



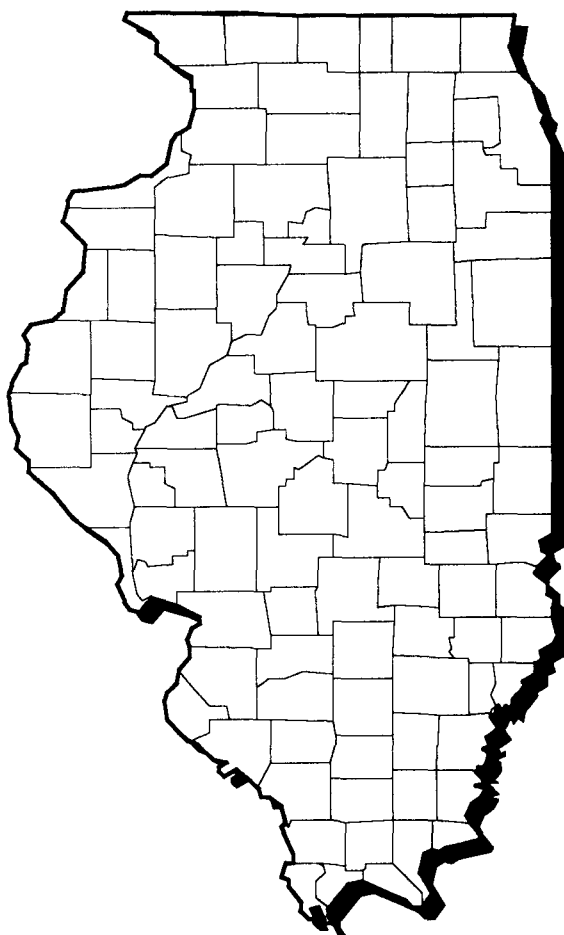
United States  
Environmental Protection  
Agency

Solid Waste And  
Emergency Response  
(5102 G)

EPA/540/R-93/012  
December 1992  
PB93-963213

# SUPERFUND:

Progress at  
National  
Priority  
List Sites



# ILLINOIS 1992 UPDATE



Printed on Recycled Paper

## **NATIONAL PRIORITIES LIST SITES:**

Illinois

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Office of Emergency & Remedial Response**

**Office of Program Management**

**Washington, DC 20460**

**U.S. Environmental Protection Agency  
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If you wish to purchase copies of any additional State volumes, contact:

National Technical Information Service (NTIS)  
U.S. Department of Commerce  
5285 Port Royal Road  
Springfield, VA 22161  
(703) 486-4650

The complete set of the 49 State reports may be ordered as PB93-963250.

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# INTRODUCTION

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## A BRIEF OVERVIEW OF SUPERFUND

**D**uring 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.

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### 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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## INTRODUCTION

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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.

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### 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.*

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## INTRODUCTION

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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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## INTRODUCTION

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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

**H**istorically, 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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## INTRODUCTION

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### HOW SUPERFUND WORKS

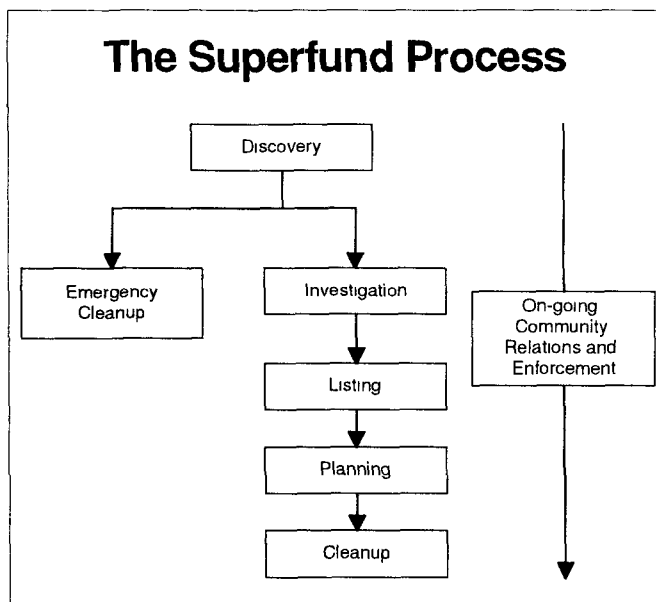
**E**ach Superfund site presents a different set of complex problems. The same hazardous materials and chemicals often contaminate many sites, but the details of each site are different. Almost always, soil is contaminated with one or more chemicals. Their vapors may taint the air over and around the 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;



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.

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# THE VOLUME

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## How to Use the State Book

**T**he 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.

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## How Can You Use This State Book?

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

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

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

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

# THE VOLUME

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

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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.



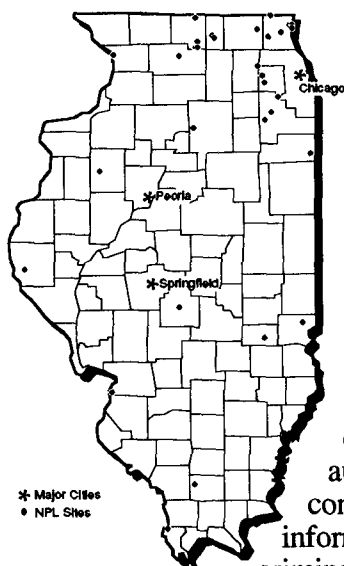
*Cleanup Ongoing* indicates that the selected cleanup remedies for the contaminated site, or part of the site, currently are underway.



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

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## **A SUMMARY OF THE STATE PROGRAM**



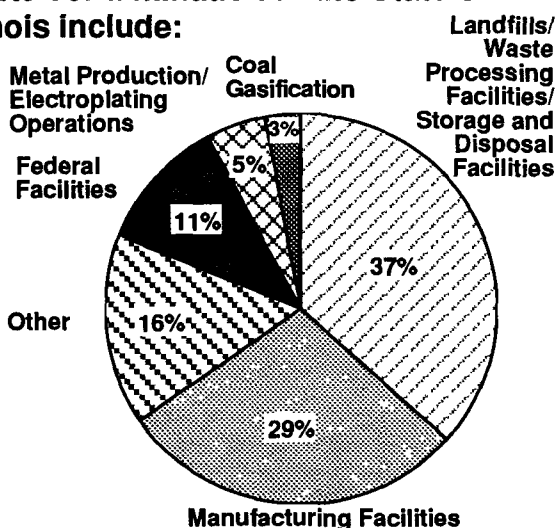
# Superfund Activities in Illinois

The State of Illinois is located within EPA Region 5, which includes the six midwestern States. The State covers 56,345 square miles. According to the 1990 Census, Illinois experienced virtually no change in population between 1980 and 1990, and is ranked sixth in U.S. population with approximately 11,431,000 residents.

The Illinois Environmental Protection Act of 1970, most recently amended in 1988, establishes the Hazardous Waste Fund and provides enforcement authority for site cleanup. The statute grants the State the authority to compel polluters who are liable for site contamination to conduct or pay for cleanup activities regardless of fault, issue notices for information gathering and site access, take injunctive action, issue civil and criminal penalties, collect damages, recover costs, and place a lien on property as a means of payment. The State also has the authority under the Responsible Property Transfer Act of 1988 to require all property owners to disclose any environmental risks prior to the transfer of real estate. The State maintains two funds. The Hazardous Waste Fund may be used to fund administration of the State program, removals, long-term cleanup actions, groundwater protection activities, and the development and implementation of a model pesticide collection program. The Hazardous Waste Research Fund may be used to fund research and development activities; technical studies; monitoring; education and research activities related to groundwater protection; emergency response and removal actions; study and design activities; and long-term cleanup actions. Both funds allocate money towards the 10 percent State contribution required by the Federal Superfund program. No more than one million dollars may be used on any single incident without specific appropriations from the State legislature. To keep the public informed, the State assigns a community relations coordinator to a majority of Superfund sites. Currently, 36 sites in the State of Illinois have been listed as final on the NPL; one site has been deleted. One new site was proposed for listing in 1992.

## The Illinois Environmental Protection Agency implements the Superfund Program in the State of Illinois

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



### Facts about the 38 NPL sites in Illinois:



Immediate Actions (such as removing hazardous substances or restricting site access) were performed at 23 sites.



Nine sites endanger sensitive environments.



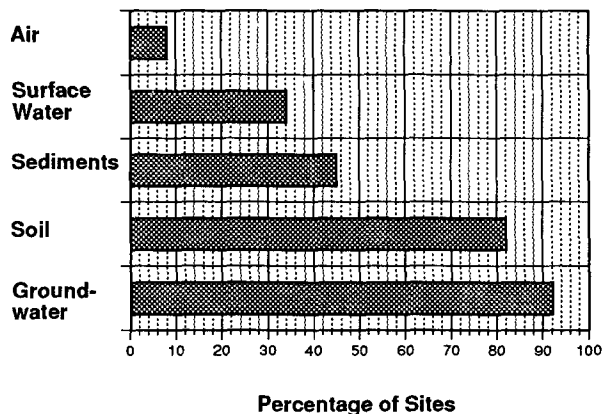
Thirty-one sites are located near residential areas.



## ILLINOIS

### Most Sites Have Multiple Contaminants and Contaminated Media:

#### Media Contaminated at Sites



#### Contaminants Found at Sites

Percentage of Sites	
VOCs	76%
Heavy Metals	71%
PCBs	29%
Creosotes	13%
Radiation	13%
Petrochemicals/Explosives	13%
Other*	11%
Pesticides/Herbicides	8%
Asbestos	8%
Cyanide	8%
Dioxin	3%
Acids	3%
Plastics	3%

\*Other contaminants include ammonias, fluorene, naphthalene, nitrate, nitrite, and sulfates.

### The Potentially Responsible Party Pays...

In the State of Illinois, potentially responsible parties are paying for or conducting cleanup activities at 26 sites.

### For Further Information on NPL Sites and Hazardous Waste Programs in the State of Illinois 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
☎ Illinois Environmental Protection Agency: The Division of Land Pollution Control	For information about the State's responsibility in the Superfund Program	(217) 782-6760
☎ 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

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# THE NPL REPORT

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## PROGRESS TO DATE

**T**he 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.

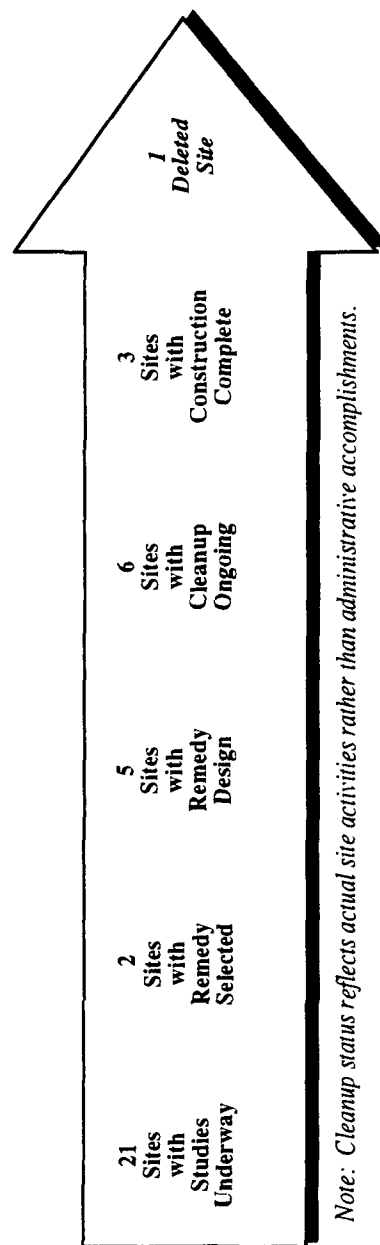
Further information on the activities and progress at each site is given in the site "Fact Sheets" published in this volume.

## Progress Toward Cleanup at NPL Sites in the State of Illinois

Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
A & F MATERIAL RECLAIMING, INC.	CUMBERLAND	Final	09/08/83	⇓	⇓	⇓	⇓	⇓	⇓	
ACME SOLVENT RECLAIMING, INC.	WINNEBAGO	Final	09/08/83		⇓	⇓	⇓	⇓		
ADAMS COUNTY QUINCY LANDFILL 2 & 3	ADAMS	Final	08/30/90	⇓	⇓					
AMOCO CHEMICAL (JOILET LANDFILL)	WILL	Final	02/21/90		⇓					
BELOIT CORP.	WINNEBAGO	Final	08/30/90		⇓					
BELVIDERE MUNICIPAL LANDFILL	BOONE	Final	09/08/83	⇓	⇓	⇓	⇓	⇓	⇓	
BYRON SALVAGE YARD	OGLE	Final	09/08/83	⇓	⇓	⇓	⇓	⇓		
CENTRAL ILLINOIS PUBLIC SERVICE CO.	CHRISTIAN	Final	08/30/90	⇓	⇓					
CROSS BROTHERS PAUL RECYCLING	KANKAKEE	Final	09/08/83	⇓	⇓	⇓	⇓			
DUPAGE COUNTY LDFL/BLACKWELL	DUPAGE	Final	02/21/90	⇓	⇓					
GALESBURG/KOPPERS COMPANY	KNOX	Final	09/08/83	⇓	⇓	⇓				
H. O. D. LANDFILL	LAKE	Final	02/21/90		⇓					
ILADA ENERGY COMPANY	ALEXANDER	Final	10/04/89	⇓	⇓					
INTERSTATE POLLUTION CONTROL	WINNEBAGO	Final	03/31/89		⇓					
JOHNS-MANVILLE CORP.	LAKE	Final	09/08/83	⇓	⇓	⇓	⇓	⇓	⇓	
JOLIET ARMY AMMO. PLANT LAP. AREA	WILL	Final	03/31/89		⇓					
JOLIET ARMY AMMO. PLANT MFG. AREA	WILL	Final	07/21/87	⇓	⇓					
KERR-MCGEE (KRESS CREEK)	DUPAGE	Final	02/08/91		⇓					
KERR-MCGEE (REED-KEPPLER PARK)	DUPAGE	Final	08/30/90	⇓	⇓	⇓				
KERR-MCGEE (RESIDENTIAL AREAS)	DUPAGE	Final	08/30/90	⇓	⇓	⇓				
KERR-MCGEE (SEWAGE TREATMENT)	DUPAGE	Final	08/30/90	⇓	⇓	⇓				
LASALLE ELECTRICAL UTILITIES	LASALLE	Final	09/08/83	⇓	⇓	⇓	⇓	⇓		
LENZ OIL SERVICE, INC.	COOK	Final	10/04/89	⇓	⇓					
MIG/DEWANE LANDFILL	BOONE	Final	08/30/90	⇓	⇓					
NL INDUSTRIES/TARACORP.	MADISON	Final	06/10/86		⇓	⇓	⇓			
OTTAWA RADIATION AREAS	LASALLE	Proposed	07/29/91	⇓	⇓					
OUTBOARD MARINE CORPORATION	LAKE	Final	09/08/83		⇓	⇓	⇓	⇓		

