vicinity. The City of Cleveland, the U.S. Coast Guard, the Ohio EPA, and the U.S. EPA all have participated in some phase of the cleanup activity.

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

NPL LISTING HISTORY
Deletion Date: 12/30/82

Threats and Contaminants



Soil was contaminated with volatile organic compounds (VOCs) including acetone, methyl ethyl ketone, methyl alcohol, toluene, xylene, trichloroethylene, and dichloroethylene, and sludge. These contaminants came from a variety of sources including flammable and non-flammable solvents (both chlorinated and non-chlorinated), paints, tar, grease, resins, and other miscellaneous wastes. The migration of contaminants off site to groundwater, surface water, or soil was not suspected. Therefore, there was no indication that a potential threat existed to individuals or the environment near the site.

Cleanup Approach

This site was addressed by an emergency cleanup of the entire site.

Response Action Status



Emergency Actions: In 1981, 2,000 containers, ranging in size from five to 55 gallons, of flammable and non-flammable solvents (both chlorinated and non-chlorinated), paints, tar, grease, resins, and other miscellaneous wastes were removed. Liquid and solid materials from six 3,500 gallon vats were also removed. Further cleanup actions included compatibility testing of chemicals and the removal of chemicals to various recyclers, incinerators, and landfills. The buildings on site were demolished and the contaminated soil was removed to a licensed landfill. Site cleanup was completed in mid-1982.

Site Facts: The Chemical Minerals Reclamation, Inc. site was placed on the Interim Priorities List in October 1981. All cleanup actions were completed before the first proposed NPL was established. A Consent Decree was signed in 1987 between the EPA and all potentially responsible parties to recover more than 85 percent of the EPA's cleanup costs.

Environmental Progress



The removal of contaminated containers, vats, and soil, and the demolition of all buildings on site have been completed and have eliminated the possibility of exposure to hazardous materials at the Chemical & Minerals Reclamation, Inc. site.

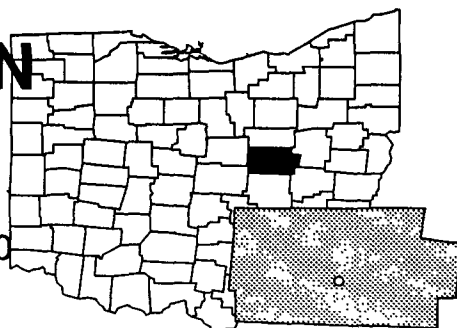
Site Repository



Information is no longer available.

COSHOCTON LANDFILL OHIO

EPA ID# OHD980509830



EPA REGION 5

Coshocton County
Coshocton

Site Description

The 80-acre Coshocton Landfill site was used in the early 1900s, and again from the mid-1950s until 1979, for the mining of coal. The subsurface mines were abandoned but contained extensive networks of mine shafts. The City built a landfill on top of the abandoned strip mines where it disposed of municipal and industrial wastes from 1968 to 1979. The City also put some wastes in a shallow excavation at the southern end of the site. In 1977, an area of the landfill caught fire. The fire burned for three days and was allowed to burn itself out. The EPA has reported several leachate seeps at the landfill. Approximately 13,400 people live in the City of Coshocton. Several farms are located near the landfill. There are at least 34 private wells for domestic use within 4,000 feet of the landfill; however, these wells do not draw their water from areas that would be affected by the landfill.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater has been contaminated with volatile organic compounds (VOCs) and heavy metals. Sediments on site contain VOCs and pentachlorophenol (PCP). Soils on site contain VOCs and phenols. Heavy metals and the VOC actone are found in the surface water. On-site workers and trespassers can be exposed to hazardous substances if they come in direct contact with contaminated soils and groundwater, inhale contaminated soil particles, or drink contaminated groundwater.

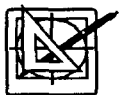
Cleanup Approach

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

Response Action Status



Immediate Actions: The EPA analyzed 14 drums on site and determined that they did not contain hazardous substances. In 1985, the City of Coshocton completed the cleanup of the drums and disposed of them in an off-site facility.



Entire Site: In 1988, the EPA selected a strategy to address contamination at the site. The selected cleanup activities include: covering the landfill with a clay cap that prevents liquids from passing through; installing a soil cap over the landfill with topsoil and vegetation; imposing deed restrictions on future use of the property; installing fencing around the landfill; filling and grading the necessary areas; and (6) installing a gas collection and venting system and a leachate collection system. The technical design for the cleanup is scheduled for completion in early 1993.

Site Facts: In 1989, the EPA issued a Unilateral Administrative Order to the City of Coshocton, requiring it to undertake some interim cleanup measures, primarily to protect surface water and to address the contaminated leachate being generated from the site.

Environmental Progress



The cleanup and disposal of drums have reduced the potential for exposure to hazardous materials at the Coshocton Landfill site while final cleanup activities are being planned.

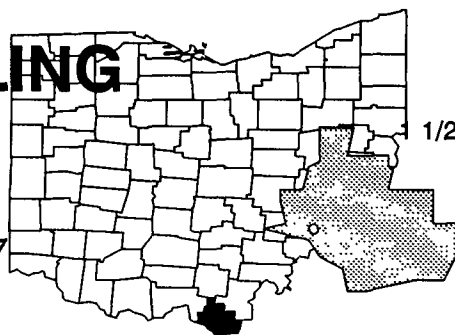
Site Repository



Coshocton Public Library, 655 Main Street, Coshocton, OH 43812

E. H. SCHILLING LANDFILL OHIO

EPA ID# OHD980509947



EPA REGION 5

Lawrence County

1/2 miles northwest of Hanging Rock

Site Description

The 3-acre E. H. Schilling Landfill site operated as an industrial waste landfill from 1969 until 1980. The landfill was licensed to accept only non-hazardous wastes, but was closed in 1980 as a result of permit violations. A variety of hazardous and non-hazardous wastes were disposed of on site. Landfill waste is contained behind an earthen dam and beneath a cover or cap. While the dam is structurally stable, it does not comply with existing safety standards. The landfill cap also fails to comply with State and Federal regulations. Leachate was discovered seeping from the face of the dam. Warning signs are posted at the site, and there is a barrier preventing vehicles from entering the premises. Approximately 1,500 people live within 3 miles of the site. The closest residence is located within 1/4 mile of the site. Domestic water is taken from municipal and private wells. Wayne National Forest borders the site to the north. An unnamed stream carries runoff from the site into Winkler Run and the Ohio River.

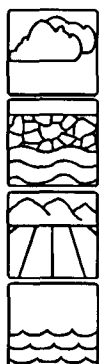
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Nickel has been detected in air sampled near the landfill at levels exceeding Federal standards. Arsenic and volatile organic compounds (VOCs) have been found in groundwater. Leachate, soil, and stream sediments are contaminated with VOCs, polycyclic aromatic hydrocarbons (PAHs), and heavy metals. Individuals who accidentally ingest contaminated groundwater, soil, or sediments may potentially suffer adverse health effects.

Cleanup Approach

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

Response Action Status



Entire Site: In 1989, the EPA selected the following cleanup technologies to address site contamination: capping the entire site; removing and treating 7,000,000 gallons of liquid waste and leachate from the landfill; constructing a cut-off wall around the landfill to prevent groundwater from infiltrating into waste; improving the earthen dam by adding a berm; consolidating 750 cubic yards of soil and 500 cubic yards of sediment under the cap; adding perimeter drainage features; fencing the entire site; monitoring groundwater; operating and maintaining the site; and imposing deed restrictions. The potentially responsible parties, under EPA monitoring, completed the design for the selected remedies in 1992 and immediately began cleanup operations. The site cleanup is expected to be completed in 1993.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the E. H. Schilling Landfill site while cleanup activities underway.

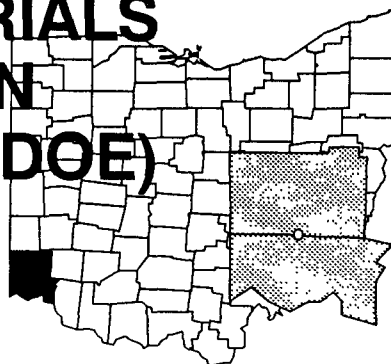
Site Repository



Briggs Lawrence County Public Library, 321 South 4th Street, Ironton, OH 45638

FEED MATERIALS PRODUCTION CENTER (USDOE) OHIO

EPA ID# OH6890008976



EPA REGION 5

Hamilton and Butler Counties
19 miles northwest of Cincinnati

Other Names:
National Lead Co. of Ohio (SIA)
Westinghouse Materials
Company of Ohio
Fernald

Site Description

The 1,450-acre Feed Materials Production Center site is operated by the U.S. Department of Energy (DOE) and has manufactured metallic uranium for DOE nuclear weapon reactors since the early 1950s. The manufacturing processes have generated large quantities of wastes, including low-level radioactive wastes, mixed hazardous and radioactive wastes, oils, solvents, and fly ash. Operations and disposal practices have resulted in contamination in the production area, six waste pits, three waste storage silos, a storm sewer ditch leading to Paddy's Run, and an effluent line discharging into the Great Miami River. Additional waste storage and disposal areas included other silos, a burn pit, a clear well, two fly ash disposal areas, a sanitary landfill, and two lime sludge ponds. Uranium has contaminated the Buried Valley Aquifer, the sole source of drinking water for the production center workers and most area residents. Approximately 1,100 production center workers obtain drinking water from wells, and 750 acres of land are irrigated by wells within 3 miles of the site. A residential area is located about 4,000 feet east of the production area. The Great Miami River is used for various recreational purposes.

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

NPL LISTING HISTORY

Proposed Date: 07/14/89

Final Date: 11/24/89

Threats and Contaminants



Radon gas has been detected in the air. Fish and plants contain radionuclides and heavy metals. Groundwater is contaminated with uranium, radium, and various volatile organic compounds (VOCs). Uranium has been detected in the sole source aquifer. Metallic scrap contained in several scrap piles is contaminated with uranium and other radionuclides. Creek and ditch sediments are contaminated with uranium and other radionuclides, while soil is contaminated with radionuclides, organics, inorganics, and asbestos. High concentrations of uranium, technetium, and hexavalent chromium have been detected in the effluent line discharging to the Great Miami River. Three uranium-contaminated private wells have been closed and are no longer used for drinking water. Potential health threats include accidentally ingesting, coming in direct contact with, or inhaling contaminated soil, groundwater, air, and surface water. Eating contaminated plants and fish is also a potential threat.

Cleanup Approach

Cleanup activities at this site are being addressed in six stages: immediate actions and five long-term remedial phases focusing on cleanup of the waste pits and soils, the groundwater, the production area, the K-65 silos, and the provision of an alternate water supply and water treatment.

Response Action Status



Immediate Actions: In 1990, waste in the pits was moved below the water line to reduce radionuclide emissions. A bentonite clay layer was placed inside the silos to cover wastes. Construction activities soon will begin to control the stormwater runoff.



Waste Pits and Soils: The DOE is investigating the nature and the extent of the contamination in the waste pits and soils. The pits contain 500,000 cubic yards of wastes, and approximately 500,000 cubic yards of contaminated soil are on site. Once the investigation is completed, scheduled for early 1994, specific cleanup strategies will be recommended.



Groundwater: The DOE is investigating the nature and extent of groundwater contamination at the site. The study indicates the groundwater is more contaminated than originally thought. Once the investigation is completed, scheduled for early 1994, cleanup remedies will be planned.



Production Area: The DOE is assessing the nature and extent of contamination in the production area. A remedy will be selected based on the results of the investigation.



K-65 Silos: The DOE is studying the extent of the contamination at the silos. The results of the investigation, expected in 1993, will lead to the selection of appropriate cleanup remedies.



Alternate Water Supply and Water Treatment: The DOE is continuing to characterize the nature and extent of contamination at the site. The investigation is exploring options for an alternate water supply, collection of the contaminated plume, and water treatment.

Site Facts: A Federal Facilities Compliance Agreement was signed in 1986 between the EPA and the DOE. Pursuant to the Agreement, the DOE is required to conduct a study of the nature and extent of site contamination and to recommend alternatives for final cleanup. A Consent Decree was signed in 1988. A new Consent Agreement was finalized in mid-1990.

Environmental Progress



Reducing radionuclide emissions by moving pit waste to below the water level and placing a clay layer over wastes in the silos have lessened the risk to human health and the environment at the Feed Materials Production Center. Additional actions are planned to further reduce sources of contamination while site investigations continue.