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

Site Name	County	NPL Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete	Deleted
PAGEL'S PIT	WINNEBAGO	Final 06/10/86		⇨	⇨				
PARSONS CASKET HARDWARE CO.	BOONE	Final 07/21/87	⇨	⇨				⇨	
PETERSEN SAND & GRAVEL	LAKE	Deleted 02/11/91	⇨	⇨	⇨				✓
SANGAMO ELECTRIC DUMP	WILLIAMSON	Final 03/31/89		⇨	⇨	⇨			
SAVANNA ARMY DEPOT	CARROLL/JO DAVIES	Final 03/31/89		⇨	⇨	⇨			
S.E. ROCKFORD GROUND WATER CONTAMINATION	WINNEBAGO	Final 03/31/89	⇨	⇨	⇨	⇨	⇨		
TRI-COUNTY LDFL/WASTE MGMT OF IL	KANE	Final 03/31/89		⇨					
VELSICOL CHEMICAL CORPORATION	CLARK	Final 09/08/83	⇨	⇨	⇨	⇨	⇨		
WAUCONDA SAND & GRAVEL	LAKE	Final 09/08/83		⇨	⇨	⇨	⇨		
WOODSTOCK MUNICIPAL LANDFILL	MCHENRY	Final 10/04/89		⇨					
YEOMAN CREEK LANDFILL	LAKE	Final 03/31/89	⇨	⇨					



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

# A & F MATERIAL RECLAIMING, INC. ILLINOIS

EPA ID# ILD980397079



## EPA REGION 5

Cumberland County  
Greenup

### Site Description

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The A & F Material Reclaiming, Inc. site covers nearly 4 acres in Greenup. The facility began operations in 1977 and processed waste materials including oil, sludge, and caustic and sulfuric acid into fuel oil and fire retardant chemicals. In 1978, four storage lagoons reached capacity and began to overflow, contaminating soil and drainage pathways leading to the Embarras River. Twelve steel storage tanks containing a mixture of waste oils, sludges, spent caustics and acids, contaminated water, and other waste products also were located on site. These tanks failed on several occasions, releasing their contents into the surrounding environment. The facility was closed in 1980. The area surrounding the site is agricultural, residential, commercial, municipal, and forestland. The county fairgrounds are southwest of the site and are used year-round for the boarding and care of horses. The Village of Greenup has a population of approximately 2,000 people. The Embarras River is 1/2 mile away from the site and is used for fishing and livestock watering.

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

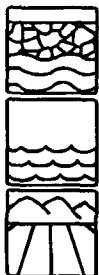
#### NPL LISTING HISTORY

Proposed Date: 07/16/82

Final Date: 09/08/83

### Threats and Contaminants

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Groundwater contains low levels of volatile organic compounds (VOCs), sulfates, phenols, heavy metals, and petroleum products. Sediments in the drainage ditch contained polynuclear aromatic hydrocarbons (PNAs). Soils were contaminated with phenols and benzoic acid. As a result of cleanup activities in 1985, the only remaining health threats may result from accidental ingestion or direct contact with contaminated groundwater until safety standards are met.

## Cleanup Approach

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

## Response Action Status

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**Immediate Actions:** When a lagoon overflowed in 1980, the EPA repaired the lagoon dikes, increased the freeboards, and cleaned the surrounding areas. In 1982, the EPA increased the freeboards by treating approximately 502,600 gallons of water with activated carbon filters and discharged the treated water into the Embarras River. In 1983, when the lagoons were close to overflowing again, the EPA treated and discharged 1,018,000 gallons of water into the Embarras River. About 7,000 cubic yards of sludge were moved from Lagoons 2, 3, and 4 into Lagoon 1. Lagoons 2 and 4 were backfilled with clean soil. All the sludge could not easily be moved from Lagoon 3 to Lagoon 1, so a sludge cell was built for the waste in Lagoon 3. A temporary cap was placed over the consolidated sludge. In 1983, the EPA selected an initial measure to quickly reduce health threats at the site. This measure included removing and disposing of all contaminated bulk liquid, oil, and drums in a federally approved facility. The EPA completed this initial measure in 1985.



**Soils:** In 1983, the EPA selected a remedy to clean up the soils by excavating and disposing of all contaminated soils; monitoring the groundwater; cleaning and removing all on-site equipment and buildings; testing and disposing of soil underneath the buildings if it was found to be contaminated; grading the site; and removing the fence surrounding the site once all contamination was addressed. The potentially responsible parties, under EPA monitoring, finished all the cleanup activities relating to the contaminated soil in 1985.



**Groundwater:** In 1986, the EPA selected a remedy to clean up the groundwater by establishing a monitoring program to ensure that all residual groundwater contamination remaining after the 1985 cleanup will continue to steadily decrease to safe levels by natural dilution and purging to the Embarras River. In addition, institutional controls have been implemented to ensure that drinking water wells are not installed in contaminated groundwater areas during the period of natural purging and dilution. Procedures have been established for a regular review of the monitoring data until safe levels are reached. The monitoring activities began in spring 1990 and the EPA is entering year three of the five year groundwater monitoring program.

**Site Facts:** In 1984, a partial Consent Decree was entered into by the EPA and four potentially responsible parties. Under the terms of the Decree, the companies agreed to undertake cleanup at the site. In 1989, four potentially responsible parties signed a Consent Decree for final cleanup at the site.

## Environmental Progress



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The immediate actions of treating contaminated lagoon water and removing contaminated materials have reduced the threat to the public and the environment. The cleanup of contaminated soils at the A & F Material Reclaiming, Inc. site has been completed and has further reduced site contamination levels. A monitoring program has been, and currently is underway to monitor the natural decline of contaminated groundwater and to ensure that safety standards are met.

## Site Repository



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Greenup City Clerk Office, Greenup Municipal Building, 115 Cumberland Road,  
Greenup, IL 62428.

# ACME SOLVENT RECLAIMING, INC. (MORRISTOWN PLANT) ILLINOIS

EPA ID# ILD053219259



## EPA REGION 5

Winnebago County  
5 miles southeast of Rockford

### Site Description

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The 20-acre Acme Solvent Reclaiming, Inc. (Morristown Plant) site was used as a drum storage and disposal area for wastes generated by Acme's solvent distillation units. From 1960 to 1972, the site consisted of seven waste disposal lagoons and open storage of 10,000 to 15,000 drums. Although operations at the site temporarily were discontinued in 1969 because of concern expressed by the Winnebago County Department of Public Health, site operations resumed in 1971 and continued until 1972. Paints, oils, solvents, and sludges are among the wastes known to have been deposited at the site. Waste disposal practices consisted of emptying drums into the lagoons and storing the empty drums at various open areas on the site. Sludge and other non-recyclable materials were pumped from tanker trucks into the lagoons. After receiving several reports in 1972, Illinois Environmental Protection Agency (IEPA) investigators found violations of environmental regulations, including operating a waste disposal facility without a permit, open burning of refuse, and dumping liquids in a manner that posed a threat to the groundwater. The State ordered the site cleaned up in 1972. The site was closed in 1973, after State inspections indicated that the majority of drums were being crushed and buried at the site, and waste in the lagoons was being covered, rather than removed for off-site disposal. In 1981, methane gas migration into some homes located between the Acme Solvent site and the nearby Pagel's Pit Landfill site led to well water testing by the County. Volatile organic compounds (VOCs) were found in four private drinking water wells. Approximately 5,500 people live within 3 miles of the site. There are several surface water bodies in the area surrounding the site, including a small tributary stream that flows into Killbuck Creek, the Kishwaukee River, and the Rock River. Only the Rock River is known to be used as a public water supply.

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

#### NPL LISTING HISTORY

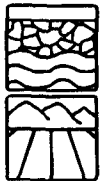
Proposed Date: 07/16/82

Final Date: 09/08/83



## Threats and Contaminants

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Groundwater contains various VOCs. Soil contains VOCs, phthalates, polychlorinated biphenyls (PCBs), and heavy metals including lead and chromium. People who come in direct contact with or accidentally ingest contaminated groundwater or soil may be at risk. If contaminants leach from the site into the nearby stream or creek, wildlife in or around the water may be harmed.

## Cleanup Approach

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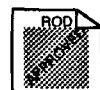
This site is being addressed in two long-term remedial phases focusing on cleanup of soils and cleanup of the waste areas, soils, bedrock, and groundwater.

## Response Action Status

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**Soils:** In 1985, the EPA selected a remedy to clean up the waste and the soil by providing an interim alternate water supply to affected residences through the installation of home carbon treatment units; excavating and incinerating waste materials and contaminated soils and disposing of them in a federally approved facility; continuing the investigation into bedrock contamination and its cleanup; and continuing the investigation of contaminated groundwater and performance of pump tests to evaluate the effectiveness of controlling the contaminant plume. In 1987, Acme, under EPA monitoring, installed home carbon treatment units in five residences with contaminated wells. The residents were provided with free bottled water until the units could be used for drinking water purposes. In addition, the parties potentially responsible for site contamination excavated and disposed of approximately 40,000 tons of contaminated materials.



**Waste Areas, Soils, Bedrock, and Groundwater:** In 1990, the EPA and the IEPA selected a remedy to clean up and treat the wastes in two waste areas, the soils, the bedrock, and the groundwater. This remedy includes: excavation of soils and sludges in two waste areas and treatment by low-temperature air stripping; further treatment of the residuals, as necessary; incineration of liquids located in two on-site tanks and disposal of those tanks; provision of a permanent alternate water supply to residents with contaminated wells; extraction and treatment of contaminated groundwater and discharge of the treated water to surface water; treatment of the remaining contaminated soils and bedrock using vapor extraction; consolidation of remaining contaminated soils and covering these soils and areas where residuals are landfilled on site with a cap; long-term groundwater monitoring; and fencing the site and providing access restrictions and deed notices or advisories for residences with contaminated groundwater. Engineering designs began in 1991, with final cleanup activities scheduled to begin in 1993.

**Site Facts:** In 1986, the potentially responsible parties entered into a Consent Order with the EPA to study and develop cleanup alternatives for the site.

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## Environmental Progress



The provision of an alternate water supply and disposal of contaminated materials have reduced the potential for exposure to contaminated materials at the Acme Solvent Reclamation site while further cleanup activities are being designed.

## Site Repository



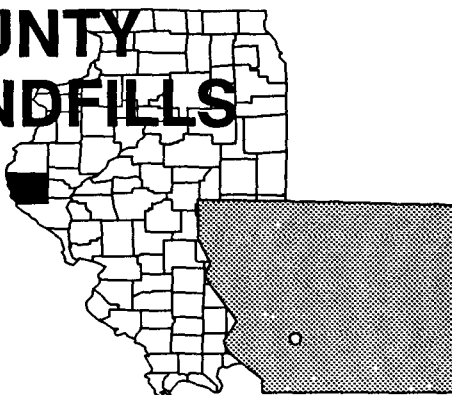
Rockford Public Library, 215 North Wyman Road, Rockford, IL 61101

# ADAMS COUNTY QUINCY LANDFILLS 2 & 3 ILLINOIS

EPA ID# ILD980607055

## EPA REGION 5

Adams County  
1/2 mile west of Quincy



### Site Description

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In 1973 and 1975, the Adams County Quincy Landfills 2 and 3 were licensed to operate as solid waste disposal sites. Landfill 2 covers nearly 12 acres and Landfill 3, approximately 40 acres. From 1972 to 1978, the Quincy landfills received the majority of the county's waste, including combustible and hazardous materials. Illinois Environmental Protection Agency (IEPA) records show that the City of Quincy accepted liquid industrial waste for disposal into unlined pits until the liquids could be pumped into the covered portions of the site. Wastes disposed of included solvents, acids, sludges, spent organic solvents used in degreasing, wastewater treatment sludges from electroplating operations, hydraulic oil, machine coolant, thinners, acetone, and toluene. An estimated 23,000 drums of hazardous waste were accepted. Groundwater samples taken by the IEPA in 1985 and 1986 showed contamination by various volatile organic compounds (VOCs). In 1985 and 1986, the IEPA also sampled two nearby wells that were found to be contaminated and closed them. Approximately 300 people obtain drinking water from private wells within 3 miles of the site.

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

#### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

### Threats and Contaminants

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The groundwater is contaminated with VOCs and selenium. Leachate seeps from the surface of the landfill are contaminated with VOCs and polychlorinated biphenyls (PCBs). Drinking contaminated groundwater or touching the contaminated leachate may be potential health threats. The site is not completely fenced.

## Cleanup Approach

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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

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**Immediate Action:** An alternate water supply was provided to residents near the site.



**Entire Site:** In 1987, the parties potentially responsible for the site contamination began an investigation to determine the nature and extent of contamination and to identify alternatives for cleanup of the site. A supplemental study is ongoing that is focusing on additional groundwater and leachate sampling. It is planned to be completed in late 1992.

## Environmental Progress



Providing an alternate water supply has eliminated the potential of exposure to hazardous substances in the drinking water and will continue to protect households near the Adams County Quincy Landfills 2 and 3 until final cleanup activities are completed.

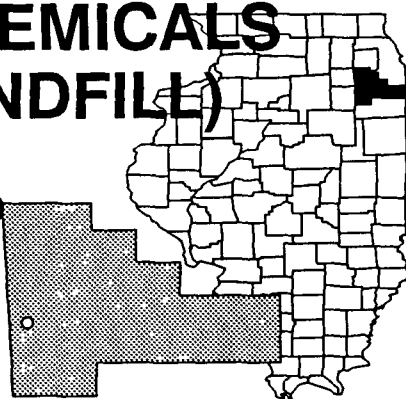
## Site Repository



Contact the Region 5 Superfund Community Relations Office.

# AMOCO CHEMICALS (JOLIET LANDFILL) ILLINOIS

EPA ID# ILD002994259



## EPA REGION 5

Will County  
6 miles southwest of Joliet

### Site Description

Amoco Chemicals (Joliet Landfill) manufactures chemicals on a property in a commercial and industrial area along Route 6, near Route 66, southwest of Joliet. Approximately 5 million cubic feet of wastes, including organics, inorganics, heavy metals, acids and mixed municipal refuse, were disposed of in a 26-acre landfill on the property from 1958 to 1976. Some ignitable wastes and organic acid residues were disposed of in drums in the landfill. A leachate collection system was installed in 1975 under a permit from the Illinois Environmental Protection Agency (IEPA). Until the leachate collection system was installed, leachate from the landfill flowed into an inlet of the adjacent Des Plaines River. The leachate now is treated in Amoco's wastewater treatment plant before it is discharged to the river. In 1976, Amoco covered the landfill with 2 feet of compacted clay and seeded it with perennial grasses. The landfill was officially closed in 1978. Tests conducted by the IEPA in 1974, and by Amoco in 1982, indicated that monitoring wells downslope of the site were contaminated. A shallow aquifer underlies the site, and the Des Plaines River is used for recreational activities. Approximately 1,000 people obtain drinking water from private wells drilled into the shallow aquifer within 3 miles of the site. An estimated 1,100 to 2,300 individuals live within 3 miles of the site. A residential area is located 1/2 mile northwest of the plant.