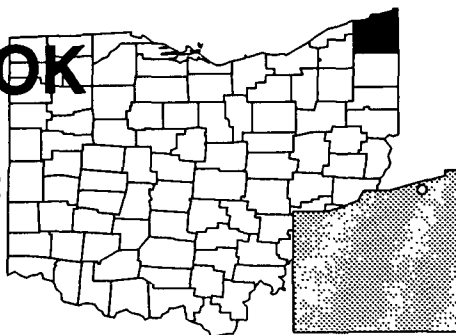
Site Repository



Lane Public Library, North 3rd & Buckeye Streets, Hamilton, OH 45011

FIELDS BROOK OHIO

EPA ID# OHD980614572



EPA REGION 5

Ashtabula County
Ashtabula

Site Description

The Fields Brook site is a 3 1/2-mile channel in a tributary of the Ashtabula River and collects water from a 5 1/2-square-mile area. A portion of Fields Brook flows through an industrial area containing a high concentration of diverse chemical plants and serves as the principal receiving stream for many industrial discharges. The site includes a brook and its tributaries, and areas bordering the site. From the industrial area, the brook flows through a residential area to the Ashtabula River. Industrial sources adjacent to Fields Brook have contaminated the sediments with a variety of toxic chemicals including polychlorinated biphenyls (PCBs) and heavy metals. The Ashtabula River empties into Lake Erie, 1 1/2 miles downstream of the site. Lake Erie serves as the potable water source for the City of Ashtabula. Contaminated sediments threaten drinking water intakes in Lake Erie.

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

NPL LISTING HISTORY

Proposed Date: 10/22/81

Final Date: 09/08/83

Threats and Contaminants

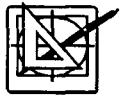


Sediments taken from the Ashtabula River are contaminated with PCBs, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), heavy metals, and phthalates. VOCs and heavy metals including mercury, lead, zinc, and cadmium have been detected in surface water from Fields Brook and the Detrex tributary. Contaminants detected in fish include VOCs and PCBs. The site poses a potential health risk to individuals who may drink or come in direct contact with contaminated water from Fields Brook and the Ashtabula River. Ingesting contaminated fish or sediments also may cause adverse health effects.

Cleanup Approach

This site is being addressed in three long-term remedial phases focusing on cleanup of sediments, controlling the source of contamination, and investigation of the Ashtabula River.

Response Action Status



Sediments: The selected cleanup technologies to address contaminated sediments include: excavating contaminated sediments from Fields Brook, subsequent temporary storing and dewatering of the sediments, and using thermal treatment to decontaminate a portion of the sediments with the on-site landfilling of the remainder of the sediments; treating wastewater from the dewatering process; and (3) long-term monitoring. Approximately 36,000 cubic yards of contaminated sediments will be solidified and 16,000 cubic yards will be thermally treated. Under EPA monitoring, six of the parties potentially responsible for site contamination are presently designing the technical specifications for the sediment cleanup. Final sediment cleanup activities are expected to be completed in late 1995.



Source Control: Under EPA monitoring, six of the potentially responsible parties currently are conducting a study to identify sources of ongoing sediment and surface water contamination. The study is planned to be completed in 1992.



Ashtabula River: Five potentially responsible parties, under EPA monitoring, are conducting an investigation into possible contamination of the Ashtabula River. The investigation will identify any potential sources of contamination to the river and harbor and will study the impacts of contamination on the water supply of the City of Ashtabula. Portions of the river may be added to the site if cleanup actions are required.

Site Facts: In 1989, six of the potentially responsible parties agreed to comply with an order from the EPA requiring them to design the cleanup technologies to address contaminated sediments at the site and to study the ongoing sources of site contamination. A separate order covers the river investigation. The EPA and the State issued a health advisory recommending that people not eat fish caught in a portion of the Ashtabula River because of possible contamination.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Fields Brook site while further studies are taking place and cleanup activities are being planned. Currently, investigations are determining if the Ashtabula River will require cleanup.

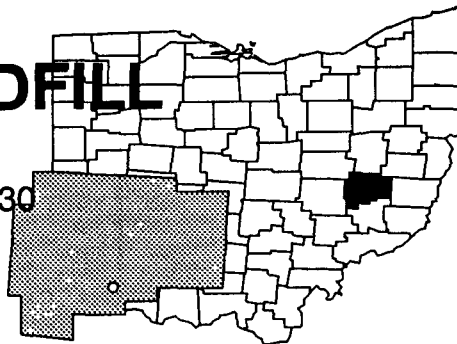
Site Repository



Ashtabula County District Library, 335 West 44th Street, Ashtabula, OH 44004

FULTZ LANDFILL OHIO

EPA ID# OHD980794630



EPA REGION 5

Guernsey County
1/2 mile northeast of Byesville

Site Description

From the mid-1950s to 1985, residential, commercial, and industrial solid waste was disposed of at the 30-acre Fultz Landfill site. The site lies in an area that was strip mined for coal in the late 1940s. Extensive subsurface coal mines also are located near the site. The landfill was licensed by Guernsey County in 1969 to accept solid waste products. On a number of occasions during the 1970s, County and State officials cited the owner of the landfill for violations of the operating license, which included inadequate control of leachate runoff and unauthorized disposal of drums that contained potentially hazardous liquid waste. In 1978, the Ohio Environmental Protection Agency found approximately 1,000 drums of hazardous waste on the property. Because the landfill was not authorized to accept hazardous waste, the State contacted the businesses generating the drums, requesting that they stop sending drums to the landfill. A former employee of the landfill confirmed that drums were emptied onto the ground so the empty drums could be sold to a recycler. The State investigated the site again in 1979 and 1980 and found that leachate seeping from the site contained phenols and heavy metals. Six ponds lie on the northern and eastern sides of the landfill. In addition, two streams, Streams A and B, are located nearby. Both streams discharge to Wills Creek. Residents of Cambridge, 3 miles north of the landfill, use Wills Creek as a source of drinking water. Five private water wells and one municipal water well are located near the site.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants

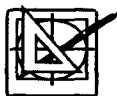


Groundwater contains heavy metals such as arsenic, barium, chromium, and lead; volatile organic compounds (VOCs); and phthalates. Sediments in two on-site ponds and leachate are contaminated with heavy metals, as well as low levels of organic compounds. Wills Creek also contains low levels of organic compounds. An aquifer under the site is contaminated with heavy metals. It is currently not known whether the contamination of this aquifer is site-related, or if it is the result of the extensive coal mining in the area. If pollutants seep into the water supply, people who come in direct contact with or drink the water may be at risk. Leachate containing heavy metals and phenols seeps from the landfill into nearby ponds and creeks. Wildlife in or around these bodies of water may be harmed by the pollutants.

Cleanup Approach

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

Response Action Status



Entire Site: In 1991, the EPA completed an investigation of the type and extent of the contamination at the site. As a result of the study, the EPA selected the following remedies to cleanup the site: capping the landfills, extracting and treating the groundwater, and stabilizing the deep mine underneath the landfill. EPA is currently designing the selected remedies and is expected to initiate actual cleanup activities in the spring of 1994.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Fultz Landfill site. Actual cleanup will begin once the selected remedies are designed.

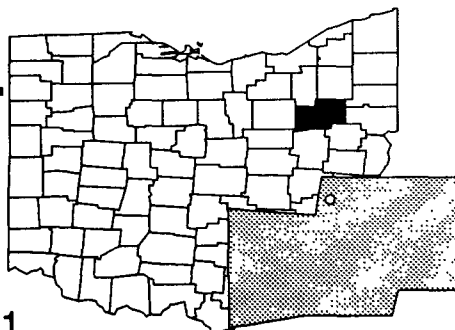
Site Repository



Guernsey County Public Library, Byesville Branch, 100 Glass Avenue, Byesville, OH 44632

INDUSTRIAL EXCESS LANDFILL OHIO

EPA ID# OHD000377911



EPA REGION 5

Stark County
10 miles from Akron

Site Description

Before 1966, the 30-acre Industrial Excess Landfill (IEL) site was used for mining sand and gravel. Gradually, the mining and excavation pit was converted into a landfill, which operated at the site from 1966 to 1980. During this time, IEL accepted wastes primarily from the nearby rubber industries. An estimated 780,000 tons of solid waste and 1,000,000 gallons of liquid waste were dumped onto the ground at the landfill. The Stark County Board of Health ordered IEL to stop dumping chemical wastes in 1972. The landfill was closed in 1980. After the landfill stopped operations, it was covered with soil, and fertilizer was applied to the surface to help vegetative growth. Before the EPA became involved with the site in 1984, several State and local government agencies were involved with licensing issues, inspections, and other response activities at the landfill. The Ohio EPA began an investigation to determine whether area drinking water was contaminated and if the site posed a health risk to nearby residents. As of 1989, the population within a 1-mile radius of the site was approximately 2,500. Over 400 residences located within a 1/2-mile radius of the landfill rely entirely on individual or private wells for their drinking water supply.

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

NPL LISTING HISTORY

Proposed Date: 10/15/84
Final Date: 06/10/86

Threats and Contaminants



Groundwater is contaminated with heavy metals including barium and chromium, and with volatile organic compounds (VOCs). On-site leachate is contaminated with heavy metals, VOCs, and phthalates. On-site soil gases located near the northern and southern boundaries of the site contain VOCs. On-site sediments are contaminated with heavy metals, cyanide, VOCs, phthalates, and pesticides. On-site surface soils have been shown to contain VOCs, heavy metals, and plastics. Off-site surface water is contaminated with heavy metals and phthalates. A potential exists for adverse effects to the aquatic life in the streams that receive runoff from the site. Individuals who come into direct contact with or accidentally ingest contaminated groundwater or soil may suffer adverse health effects.

Cleanup Approach

This site is being addressed in three stages: initial actions and two long-term remedial phases focusing on cleanup of the entire site and the provision of an alternate water supply.

Response Action Status



Initial Actions: Between 1985 and 1988, the EPA installed an active methane-venting system to control the migration of this chemical off site.

Methane gas has stopped moving off site since the venting system was completed in 1988. During the installation of this system, 53 drums of suspected industrial waste were uncovered. These drums subsequently were removed from the site and disposed of in an EPA-approved facility. After testing completed by the EPA in 1987 showed that ten private residential wells were contaminated with VOCs, the EPA installed air strippers to remove vinyl chloride and other VOCs from the water. Four additional landfill gas monitoring wells were installed in 1989.



Entire Site: The methods selected by the EPA in 1989 to clean up the site include: covering the entire site with a cap; expanding the methane gas venting system that is already in place; extracting and treating contaminated groundwater; pumping groundwater to maintain the water table at a level that is below that of the wastes in the landfill; fencing the site; placing deed restrictions on future use of the site; and continued monitoring of the site. The EPA has demolished and removed on-site structures for preparation of the cap. Residential wells have been properly abandoned. Final grading and seeding of the properties was completed 1991. Remaining cleanup activities are expected to be completed in 1994.



Alternate Water Supply: Alternate water has been supplied to an area comprising of approximately 100 homes located west of the site.

Environmental Progress



The actions taken to control methane gas migration, removing of drums containing industrial waste, installing of air strippers, and providing of an alternate water supply have reduced the potential of exposure to hazardous substances in the drinking water at the Industrial Excess Landfill site while remaining cleanup activities are underway.

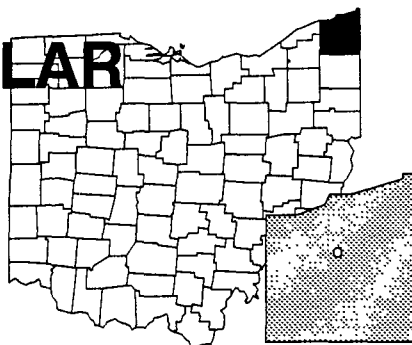
Site Repository



Hartville Branch Library, 411 East Maple Street, Hartville, OH 44632

LASKIN/POPLAR OIL CO. OHIO

EPA ID# OHD061722211



EPA REGION 5

Ashtabula County
Jefferson

Other Names:

Laskins Waste Oil Co.
Alaskaln Greenhouse Waste Oil
Poplar Oil Co.

Site Description

The 9-acre Laskin/Poplar Oil Co. site is a greenhouse and waste oil recovery operation that opened during the late 1890s. By the 1950s, the operation had installed oil-fired boilers to heat the greenhouses. In the 1960s, storage tanks and pits were installed to store waste oil. Environmental problems at the site are related to the subsequent storage, handling, and combustion of waste oil. The EPA and the Ohio EPA discovered contamination at the site in 1977, and much of the on-site oil was removed during the next 5 years. The site contains two drained ponds formerly used to separate oil, a boiler house, four oil storage pits, one underground oil storage tank, 32 aboveground oil storage tanks, a retention pond, a freshwater pond, a greenhouse complex, and other miscellaneous buildings and sheds. Three small treatment ponds lie near the bottom of the Cemetery Creek ravine, north of the retention pond. Liquids stored in the tanks and ponds have the potential to overflow, leak, or collapse because of poor construction and maintenance. Any contaminants released would enter Cemetery Creek. The creek is a tributary of Mill Creek, which flows into the Grand River. Drinking water is drawn from the Grand River in Harpersfield Township, approximately 11 1/2 miles downstream of the site.

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

NPL LISTING HISTORY

Proposed Date: 07/16/82
Final Date: 09/08/83

Threats and Contaminants



The groundwater is contaminated with phenols, polycyclic aromatic hydrocarbons (PAHs), and acetone. Sediments in the on-site retention pond are contaminated with volatile organic compounds (VOCs), pesticides, polychlorinated biphenyls (PCBs), and lead. PCBs, PAHs, and heavy metals including aluminum, iron, cobalt, thallium, silver, cadmium, and lead are contaminating the soil, while soil in the boiler house is contaminated with dioxin. The surface water in the on-site retention pond is contaminated with low levels of acetone in addition to arsenic, mercury, and other heavy metals. A potential health threat exists if accidental ingestion of contaminated soils and surface water were to occur. There is also a possibility that contaminants may enter the food chain and contaminate meats and vegetables that are raised locally.

Cleanup Approach

This site is being addressed in three stages: initial actions and two long-term remedial phases focusing on cleanup of ponds, structures, and soils, as well as other areas of surface contamination.

Response Action Status



Initial Actions: In 1980, the EPA stabilized the site by treating the water from the pond through a sand filter and activated carbon system. The treated water was discharged to Cemetery Creek. When oil-contaminated water from a pond overflowed into the creek, the oil was recovered with sorbent booms. The pond and tanks were covered. From 1982 to 1986, various actions were performed at the site including: removal of 300,000 gallons of contaminated oil; on-site treatment of 400,000 gallons of contaminated wastewater; on-site containment of 205,000 gallons of contaminated sludge; removal of an additional 250,000 gallons of wastewater and oil; removal of contaminants from one pond; and removal of approximately 100 drums containing hazardous wastes. The potentially responsible parties removed 450,000 gallons of oil and wastewater from the pits and tanks in 1985 and 1986. Later in 1986, they sampled the residues left in the pits and tanks and conducted additional soil borings. In 1987, the EPA repaired the existing fence around the site and the leaks found in the covers of the underground tanks.



Ponds, Structures, and Soils: The EPA chose the following methods for cleanup: drain the retention and freshwater ponds, discharge the surface water from the ponds to Cemetery Creek, with treatment if required; backfill freshwater ponds with clean fill and grade the retention pond area; thermally treat contaminated soil, ash, and debris from the boiler house area and dispose of the ash in a federally approved landfill; demolish and thermally treat or decontaminate dioxin-contaminated structures, or if this material cannot be decontaminated or thermally treated, it will be contained in an on-site concrete vault and placed beneath the cap for temporary storage until proper effective disposal can be secured for the material; construct a groundwater diversion trench uphill from the contaminated soil and groundwater; construct a multi-layer cap over soils; dewater the site by natural groundwater flow to Cemetery Creek; monitor groundwater and surface water to assess the quality of groundwater migrating to Cemetery Creek; and impose access and land use restrictions. Design of these cleanup activities was completed in 1992. Cleanup of the freshwater ponds has been completed. The remaining cleanup activities are planned for completion in 1994.



Surface Contamination: Based on the results of the site investigation, the EPA selected several remedies to address surface contamination. The cleanup strategy for this portion of the site includes: constructing a fence around contaminated portions of the site and the incinerator; incinerating oils, sludges, and contaminated soils, with the safe disposal of all incinerator ash; dismantling and disposing of all tanks and cinder blocks in the pits; and regrading the site to prevent ponding in the excavated areas. The potentially responsible parties, under EPA monitoring, completed most of the design work for sludge and oil incineration, and removed the tanks and contaminated soils. Cleanup work began in 1991 and is expected to be completed in 1992.

Environmental Progress



The removal of contaminated oil, wastewater, and drums, along with the treatment of contaminated wastewater and contaminated sludge, have reduced the potential for exposure to hazardous substances at the Laskin/Poplar Oil site. Cleanup of the freshwater ponds has eliminated further contamination of Cemetery Creek while remaining cleanup activities are conducted at the site.

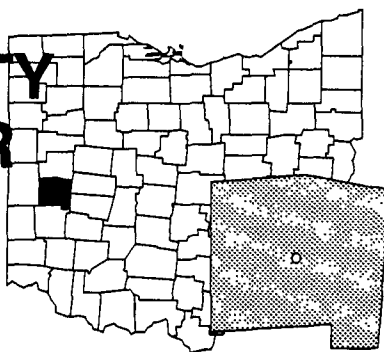
Site Repository



Ashtabula Public Library, 355 West 44th Street, Ashtabula, OH 44004

MIAMI COUNTY INCINERATOR OHIO

EPA ID# OHD980611800



EPA REGION 5

Miami County
2 miles north of Troy

Site Description

The 65-acre Miami County Incinerator (MCI) site contains five areas of concern: the South Landfill, the North Landfill, the Liquid Disposal Area, Contaminated Groundwater, and the Ash Disposal Pit and Ash Pile. Other important features of the site include an area of visibly stained soil near the incinerator building, a former scrubber wastewater lagoon, and sediment in the Eldean Tributary. The incinerator and landfill were opened in 1968 to process and dispose of municipal and industrial wastes. Combustible wastes were to be incinerated and non-combustible wastes were to be landfilled. However, large volumes of combustible wastes were landfilled along with non-combustible wastes. The facility generated scrubber wastewater and ash quench water, which were disposed of in the wastewater lagoon. Incinerator fly ash and bottom ash, non-combustible materials, and unburned refuse were disposed of in a landfill north of the tributary, and liquid wastes, including waste oils and solvents, were dumped or buried on site. MCI was ordered by the Ohio EPA to cease the disposal of liquid waste by 1974. The site stopped accepting liquid wastes in 1975, and all landfill operations ended in 1978. The incinerator building now serves as a solid waste transfer station. The Eldean Tributary of the Great Miami River runs across the northwestern corner of the site. The eastern section of the site is located in a 100-year flood plain. Municipal wells serving 19,000 people are located within 3 miles of the site. The nearest private wells are 1,000 feet downgradient from contaminated wells.

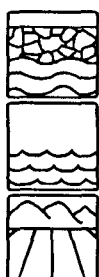
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



Volatile organic compounds (VOCs) and heavy metals including arsenic, barium, and cadmium were detected in groundwater near the Liquid Disposal Area. Sediments along the unnamed creek are contaminated with pesticides and polychlorinated biphenyls (PCBs). VOCs, polycyclic aromatic hydrocarbons (PAHs), PCBs, dioxins, pesticides, and heavy metals including arsenic, lead, cadmium, and chromium were detected in soil below the surface of the Liquid Disposal Area. Potential health risks exist for those who ingest contaminated water or the contaminated soil. Cleanup workers and children playing on the site may be most at risk. However, the site does have ground cover, lessening the opportunity for direct contact with the soil.

Cleanup Approach

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

Response Action Status



Immediate Actions: Three residences, the Miami County Highway garage, and the incinerator facility were provided with alternate water supplies in 1986. Other affected residences were provided with alternate water supplies in 1989.



Entire Site: In 1989, the EPA selected the following remedies for each area of concern. For the South Landfill and the North Landfill, the EPA will construct a single-barrier clay cap to prevent direct contact with the contaminants and decrease infiltration of rainwater to reduce the potential for groundwater contamination. The Ash Pile will be cleaned up by removing contaminated soil, treating it if necessary, and placing the material into the North or South Landfill before construction of the cap. The Ash Disposal Pit will be capped. Soil vapor extraction, groundwater pumping and treatment, and capping will be used to treat the Liquid Disposal Area and Contaminated Groundwater Area. Soil vapor extraction will reduce the risk of future VOC releases and reduce the volume of contamination in the soil. Groundwater pumping and treatment will reduce the volume of contamination in groundwater within and downgradient of the Liquid Disposal Area. All of the remedies include construction of a fence to reduce the potential for site access and land use restrictions to prevent future exposure to contaminants. The parties potentially responsible for the contamination have completed the design part of the cleanup approach and are expected to complete the remaining engineering designs by early 1994.

Environmental Progress



By supplying an alternate water supply, the potential of exposure to hazardous substances in the drinking water has been eliminated, and residents near the Miami County Incinerator site will continue to be protected until planned cleanup activities are completed.

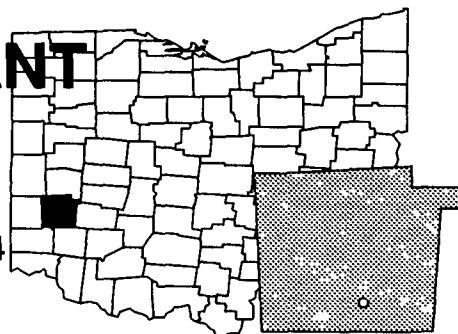
Site Repository



Miami County Public Library, 419 West Main Street, Troy, OH 45373

MOUND PLANT (USDOE) OHIO

EPA ID# OH6890008984



EPA REGION 5

Montgomery County
Miamisburg

Other Names:
US DOE Mound Facility

Site Description

The 306-acre Mound Plant facility has operated since 1948 in support of weapons and energy programs, with an emphasis on small explosive components and nuclear technology. First operated by the Atomic Energy Commission, it now is operated by a contractor for the Department of Energy (DOE). The site consists of two elevated areas divided by a small valley. The major waste areas are on the southern slope and the valley of the northwestern elevated area. They include a landfill in which solvents, paints, and chemical solutions were deposited; several leachate beds used to dispose of solutions containing radionuclides and explosive materials; and an area in which a solution contaminated with plutonium was spilled. The landfill operated from 1948 until the mid-1970s. In 1978, the existing wastes were excavated and placed in a lined landfill. The facility employs 2,200 people. Miamisburg municipal wells are within 3 miles of the site and serve approximately 17,000 people. There is no alternate water supply source. A system of ditches, canals, and ponds carries surface waters from the facility to the Great Miami River approximately 1 mile downstream. The river is used for recreational activities.

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

NPL LISTING HISTORY

Proposed Date: 07/14/89

Final Date: 11/24/89

Threats and Contaminants



Groundwater is contaminated with various volatile organic compounds (VOCs). Leachate beds contain radionuclides and explosives. Off-site sediments are contaminated with plutonium. Drinking contaminated groundwater and coming into direct contact with other site contaminants are potential health threats.

Cleanup Approach

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

Response Action Status



Entire Site: In 1990, a site investigation was begun by the DOE to determine the extent of contamination and to recommend alternatives for cleaning up the site.

The results of this investigation are expected in 1994. The site probably will be divided into several cleanup phases as the studies progress.

Site Facts: The site is being addressed under the DOE Comprehensive Environmental Assessment and Response Program. The investigation and cleanup are being conducted as part of a Federal Facility Agreement between the DOE and the EPA, which became effective in October 1990.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Mound Plant (USDOE) site while studies are taking place and cleanup activities are being planned.