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

#### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/21/90

### Threats and Contaminants



The groundwater is contaminated with volatile organic compounds (VOCs) including benzene, toluene, and xylenes. The leachate is contaminated with the heavy metals cadmium, copper, lead, and chromium. Coming in direct contact with contaminated groundwater may pose a potential health threat. The site is open to the river, making it possible for people and animals to come into direct contact with hazardous substances.

## Cleanup Approach

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

## Response Action Status

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**Entire Site:** An investigation into the extent of groundwater, leachate, and possible surface water contamination, as well as alternative remedies, is scheduled to begin in 1992. Following the investigation and the evaluation of results, the EPA will select the appropriate cleanup technologies.

## Environmental Progress



After placing the Amoco Chemicals (Joliet Landfill) site on the NPL, the EPA performed preliminary evaluations and determined that the site does not pose an imminent threat to the public or the environment while the investigations leading to the selection of permanent cleanup remedies are taking place.

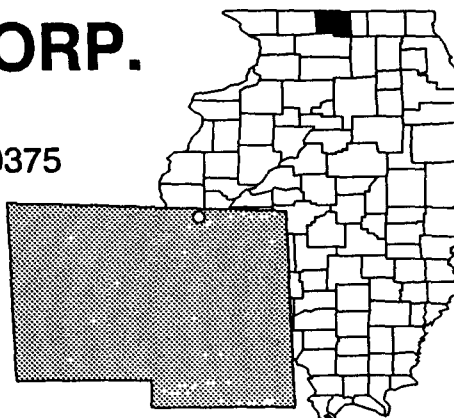
## Site Repository



Contact the Region 5 Superfund Community Relations Office.

# BELOIT CORP. ILLINOIS

EPA ID# ILD021440375



## EPA REGION 5

Winnebago County  
Village of Rockton

### Site Description

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The 175-acre Beloit Corp. site in Rockton operates as a plant for paper-making machine manufacturing and as a research and development facility for designing and demonstrating the machines to prospective customers. The facility purchases clean virgin pulp to make multi-layered paper products. The wastewater and paper fibers generated from the manufacturing process were disposed of in three unlined surface impoundments. These impoundments have since been taken out of service. The paper fiber sediment from the bottom of the impoundments was spread on the ground, as allowed by the State through a permit issued in 1983. Tests by the company in 1985 found volatile organic compounds (VOCs) in on-site monitoring wells and in nearby private wells. Approximately 15,000 people obtain drinking water from public and private wells located within 3 miles of the site. The Rock River is less than 50 feet from the site's surface impoundments.

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

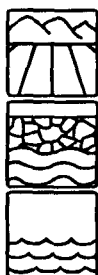
#### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

### Threats and Contaminants

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Soils, groundwater, surface water, and on-site pond sediments are contaminated with VOCs. Potential health threats to people include drinking contaminated groundwater and pond water, accidental ingestion of contaminated soil and pond sediments, and coming in direct contact with contaminated groundwater, pond water, pond sediments, and soils.

## Cleanup Approach

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

## Response Action Status

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**Entire Site:** The EPA and the State currently are working together on a groundwater monitoring program in the Rockford area. An investigation that will define the contaminants of concern and will recommend effective alternatives for final cleanup currently is underway and is planned to be completed in early 1994.

## Environmental Progress



The EPA and the State have determined that the site is not a threat while investigations leading to the selection of the final remedies to clean up the Beloit Corp. site are underway.

## Site Repository

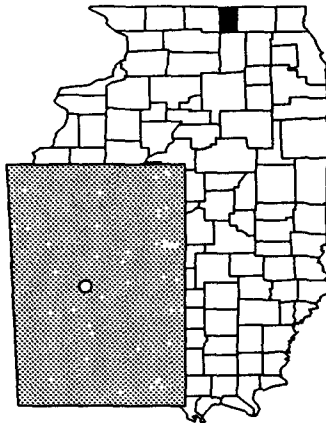


Talcott Free Library, 101 East Main Street, Rockton, IL 61072



# BELVIDERE MUNICIPAL LANDFILL ILLINOIS

EPA ID# ILD980497663



**EPA REGION 5**  
Boone County  
Adjacent to the City of Belvidere

## Site Description

The Belvidere Municipal Landfill site occupies 139 acres, 19 of which were used for a landfill. The City of Belvidere operated the landfill and received municipal wastes from 1939 to 1973. Between 1965 and 1973, the site was used to dispose of industrial wastes, sludge from the city sewage treatment plant, paint and oil sludge, unknown liquid wastes, and other sludges. The current landfill cover is composed of silt and sand and varies in thickness up to 36 inches. An area just west of the landfill was found to contain buried drums that were filled with liquids or sludges. The Kishwaukee River borders the site, and an active gravel pit is adjacent to the northern portion of the site. West Pond and East Pond lie to the east of the site, and Spencer Park lies southeast of the site. Approximately 14,000 people live within 3 miles of the landfill. The site is located 1/2 mile from six residences that use groundwater as a supply for drinking water. Most of the county is rural; however, Belvidere has an industrial base which includes the manufacture of cars, furniture, and metal fasteners, in addition to several light industries.

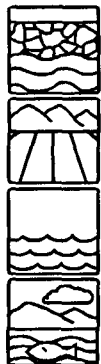
**Site Responsibility:** The site is being addressed through Federal and potentially responsible parties' actions.

### NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

## Threats and Contaminants



Remaining site soils contain low levels of volatile organic compounds (VOCs) including benzene, toluene, and xylenes; polycyclic aromatic hydrocarbons (PAHs); polychlorinated biphenyls (PCBs); nitrite; and heavy metals including chromium. Surface water contains low levels of VOCs including trichloroethylene (TCE), nitrate, and heavy metals. None of these contaminants exceeds established Federal standards. Individuals who came into direct contact with contaminated soil could have been at risk prior to the completion of cleanup actions. The shallow groundwater under the site, which was transporting significant levels of contaminants toward the Kishwaukee River, has been contained through the ongoing treatment of the contaminated groundwater.

## Cleanup Approach

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

## Response Action Status

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**Initial Actions:** In 1986, the EPA staged and sampled 110 drums. Workers crushed and relocated 65 empty drums to a new holding area for disposal, and contaminated soils were excavated and loaded into boxes. The drums and contaminated soils were compiled into one waste pile and disposed of at a federally approved landfill. The EPA solidified liquids with cement and transported them off site for disposal.



**Entire Site:** In 1988, the EPA chose the following remedies to address contamination at the site: placing a cap over the landfill; sampling the soil in the drum disposal area and cleaning up the PCBs; removing highly contaminated soil off site to be burned, with the remaining lesser-contaminated soils to be capped; installing a pump and treat system to remove contaminants from groundwater and discharging the treated water to the City's water treatment plant; monitoring the groundwater in and around the site; installing an upgraded fence around the landfill; instituting deed restrictions to control unacceptable activities and construction on site; and installing flood control measures to prevent erosion of the cap and the contents of the landfill. The EPA approved the technical designs for the cleanup in 1990, and the potentially responsible parties began site work. The PCB-contaminated soil was consolidated on the landfill, and the landfill was capped. A fence was installed around the landfill, and deed restrictions are in place. Construction of the groundwater extraction system was completed in 1992. Groundwater treatment will continue until established cleanup goals are met.

## Environmental Progress



Construction of a fence around the landfill and wells and a cap over the contaminated soils have eliminated the possibility of direct contact with the site contaminants. By removing the contaminated drums and their contents to an approved disposal facility, the EPA reduced the risk of exposure to hazardous materials at the Belvidere Municipal Landfill site while groundwater cleanup continues.

## Site Repository

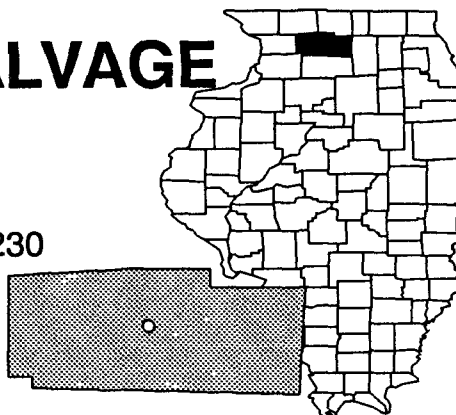


Ida Public Library, 320 NorthState Road, Belvidere, IL 61008

# BYRON SALVAGE YARD

## ILLINOIS

EPA ID# ILD010236230



### EPA REGION 5

Ogle County  
4 miles southwest of Byron

**Other Names:**  
**Byron Johnson**

## Site Description

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The Byron Salvage Yard site encompasses both the Byron Johnson Salvage Yard and Dirk's Farm near Byron. During the 1960s and the early 1970s, the salvage yard accepted miscellaneous wastes and debris for disposal, including drums of electroplating wastes, oil sludges, cutting wheels, solvents, and scrap metal. Because industrial waste dumping occurred during periods of heavy rainfall, much of the waste was carried off site by the surface water runoff. Cyanide-containing plating waste was sprayed onto the roads in and around the salvage yard. In 1976, the State found cyanide and heavy metals in the soil, surface water, and groundwater. Approximately 5,000 people live in Byron. The closest residence to the salvage yard is approximately 100 yards away. About 50 people live within 1 mile of the site, and all residences used private wells supplied by groundwater until the State extended a municipal water line to a majority of the affected residences in 1988 and 1989. The area is rural, and the site is bordered by a forest preserve, farmlands, and a nuclear power plant. The property is bisected by two ravines that drain surface water runoff into the south branch of Woodland Creek, which flows into the Rock River.

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

#### NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

## Threats and Contaminants

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Groundwater is contaminated with volatile organic compounds (VOCs) such as vinyl chloride and trichloroethylene (TCE) and heavy metals including cadmium, chromium, nickel, and lead. Soil is contaminated with cyanide, toluene, xylene, and heavy metals including antimony. Meyer's Spring contains trace levels of cyanide and TCE. Groundwater is the only source of drinking water in the area; therefore, people who drink or come in direct contact with contaminated well water may be at risk. Those who trespass on the site and accidentally ingest or come in direct contact with contaminated soil potentially may suffer adverse health effects.

## Cleanup Approach

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The site is being addressed in five stages: initial actions and four long-term remedial phases focusing on cleanup of the soils and drums, installation of home carbon units, cleanup of the groundwater, and cleanup of Dirk's Farm.

## Response Action Status

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**Initial Actions:** As initial actions in 1984, the EPA constructed a fence to prohibit access to the site, provided residents with bottled water, and, later, carbon filter systems for their water supplies. In 1988, the EPA discovered floating contaminants in the groundwater and installed a skimmer in a pumping well to remove the pollutants.



**Soils and Drums:** In 1985, the State selected a remedy to clean up the soil and the buried drums by disposing of all surface and buried drums, excavating and disposing of highly contaminated soils, and treating soils containing less than 100 parts per million of cyanide with sodium hypochlorite. The State completed all the cleanup actions for the drums and soil in 1986.



**Home Carbon Units:** In 1986, following the installation of carbon filtration units for 10 houses in the Acorn Road subdivision, the EPA selected a remedy consisting of installing whole-house carbon filtration systems in affected residences, continuing sampling to ensure that the carbon filtration is effective, installing replacement carbon filters when needed, and disposing of the spent filters at a federally approved facility. The EPA completed these actions in 1986. The EPA has since removed all carbon filters, because the homes have been connected to the municipal water supply since 1988.



**Groundwater Contamination:** In 1989, the EPA selected a remedy to clean up the groundwater by: (1) extending the Byron municipal water supply system to 27 additional residences; (2) removing all wastes generated during an EPA study; (3) installing, sampling, and analyzing monitoring wells near the Rock River; (4) monitoring surface water and groundwater on a long-term basis; (5) plugging monitoring wells not selected for long-term use; and (6) limiting public exposure to groundwater by plugging abandoned residential wells and requiring hook-ups to the public water supply. The technical design was completed in the fall of 1991. Final cleanup activities are scheduled to begin in late 1992.



**Dirk's Farm:** During investigations of the salvage yard, the EPA also discovered Dirk's Farm, adjacent to the site area, to be contaminated. The EPA investigated this new area thoroughly to determine the extent and type of contamination. Field work is complete; the investigative report scheduled to be completed in early 1993. At that time, measures to clean up the area will be selected by the EPA.

**Site Facts:** In 1983, the EPA and the State signed a Cooperative Agreement, under which the State agreed to study the type and extent of the site contamination.

## Environmental Progress

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The EPA has completed numerous cleanup actions at the Byron Salvage Yard site, including installing a fence, providing carbon treatment units to homes with wells, and removing contaminated drums and soils. The EPA also has initiated a study on the adjacent contaminated area discovered during investigations of the site. All these actions have reduced the threat of exposure to hazardous materials on the site while the remaining cleanup activities are taking place.

## Site Repository

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Ogle County Health Department, 104 South 5th Street, Oregon, IL 61061

# CENTRAL ILLINOIS PUBLIC SERVICE CO. ILLINOIS

EPA ID# ILD981781065



## EPA REGION 5

Christian County

Taylorville

Other Names:

CIPS

## Site Description

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The Central Illinois Public Service Co. (CIPS) site is a former coal gasification plant covering 1 acre in Taylorville. The plant was constructed in 1892 and was operated by the Taylorville Gas and Electric Company until 1912, when it was acquired by CIPS. Operations stopped in 1932, and CIPS sold the property in 1961. The gasification process generated coal tar, which contains polynuclear aromatic hydrocarbons (PNAs) and other impurities that were periodically removed and sold or given away for use as road oil, roofing tar, or a pesticide. When CIPS abandoned the facility, the aboveground structures were demolished; however, underground tanks containing tar and other equipment remained in place. The tanks were covered with miscellaneous debris and fill. Contamination at the site was first suspected when Apple Construction Company, which acquired the site in 1985, excavated a trench for a septic tank drainage line. Workers noticed strong odors, discoloration of excavated soils, and a dark viscous material throughout the soil. CIPS was notified of the problem and began an investigation. In 1986, CIPS confirmed the presence of PNAs and volatile organic compounds (VOCs) in soils and groundwater. Contaminants also have been found in the Sangamon River. CIPS is monitoring groundwater and surface water, as well as sediment and fish in the Seaman Estate Pond. Approximately 12,700 people live within a 3-mile radius of the site, and about 4,500 people live within 1 mile. Three municipal water wells are located 3 miles from the property. These wells serve as an alternate supply for the City of Taylorville. The main water supply for the city is Lake Taylorville, about 4 miles southeast of the site.

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

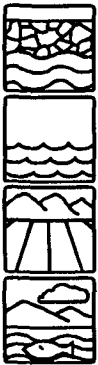
### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

## Threats and Contaminants

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Groundwater and sediments from a drainage culvert and a private lake are contaminated with VOCs including benzene, toluene, and xylene. The excavated soil was contaminated with naphthalene, fluorene, and various VOCs. Surface water runoff has transported contaminants off the site. People who come in direct contact with or accidentally ingest contaminated soil, groundwater, surface water, or sediments may suffer adverse health effects. Contaminants may accumulate in fish in the Seaman Estate Pond, and if eaten, the fish may be harmful to human health.

## Cleanup Approach

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

## Response Action Status

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**Immediate Actions:** Under Illinois Environmental Protection Agency (IEPA) supervision, 3 underground structures, 9,000 cubic yards of contaminated on-site soil, and 3,000 cubic yards of off-site soil were removed. A water main was completed by CIPS to supply water to residents within 1/2 mile of the site, and the ownership was transferred to the City of Taylorville. The building on the site also was demolished, and a chain-link fence with a locking gate was installed around much of the perimeter of the site.



**Entire Site:** CIPS began a thorough investigation of the site under State supervision. This investigation, scheduled to be completed in 1992, will determine if additional soil needs to be excavated and the most effective method to treat the contaminated groundwater, surface water, and sediments. Draft site reports currently are under review by the IEPA. Once the studies are completed, the EPA will review and select cleanup alternatives for the site.

**Site Facts:** In 1986, the State issued an order to CIPS and Apple Contractors, directing the companies to thoroughly investigate the site and to remove the buried structures.

## Environmental Progress



The removal of the underground structures, contaminated soils, construction of a fence to limit site access, and the demolition of the contaminated building on the Central Illinois Public Service Co. site have reduced the potential for exposure to hazardous materials while the studies leading to a final selection of cleanup alternatives are being conducted.

## Site Repository

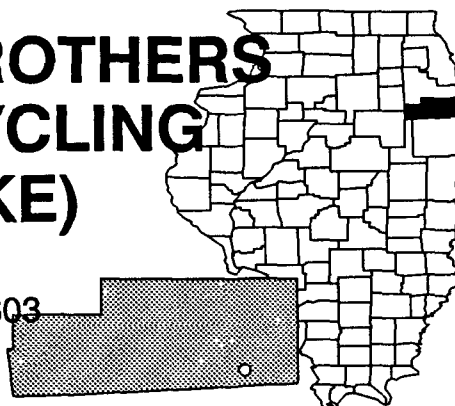


Taylorville Public Library, 121 W. Vine Street, Taylorville, IL



# CROSS BROTHERS PAIL RECYCLING (PEMBROKE) ILLINOIS

EPA ID# ILD980792303



## EPA REGION 5

Kankakee County  
Pembroke Township

### Site Description

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The 20-acre Cross Brothers Pail Recycling (Pembroke) site, located about 14 miles southeast of Kankakee, is an abandoned drum and pail reclamation facility. The container reclamation facility covered 10 acres of the site. From 1961 until 1980, pails and drums were recycled at the site by burning out the residue using hazardous waste solvents as fuel and then sandblasting and painting them. Container contents were emptied onto the ground, and the containers were buried. Soil and groundwater became contaminated during these operations. Site investigations led to the discovery of over 10,000 mostly empty 5-gallon pails, 10 acres of contaminated soil, at least 10 covered trenches of unknown wastes, and a plume of contaminated groundwater leaving the site. A house trailer is occupied and maintained at the site. There are 3,500 people living within 3 miles of the site. The site is adjacent to properties that either are pasture land or individual residential lots. The contaminated groundwater plume has moved to the north and has contaminated two residential water wells. These two wells have been abandoned and replaced with deeper wells. Local residents use groundwater as their drinking water supply, and possibly, as a livestock and agriculture water supply. There are at least 12 privately owned water supply wells within 1/2 mile of the site.

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

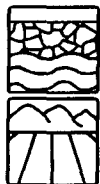
#### NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

### Threats and Contaminants

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Groundwater is contaminated with volatile organic compounds (VOCs) such as benzene, toluene, and xylenes and heavy metals including lead. Soil is contaminated with polychlorinated biphenyls (PCBs) and VOCs. The greatest health threat to people is through direct exposure to the contaminated groundwater moving off site into nearby residential, livestock, and agricultural water supply wells. The potential for contaminated groundwater to migrate exists. Trespassers also may be at risk by accidentally ingesting, inhaling, or making direct contact with contaminated soil.

## Cleanup Approach

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

## Response Action Status

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**Immediate Actions:** Under advisement by the State, the potentially responsible parties deepened contaminated wells to provide clean drinking water. As an initial measure in 1985, a partial fence was placed around the site. Most of the drums, pails, and contaminated soils, considered to be the sources of groundwater contamination, were removed from the site. Also in 1985, the EPA selected soil cleanup technologies to address site contamination, including off-site disposal of surface and buried waste materials and visibly contaminated soil.



**Entire Site:** In 1989, the EPA selected cleanup technologies to address site contamination which include: resampling localized areas of the PCB-contaminated soil area for eventual removal and incineration; installing a groundwater collection system to capture the contaminated groundwater plume; treating on-site groundwater; cleaning soil from an estimated 3 1/2-acre area by flushing with water; and applying a 6-inch vegetative cover to the remaining site area. A fence surrounding the entire site will be constructed. Water discharged from groundwater cleanup will be treated and used for the soil flushing operation. The potentially responsible parties, under EPA monitoring, are preparing the technical specifications and design for the selected cleanup technologies. Cleanup activities are expected to begin once the design phase is completed.

**Site Facts:** In 1980, the Kankakee County Circuit Court ordered the potentially responsible parties to discontinue recycling operations and to clean up the site surface. In 1983, the EPA signed a Cooperative Agreement with the State to conduct an investigation into the nature and extent of contamination at the site.

## Environmental Progress



The affected area wells have been deepened to provide safe drinking water, and most of the contaminated containers and soils have been removed and disposed of in an approved facility. The EPA has selected the remedies for the permanent cleanup of the Cross Brothers Pail Recycling (Pembroke) site, and the actual cleanup activities are scheduled to begin once the design phase has been completed.

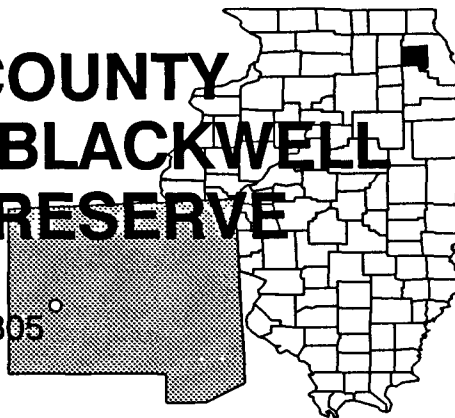
## Site Repository



Kankakee Public Library, 304 South Indiana Road, Kankakee, IL 60901

# DUPAGE COUNTY LANDFILL/BLACKWELL FOREST PRESERVE ILLINOIS

EPA ID# ILD980606305



## EPA REGION 5

Dupage County  
Warrenville

### Site Description

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The Dupage County Landfill/Blackwell Forest Preserve site covers 40 acres within the 1,235-acre Blackwell Forest Preserve. From 1965 to 1970, the Forest Preserve District and DuPage County operated the landfill, accepting demolition debris, municipal refuse, and unknown amounts of potentially hazardous waste. When the site was closed, the Forest Preserve District covered it with a clay cap. Private and public wells within 3 miles of the site provide drinking water to 44,000 people. The Forest Preserve District continues to monitor the landfill. A lake close to the landfill has been closed to swimming as a precautionary measure.

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

#### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 02/21/90

### Threats and Contaminants

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In 1984, volatile organic compounds (VOCs) were detected in numerous monitoring wells installed around the site. Because the site was capped after closure of the landfill, there do not appear to be any potential threats to people using the site for recreational purposes.

### Cleanup Approach

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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

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**Immediate Actions:** In 1987, the Forest Preserve District began pumping leachate from collection manholes. Since the 1970s, over 50 monitoring wells have been installed around the site.



**Entire Site:** The Forest Preserve District initiated an investigation in 1989, under EPA monitoring, to determine the type and extent of contamination at the site and to identify alternative technologies for the cleanup. The first phase of field sampling has been completed. The data currently are being evaluated and a draft investigative report is scheduled for mid-1992. Over 50 residential wells adjacent to the site have been sampled and results indicate no apparent threat to public health. This investigation is scheduled for completion in 1993.

**Site Facts:** In 1989, the Forest Preserve District signed an Administrative Order on Consent with the EPA and the State, under which the District agreed to perform an investigation into site contamination.

## Environmental Progress



The installation of monitoring wells and removal of leachate from the Dupage County Landfill/Blackwell Forest Preserve site have reduced the potential for exposure to contaminated materials while cleanup activities are being planned.

## Site Repository



Warrenville Public Library, 28 West 751 Stafford Place, Warrenville, IL 60555

# GALESBURG/ KOPPERS CO. ILLINOIS

EPA ID# ILD990817991



## EPA REGION 5

Knox County  
2 miles south of Galesburg

**Other Names:**  
**Burlington Northern Rail Yard**  
**Koppers Co./Galesburg**

## Site Description

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The Galesburg/Koppers Co. site covers 105 acres near Galesburg. The Burlington Northern Railroad Company operated the site as a railroad tie treatment plant from 1907 until 1966. In 1966, the Koppers Company leased the production plant from the railroad and assumed operation of the facility. Treatment operations consisted of pressure-treating the railroad ties with a mixture of creosote and coal tar or creosote and fuel oil. The facility treats 600,000 to 800,000 cross ties a year. From 1971 to 1976, pentachlorophenol (PCP) was used in the treatment process. Key contaminated areas at the site include a slurry pond, a northern and southern creosote lagoon, a PCP-contaminated lagoon, a waste pile storage area, two backfilled drainage ditches, and two former wastewater spray fields. Contamination has been found in soil, groundwater, surface water, and sediment. Between 1966 and 1980, lagoons were cleaned and closed, used oil was recycled, and the wastewater spray fields were constructed. Approximately 60,000 residents live in Galesburg. The area near the site is residential, agricultural, and commercial/industrial. The economy is dependent on livestock and agricultural products such as hogs, beef cattle, and corn. Brush Creek, an intermittent stream located adjacent to the site, flows southeast to Lake Bracken, which is about 2 miles downstream.

**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

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Air contains volatile organic compounds (VOCs), phenols, and petrochemicals. VOCs, asbestos, heavy metals, phenols, and PCP are present in the groundwater. Sediments contain heavy metals, VOCs, polychlorinated biphenyls (PCBs), and pesticides. Soil is contaminated with dioxins, phenol, and polycyclic aromatic hydrocarbons (PAHs). Surface water contains VOCs, asbestos, and heavy metals. Fish in Lake Bracken are contaminated with PCBs and PAHs. People who come in direct contact with or accidentally ingest contaminated groundwater, soil, surface water, or sediments may be at risk. On-site workers and nearby residents potentially could be exposed to contaminants by inhaling dust. Those who eat contaminated fish from Lake Bracken may suffer adverse health effects. Wildlife in and around the lake and Brush Creek also may be harmed by the pollutants.

## Cleanup Approach

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

## Response Action Status

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**Interim Actions:** The PCP lagoon was pumped dry, and the water was treated in 1983. The contaminated soils from the lagoons also were removed and disposed of off site. Excavated soil from the area around the treatment building is being stored in piles on site.



**Entire Site:** In 1989, the State selected a remedy to clean up the site by: (1) excavating contaminated soil and consolidating it on site and then removing contaminants with a biological treatment called bioremediation; (2) constructing shallow groundwater interceptor trenches and deep pumping wells to extract groundwater; (3) pre-treating the extracted groundwater using an existing wastewater treatment system to remove contaminants and then discharging the treated water to the Galesburg Sanitary District treatment works for final treatment; (4) monitoring the groundwater and soil to ensure the effectiveness of the cleanup; and (5) implementing land use restrictions. Koppers Company, under State supervision, is designing the technical specifications for the cleanup of the site. The design phase is scheduled to begin in 1992 and is expected to be completed in 1994, after which the cleanup activities will begin.

## Environmental Progress



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The cleanup and treatment of the soils and water from the PCP-contaminated lagoon on the *Galesburg/Koppers Co. site* have reduced the potential for exposure to hazardous materials on the site while design of the technical specifications and the final cleanup activities are being planned.

## Site Repository

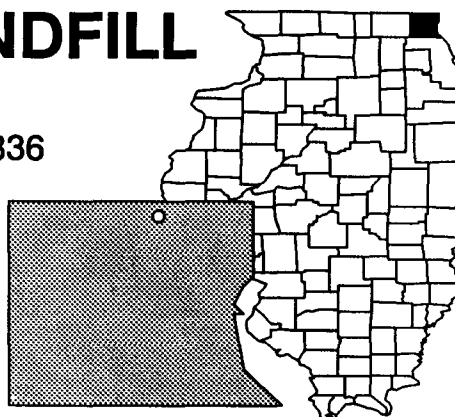


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Contact the Region 5 Superfund Community Relations Office.

# H.O.D. LANDFILL ILLINOIS

EPA ID# ILD980605836



## EPA REGION 5

Lake County  
Antioch

Other Names:  
CCD Landfill

### Site Description

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The H.O.D. Landfill covers 50 acres of an 80-acre parcel of land. Liquid organic and drummed wastes were disposed of at the landfill from 1963 to 1984, and the site is now closed. One tanker dumped wastes containing high levels of polychlorinated biphenyls (PCBs). Groundwater downgradient of the site contains zinc, lead, and cadmium. The closest residence is within 100 feet of the landfill. Approximately 14,300 people live within 3 miles of the site. Approximately 40 private wells used for domestic water purposes are located within 3 miles of the landfill. Five public water supply wells are in the vicinity, with the closest being 600 feet away; these wells serve approximately 4,600 people. The site is adjacent to a freshwater wetland. Sequoit Creek also is adjacent to the landfill and flows into a series of lakes used for recreation.

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

#### NPL LISTING HISTORY

Proposed Date: 09/18/85

Final Date: 02/21/90

### Threats and Contaminants

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Groundwater is contaminated with various volatile organic compounds (VOCs) and heavy metals including cadmium, lead, zinc, and manganese. People who come in direct contact with or drink contaminated groundwater may potentially be at risk. If contaminants seep from the site into Sequoit Creek or the wetlands area, wildlife in or around the water may be harmed.

### Cleanup Approach

---

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



## Response Action Status

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**Entire Site:** An investigation to determine the nature and extent of contamination at the site currently is underway. Groundwater, soil, sediments, surface water, and air will be sampled to measure the levels of contamination.