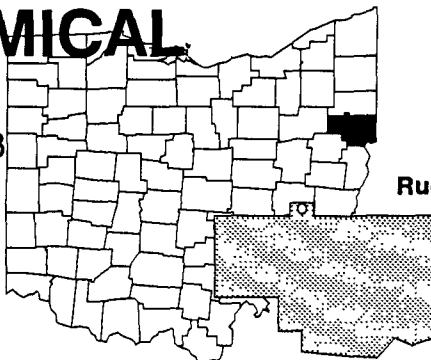
Site Repository



Dayton & Montgomery County Public Library, Miamisburg Branch, 355 Fifth Street,
Miamisburg, OH 45342

NEASE CHEMICAL OHIO

EPA ID# OHD980610018



EPA REGION 5

Columbiana County
Salem

Other Names:

Ruetgers Nease Chemical Company/
Salem Plant

Site Description

The 44-acre Nease Chemical site was used for the manufacturing of pesticides, fire retardants, cleaning compounds, and pharmaceutical products. The plant closed the production facilities in 1973 and completed site closure activities in 1975. In 1982, a report indicated that contaminants had migrated from the site and drums had been buried on the site. Following approval from the EPA in 1983, the company removed the buried drums and associated contaminated soils from the site and soils from a barren area. In addition, the company removed soil from an abandoned pond and a freshwater ditch running parallel to the main railroad line. Between 1983 and 1984, additional monitoring wells and soil borings were drilled to further define the hydrogeology and groundwater quality. Residences are located near the site. Feeder Creek, located on the site, drains into the Middle Fork of Little Beaver Creek, where a 1987 EPA investigation verified sediment and fish contamination. These creeks drain into the Ohio River.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater, soil, and sediments are contaminated with volatile organic compounds (VOCs). A 1987 EPA study showed contamination of fish, creek and adjacent floodplains sediments with mirex, a pesticide and fire retardant. Dairy herds on two nearby farms were affected by exposure to creek contamination. Access to the site now is restricted by fencing and bridges.

Cleanup Approach

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

Response Action Status



Initial Actions: Several initial cleanup actions have been completed to locate and remove the main sources of contamination at the site. Earlier cleanup actions conducted by the company included the removal of contaminated contents of the waste ponds and buried drums located on the site, along with associated soils. In addition, intermediate level activities are also being implemented to minimize migration of contaminants off site. These activities include leachate collection and treatment, and surface water management.



Entire Site: Under EPA monitoring, the parties potentially responsible for the contamination initiated an investigation in 1988 to determine the nature and extent of site contamination and to identify alternative cleanup methods. A preliminary assessment indicates that any remaining contaminated soil will require removal and contaminants will need to be separated from groundwater. Additionally, a groundwater containment system needs to be implemented. The final cleanup remedy for the site will be selected once the investigation is completed, scheduled in 1994.

Environmental Progress



Initial cleanup actions have removed the immediate sources of contamination and have reduced the potential for nearby residents to be exposed to hazardous wastes left at the Nease Chemical site while further studies are taking place and cleanup activities are being planned.

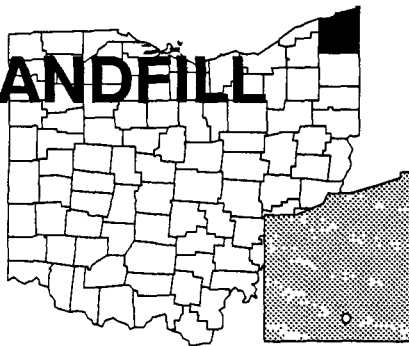
Site Repository



Salem Public Library, 821 East State Street, Salem, OH 44460

NEW LYME LANDFILL OHIO

EPA ID# OHD980794614



EPA REGION 5

Ashtabula County
New Lyme

Other Names:
Ashtabula County Waste, Inc.

Site Description

Operations began at the 40-acre New Lyme Landfill site in 1969 and were initially managed by two farmers. In 1971, the landfill was licensed by the State of Ohio, and operations were taken over by a licensed landfill operator. The site received various wastes and construction and demolition debris. However, numerous violations of the license occurred, including open dumping, improper spreading and compacting of wastes, no State approval for disposal of certain industrial wastes, and excavation of trenches into the shale bedrock. In 1978, the landfill was closed by the Ashtabula County Health Department. Wastes at the site included asbestos, coal tar, resins, paint sludge, oils, corrosive liquids, acetone, volatile organic chemicals (VOCs), chlorinated solvents, and laboratory chemicals. Leachate containing organics discharged from two sides of the fill area and threatens nearby surface waters. There is also concern that groundwater might be contaminated by leachate from the landfill. Ten families live within 1/4 mile of this site. Three households are presently using groundwater as their drinking water source. Lebanon Creek and a wetland known as the New Lyme Wildlife Area are located near the site.

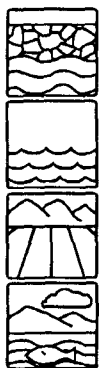
Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



The groundwater is contaminated with VOCs and phenols. Sediments in Lebanon Creek, the wetlands, and leachate seeps have been exposed to VOC, lead, and chromium contamination by surface runoff during site operations and leachate seep discharge. Surface soil samples from the central and eastern portion of the site contained VOCs. One soil sample contained polychlorinated biphenyls (PCBs). Potential health risks may exist for individuals accidentally ingesting or touching the contaminated groundwater, soil, sediments, or leachate. Lebanon Creek, other area surface waters, and area wetlands may be threatened by the site contamination.

Cleanup Approach

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

Response Action Status



Entire Site: In 1985, the EPA selected the following cleanup actions for the site: construction of a cap over the landfill; installation of extraction and containment wells around the perimeter of the landfill to dry up the landfill and to eliminate leachate production; on-site treatment of contaminated groundwater and leachate; on-site consolidation of contaminated sediments; installation of gas vents; fencing of the site; and installation of a groundwater monitoring system. The wastewater treatment plant was constructed in late 1990. The treatment plant currently is operating, however, modifications are being made to make the plant more efficient. These modifications are expected to be completed in early 1993. All other cleanup activities at the site were completed in 1990.

Environmental Progress



The completed cleanup activities, including the construction of the cap in 1990, have reduced the potential for exposure to hazardous substances at the New Lyme Landfill site while the water treatment plant for the final phase of the site cleanup plan is put into full operation.

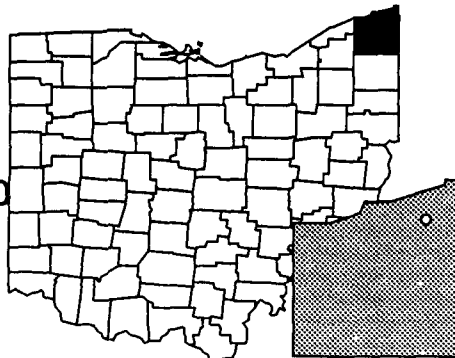
Site Repository



United States Post Office, 4949 Day Road, Jefferson, OH 44047

OLD MILL OHIO

EPA ID# OHD980510200



EPA REGION 5

Ashtabula County
Rock Creek

Other Names:
Webb MR
Rock Creek/Jack Webb
Kraus Disposal Site

Site Description

The Old Mill site consists of two parcels of land, the 3-acre Henfield Property and the 10 acre Kraus Property. The Henfield Property included four dilapidated wood buildings and four concrete silos, which were removed as part of the site cleanup. This property became contaminated when drummed waste and potting soil additives were improperly stored. The Kraus Property was partially covered with piles of railroad ballasts and had one empty abandoned bulk liquid tank. Wastes from the Henfield Property were stored on the Kraus Property with the owner's permission. In 1979, the EPA and Ohio EPA found approximately 1,200 drums of toxic waste, including solvents, oils, resins, and polychlorinated biphenyls (PCBs) stored on both properties. The drums leaked, causing contamination of soil and groundwater. Approximately 100 homes are within a 1/4-mile radius of the site. An estimated 1,400 people are living 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: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Volatile organic compounds (VOCs) are contaminating the groundwater underneath the Henfield Property and the Kraus Property. VOCs and heavy metals including lead were contaminating the soils near the silos on the Henfield Property and in the drum storage area of the Kraus Property. Potential health risks exist through accidental ingestion of or direct contact with the contaminated groundwater until ongoing treatment is complete.

Cleanup Approach

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

Response Action Status



Immediate Actions: In 1981 and 1982, some of the parties potentially responsible for site contamination voluntarily removed 580 drums of wastes. Later in 1982, all remaining drums were removed, and contaminated soil was removed from the drum storage area. Soil and well water samples were taken and analyzed. In 1984, a security fence was installed around the site.



Entire Site: In 1985, the EPA selected the following cleanup remedies: removal and off-site disposal of a select volume of contaminated soil; extraction and treatment of contaminated groundwater; aquifer use restrictions; and provision of an alternate water supply for one residence. By 1989, the EPA had removed the contaminated soils and installed the groundwater collection and treatment system. The silos and buildings, drums, and tanks were removed, and debris was taken to an off-site disposal facility. Groundwater will continue to be pumped and treated until established cleanup goals are met.

Environmental Progress



The removal of contaminated soil and debris has eliminated the surface contamination at the Old Mill site. The groundwater will continue to be treated until contaminant levels meet the cleanup standards specified in the remedy.

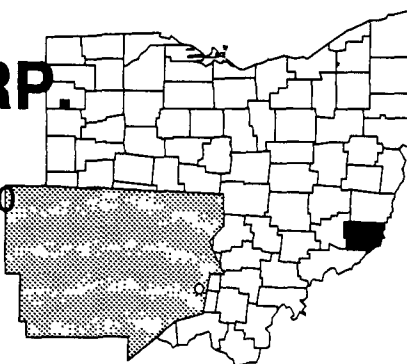
Site Repository



Rock Creek Public Library, 2988 High Street, Rock Creek, OH 44084

ORMET CORP. OHIO

EPA ID# OHD004379970



EPA REGION 5

Monroe County
Hannibal

Site Description

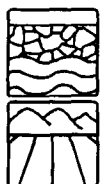
The 200-acre Ormet Corp. site is an aluminum processing facility that began operating in 1958. Between 1958 and 1968, approximately 85,000 tons of spent potliner material were stored in an unlined, open storage area. From 1968 until 1981, Ormet Corp. operated a caustic digestion process to recover chemicals from the potliner material. Since 1981, spent potliner material has been transported off site for disposal. From 1958 to 1981, as many as five unlined disposal ponds were used to hold waste materials at the site. Untreated water from the facility, as well as contaminated groundwater, empties into the Ohio River. The Ohio River is a major industrial waterway, recreational area, and source of drinking water for many communities along its banks. Approximately 1,500 people live within a 3-mile radius of the site. The Ohio River separates the site from the closest residence, which is 1,500 feet away. The well that provides drinking water for over 3,000 employees of Ormet Corp. and the nearby Consolidated Aluminum Corp. is 1,970 feet from the site. There are no other public water supply wells within a 3-mile radius of the site.

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

NPL LISTING HISTORY

Proposed Date: 09/18/85
Final Date: 07/21/87

Threats and Contaminants



Groundwater is contaminated with cyanides and fluorides. Sludges in an 8-acre lagoon on site are contaminated with polycyclic aromatic hydrocarbons (PAHs), cyanide, fluoride, volatile organic compounds (VOCs), and petrochemicals. People can be exposed to hazardous substances from the site by drinking or coming in direct contact with contaminated groundwater. Contaminated groundwater could affect the drinking water supply for workers at the Ormet Corp. plant and the nearby Consolidated Aluminum Corp.

Cleanup Approach

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

Response Action Status



Entire Site: In 1987, the EPA and the Ohio EPA began an investigation to identify the types and amounts of contaminants on and near the site. The following activities were completed during the first phase of the investigation: samples of surface water, groundwater, surface soils, and sediment were collected at and near the site and were tested; air quality at certain locations was analyzed; and data from previous investigations of the site were reviewed to assist in identifying contaminants present at the site. The second phase of the investigation included the following activities: groundwater sampling; investigating the construction material scrap dump to define the types of contaminants within and originating from this area; investigating the carbon runoff and deposition area to define the boundaries of the area and to determine the thickness of the carbon material; and sampling the Ohio River sediment to define the extent and type of contamination. The Ormet Corp., under EPA and Ohio EPA monitoring, will evaluate the best ways to address contamination problems found at the property. The investigation, scheduled for completion in 1992, will provide the basis for selecting a cleanup method for the property.

Site Facts: In 1987, the EPA and the Ohio EPA negotiated an Administrative Order on Consent with the Ormet Corp. to conduct a study of the nature and extent of contamination at the site.

Environmental Progress



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

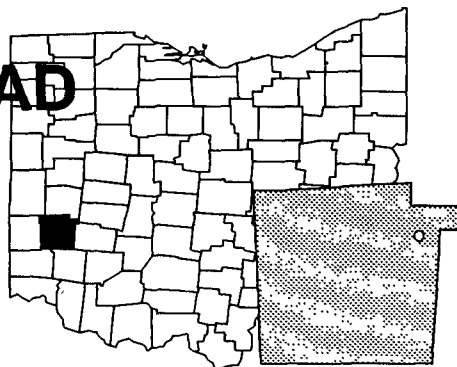
Site Repository



United States Post Office, Boston Hill Road, Hannibal, OH 43931

POWELL ROAD LANDFILL OHIO

EPA ID# OHD000382663



EPA REGION 5

Montgomery County
Dayton

Other Names:
SCA Services Inc.

Site Description

The 70-acre Powell Road Landfill site is located in a former sand and gravel staging area. The site was first used to mine gravel before 1959, but was later used as a landfill for municipal and demolition waste. Only household refuse, construction waste, and other similar waste materials were licensed to be disposed of at the site, but the Ohio EPA and the Montgomery County Health Department found that liquid and industrial wastes also were accepted by the site's original operator. Residents in the area complained to the Ohio EPA about uncovered waste, exposed leachate and litter at the site, and odors. This prompted the State to investigate the site. The landfill was closed, capped, and sealed in 1985.

Approximately 3,000 people live within a 1-mile radius of the site. The Great Miami River flows along the southern boundary of the site. The entire site is fenced, and a locking gate restricts access. Area drinking water is provided by public and private groundwater wells. Surface water runoff drains south toward the Great Miami River.

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

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



Air sampled on the site contains various volatile organic compounds (VOCs). Groundwater is contaminated with VOCs, primarily ethenes and ethanes. The site currently poses little risk to public health; however, people potentially could be exposed to hazardous substances from the site by drinking or coming in direct contact with contaminated groundwater or by inhaling gases or contaminated dust particles in the air. People in the area use the Great Miami River Valley Aquifer as a source of drinking water. The contamination of this resource would increase the chances of exposure to contaminants for residents in the area who use it.

Cleanup Approach

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

Response Action Status



Entire Site: The EPA and the Ohio EPA are supervising the study being conducted by the potentially responsible party. The purpose of the study is to examine the nature and extent of contamination at the site and to identify alternative remedies for cleaning up the site. The study is scheduled for completion in late 1992. The following actions have been taken to date: private residential wells were sampled to determine if site contamination had entered the local water supply; samples of surface water, groundwater, and seeps at and near the landfill were collected; soil and sediment samples were taken from locations at and around the site; a soil gas survey was conducted; landfill gas and gas-vent liquid were collected to determine what chemicals may be present in air at the site; and an air monitoring survey of the surrounding area was performed to discover if gases leaving the landfill may cause a health problem for nearby residents. During 1990, monitoring wells were installed south of the river and additional groundwater samples were taken at the request of a citizens group. Sampling detected VOCs, primarily in the ethene group, which are generally different from samples obtained near the landfill, primarily VOCs in the ethane group.

Site Facts: SCA Services agreed to study contamination problems at the landfill. The EPA, the Ohio EPA, and SCA Services signed a Consent Order in 1987.

Environmental Progress



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

Site Repository



Montgomery County Public Library, Dayton Branch, 215 East 3rd Street, Dayton, OH 45402

PRISTINE, INC.

OHIO

EPA ID# OHD076773712



EPA REGION 5

Hamilton County
Reading

Site Description

Pristine, Inc. began operating a liquid waste disposal facility at the location of a former sulfuric acid manufacturing plant on this 2-acre site in 1974. In 1977, the company obtained a permit allowing the operation of a liquid waste incinerator. From 1974 to 1981, a variety of acids, organic solvents, and waste products were received at the facility and subsequently were treated by incineration or acid neutralization and disposed of at the site. In 1979, an inspection revealed the presence of 8,000 to 10,000 drums and 13 bulk storage tanks containing a wide variety of hazardous substances. In 1981, the facility closed as a result of State enforcement actions. The City of Reading has a population of approximately 12,800. Eight municipal water supply wells serving the people of Reading are located 300 feet northwest of the site.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Groundwater is contaminated with volatile organic compounds (VOCs), phenols, fluoride, and heavy metals including manganese and iron. Compounds detected in the soil and sediments include VOCs, polycyclic aromatic hydrocarbons (PAHs), heavy metals, and pesticides. Surface water contaminants include VOCs, PAHs, phenols, and heavy metals. The presence of trace levels of VOCs in groundwater does not present an immediate health risk to people. Other contaminants are present at levels low enough not to constitute a health concern. Contaminated runoff from the site to Mill Creek may pose a problem.

Cleanup Approach

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

Response Action Status



Initial Actions: From 1980 to 1983, Pristine, Inc., under the monitoring of the State, removed much of the waste at the site. In 1984, some of the parties potentially responsible for site contamination, under EPA monitoring, performed soil, sludge, sediment, and waste removal activities to address immediate hazardous site conditions.



Entire Site: In 1987, the EPA selected the following cleanup technologies to address both the soil and groundwater contamination: treatment of the top one foot of soil across the site and all other soils from the present groundwater surface to 4 feet below the ground surface by in-situ vitrification, whereby the soil is electrically melted to bind the waste in a glassy solid material; treatment of sediments and waste pit soils if necessary, and placement of ash under an on-site cap, if necessary; performance of an additional groundwater investigation and extraction and treatment of the lower aquifer with wells, an air stripper, and carbon adsorption; decontamination and demolition of on-site structures and disposal of debris in a sanitary landfill; construction of a fence to restrict access; implementation of deed restrictions to restrict land use; and monitoring of groundwater flow and quality. In 1990, the EPA revised the remedy to treat the contaminated soil by incineration and in-situ soil vapor extraction rather than in-situ vitrification. The soil vapor extraction process removes VOCs from the soil by placing a cover over the contaminated area and applying a vacuum to filter the contaminants from the soil particles. The demolition of on-site structures was completed in early 1991 by the potentially responsible parties, under EPA monitoring. The designs for the incinerator, the soil vapor extraction system, and the groundwater treatment system began in 1991.

Site Facts: From 1980 to 1983, much of the on-site waste was removed in accordance with a Consent Decree entered into between the State and Pristine, Inc.

Environmental Progress



The removal of waste, soil, sludge, and sediment has reduced the potential for exposure to hazardous substances at the Pristine, Inc. site while final cleanup actions are being conducted.

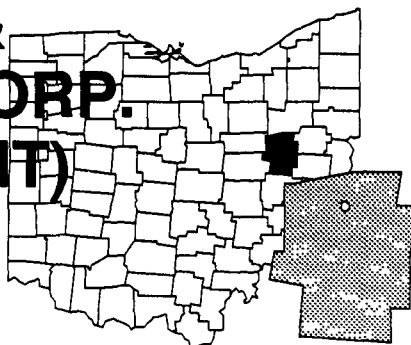
Site Repository



Valley Public Library, 301 West Benson Street, Reading, OH 45215

REILLY TAR & CHEMICAL CORP. (DOVER PLANT) OHIO

EPA ID# OHD980610042



EPA REGION 5

Tuscarawas County
Dover

Site Description

The 4-acre Reilly Tar & Chemical Corp. (Dover Plant) site was operated from 1932 to 1956 as a coal tar refinery. During that time, coal tar wastes accumulated on the ground from spillage and other site activities. The site is situated on slag originally deposited by a local blast furnace. The site is currently inactive, fenced, and located on the sand and gravel deposits of the Tuscarawas River basin. The aquifer in the deposits is the sole source of drinking water for approximately 28,700 people served by the municipal water systems of Dover and New Philadelphia. An additional 4,000 people obtain drinking water from private wells within 3 miles of the site.

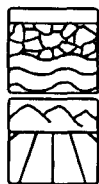
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Threats and Contaminants



Groundwater and soil are contaminated with petrochemicals from coal tar wastes. Potential health threats include accidentally ingesting or coming in direct contact with contaminated groundwater or soil. However, potential contact with hazardous substances is limited, because the site is fenced and is located in an industrial area.

Cleanup Approach

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

Response Action Status



Initial Actions: In 1988, the parties potentially responsible for site contamination, under EPA monitoring, installed a fence around the site. In 1990, they also removed surface coal tars from the site and took them to a hazardous waste landfill.



Entire Site: Under EPA monitoring, the potentially responsible parties currently are conducting an investigation into the nature and extent of contamination at the site. The investigation will define the contaminants, identify potential off-site migration, and will result in the recommendation of alternatives for the final cleanup. The investigation is scheduled to be completed in 1993.

Site Facts: The parties potentially responsible for site contamination are conducting the investigation under a Unilateral Administrative Order dated March 29, 1989.

Environmental Progress



The installation of a fence and the removal of surface coal tars have reduced the potential for exposure to contaminated materials at the Reilly Tar & Chemical Corp. (Dover Plant) site while studies are taking place and final cleanup activities are being planned.

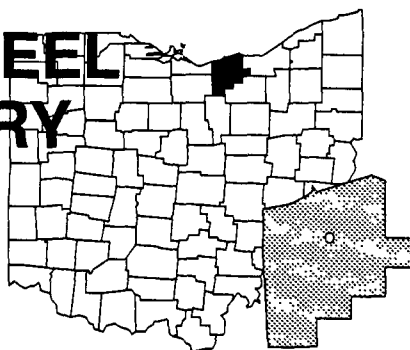
Site Repository



Dover Public Library, 525 North Walnut, Dover, OH 44622

REPUBLIC STEEL CORP. QUARRY OHIO

EPA ID# OHD980903447



EPA REGION 5

Lorain County
Elyria

Site Description

The Republic Steel Corp. Quarry site consists of a 4-acre quarry containing water that is surrounded by 7 acres of fenced property. Prior to 1950, the site operated as a sandstone quarry. The site then was used for the disposal of spent pickle liquor. Pickle liquor is an acid used to dissolve oxides in the mill scale that forms on steel during the hot rolling process. Sulfuric acid was used as the pickling acid at this facility. From 1950 to 1972, approximately 200,000 gallons of waste pickle liquor were discharged into the quarry each year. Waste pickle liquor reportedly was pumped through an aboveground pipe to a ditch located on the eastern side of the plant. The ditch routed the liquid north to the quarry. Beginning in 1969, the operators stopped discharging the pickle liquor into the quarry, and it was hauled off site. From 1969 to 1975, the ditch continued to be used to direct wastewater from the plant to the quarry. In 1976, the ditch was dammed. The site, although fenced, is still accessible. Approximately 60,000 people live within 3 miles of the site. The City of Elyria Water Company supplies treated water for all water users within 3 miles of the quarry, except for 360 homes. Of these 360 homes, 150 are served by the Rural Lorain County Water Authority. Both of the water companies obtain their water supplies from Lake Erie. The remaining 210 homes obtain water from private wells. Two residential wells are within 1 mile of the site. Both the on-site quarry and the Black River are used for recreational purposes.

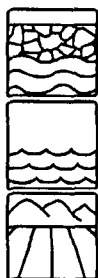
Site Responsibility: This site was addressed through Federal and State actions.

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/12/86

Threats and Contaminants



Groundwater and surface water were contaminated with heavy metals including barium, manganese, and iron. Groundwater still contains beryllium. Quarry sediments were contaminated with volatile organic compounds (VOCs), heavy metals, and phthalates. Heavy metals, phthalates, oil and grease, and pyrene were contaminating the soil. Health risks included accidentally ingesting or coming in direct contact with contaminated groundwater, surface water, soil, or sediments.

Cleanup Approach

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

Response Action Status



Entire Site: In 1988, the EPA selected the following cleanup technologies to address soil contamination: excavation of contaminated surface soil from the pickle liquor discharge ditch and the southern end of the quarry; disposal of excavated soil; a five-year monitoring plan including a fish species survey and fish tissue study to ensure the absence of contaminants; and groundwater monitoring. Approximately 130 cubic yards of contaminated soil were removed and disposed of in a regulated hazardous waste landfill. Groundwater was resampled and fish tissue samples were collected to better assess risks at the site. The EPA and the State are in the process of determining if the presence of beryllium in the groundwater at the site warrants any further action; however, it is anticipated that no further action will be necessary. The site is planned for deletion from the NPL. Presently, a preliminary closeout report is being prepared. The extent of the contamination and the likelihood that the groundwater will be used as a potable water source will be evaluated before site deletion proceeds.

Environmental Progress



All planned cleanup activities have been completed, and contaminated soils at the site have been safely removed. The EPA currently is in the process of evaluating the cleanup activities performed at the Republic Steel Corp. Quarry to ensure that any future usage of the site does not pose a risk to public health and the environment. The site is scheduled to be deleted from the NPL by the close of 1992.