Upon completion of the investigation, scheduled for 1993, measures will be recommended to clean up the landfill.

## Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the H.O.D. Landfill site while site investigations are underway.

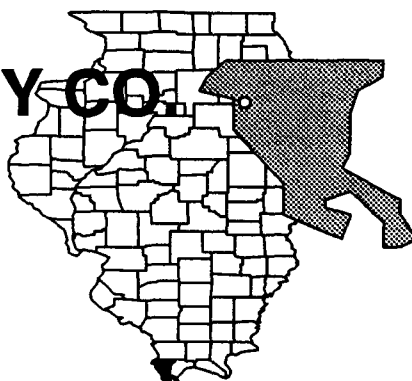
## Site Repository



Antioch Township Library, 757 Main Street, Antioch, IL 60002

# ILADA ENERGY CO. ILLINOIS

EPA ID# ILD980996789



## EPA REGION 5

Alexander County  
East Cape Girardeau

### Site Description

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The 20-acre Ilada Energy Co. site is located in East Cape Girardeau. The Federal government operated a fuel oil storage/transfer terminal on the site from 1942 until the early or mid-1950s and placed oil in 17 tanks with a capacity in excess of 11 million gallons. In the late 1950s, the government deeded the site back to its original owner. The site remained vacant until 1981, when the Ilada Energy Co. purchased and operated it as a waste oil reclamation facility from 1981 to 1983. As part of its operations, Ilada removed bottom sediment and water from the waste oil and blended it to obtain the desired heat content. The "cleaned" oil then was sold to commercial enterprises. The Illinois Environmental Protection Agency (IEPA) conducted an inspection of the operations and facilities at the site in 1982. During this visit, IEPA found that Ilada was improperly storing, handling, mixing, and disposing of waste oils contaminated with polychlorinated biphenyls (PCBs). Ilada burned the PCB-laden waste oil in an on-site boiler. Of the 17 tanks on site, 11 contained oil contaminated with chlorinated organic solvents, metals, and other elemental constituents of PCBs. The IEPA also observed oily material spilling and leaking onto the ground, under the valves of the tanks, and in the designated loading and unloading areas. Although the site borders the Mississippi River, it is protected against floods by a levee that borders the southern edge of the site. The site is located in a sparsely populated area that is relatively flat. An estimated 500 people obtain drinking water from wells located within 3 miles of the site. Approximately 130 people live within a mile of the site.

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

#### NPL LISTING HISTORY

Proposed Date: 06/24/88  
Final Date: 10/04/89

### Threats and Contaminants

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On-site groundwater is contaminated with the heavy metals zinc and arsenic. Liquid oily wastes are contaminated with volatile organic compounds (VOCs), PCBs, and heavy metals including lead, arsenic, and zinc. On-site surface soils are contaminated with PCBs and heavy metals. The potential exists for site-related contaminants to migrate off site into the sole source drinking water supply of the area residents. Additionally, agricultural lands and the nearby Mississippi River could be adversely affected by oil wastes and associated contaminants from the site.

## Cleanup Approach

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

## Response Action Status

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**Immediate Actions:** The IEPA installed six monitoring wells on the site in 1986. Subsequent sampling of these wells showed that two of them were contaminated with arsenic. The EPA ordered the potentially responsible parties to remove the PCB-contaminated waste oil tanks and to decontaminate the tanks, associated piping, and on-site structures. Cleanup activities were started in 1989. All tanks and their contents, as well as visibly contaminated soils, have been removed from the site. Access to the site is restricted by a fence surrounding the site. Both of the site's access gates have been padlocked and posted with warning signs by the EPA, and the site is guarded on a 24-hour basis.



**Entire Site:** The potentially responsible parties, under monitoring by the EPA, began a study into the nature and extent of contamination at the site and the most effective methods of addressing this contamination. The study is currently under review and is scheduled for completion in late 1992.

**Site Facts:** The EPA filed a complaint against the Ilada Energy Co. in 1983 for PCB violations under the Toxic Substances Control Act. The company signed a Consent Decree with the EPA to clean up the site, but abandoned the site before taking any action. In 1989, the potentially responsible parties signed a Consent Order with the EPA to perform the investigation into the nature and extent of contamination at the site. Also in 1989, the parties signed a Unilateral Administrative Order with the EPA to conduct the removal actions necessary at the site.

## Environmental Progress



By constructing a fence and posting a 24-hour guard at the Ilada Energy Co. site, the potential for people to be exposed to hazardous materials has been greatly reduced. The removal of contaminated tanks and their contents and some contaminated soils has been completed and further studies leading to solutions for permanent cleanup of the entire site are taking place.

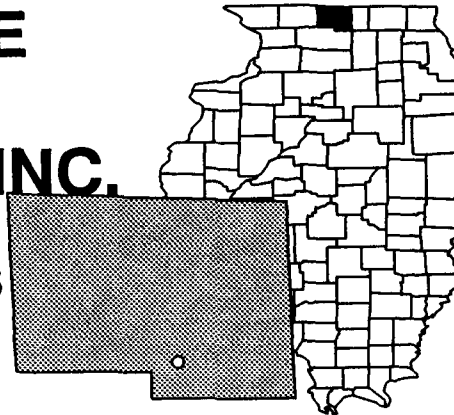
## **Site Repository**



Cape Girardeau Public Library, 711 North Clark Road, Cape Girardeau, MO 63701

# INTERSTATE POLLUTION CONTROL, INC. ILLINOIS

EPA ID# ILT180011975



**EPA REGION 5**  
Winnebago County  
Rockford

**Other Names:**  
**Roto-Rooter Service, Inc.**

## Site Description

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The Interstate Pollution Control site is 2 to 4 acres in size and is located in a heavily industrialized section of Rockford. Interstate Pollution Control, a division of Roto-Rooter Service, Inc., operated a hazardous waste storage facility at the site from 1974 until 1982. Activities performed by Interstate Pollution Control included hauling, and sometimes storing, waste oils, solvents, and cyanide-containing plating wastes from at least 30 to 40 local industries. Most recent activities at the site include reclaiming or "cleaning" waste oil for resale. Both the Illinois and U.S. Environmental Protection Agencies have documented a history of poor operating practices at the site, including using unlined surface impoundments and leaking storage tanks and drums. Due to pressure from these two agencies, Interstate Pollution Control removed leaking drums and contaminated soils from the site. The EPA detected various volatile organic compounds (VOCs) in off-site wells located downgradient of the site in 1986.

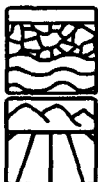
**Site Responsibility:** This site is being addressed through Federal, State, and potentially responsible parties' actions.

### NPL LISTING HISTORY

Proposed Date: 06/24/88  
Final Date: 03/31/89

## Threats and Contaminants

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Off-site groundwater, measured in wells downgradient of the site, is contaminated with VOCs. On-site soil contains heavy metals such as cadmium and copper. Since parts of the fence surrounding the site are broken, it is possible for trespassers to come into direct contact with contaminants on site. If site-related contaminants migrate from the affected off-site wells into the municipal drinking water supply of the City of Rockford, individuals could be exposed to contaminants when consuming or coming into direct contact with drinking water.

## Cleanup Approach

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

## Response Action Status

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**Initial Actions:** The EPA has proposed several initial actions for this site including: fencing the site, repair of the cap, removal of the substances in the tanks on the site, and removal of the tanks. These activities began in early 1992.



**Entire Site:** The State negotiated with some of the potentially responsible parties to conduct an investigation into the nature and extent of site contamination. This investigation workplan is currently under review. After all the various alternatives for cleaning up the site have been studied, the most effective remedies will be chosen.

## Environmental Progress



After listing the Interstate Pollution Control, Inc. site on the NPL, the EPA and the State performed preliminary evaluations and proposed several actions to reduce risks while the investigations leading to the selection of final remedies are taking place. These initial actions began in 1992.

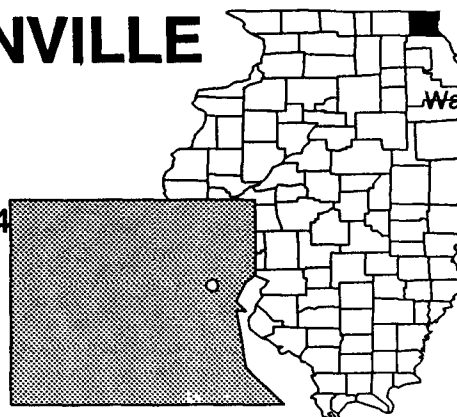
## Site Repository



Rockford Public Library, 215 North Wyman Road, Rockford, IL 61101

# JOHNS-MANVILLE CORP. ILLINOIS

EPA ID# ILD005443544



## EPA REGION 5

Lake County

Waukegan, 37 miles north of Chicago

### Site Description

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The Johns-Manville Corp. site covers 120 acres on a 300-acre parcel of land in Waukegan. The plant presently produces a wide range of building materials. Since 1922, waste materials containing primarily asbestos, the heavy metals lead and chrome, and the volatile organic compound (VOC) xylene have been deposited in a variety of pits. No asbestos or lead presently is used in the manufacturing process. The active waste disposal pits include the sludge disposal pit, which receives dredged materials from the on-site wastewater treatment system, and the miscellaneous disposal pit, into which asbestos- and non-asbestos-containing wastes are deposited. Waste materials cover a large portion of the disposal area and form a berm that is approximately 25 to 30 feet high. The disposal site is located in an industrial area, and the nearest residential area is about 1/2 mile northwest of the site. The population of Waukegan is 67,500. Approximately 1,800 day workers and 450 night workers are at the site during a work day, and about 5,000 people are present in the general area during the day shifts. The site is bordered by Lake Michigan and Illinois Beach State Park, both of which are used daily for recreation. Local fishermen use a pier located between the Johns-Manville and Commonwealth Edison facilities.

**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

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Air sampled in the site vicinity contained asbestos fibers. Groundwater contained asbestos, arsenic, and several VOCs. Waste materials and sludge were contaminated with asbestos, heavy metals and VOCs. The most significant threat to public health prior to cleanup was the inhalation of asbestos fibers. The site was *dusty during dry periods* and posed health concerns to the surrounding communities and to the on-site workers. Asbestos in the waste materials was a limited public health concern, unless dispersed by wind or water. People who drank the contaminated groundwater may have suffered adverse health effects.

## Cleanup Approach

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

## Response Action Status

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**Initial Actions:** The asbestos pit was closed in 1989, and the soil cover was completed in 1990 by the potentially responsible parties.



**Entire Site:** In 1987, the EPA selected a remedy to clean up the site which included: disposing of the asbestos-containing material generated from the reconstruction activities in the asbestos disposal pit prior to closure; monitoring the soil cover, groundwater, surface water, and the air; clearing the debris on the site; fencing the eastern boundary and posting warning signs; closing a small ditch and the open area at the miscellaneous disposal pit; and sampling to ensure the effectiveness of the remedy. All cleanup activities outlined in the remedy have been completed. During cleanup operations, additional asbestos-contaminated areas were discovered and cleaned up in late 1991. The removal of contaminated source materials addressed the contamination of the groundwater, surface water and air. Ongoing monitoring will ensure the long-term effectiveness of the remedy.

## Environmental Progress



By sealing off the asbestos pit and covering the contaminated soil to reduce the migration of asbestos fibers into the air and groundwater, the potential for exposure to hazardous materials at the Johns-Manville site has been eliminated. All clean up activities have been completed, however, the EPA will continue to monitor the soil cover and asbestos levels to ensure that they remain protective of human health and the environment.

## Site Repository

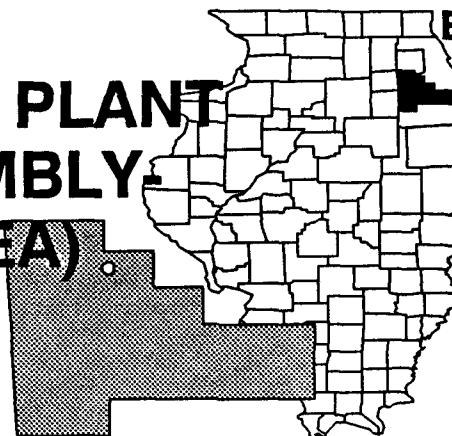


Waukegan Public Library, 128 North County Road, Waukegan, IL 60085



# JOLIET ARMY AMMUNITION PLANT (LOAD-ASSEMBLY- PACKING AREA) ILLINOIS

EPA ID# IL0210090049



EPA REGION 5

Will County  
Joliet

## Site Description

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The Joliet Army Ammunition Plant (Load-Assembly-Packing Area) covers 22 square miles on an inactive Army munitions installation in Joliet. The installation is divided into two major functional areas: the Manufacturing Area, which is a separate NPL site, and the Load-Assembly-Packing Area. From the early 1940s until 1977, high explosive artillery projectiles, aerial bombs, and a variety of ammunition component items were loaded, assembled, and packaged at this site. Other activities included testing of ammunition, washout and renovation of projectiles, and burning and demolition of explosives. Since 1977, the plant has been maintained in non-operating standby condition by Uniroyal, the contractor/operator. The main source of wastewater produced by the facility was "pink water" created by the washout of rejected bombs and from washing the equipment and floors. Approximately 250 people live within 3 miles of the site and depend on groundwater for drinking water. The nearest residence is less than 1/2 mile away. About 40 water supply wells are used for drinking water within 3 miles of the plant. The surface water on the site flows into the Des Plaines and Kankakee Rivers, and Kemery Lake is within the site area. About 2,500 acres of the site are used for commercial agriculture. An active land-leasing program exists, with more than 80 agricultural and cattle grazing leases being exercised. The surface water is used for recreational activities, and a fishing program exists on site.

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

### NPL LISTING HISTORY

Proposed Date: 04/10/85

Final Date: 03/31/89

## Threats and Contaminants

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Groundwater, sediments, soils, and surface water are contaminated with trinitrotoluene (TNT), other explosive by-products, and heavy metals including lead, mercury, chromium, and cadmium. Potential health threats include coming in direct contact with or accidentally ingesting contaminated groundwater, soil, surface water, or sediments. In addition, contaminants may accumulate in fish, waterfowl, livestock, and commercial agricultural products and can pose a health threat to those who eat them.

## Cleanup Approach

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

## Response Action Status

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**Entire Site:** In 1989, the Army began investigating the nature and extent of the contamination at the plant. Phase I of the investigation is currently complete, and a report addressing the investigation findings is due in late 1992. The investigation is scheduled for completion in June 1993. Once the investigation is completion, the most timely and effective measures will be recommended for site cleanup.

**Site Facts:** An Interagency Agreement was signed with the EPA in 1989. Under the terms of this agreement, the Army will investigate and clean up the contamination found on the site. The site 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 or other DOD facilities.

## Environmental Progress



The Army is conducting investigations that will lead to the selection of final cleanup actions for the Joliet Army Ammunition Plant (Load-Assembly-Packing Area) site. After preliminary evaluation, it has been determined that the site does not present an immediate threat to the surrounding population or the environment while investigations are underway.

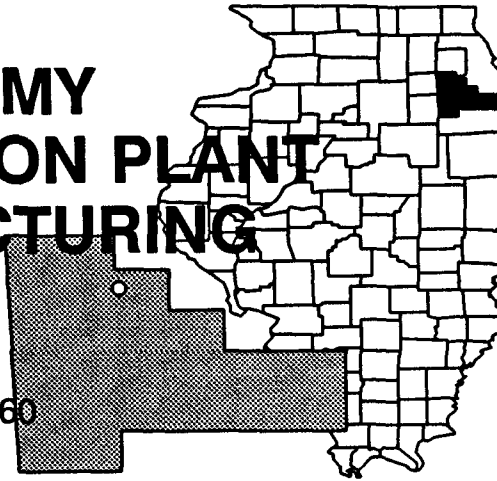
## Site Repository



Joliet Public Library, 150 North Ottawa Road, Joliet IL 60431

# JOLIET ARMY AMMUNITION PLANT (MANUFACTURING AREA) ILLINOIS

EPA ID# IL7213820460



## EPA REGION 5

Will County  
Joliet

### Site Description

The Joliet Army Ammunition Plant (Manufacturing Area) covers 14 square miles of an inactive Army munitions facility in Joliet. The site consists of two areas: the manufacturing area that produced constituent chemicals and explosive materials and the Load-Assembly-Packing Area, which is listed as a separate site on the NPL. More than 4 billion pounds of explosives were produced in the manufacturing area from the early 1940s until 1977. Since 1977, the area has been maintained in non-operating standby condition by Uniroyal, the contractor/operator. The manufacturing facility consists of a TNT ditch complex, where process wash and wastewater were transported off site to be processed at water treatment facilities; the Red Water Area consisting of storage tanks, incinerators, evaporators, a lined lagoon, and the incinerator ash piles; and the Flashing Ground. During the manufacturing process, contaminated process waters and chemical spills routinely were discharged without treatment into constructed drainage ditches, where they flowed into Jackson Creek and Grant Creek. Unlined piles of incinerator ash and a leak in the liner of one of several wastewater lagoons also have contributed to contamination of groundwater and surface water. Approximately 1,155 people live within 3 miles of the site. The nearest residence is less than 1/2 mile away, and there are water supply wells in use within a mile of the site. About 2,500 acres on the site are used for commercial agriculture. An active land-leasing program exists, with more than 80 agricultural and cattle grazing leases being exercised.

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

#### NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 07/21/87

### Threats and Contaminants



Groundwater is contaminated with trinitrotoluene (TNT) and related organic compounds. Sediments, soil, and surface water contain TNT, lead, arsenic, and chromium. Potential health threats include touching or accidentally ingesting contaminated groundwater, soil, surface water or sediments. In addition, contaminants may accumulate in fish, waterfowl, livestock, and commercial agricultural products and could pose a health threat to those who eat them.

## Cleanup Approach

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

## Response Action Status

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**Immediate Actions:** In 1985, over 7 million gallons of explosive-contaminated water were removed from the Red Water Lagoon and transported to a federally approved facility for disposal. Explosive-contaminated sludge and the lagoon liner also were removed, and the area was covered with clay. In addition, two piles containing ash from past incineration of explosives were re-capped.



**Entire Site:** In 1989, the Army began investigating the type and extent of the contamination at the plant. Phase I of the investigation was completed in the fall of 1989 and phase II was completed in late 1991. The investigative report is due in late 1992. Once the investigation is completed and based on the results of the studies, effective measures will be recommended for site cleanup.

**Site Facts:** An Interagency Agreement was signed between the Army and the EPA in June 1989. Under this agreement, the Army will investigate and clean up the contamination on the site. The site 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 waste contaminants at military or other DOD facilities.

## Environmental Progress



Removing the wastewater and sludge and capping the area have reduced the threat of exposure to or the spread of hazardous materials. The Army currently is conducting investigations that will lead to the selection of final cleanup actions for the Joliet Army Ammunition Plant (Manufacturing Area) site.

## Site Repository



Joliet Public Library, 150 North Ottawa Road, Joliet, IL 60431

# KERR-MCGEE (KRESS CREEK/WEST BRANCH OF DUPAGE RIVER)

ILLINOIS

EPA ID# ILD980823991



## EPA REGION 5

DuPage County  
West Chicago

Other Names:  
West Branch of DuPage River

### Site Description

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The Kerr-McGee (Kress Creek/West Branch of DuPage River) site covers about 1 1/2 miles of Kress Creek and 1/2 mile of the West Branch of the DuPage River in West Chicago. In 1931, the Lindsay Light and Chemical Company established a mill in West Chicago for extracting thorium and non-radioactive elements from monazite and other ores. Later, the mill was used for the manufacture of gaslight mantles (which contain thorium), mesothorium, and, during World War II, hydrofluoric acid. Ownership of the facility changed from Lindsay to American Potash and Chemical in 1958 and to Kerr-McGee Chemical Corporation in 1967. The primary activity at Kerr-McGee was the processing of ores containing thorium, radium, uranium, rare earths, and heavy metals such as lead. The waste materials from these operations were sent to numerous areas within the City of West Chicago. The main sites include: the Kress Creek and West Branch area, which received runoff from the Rare Earth Facility; the City sewage treatment plant; Reed-Keppler Park, a public park; and 117 additional properties. Operations continued at the site until Kerr-McGee closed the plant in 1973. Over the years, a portion of the wastes from the plant were discharged into Kress Creek, a tributary of the DuPage River, either by storm sewer or drainage ditch. Radiation contamination, which is found to a depth of several feet along the stream, decreases with distance from the creek. Many of the highest levels of contamination were found near the storm sewer outfall. Kerr-McGee (Reed-Keppler Park), Kerr-McGee (Residential Areas), and the Kerr-McGee (Sewage Treatment Plant) are listed as separate sites on the NPL. Approximately 20,000 people live within 3 miles of the site. Drinking water in the area is obtained by municipal or private wells.

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

#### NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 02/11/91

## Threats and Contaminants

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Sediments and Kress Creek contain radioactive wastes. People who come in direct contact with or accidentally ingest the contaminated water in Kress Creek may suffer adverse health effects. In addition, wildlife in and around the creek may be harmed by the radiation.

## Cleanup Approach

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The site is being addressed in a long-term remedial phase focusing on cleanup of Kress Creek.

## Response Action Status

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**Kress Creek:** The EPA is scheduled to begin an investigation in late 1992 to explore the nature and extent of contamination at Kress Creek. Once the investigation is completed, the EPA will select a final cleanup remedy.

**Site Facts:** In 1984, the U.S. Nuclear Regulatory Commission (NRC) issued an Order to Show Cause, requiring Kerr-McGee Chemical Corporation either to prepare and implement a cleanup plan, or to show just cause why it should not be required to do so. In 1985, Kerr-McGee and the City of West Chicago entered into a Consent Decree to excavate, remove contaminants, and decontaminate the sites. To date, Kerr-McGee has not removed any contamination from the creek.

## Environmental Progress



After listing the Kerr-McGee (Kress Creek/West Branch of DuPage River) site on the NPL, the EPA performed preliminary evaluations and determined that the site does not pose an immediate threat to the public or the environment while the investigations leading to a permanent cleanup remedy for this site and the three associated Kerr-McGee sites are taking place.

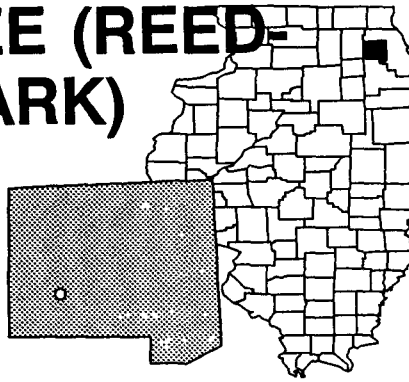
## Site Repository



Not established.

# KERR-MCGEE (REED-KEPPLER PARK) ILLINOIS

EPA ID# ILD980824007



## EPA REGION 5

DuPage County  
West Chicago

### Site Description

The Kerr-McGee (Reed-Keppler Park) site covers about 11 acres in West Chicago. In 1931, the Lindsay Light and Chemical Company established a mill in West Chicago for extracting thorium and non-radioactive elements from monazite and other ores. Later, the mill was used for the manufacture of gaslight mantles (which contain thorium), mesothorium, and during World War II, hydrofluoric acid. Ownership of the facility changed from Lindsay to American Potash and Chemical in 1958 and to Kerr-McGee Chemical Corporation in 1967. The primary activity at Kerr-McGee was the processing of ores containing thorium, radium, uranium, rare earths, and heavy metals such as lead. The waste materials from these operations were dispersed among numerous areas within the City of West Chicago. The main sites include: the Kress Creek and West Branch area, which receives runoff from the Rare Earth Facility; the City sewage treatment plant; Reed-Keppler Park, a public park; and 117 additional properties. Operations continued at the site until Kerr-McGee closed the plant in 1973. Radioactive materials were landfilled at Reed-Keppler Park, which originally had been a gravel quarry. The contaminated areas are within the landfill and around and under the tennis courts adjacent to it. For additional information, please see the other listings for Kerr-McGee (Residential Areas), Kerr-McGee (Sewage Treatment Plant), and Kerr-McGee (Kress Creek/West Branch), all listed as separate NPL sites. Approximately 15,000 people live within 3 miles of the site. The closest residence to the park is about 250 feet away. There are several private wells 2,000 feet from the park.

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

**NPL LISTING HISTORY**  
Proposed Date: 10/15/84  
Final Date: 08/30/90

### Threats and Contaminants



The air and groundwater contain radioactive wastes. Soil contains heavy metals and radioactive wastes. People who come in direct contact with or accidentally ingest contaminated groundwater and soil may be at risk.

## Cleanup Approach

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The site is being addressed in two stages: interim actions and a long-term remedial phase focusing on cleanup of Reed-Keppler Park.

## Response Action Status

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**Interim Actions:** In 1986, approximately 20,000 cubic yards of thorium mill tailings at the park were excavated and moved to a fenced area.



**Reed-Keppler Park:** The EPA is scheduled to begin an investigation in late 1992 to explore the nature and extent of contamination at the Reed-Keppler Park. Once the investigation is completed, the EPA will select a final cleanup remedy.

**Site Facts:** In 1984, the U.S. Nuclear Regulatory Commission (NRC) issued an Order to Show Cause, requiring Kerr-McGee Chemical Corporation either to prepare and implement a cleanup plan, or to show just cause why it should not be required to do so. In 1985, Kerr-McGee and the City of West Chicago entered into a Consent Decree to excavate and to decontaminate the sites.

## Environmental Progress



The removal of mill tailings from the park has reduced the potential for exposure to radioactive materials at the Kerr-McGee (Reed-Keppler Park) site, while investigations leading to final cleanup actions take place.

## Site Repository

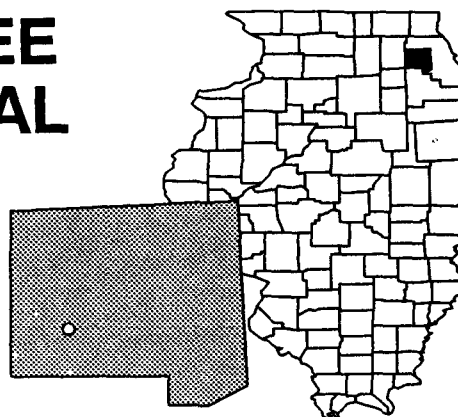


Not established.



# KERR-MCGEE (RESIDENTIAL AREAS) ILLINOIS

EPA ID# ILD980824015



## EPA REGION 5

DuPage County  
West Chicago

### Site Description

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The Kerr-McGee (Residential Areas) site covers about 30 acres adjacent to the Kerr-McGee Chemical Corporation facility, as well as other adjacent areas and isolated spots of elevated radiation levels in West Chicago. Additional areas will be added to the site as contamination is discovered. In 1931, the Lindsay Light and Chemical Company established a mill in West Chicago for extracting thorium and non-radioactive elements from monazite and other ores. Later, the mill was used for the manufacture of gaslight mantles (which contain thorium), mesothorium, and, during World War II, hydrofluoric acid. Ownership of the facility changed from Lindsay to American Potash and Chemical in 1958 and to Kerr-McGee Chemical Corporation in 1967. The primary activity at Kerr-McGee was the processing of ores containing thorium, radium, uranium, rare earths, and heavy metals such as lead. The waste materials from these operations were dispersed among numerous areas within the City of West Chicago. The main sites include: the Kress Creek and West Branch area, which received runoff from the Rare Earth Facility; the City sewage treatment plant; Reed-Keppler Park, a public park; and 117 additional properties. Operations continued at the site until Kerr-McGee closed the plant in 1973. In 1978, the U.S. Nuclear Regulatory Commission (NRC) located 75 spots of elevated radiation levels. Since that time, the number has grown to approximately 117. Although the general area of contamination may be due, in part, to long-term emissions from the facility, the primary source of contamination is believed to be the result of specific incidents such as spills and the use of contaminated material as fill. The Kerr-McGee (Reed-Keppler Park), Kerr-McGee (Kress Creek/West Branch), and Kerr-McGee (Sewage Treatment Plant) sites all are being treated as separate sites on the NPL. Approximately 15,000 people live within 3 miles of the site.

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

#### NPL LISTING HISTORY

Proposed Date: 10/15/84  
Final Date: 08/30/90

## Threats and Contaminants

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Soil is contaminated with radioactive wastes. People who are exposed to elevated levels of radiation in the soils may suffer adverse health effects.

## Cleanup Approach

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

## Response Action Status

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**Interim Actions:** In the mid-1980s, Kerr-McGee voluntarily removed soils from many affected residences and placed the material at a facility for temporary storage. The materials will be in temporary storage until a final disposal site becomes available.



**Residential Areas:** The EPA will begin an investigation to explore the nature and extent of contamination at the residential areas in late 1992. It appears that the removal actions conducted by Kerr-McGee in the mid-1980s did not address the contamination at all affected properties. The EPA will determine which properties require further cleanup, and will address those properties through removal actions whenever practical. The EPA's final remedy will address any remaining contamination, as well as final disposal of the materials.

**Site Facts:** In 1984, the NRC issued an Order to Show Cause, requiring Kerr-McGee Chemical Corporation to either prepare and implement a cleanup plan, or to show just cause why it should not be required to do so. In 1985, Kerr-McGee and the City of West Chicago entered into a Consent Decree to excavate, remove contaminants, and decontaminate the sites.

## Environmental Progress

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The removal of some of the contaminated soil from the Kerr-McGee (Residential Areas) site has helped to reduce the potential of exposure to hazardous materials while the investigations leading to the selection of the final cleanup remedies are taking place.