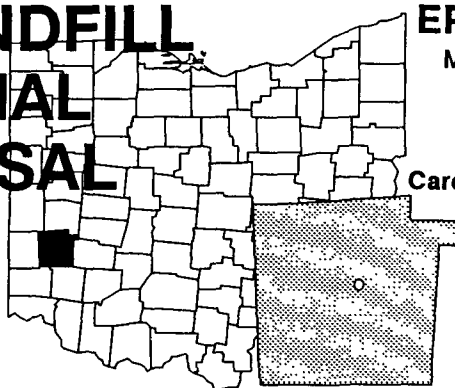
Site Repository



Elyria Public Library, Reference Department, 320 Washington Avenue, Elyria, OH 44035

SANITARY LANDFILL CO. (INDUSTRIAL WASTE DISPOSAL CO., INC.) OHIO

EPA ID# OHD093895787



EPA REGION 5

Montgomery County
Dayton

Other Names:
Cardington Road Landfill

Site Description

The 50-acre Sanitary Landfill Co. (Industrial Waste Disposal Co., Inc.) site was operated as a landfill from 1965 to 1980. The landfill reportedly accepted municipal wastes and various types of industrial wastes including solvents. In 1980, the landfill was closed according to State regulations. No waste material is exposed, due to a cap that was installed. Approximately 6,500 people live within 3 miles of the site. The closest residence is located less than 150 feet from the site. Approximately 125,000 people draw drinking water from wells within 3 miles of the site. Municipal wells within the vicinity of the site are not contaminated, and private wells within the vicinity of the site are not used for potable purposes. The Great Miami River is located near the site.

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

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



Groundwater is contaminated with solvents and heavy metals including chromium, copper, cadmium, and lead. The soil contains solvents, asbestos, and the heavy metals chromium, copper, cadmium, and lead. Potential health risks to people include accidentally ingesting or coming in direct contact with contaminated soil. There also is the possibility of a health risk associated with consuming contaminated animals and agricultural products. Access to the site is restricted by a fence.

Cleanup Approach

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

Response Action Status



Entire Site: The parties potentially responsible for site contamination currently are conducting a study of the nature and extent of contamination at the site. The study will define the contaminants and will recommend alternatives for the final cleanup; it is planned to be completed in late 1992.

Site Facts: In 1987, the EPA and a group of potentially responsible parties signed a Consent Order requiring the parties to conduct an investigation of the nature and extent of site contamination.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Sanitary Landfill Co. (Industrial Waste Disposal Co., Inc.) site while studies are taking place and cleanup activities are being planned.

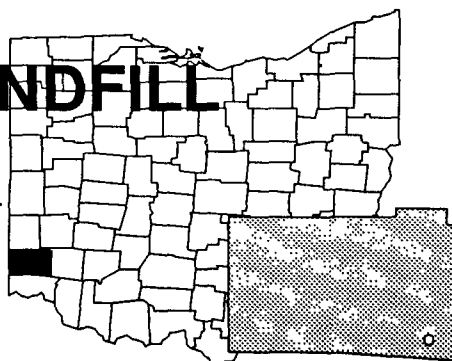
Site Repository



Dayton Public Library, Kettering-Moraine Branch, 3496 Far Hills Avenue, Kettering, OH 45429

SKINNER LANDFILL OHIO

EPA ID# OHD063963714



EPA REGION 5

Butler County
West Chester

Site Description

The 78-acre Skinner Landfill site is located on a ridge above the east fork of Mill Creek in West Chester. The landfill accepted hazardous and demolition wastes since the late 1950s. The actual landfill area covers approximately 10 acres and includes a lagoon less than 1 acre in size, containing hazardous waste and approximately 100 drums of solvents, pesticides, and heavy metals. Approximately 40 feet of demolition material are on top of this lagoon. Demolition waste was accepted until July 1990. The remaining 60 acres of the site contain scrap metal, the owner's residence, and buildings used by the owner for his general contracting business. Two wells located downgradient from the lagoon are contaminated with VOCs. Approximately 3,000 people live within 3 miles of the site. On-site residences use groundwater upgradient from the landfill area for drinking water. The majority of off-site residences are connected to a municipal water supply. A fork of Mill Creek borders the site to the East and Skinner Creek borders it to the West. The potential exists for wildlife in the creeks to become contaminated from migrating contaminated sludge.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



Liquid sludge in the on-site lagoon is contaminated with heavy metals including cyanide, cadmium, and chromium; volatile organic compounds (VOCs) and semi-volatile organic compounds; pesticides; polychlorinated biphenyls (PCBs); dioxins; and furans. Groundwater is contaminated with various VOCs and semi-volatile organic compounds. Two creeks which border the site contain sediments contaminated with VOCs from sludge migration. Potential health threats include accidental ingestion of and direct contact with contaminated liquid sludge, groundwater, or river sediments.

Cleanup Approach

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

Response Action Status



Entire Site: The EPA completed the second phase of an investigation into the nature and extent of site contamination. The investigation, which began in late 1988, has defined the contaminants of concern and recommended alternatives for the final cleanup. The investigation was completed in mid-1992 and the proposed cleanup plan is currently going through a public comment period. The proposed remedy includes: excavating portions of the waste lagoon; incinerating and solidifying excavated materials; redepositing treated materials and constructing a multi-layer cap; conducting soil vapor extraction to remove VOCs from landfill soil; and collecting and treating groundwater. In the meantime, an interim remedy is in effect. It includes fencing the site to prevent migration of contaminated sludges off-site, and providing hook-ups to the city water supply for area residences who might become affected by contaminated groundwater. An amended remedy selection is expected in early 1993 following the public comment period. Design of the selected remedy will begin shortly thereafter.

Environmental Progress



An initial evaluation of the Skinner Landfill site determined that no immediate actions were needed during the investigation leading to the selection of final cleanup remedies. Results of current site investigations are being discussed in a public comment period expected to close in early 1993.

Site Repository

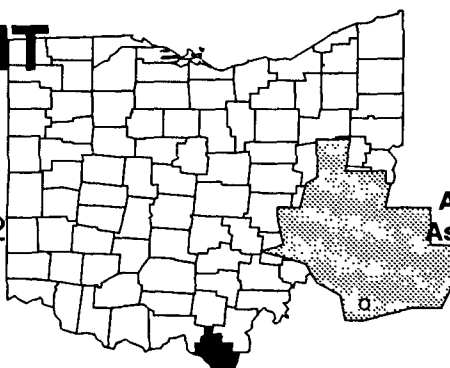


Union Township Library, 7900 Cox Road, West Chester, OH 45069

SOUTH POINT PLANT

OHIO

EPA ID# OHD071650592



EPA REGION 5

Lawrence County
South Point

Other Names:

Allied Chemical Ethanol Plant
Ashland Oil South Point Facility

Site Description

The 75-acre South Point Plant site is an active ethanol producing facility. Ammonia, fertilizer, and formaldehyde were produced on site from 1943 to 1979. The Federal government began operations at the site in 1943 with the production of chemicals used in explosives. The Allied Chemical Corporation operated the plant for the military until 1946, when the company purchased the property. From 1946 until the plant closed in 1979, Allied Chemical Corporation produced chemicals used for agricultural and other purposes. In 1982, South Point Ethanol built an ethanol production plant and began operations on the site. Several unlined landfills, covering approximately 20 acres, and surface impoundments were used for process waste disposal. The landfills were closed in 1979; one is eroding. Numerous activities have contributed to groundwater contamination. In the late 1950s, a large volume of water used to extinguish a fire in the ammonium nitrate building caused two incidents of surface water runoffs. In 1971, an on-site spill of 300,000 gallons of ammonium nitrate occurred. Access to the site is unrestricted. Approximately 65,000 people live within 3 miles of the site. The site is located on the eastern flood plain of the Ohio River. Surface water from the facility drains to the Ohio River through Solida Creek or the surface water drainage system. The intake for the Ashland, Kentucky municipal water supply is located on the Ohio River a mile downstream from the site. The Village of South Point draws its water supply from two well fields, one of which is located between the site and the Ohio River. The underlying aquifer that supplies potable water to the Village of South Point is contaminated.

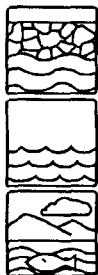
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



Groundwater is contaminated with heavy metals including iron and manganese, as well as chloride, nitrate, and sulfate. Surface water is contaminated with nitrate and manganese. Potential health threats include drinking or coming in direct contact with contaminated groundwater and surface water and eating contaminated fish, animals, and plants.

Cleanup Approach

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

Response Action Status



Entire Site: The parties potentially responsible for site contamination currently are conducting an investigation into the nature and extent of site contamination.

The investigation will define the contaminants and will recommend alternatives for the final cleanup. The ongoing investigation is planned to be completed in 1992 and includes the following activities: a review of data from historical photographs, maps, and reports to define the extent of the former disposal areas; an expanded investigation of portions of the disposal areas, fly ash ponds, and soils surrounding these areas; and sampling for gases within the soils in and near the disposal areas and fly ash ponds.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the South Point Plant site while investigations are taking place and cleanup activities are being planned.

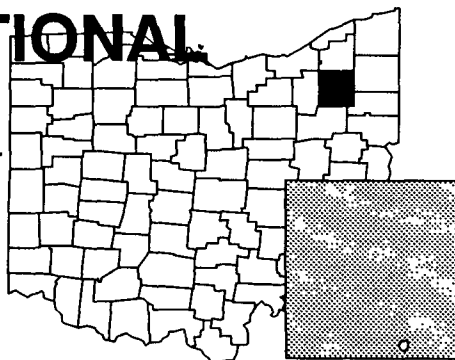
Site Repository



Briggs-Lawrence County Library, 321 South 4th Street, Ironton, OH 45683

SUMMIT NATIONAL OHIO

EPA ID# OHD980609994



EPA REGION 5

Portage County
Deerfield

Site Description

The 115-acre Summit National site is located on a former coal strip mine containing a coal wash pond and a coal stock pile. From 1974 to 1978, the site was used as a waste disposal facility and received such wastes as oils, resins, paint and metal plating sludges, flammable solvents, and chlorinated solvents. In addition, two surface water ponds and an incinerator were located on site. The facility received liquid wastes, which were stored in drums, an open pit, or bulk tanks. Some wastes were incinerated, others were buried, and some were dumped on the soil. In 1975, the Ohio EPA investigated a complaint of unauthorized discharge from the site. In 1978, the facility was ordered to stop receiving waste materials and to remove all liquid wastes from the site. In 1979, surface water monitoring revealed violations of State water quality standards. Approximately 4,500 people live within 3 miles of the site. There are several agricultural fields located within a few thousand feet of the site. Berlin Lake Reservoir is located about 1 mile southeast of the site. The site is enclosed by a fence with locked gates.

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

NPL LISTING HISTORY

Proposed Date: 10/22/81

Final Date: 09/08/83

Threats and Contaminants



The groundwater is contaminated with various volatile organic compounds (VOCs), phenols, and phthalates. VOCs, phenols, and heavy metals including cadmium and antimony are contaminating the soil. The surface water is contaminated with VOCs, phenols, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and heavy metals including arsenic and chromium. The contaminated groundwater, soil, and surface water could pose a health problem if accidentally touched or swallowed. The Berlin Lake Reservoir is a standby water supply for the City of Youngstown. The reservoir is threatened, because a contaminated waste lagoon overflowed into the tributary of the reservoir.

Cleanup Approach

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

Response Action Status



Immediate Actions: In 1980, the EPA removed contaminated materials that threatened the Berlin Lake Reservoir. Also, drums, tanks, various surface debris, and a small amount of contaminated surface soil were collected and shipped off site. All drums, bulk containers, and the concrete block pit were emptied and removed. A slope was built on the site to control the stormwater runoff. In 1987, the EPA contained a threatened release of hazardous materials by treating liquid wastes in ponds that were threatening to overflow, recovering and disposing of an underground storage tank, increasing the freeboard, strengthening the dikes around the pond, and excavating the underground tank. Contaminated soils were stored on site and will be treated in the final stages of cleanup operations.