## Site Repository

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Not established.

# KERR-MCGEE (SEWAGE TREATMENT PLANT) ILLINOIS

EPA ID# ILD980824031



## EPA REGION 5

DuPage County  
West Chicago

### Site Description

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The Kerr-McGee (Sewage Treatment Plant) site covers about 23 acres in West Chicago. In 1931, the Lindsay Light and Chemical Company established a mill in West Chicago for extracting thorium and non-radioactive elements from monazite and other ores. Later, the mill was used for the manufacture of gaslight mantles (which contain thorium), mesothorium, and, during World War II, hydrofluoric acid. Ownership of the facility changed from Lindsay to American Potash and Chemical in 1958 and to Kerr-McGee Chemical Corporation in 1967. The primary activity at Kerr-McGee was the processing of ores containing thorium, radium, uranium, rare earths, and heavy metals such as lead. The waste materials from these operations were sent to numerous areas within the City of West Chicago. The main sites include: the Kress Creek and West Branch area, which receives runoff from the Rare Earth Facility; the City sewage treatment plant; Reed-Keppler Park, a public park; and 117 additional properties. Operations continued at the site until Kerr-McGee closed the plant in 1973. The original sewage treatment plant was built in 1919 and included two septic tanks. Over the years, the tanks were filled with radioactive materials. Additionally, fill, including radioactive materials, was placed in other areas of the site. While modernizing the plant, the City has located many surface and subsurface areas of the contamination. For additional information, please see the listings for Kerr-McGee (Reed-Keppler Park), Kerr-McGee (Residential Areas), and Kerr-McGee (Kress Creek/West Branch), all listed separately on the NPL. Approximately 15,000 people live within 3 miles of the site. The surrounding area is low-density residential, with forests to the north of the plant. There are thorium mill tailings on the west bank of the DuPage River, and the closest residences are on the eastern side of the river. The closest house is about 300 feet from the tailings.

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

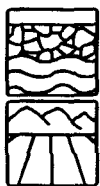
#### NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 08/30/90

## Threats and Contaminants

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Groundwater contains radioactive wastes and heavy metals. Soil at the site contains radioactive wastes. People who are exposed to radioactive-contaminated groundwater and soil may suffer adverse health effects.

## Cleanup Approach

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

### Response Action Status

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**Immediate Actions:** In 1986, Kerr-McGee removed soils from the sewage treatment plant and placed the material in a facility for temporary storage.



**Sewage Treatment Plant:** In late 1992, an investigation of the nature and extent of contamination at the site will be conducted by the EPA. This investigation also will evaluate the effectiveness of the 1986 removal action undertaken by Kerr-McGee. Evidence indicates that this action was incomplete and that thorium mill tailings may remain at the site. Once the investigation is completed, measures will be recommended for site cleanup and the EPA will select the final cleanup remedy.

**Site Facts:** In 1984, the U.S. Nuclear Regulatory Commission (NRC) issued an Order to Show Cause, requiring Kerr-McGee Chemical Corporation either to prepare and implement a cleanup plan, or to show why it should not be required to do so. In 1985, Kerr-McGee and the City of West Chicago entered into a Consent Decree to excavate, remove contaminants, and decontaminate the site.

## Environmental Progress



Removal of some of the contaminated soil from the Kerr-McGee (Sewage Treatment Plant) site has helped to reduce the potential for exposure to hazardous materials while the investigations leading to the selection of a permanent remedy for the site are taking place.

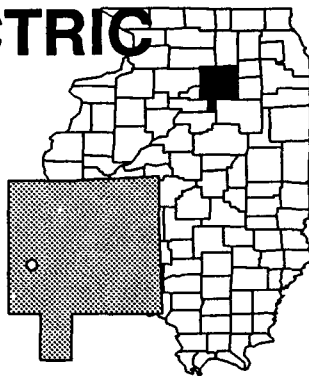
## Site Repository



Not established.

# LASALLE ELECTRIC UTILITIES ILLINOIS

EPA ID# ILD980794333



## EPA REGION 5

LaSalle County  
LaSalle

### Site Description

From the late 1940s to 1978, the 10-acre LaSalle Electric Utilities (LEU) site was used to manufacture capacitors containing polychlorinated biphenyls (PCBs). Operations ceased in 1981, and the site now is abandoned. The company reportedly used waste oil to control dust in the parking lot and off site until 1969. Several hundred drums of PCB wastes, many of which were leaking, were found stored in a wooden shed. A tank truck containing PCB-contaminated wastes was found near a storm drain manhole. Leakage from these containers may have reached the storm sewer system and surface water tributary to the Illinois River. An aboveground storage tank discovered on site contained 940 gallons of trichloroethylene (TCE). Additionally, PCB-contaminated soil was stockpiled on site. PCBs have been found on the shoulder of the road that passes in front of the LEU site. This contaminated area covers approximately 1 1/2 miles and passes in front of a school and a recreational park. Approximately 190 people reside within 1/8 mile of the site; 3,400 people live within a mile of the site, and approximately 21,000 people live within 3 miles of the site.

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

#### NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

### Threats and Contaminants



Groundwater, surface water, sediments, soil, and the buildings on site are contaminated with PCBs. The buildings also are contaminated with asbestos. Primary health threats include coming in direct contact with or accidentally ingesting contaminated groundwater, surface water, sediments, or soil. PCB leakage from the drums on site could reach the storm sewer system and tributaries of the Illinois River.

## Cleanup Approach

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

## Response Action Status

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**Initial Actions:** Between 1982 and 1985, the EPA completed several activities in order to stabilize the contaminated areas including: installing warning signs, a barbed wire fence, and a gate around the site; capping the property; constructing four on-site monitoring wells; capping contaminated off-site areas; staging, sampling, and packaging PCB waste materials for future disposal; and draining 15 vertical tanks and five diffusion pump reservoirs inside the LaSalle Electric building into five drums. The drums containing PCB materials were moved to a diked and lined storage area inside the warehouse. A retention pond was expanded to control on-site drainage, stained soil was excavated from under the tank trailer, and the excavated soil was placed into drums. The tank containing TCE was removed from the site for reuse.



**Off-Site Soil:** Based on the results of the site investigations, the EPA selected the following remedies to clean up the site: excavating approximately 23,550 cubic yards of contaminated off-site soil and replacing it with clean fill; incinerating contaminated soils with a thermal destruction unit; and implementing conventional industrial cleaning to include vacuuming, hand washing, and steam jet cleaning of all structures where soil removal activities have taken place. The State began cleanup activities in 1987 by excavating the contaminated off-site soil and replacing it with the clean fill. Following this action, buildings in the area were cleaned, and the ventilation systems were scrubbed. The remaining soil incineration and final work on the site cleanup were completed in 1990; remaining details were completed in 1991. As a safety measure to avoid the inhalation of possible airborne contaminated particulates by the residents, approximately 30 families and two businesses were relocated while excavations and clearing the homes took place.



**On-Site Soil, Sediments, and Groundwater:** In 1988, a decision was reached by the State to perform the following cleanup actions: excavating contaminated soil from the LEU property, high pressure flushing and mechanically cleaning contaminated sewer lines, excavating contaminated sediments from the unnamed creek downstream of the storm sewer discharge, incinerating the contaminated soil and sediment, demolishing and disposing of the contaminated LEU buildings, and constructing a groundwater collection and treatment system. Cleanup activities began in 1990. To date, the LEU buildings have been demolished and disposed of, the sewer lines have been cleaned, the groundwater treatment system has been completed and excavation of the contaminated soil from the LEU property and incineration of oil and sediments are ongoing. The excavation of contaminated sediment from the unnamed creek is scheduled to begin in mid-1992. The cleanup activities are expected to be completed in 1993.

## Environmental Progress



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Securing the site, containing contaminated soil through capping, excavating and incinerating the PCB wastes, and completing the off-site soil cleanup have reduced the potential for exposure to hazardous materials at the LaSalle Electric Utilities site while further cleanup activities are being completed.

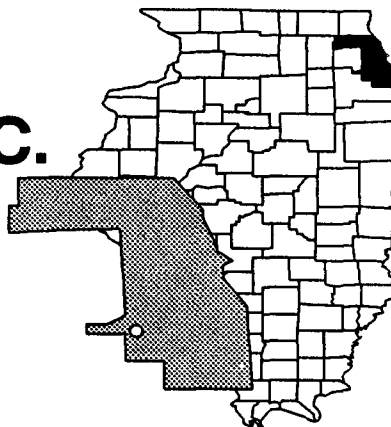
## Site Repository



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City Clerk's Office, LaSalle City Hall, 745 2nd Street, LaSalle, IL 61301

**LENZ OIL  
SERVICE, INC.  
ILLINOIS**  
EPA ID# ILD005451711



**EPA REGION 5**  
Cook County  
Lemont

## Site Description

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Lenz Oil Service, Inc. operated an oil and solvent storage and transfer facility under several different owners for over 20 years. In 1980, Charles Russell purchased the company and began a waste management operation at the site. In 1981, the company received a permit from the Illinois Environmental Protection Agency (IEPA) to accept hazardous waste. In 1985, three surface impoundments were used to store hazardous waste. Also at the site were 3 underground unlined concrete storage tanks, 35 aboveground tanks, and 200 drums. In 1985, the Illinois Attorney General's Office required Lenz Oil and Charles Russell to begin an immediate cleanup and to file a closure and compliance plan. In 1986, Lenz Oil filed for bankruptcy. The IEPA performed soil sampling at the site in 1986 and found it to be contaminated with high levels of volatile organic compounds (VOCs). Private residential wells adjacent to the site are contaminated, but these homes have been connected to alternate water supplies. Approximately 11,300 people live within 3 miles of the site.

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

<b>NPL LISTING HISTORY</b> Proposed Date: 06/24/88 Final Date: 10/04/89
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## Threats and Contaminants

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Groundwater and soils are contaminated with various VOCs. Private wells adjacent to the site also are contaminated. Drinking contaminated groundwater and coming in contact with VOC-contaminated soils may pose a public threat.



## Cleanup Approach

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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

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**Immediate Actions:** In 1986, the State provided an alternate water supply to residences having contaminated wells. The State subsequently performed surface soil cleanup activities in 1989, which included the incineration of 21,000 tons of contaminated soil.



**Entire Site:** A group of over 200 potentially responsible parties agreed to perform a study to determine the nature and extent of contamination at the site. The study began in 1989 and includes analyzing samples taken from surface and subsurface soils, sediments, and surface waters. The first phase of the investigation was completed in early 1992. The second phase of the field investigations, which consisted of additional soil and groundwater samples, was completed later in 1992. Based on the results of the investigations, expected to be completed in mid-1992, various cleanup alternatives will be recommended, from which the EPA will select the final cleanup remedy.

**Site Facts:** Additional potentially responsible party groups have joined the original group of 199 to voluntarily perform the site investigation.

## Environmental Progress



The incineration of contaminated soil and the provision of an alternate water supply have reduced the potential for exposure to hazardous substances at the Lenz Oil Service, Inc. site while cleanup activities are being planned.

## Site Repository

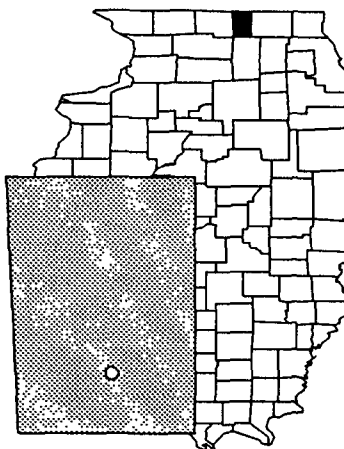


Lemont Town Hall, 418 Main Street, Lemont, IL 60439

# MIG/DEWANE LANDFILL

## ILLINOIS

EPA ID# ILD980497788



## EPA REGION 5

Boone County  
Belvidere

**Other Names:**  
MIG Investment  
Bonus Landfill  
Boone Landfill  
Kennedy Landfill  
Dewane Landfill (MIG)

## Site Description

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The 50-acre MIG/Dewane Landfill site began accepting household refuse and special wastes such as paint sludges and organic solvents in 1969. Reportedly, 480,000 gallons of hazardous wastes were dumped into the landfill. Portions of the landfill are not covered, and leachate has been observed moving off site. The site ceased operations in 1988, when the State sued the landfill owner for exceeding its permit authority. Approximately 10 acres of the site contain exposed wastes. The State pumps out a leachate collection lagoon periodically to keep it from overflowing. There are approximately 16,300 people who obtain drinking water from wells within 3 miles of the site. The site is located near Belvidere's municipal water wells and private wells. One municipal well and 28 percent of the area's private wells obtain water from the upper aquifer. A private well is 2,500 feet from a contaminated well on the site. The site is located about 1,000 feet from the Kishwaukee River.

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

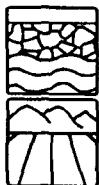
### NPL LISTING HISTORY

Proposed Date: 10/26/89

Final Date: 08/30/90

## Threats and Contaminants

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Volatile organic compounds (VOCs) have been detected in groundwater under the site. Heavy metals including arsenic, cyanide, lead, and zinc have been detected in leachate samples. Potential health threats include drinking contaminated groundwater and coming in direct contact with contaminated leachate.

## Cleanup Approach

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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

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**Immediate Actions:** In June 1989, the EPA removed 85,000 gallons of leachate from the on-site leachate lagoon. The leachate was transported to a nearby sewage treatment plant and discharged. In June 1990, the EPA removed 75,000 gallons of leachate from the same lagoon. An interim action as part of the site-wide investigation was initiated in early 1991, and is scheduled to be completed in 1992. As part of the interim action, a temporary cap will be constructed to prevent further infiltration into the landfill.



**Entire Site:** A thorough investigation is currently being conducted by the potentially responsible party, under EPA and Illinois Environmental Protection Agency (IEPA) monitoring, to determine the nature and extent of the contamination at the site. Based upon the study results, final cleanup remedies will be selected.

**Site Facts:** A three-party Consent Order was signed in early 1991. Under this Order, the potentially responsible parties will perform the site studies under the supervision of the EPA and the IEPA.

## Environmental Progress



The removal of approximately 160,000 gallons of leachate has reduced the potential for exposure to hazardous materials at the MIG/Dewane Landfill site while studies to determine future cleanup activities are being completed.