Entire Site: The parties potentially responsible for the contamination will assume the responsibility for site cleanup. The selected cleanup remedies for this site include: excavation and on-site incineration of approximately 24,000 cubic yards of contaminated soil and sediments and the contents of approximately 1,600 buried drums and 4 tanks, with disposal of incinerator residuals in a federally approved landfill; groundwater pumping and treatment using a trench system and extraction well system; surface water treatment on site; discharge of treated water to downslope surface water; installation of a permeable cap over the site with regrading and revegetation; dismantling and on-site disposal of all on-site structures; access and deed restrictions to restrict land uses; and groundwater and surface water monitoring and residence relocation. The design of the cleanup activities began in 1991 and is expected to be completed in 1993.

Site Facts: In 1981, the State and the potentially responsible parties reached an agreement to undertake a surface cleanup of the site.

Environmental Progress



The removal of contaminated materials, control of runoff, treatment of liquid wastes, and strengthening of the dikes by the EPA have reduced the potential of exposure to hazardous materials at the Summit National site while cleanup activities are being designed.

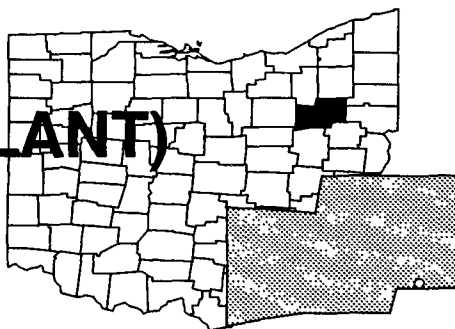
Site Repository



Deerfield Post Office, 1365 State Route 14, Deerfield, OH 44411

TRW, INC. (MINERVA PLANT) OHIO

EPA ID# OHD004179339



EPA REGION 5

Stark County
Minerva

Site Description

The 54-acre TRW, Inc. (Minerva Plant) site is a manufacturing facility that was sold to PCC Airfoils, Inc. However, the TRW Corporation still owns land near its former plant in order to conduct waste management and treatment of the contamination associated with its past disposal practices. The facility was used for metal casting, in which volatile organic compounds (VOCs) were used as degreasers. The spent degreasing materials were discharged directly to the Wax Ditch, which flowed into the South Pond. Dredged material from South Pond and Wax Ditch also was deposited on the Rubble Pile. Minerva city wells are located approximately 1 mile southwest and downslope from the TRW building. The wells draw water from a sand and gravel aquifer, the same aquifer that underlies the TRW property. These wells serve approximately 4,550 people. Within 3 miles of the site are shallow residential wells serving approximately 900 people. The nearest residential well is 925 feet from the TRW facility.

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

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 03/31/89

Threats and Contaminants



The groundwater, sediments, and soil are contaminated with polychlorinated biphenyls (PCBs) and VOCs, and could pose a health hazard if they are accidentally touched or swallowed.

Cleanup Approach

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

Response Action Status



Immediate Actions: In 1985, the potentially responsible parties hooked up all residences with contaminated wells to municipal drinking water supplies. In 1985, contaminated soils and sediments from the former disposal areas were excavated and disposed of in an on-site secured landfill. A PCB vault was built on the site to secure excavated toxic materials, and a soil cap was placed over the concrete-lined vault. TRW excavated the soils and sediments for placement in the vault.



Groundwater: In 1986, the parties potentially responsible for the contamination started operating a system that pumps contaminated groundwater to the surface, treats it with an air stripper, and discharges the treated water to the Sandy Creek. The groundwater treatment system is currently operating. It is estimated that the cleanup process will take more than 30 years.

Site Facts: In 1985, the State issued an Administrative Order on Consent to the potentially responsible parties, requiring that the parties clean up the groundwater.

Environmental Progress



The provision of an alternate water supply, disposal of contaminated soils, securing of toxic materials, the placement of a cap, and the operation of the groundwater treatment system have reduced the potential for exposure to contaminated materials at the TRW, Inc. (Minerva Plant) site. Cleanup goals for surface contamination have been met. Groundwater treatment will continue at the site until established cleanup goals are met.

Site Repository



Minerva Public Library, 677 Linwood Street, Minerva, OH 44657

UNITED SCRAP LEAD CO., INC. OHIO

EPA ID# OHD018392928



EPA REGION 5

Miami County
Troy

Site Description

From 1948 until 1980, the 25-acre United Scrap Lead Co., Inc. site was used to reclaim lead batteries. An estimated 32,000 cubic yards of crushed battery cases were generated and used as fill material. The battery acid and the rinse water were disposed of in an infiltration pit. Beginning in 1972, the acid was neutralized with ammonia prior to discharge into the pit. In 1974, the State recommended implementing a more effective on-site treatment system. United Scrap Lead did not implement the suggested treatment because operations ceased, and the facility was closed shortly thereafter. Monitoring wells on site are contaminated with lead. The site is partially fenced and consists of three general areas: an open flat area occupying the northern half of the site, a wooded area in the southeastern quarter of the site, and the southwestern quarter of the site where the offices, process buildings, and waste disposal areas are located. Forming the southern boundary of the site is a ditch that flows into the Miami River and serves as a major drainage route for runoff for much of Troy and the surrounding area. A residential garden is located adjacent to the site. There also is a migrant worker population associated with commercial activity in the area. The nearest Troy public water supply well is located approximately 2 miles upgradient of the site.

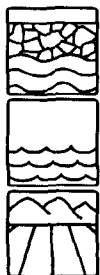
Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 09/08/83

Final Date: 09/21/84

Threats and Contaminants



The groundwater is contaminated with lead, but the concentration does not exceed primary drinking water standards. Sediments and surface water also are contaminated with lead; soil contains lead and arsenic. The contaminated soil, surface water, groundwater, and sediments could pose a health threat if they are accidentally touched or ingested. Also, since the site is located in the Miami River flood plain, there is a possibility of the site contaminating the river.

Cleanup Approach

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

Response Action Status



Emergency Actions: In 1985, the EPA excavated contaminated soil and battery casings from the western portion of the site and moved them away from nearby residents to the interior of the site.



Entire Site: In 1988, the EPA selected the following remedies for the site cleanup: excavating and treating soil and battery casings by washing, with lead recovery and off-site disposal or recycling of casing residues and replacement of cleaned residual soil on site; dewatering tributary sediments, followed by on-site disposal with treated soil; constructing a soil cover over treated material and revegetating the area; decontaminating buildings and debris, followed by off-site disposal; installing a new residential well; imposing deed restrictions; and monitoring groundwater and surface water. The EPA is expected to complete the design specifications for the cleanup in 1994.

Environmental Progress



The excavation of contaminated soil and battery casings have reduced the potential for exposure to contaminated materials at the United Scrap Lead Co., Inc. site while final cleanup activities are being designed.

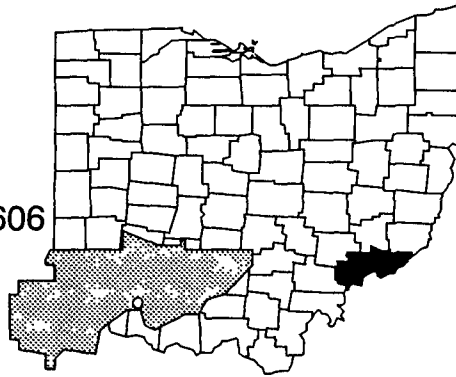
Site Repository



Troy-Miami County Public Library, 419 West Main Street, Troy, OH 45373

VAN DALE JUNKYARD OHIO

EPA ID# OHD980794606



EPA REGION 5

Washington County
1 1/2 miles northeast of Marietta

Other Names:
Vandalis Junkyard

Site Description

The 10-acre Van Dale Junkyard is a licensed facility that accepted hundreds of drums for salvage, some of which contained such materials as waste dyes and organic solvents. Wastes from the drums were disposed of through open burning, direct dumping on to soils, and burial. The small stream draining the site and an adjacent marshy area are contaminated with volatile organic compounds (VOCs) and heavy metals. Approximately 10,000 people live within 2 miles of the site. Area surface waters are used for recreation, while residents rely on groundwater from both private wells and a public water system for their water supply.

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

NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

Threats and Contaminants



Off-site sediments and on-site soils are contaminated with polycyclic aromatic hydrocarbons (PAHs), phthalates, and VOCs. On-site sludge is contaminated with various VOCs and metals. People may be exposed to health threats if they accidentally ingest or come in direct contact with contaminated materials. Site geology has contributed to contamination reaching adjacent streams and a nearby marshy area.

Cleanup Approach

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

Response Action Status



Entire Site: The EPA is conducting an investigation of the Van Dale Junkyard that will identify the types and extent of site pollutants. The investigation is focusing on contaminants in groundwater, soils, and surface waters on and near the site. The investigation was initiated by the potentially responsible parties in 1988. The EPA assumed responsibility for completion of the investigation from the parties in 1990 due to dissatisfaction with the course of the investigation. At the conclusion of the study, scheduled for 1992, alternatives for site cleanup will be recommended.

Site Facts: In 1984, the owner of the site agreed to stop accepting solid and hazardous wastes and to stop filling, grading, excavating, or burning wastes.

Environmental Progress



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

Site Repository



Washington County Public Library, 615 Fifth Street, Marietta, OH 45750

WRIGHT-PATTERSON AIR FORCE BASE OHIO

EPA ID# OH7571724312



EPA REGION 5

Greene County
Northeast of Dayton

Other Names:
USAF Wright-Patterson

Site Description

The 8,511-acre Wright-Patterson Air Force Base is the headquarters for the Air Force Logistics Command and includes the Aeronautical Systems Division and the Air Force Institute of Technology, as well as a medical center. Past Air Force activities in support of operational missions have resulted in the creation of several unlined waste disposal areas throughout the base, including landfills, fire training areas, and coal storage piles. From 1941 to 1973, the Industrial Shops and the Research and Development Laboratories disposed of more than 6,600 tons of waste on the base, including solvents, contaminated thinners, degreasing sludges, and miscellaneous hazardous chemicals. The base employs approximately 32,000 people and 8,000 people live on the base. The Buried Valley Aquifer, which is the predominant water source in the Dayton and Wright-Patterson area, provides water to three municipal wellfields within 3 miles of the site. These wells serve more than 375,000 people. The people working and living on the base are served by 16 base wells.

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

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



Air releases from the site contain methane. Contaminants identified in the groundwater and leachate include volatile organic compounds (VOCs). Surface water and sediments contain lead and polycyclic aromatic hydrocarbons (PAHs). Methane may be migrating through soils to nearby housing, and concentrations in the soil at some landfills are above explosive levels for methane. Residents threatened by the contaminated soil are being relocated to other housing on base. Previous radiological analyses show elevated alpha and beta radiation in leachate. A plume of VOC-contaminated groundwater is migrating off base toward the City of Dayton's well field.

Cleanup Approach

This site is being addressed in 14 stages: emergency actions and 13 long-term remedial phases focusing on cleanup of landfills 8 & 10; spill sites 2 & 3 and coal and chemicals storage area; landfills 11, 12, & 14; fire training areas 3 & 4 and spill site 1; landfill 5, fire training area 1, and Gravel Lake tanks; landfills 3, 4, 6, and 7; Building 4020 underground storage tank BS-2 and chemical disposal area; and seven additional phases beginning within the next two years. Additional phases will be defined as the investigation proceeds.

Response Action Status



Emergency Actions: Base residents near one landfill are being relocated, due to the unstable nature of high levels of methane in the soil. Sixteen base wells use air strippers to remove contamination. However, the air strippers currently are not in operation due to mechanical problems. Even so, the drinking water has remained safe. Approximately 400 drums were removed from various landfills, and the recovery of free product at a fuel spill site has begun. Based on the results of a study completed in 1990, the Air Force began operating a pump and treat system for VOCs in the groundwater in late 1991.



Landfills 8 & 10: The Air Force began an investigation to determine the type and extent of contamination at these landfills in 1990. At the conclusion of the investigation, scheduled for 1993, recommendations will be made for cleaning up these areas. A temporary leachate collection system has been installed.



Spill Sites 2 & 3 and Coal and Chemicals Storage Area: The Air Force plans to begin a study to determine the nature and extent of contamination and to identify cleanup alternatives. Field work is expected to begin in 1992.



Landfills 11, 12, & 14, Fire Training Areas 3 & 4, and Spill Site 1: The Air Force is expected to begin a study to determine the nature and extent of contamination and to identify cleanup alternatives in 1992.



Landfill 5, Fire Training Area 1, and Gravel Lake Tanks: In 1992, the Air Force is expected to begin studies to investigate the extent and nature of contamination and to identify cleanup alternatives.



Landfills 3, 4, 6, & 7: In 1992, the Air Force is expected to begin a study to investigate the extent and nature of contamination in these landfills and to identify cleanup alternatives.



Building 4020 Underground Storage Tank BS-2 and Chemical Disposal Area: In 1991, the Air Force is expected to begin studies to investigate the extent and nature of contamination in these areas and to identify cleanup alternatives.

Site Facts: Wright-Patterson Air Force Base is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities. An Interagency Agreement with the base to oversee studies and implementation of selected remedies was signed on March 21, 1991.

Environmental Progress



The relocation of residents will reduce the potential for exposure to explosive gases at the Wright-Patterson Air Force Base site while studies leading to the selection of final cleanup activities are taking place.

Site Repository

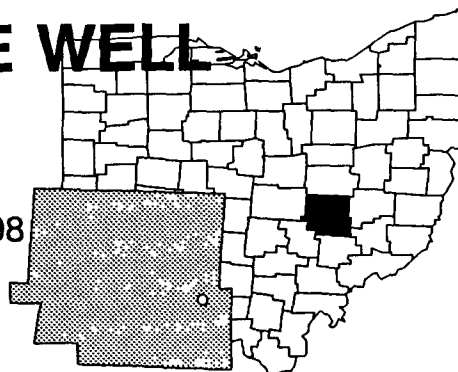


Greene County Library, Fairborn Branch, 1 East Main Street, Fairborn, OH 45324

ZANESVILLE WELL FIELD

OHIO

EPA ID# OHD980794598



EPA REGION 5

Muskingum County
Northeast of Zanesville

Site Description

The 1-acre Zanesville Well Field site supplies water to the City of Zanesville and is adjacent to the Muskingum River. In 1981, the State found that three of the 13 production wells were highly contaminated. A groundwater study conducted by the EPA identified trichloroethylene (TCE) as a primary contaminant. The City took the three contaminated wells out of service and began flushing to remove contaminants remaining in the water lines. By 1982, the contaminated wells still were not in use, but were being continually pumped to reduce the contamination and to prevent its further migration into the well field. A nearby production well also was not in use because of the danger of contamination. The City conducts a regular monitoring program at the site. A neighboring industry, after studying its operation, began to excavate buried wastes and to treat local groundwater. Approximately 40,000 people reside within 3 miles of the site. Fourteen city wells supply water to the population.

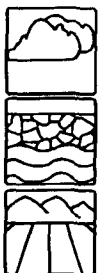
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



The air, groundwater and soil contain volatile organic compounds (VOCs). The soil also contains some heavy metals. Accidentally ingesting or coming in direct contact with groundwater or soil could pose a potential health threat. Inhaling contaminated airborne vapors also may be a health threat.

Cleanup Approach

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

Response Action Status



Entire Site: An investigation to determine the nature and extent of contamination and to identify alternatives for final cleanup was completed in 1991. Cleanup activities at the site will include: pumping and treating groundwater with discharge of treated water into the Muskingum River; washing soil to remove metal contamination; and extracting volatile contaminants from the soil through vapor extraction. Design of these cleanup methods are expected to begin in 1993.

Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Zanesville Well Field site while cleanup activities are being planned.

Site Repository



Muskingum County Library, 220 North Fifth Street, Zanesville, OH 43701

GLOSSARY

Terms Used in the NPL Book

This glossary defines terms used throughout the NPL Volumes. The terms and abbreviations contained in this glossary apply specifically to work performed under the Superfund program in the context of hazardous waste management. These terms may have other meanings when used in a different context. A table of common toxic chemicals found at NPL sites, their sources, and their potential threats is located on page G-15

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

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

Administrative Order [Unilateral]: A legally binding document issued by the EPA, directing the parties potentially responsible to perform site cleanups or studies (generally, the EPA does not issue Unilateral Orders for site studies). This type of Order is not signed by the PRPs and does not require approval by a judge.

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

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

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

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

Applicable or Relevant and Appropriate Requirements (ARARs): Federal, State, or local laws which apply to Superfund activities at NPL sites. Both emergency and long-term actions must comply with these laws or provide sound reasons for allowing a waiver. ARARs must be identified for each site relative to the characteristics of the site, the substances found at the site, or the cleanup alternatives being considered for the site.

GLOSSARY

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

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

Asbestos: A mineral fiber that can pollute air or water and is known to cause cancer or asbestosis when inhaled.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Carbon Disulfide: A degreasing agent formerly used extensively for parts washing. This compound has both inorganic and organic

properties, which increase cleaning efficiency. However, these properties also cause chemical reactions that increase the hazard to human health and the environment.

Carbon Treatment: [see Carbon Adsorption].

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

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

Characterization: The sampling, monitoring, and analysis of a site to determine the extent and nature of toxic releases. Characterization provides the basis for acquiring the necessary technical information to develop, screen, analyze, and select appropriate cleanup techniques.

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

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

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

Closure: The process by which a landfill stops accepting wastes and is shut down under Federal

guidelines that ensure the protection of the public and the environment.

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

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

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

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

Confined Aquifer: An aquifer in which groundwater is confined under pressure that is significantly greater than atmospheric pressure.

GLOSSARY

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

Consent Order: [see Administrative Order on Consent].

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

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

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

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

Cost Recovery: A legal process by which potentially responsible parties can be required to pay back the Superfund program for money

it spends on any cleanup actions [see Potentially Responsible Parties].

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

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

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

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

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

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

Deletion: A site is eligible for deletion from the NPL when Superfund response actions at the site are complete. A site is deleted from the NPL when a notice is published in the Federal Register.

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

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

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

Dioxin: An organic chemical by-product of pesticide manufacture which is known to be one of the most toxic man-made chemicals.

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

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

Ecological Assessment: A study of the impact of man-made or natural activity on living creatures and their environment.

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

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

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

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

assessment supplements an investigation of the site hazards.

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

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

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

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

Feasibility Study: The analysis of the potential cleanup alternatives for a site. The feasibility study usually starts as soon as the remedial investigation is underway. In this volume, the feasibility study is referred to as a site study [see also Remedial Investigation].

GLOSSARY

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

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

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

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

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

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

General Notice Letter: [See Notice Letter].

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

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

Groundwater: Water that fills pores in soils or openings in rocks to the point of saturation. In aquifers, groundwater occurs in sufficient

quantities for use as drinking and irrigation water and other purposes.

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

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

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

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

Heavy Metals: Metallic elements with high atomic weights, such as arsenic, lead, mercury, and cadmium. Heavy metals are very hazardous even at low concentrations and tend to accumulate in the food chain.

Herbicide: A chemical pesticide designed to control or destroy plants, weeds, or grasses.

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

Hydrocarbons: Chemical compounds that consist entirely of hydrogen and carbon.

Hydrology: The properties, distribution, and circulation of water.

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

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

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

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

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

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

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

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

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

Interagency Agreement: A written agreement between the EPA and a Federal agency that has the lead for site cleanup activities, setting forth the roles and responsibilities of the agencies for performing and overseeing the activities. States often are parties to interagency agreements.

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

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

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

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

Leach, Leaching [v.t.]: The process by which soluble chemical components are dissolved and carried through soil by water or some other percolating liquid.

GLOSSARY

Leachate [n]: The liquid that trickles through or drains from waste, carrying soluble components from the waste.

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

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

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

Long-term Response Action: An action which requires a continuous period of on-site activity before cleanup goals are achieved. These actions typically include the extraction and treatment of groundwater and monitoring actions.

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

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

Mill Tailings: [See Mine Tailings].

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

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

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

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

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

Natural Attenuation: [See Attenuation].

Neutrals: Organic compounds that have a relatively neutral pH, complex structure and, due to their organic bases, are easily absorbed into the environment. Water is the most commonly known neutral, however, naphthalene, pyrene, and trichlorobenzene also are examples of neutrals.

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

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

The 60-day period may be extended if the EPA receives a good faith offer from the PRPs within that period. [See also Good Faith Offer].

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

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

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

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

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

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

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

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

Pesticide: A substance or mixture of substances intended to prevent, destroy, or repel any pest. If misused, pesticides can accumulate in the foodchain and contaminate the environment.

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

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

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

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

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

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

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

GLOSSARY

Polycyclic Aromatic Hydrocarbons or Polyaromatic Hydrocarbons (PAHs):

PAHs, such as pyrene, are a group of highly reactive organic compounds found in motor oil. They are a common component of creosotes and can cause cancer.

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

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

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

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

Potentially Responsible Parties (PRPs):

Parties associated with a Superfund site who may be liable for the cost of remedying the release of hazardous substances. This may include owners or operators of the site or transporters who disposed of materials at the site. PRPs may admit liability, or liability may be determined by a court of law. PRPs may sign a

Consent Decree or Administrative Order on Consent to participate in the site cleanup without admitting liability.

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

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

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

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

RCRA: [See Resource Conservation and Recovery Act].

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

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

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

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

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

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

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

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

Remedy Selection: The selection of the final cleanup strategy for the site. At the few sites where the EPA has determined that initial response actions have eliminated site contamination, or that any remaining con-

tamination will be naturally dispersed without further cleanup activities, a "No Action" remedy is selected [see Record of Decision].

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

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

Resource Conservation and Recovery Act (RCRA): A Federal law that established a regulatory system to track hazardous substances from the time of generation to disposal. The law requires safe and secure procedures to be used in treating, transporting, storing, and disposing of hazardous substances. RCRA is designed to prevent new, uncontrolled hazardous waste sites.

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

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

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

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

GLOSSARY

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

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

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

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

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

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

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

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

Slurry Wall: Barriers used to contain the flow of contaminated groundwater or subsurface

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

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

Soil Gas: Gaseous elements and compounds that occur in the small spaces between particles of soil. Such gases can move through or leave the soil or rock, depending on changes in pressure.

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

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

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

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

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

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

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

Special Notice Letter: [See Notice Letter].

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

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

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

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

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

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

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

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

Trichloroethylene (TCE): A stable, colorless liquid with a low boiling point. TCE has many industrial applications, including use as a solvent and as a metal degreasing agent. TCE may be toxic to people when inhaled, ingested, or through skin contact and can damage vital organs, especially the liver [see Volatile Organic Compounds].

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

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

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

GLOSSARY

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

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

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

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

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

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

Water Table: The upper surface of the groundwater.

Weir: A barrier to divert water or other liquids.

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

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

Some Common Contaminants at NPL Sites

Contaminant Category	Example Chemical Types	Sources	Potential Health Threats*
Heavy Metals	Arsenic, Barium, Beryllium, Cadmium, Cobalt, Copper, Chromium, Lead, Manganese, Mercury, Nickel, Silver, Selenium, Zinc	Electroplating, batteries, paint pigments, photography, smelting, thermometers, fluorescent lights, solvent recovery	Tumors, cancers, and kidney, brain, neurological, bone and liver damage
Volatile Organic Compounds (VOCs)	Trichloroethylene (TCE), Perchloroethylene (PCE), Acetone, Benzene, Ketone, Methyl chloride, Toluene, Vinyl Chloride, Dichloroethylene	Solvents and degreasers, gasoline octane enhancers, oils and paints, dry cleaning fluids, chemical manufacturing.	Cancers, kidney and liver damage, impairment of the nervous system resulting in sleepiness and headaches, leukemia
Pesticides/Herbicides	Chlordane, DDT 4-4, DDE, Heptachlor, Aldrin, Endrin, Atrazine, Dieldrin, Toxaphene	Agricultural applications, pesticide and herbicide production	Various effects ranging from nausea to nervous disorders. Dioxin is a common by-product of the manufacture of pesticides and is both highly toxic and a suspected carcinogen.
Polychlorinated biphenyls (PCBs)	—	Electric transformers and capacitors, insulators and coolants, adhesives, caulking compounds, carbonless copy paper, hydraulic fluids.	Cancer and liver damage.
Creosotes	Polyaromatic hydrocarbons (PAHs), Polynuclear aromatics (PNAs), Phenolic Tars, Pentachlorophenol (PCP)	Wood preserving, fossil fuel combustion	Cancers and skin ulcerations with prolonged exposure
Radiation (Radionuclides)	Radium-226, Radon, Uranium-235, Uranium-238	Mine tailings, radium products, natural decay of granites	Cancer

Sources: *Toxic Chemicals—What They Are, How They Affect You (EPA, Region 5)*
Glossary of Environmental Terms (EPA, 1988)

*The potential for risk due to these contaminants is linked to a number of factors; for example, the length and level of exposure and environmental and health factors such as age.