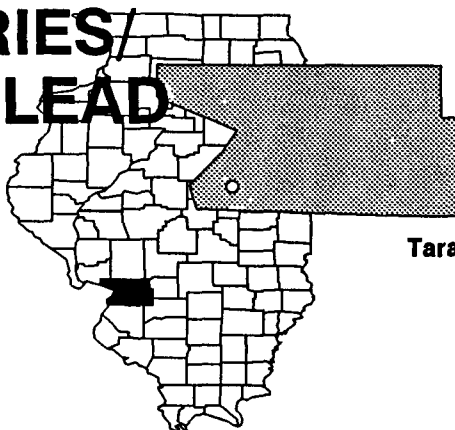
## Site Repository



Ida Public Library, 320 North State Street, Belvidere, IL 61008

# NL INDUSTRIES/ TARACORP LEAD SMELTER ILLINOIS

EPA ID# ILD096731468



## EPA REGION 5

Madison County  
Granite City

Other Names:  
Hoyt Plant

National Lead Taracorp  
Taracorp Industries Granite City Plant  
Granite City Lead

## Site Description

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Operations at the 16-acre NL Industries/Taracorp Lead Smelter site have included metal refining, fabricating, and related activities since the turn of the century. Taracorp, Inc. purchased the facility in 1979 from NL Industries, owners since 1928, and currently operates it as a metal fabrication facility. Lead pollution in the area is believed to be partially a result of lead smelting conducted at the site from 1905 until 1983. The smelter was used for purifying and reprocessing lead-containing scrap, used batteries, and cable sheathing. Solid wastes generated from this process included blast furnace slag, battery cases, and dust from the smelter's smoke stack. These wastes were stored on site in waste piles. Another storage area of waste piles is located at the St. Louis Lead Recyclers (SLLR) site, adjacent to the Taracorp, Inc. property. The wastes at SLLR were a result of recycling the original waste piles. A third location of contamination attributed to the site is the remote fill areas of Venice and Eagle Park Acres, where lead-containing battery case pieces allegedly were used for fill and alley paving material. The Illinois Environmental Protection Agency (IEPA) began monitoring air quality for lead in 1978. Between 1978 and 1981, air monitoring detected levels exceeding Federal standards. In 1981, the State of Illinois was required by the EPA to develop a plan to control and maintain Federal air quality standards for lead in Granite City. In 1982, the State of Illinois denied an application for renewal of Taracorp's permit to operate the smelter, since the primary source of lead pollution detected in area air and soil was from the Taracorp facility. Approximately 15,000 people live within 1 mile of the site, which is located within a heavily industrialized section of Granite City.

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

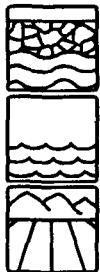
### NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

## Threats and Contaminants

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Groundwater in monitoring wells was found to be contaminated with dissolved solids, sulfates, and manganese. Two on-site wells also contained heavy metals including arsenic, cadmium, nickel, manganese, and zinc. Sediment samples from the stormwater runoff areas and soils contained elevated levels of lead. Granite City's municipal drinking water comes from the Mississippi River and does not appear to be affected by contaminated groundwater. Potential health risks may exist from coming in direct contact with or accidentally ingesting contaminated soils.

## Cleanup Approach

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

## Response Action Status

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**Entire Site:** In 1990, the EPA selected a remedy to clean up the site which includes: removing crushed hard rubber battery casings and lead-contaminated soil from residential areas; excavating and consolidating the soils, crushed casings, and lead-contaminated materials from an adjacent waste pile into the existing Taracorp slag pile; covering the Taracorp pile with a cap; installing an upgraded security fence around the Taracorp pile; implementing deed restrictions and other institutional controls; inspecting alleys and driveways and areas containing surficial battery case material to determine if they must also be cleaned; installing monitoring wells; monitoring groundwater, air, and the cap; removing and recovering all drums on the Taracorp pile at a secondary smelter; and consolidating the waste contained in the adjacent St. Louis Lead Recyclers piles with the Taracorp pile. The technical specifications for cleanup currently are being designed under funding from the EPA and are scheduled for completion in early 1993.

**Site Facts:** Taracorp Inc. filed for bankruptcy in 1982. In 1985, the EPA and the State signed a Consent Order with NL Industries, requiring that the company conduct an investigation to determine the type and extent of contamination at the site and to identify alternatives for cleanup. In 1991, the EPA and the U.S. Army Corps of Engineers signed an Interagency Agreement to conduct the design phase of the selected remedy.

## Environmental Progress



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After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the NL Industries site while cleanup activities are being designed.

## Site Repository

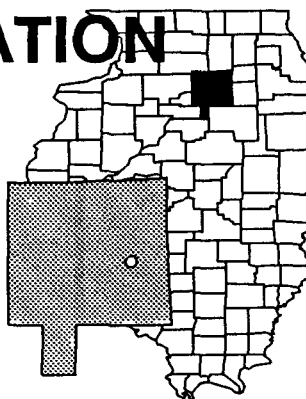


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Granite City Public Library, 2001 Delmar Street, Granite City, IL 62040

# OTTAWA RADIATION AREAS ILLINOIS

EPA ID# ILD980606750



## EPA REGION 5

LaSalle County  
Ottawa

### Site Description

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The Ottawa Radiation Areas site, approximately 25 to 30 acres in size, consist of 14 areas contaminated by radioactive materials. These 14 areas, many of which are in residential sections, are within 3 miles of each other and have been added to the NPL as one site because they are contaminated by the same wastes, involve the same potentially responsible parties, and require cleanup activities for the same media. Site investigators believe contamination originated from the processing of wastes and the demolition of debris by two companies that once operated in the center of Ottawa Radium Dial Co. (from 1918 to 1936) and Luminous Processes, Inc. (from 1937 to 1978). These businesses produced luminous dials for clocks and watches using radium-based paint. In 1969, the Radium Dial Co. building was demolished and removed to an unknown destination. The Luminous Processes Inc. building was dismantled by the Illinois Department of Nuclear Safety (IDNS) in 1985; radioactive remnants were shipped to a U.S. Department of Energy (DOE) disposal facility in Hanford, Washington. Contaminated soils in the area of the building also were sent to the DOE facility in Hanford. During these activities, investigators discovered that radioactive wastes from the two companies had been used as filler materials in the Ottawa area. Fourteen contaminated areas in and near Ottawa were identified by subsequent radiation surveys performed by IDNS, DOE, and the EPA. Radium was detected in surface soils and soils as deep as 8 feet below the surface. The EPA also discovered radon in four of the 64 buildings it screened. Access to many of the contaminated areas is unrestricted. The Old Ottawa City Landfill, located at one of the 14 areas, is in close proximity to two businesses. The homes of approximately 50 people were built on soil contaminated by radioactive materials; an additional 84 people who use the areas recreationally are being exposed to site contaminants.

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

**NPL Listing History**  
Proposed Date: 07/29/91

## Threats and Contaminants

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Surface and subsurface soils in the area of the Luminous Processes, Inc. building have been contaminated with radioactive wastes. Four buildings in the Ottawa area are contaminated with radon. Soil and sediment samples collected from the landfill area were found to have elevated levels of three radioactive metals: radium-226, lead-214, and bismuth-214. Site access is unrestricted and individuals could be at risk of direct contact or accidental ingestion with contaminated soils or sediments.

## Cleanup Approach

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

### Response Action Status

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**Immediate Actions:** In 1986, the State removed contaminated soils located near homes in one of the 14 contaminated areas and purchased one home in another area. Radon reduction systems were installed in two homes and one business in 1988 by the EPA. In 1990, the EPA moved a third home to uncontaminated property owned by the resident.



**Entire Site:** An investigation is scheduled to begin in 1993 to explore the nature and extent of contamination at the entire site. Once the investigation is completed, a final cleanup remedy for the site will be selected.

## Environmental Progress

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Immediate actions such as the dismantling of the Luminous Processes, Inc. building, the removal of contaminated soils, and the installation of radon reduction systems have reduced health and safety risks to the nearby population while additional studies are taking place.

## Site Repository

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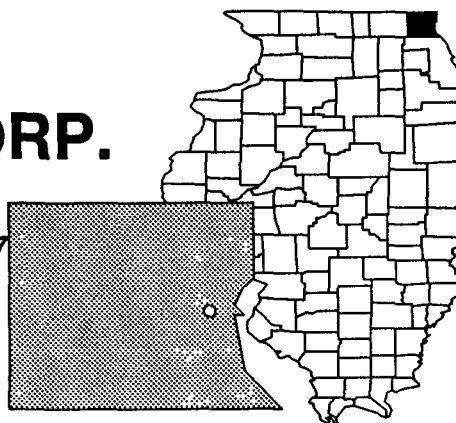


Not established.



# OUTBOARD MARINE CORP. ILLINOIS

EPA ID# ILD000802827



## EPA REGION 5

Lake County  
Waukegan

### Site Description

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The Outboard Marine Corp. (OMC) site covers three separate areas: Waukegan Harbor, a 37-acre area along the western shore of Lake Michigan; North Ditch, a small tributary approximately 1,500 feet north of the Harbor; and the OMC parking lot, a 9-acre lot south of North Ditch. Between 1959 and 1971, the Johnson Motors Division of OMC purchased hydraulic fluids containing polychlorinated biphenyls (PCBs). The company used the material in aluminum die cast machines that routinely leaked. In 1976, it was discovered that the company was discharging PCBs into Waukegan Harbor and the North Ditch. Both of these water bodies flow into Lake Michigan. The City of Waukegan has a population of approximately 68,000 and surrounds Waukegan Harbor. The harbor area is zoned primarily for industrial and commercial use. There are approximately 15 businesses in the immediate harbor area and a worker population of about 3,500 people. People in the area also use the harbor for various recreational activities.

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

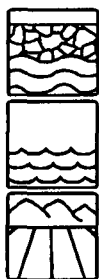
#### NPL LISTING HISTORY

Proposed Date: 10/22/81

Final Date: 09/08/83

### Threats and Contaminants

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Groundwater, surface water, sediments, and soils are contaminated with PCBs. The primary way people could be exposed to hazardous chemicals from the site is by eating fish contaminated with PCBs. Other potential health hazards include coming in direct contact with or accidentally ingesting contaminated materials.

## Cleanup Approach

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This site is being addressed in two long-term remedial phases focusing on cleanup of the entire site and the coal tar wastes.

## Response Action Status

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**Entire Site:** In 1989, the EPA selected a remedy to clean up the site including: constructing a cut-off and slurry wall in a boat slip in the harbor to form a cell to contain the contaminants; constructing a new boat slip and relocating Larsen Marine; removing and treating sediments in the boat slip and placing contaminated sediments in the containment cell of the new slip; excavating and treating soil and sediments on site from the lagoon area; constructing a containment cell to treat residues and PCB-contaminated soils with lower levels of contamination; constructing a containment cell around the parking lot area; constructing a temporary facility on site to treat waste dredged from the containment cells; constructing a permanent facility on site to treat contaminated water; treating water from the containment cell on site by discharging the water to a facility that can treat the water; placing a cap on all containment cells; and monitoring the groundwater. The potentially responsible parties have completed designing the technical specifications for the cleanup, under EPA monitoring. Construction of the new boat slip has been completed and construction of the remaining cleanup activities is underway. All cleanup activities are expected to be completed in 1993.



**Coal Tar Wastes:** Creosote and coal tar wastes were discovered during the technical design of the remedy for the PCB-contaminated areas. A separate study is underway to determine the nature and extent of the contamination and to identify cleanup alternatives. Phase one of the field work is complete.

**Site Facts:** A Consent Decree was signed in 1986 by OMC. The potentially responsible parties and the EPA entered into a Consent Decree in 1989, requiring the parties to perform the cleanup activities on the site.

## Environmental Progress

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

## Site Repository

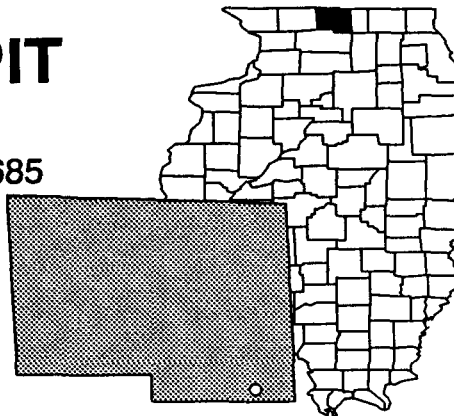
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Waukegan Public Library, 128 North County Road, Waukegan, IL 60085

# PAGEL'S PIT ILLINOIS

EPA ID# ILD980606685



## EPA REGION 5

Winnebago County  
Rockford

### Site Description

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The Pagel's Pit site, located in a predominately rural unincorporated area, consists of about 100 acres with the landfill occupying about 47 acres. The landfill began operation in 1972 and is still operating. The base of the landfill was covered with an asphaltic concrete that was sealed with a coal tar sealer. The landfill is equipped with a leachate extraction system and a gas extraction system. Primarily, municipal wastes and sewage treatment plant sludge have been the waste accepted at the site, but some special wastes also have been disposed of there. The shallow aquifer under the site is a source of drinking water to residents in the area. However, the groundwater flow is primarily toward the west while the nearby residents are located mainly along a road that touches the eastern edge of the site. The Winnebago County Health Department tested the water and discovered it was contaminated with several volatile organic compounds (VOCs). Some residents along this road have home treatment units on their water supply that have been provided the potentially responsible parties associated with the Acme Solvent Reclaiming, Inc. NPL site. This site is located upgradient of the Pagel's Pit site. Killbuck Creek is to the west of the site.

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

#### NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 06/10/86

### Threats and Contaminants

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Shallow groundwater under the site contains VOCs and arsenic. People potentially may be exposed to hazardous chemicals from the site by coming in direct contact with or ingesting contaminated groundwater. Killbuck Creek could become contaminated through runoff from the site and groundwater discharge. However, the creek has not been found to be affected by the site.

## Cleanup Approach

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This site is being addressed through two long-term remedial phases focusing on cleanup of the entire site and the southeastern portion of the site.

## Response Action Status

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**Entire Site:** In 1984, the State and the EPA began a study of the site. In 1986, some of the potentially responsible parties took over the study to explore the nature and extent of contamination at the site and to recommend alternatives for site cleanup. After evaluating the cleanup alternatives, the EPA selected a final remedy in 1991 which includes: groundwater extraction and treatment, with discharge of treated water into a local stream; leachate extraction, treatment, and discharge into a wastewater treatment plant; upgrading gas use on the landfill; and capping the site. The design of the remedy will begin once negotiations between the EPA and the potentially responsible parties have been settled.



**Southeast Portion of Site:** In 1991, an investigation began in the southeast corner of the site to determine the nature and extent of groundwater contamination. The investigation is expected to be completed in 1993, at which time a final cleanup remedy will be selected.

**Site Facts:** In 1986, under an Administrative Order on Consent, the EPA negotiated a settlement with some of the potentially responsible parties to study the nature and extent of the problem and to examine alternative solutions.

## Environmental Progress



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

## Site Repository



Rockford Public Library, 215 North Wyman Road, Rockford, IL 61101

# PARSONS CASKET HARDWARE CO. ILLINOIS

EPA ID# ILD005252432



## EPA REGION 5

Boone County  
Belvidere

### Site Description

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The 2-acre Parsons Casket Hardware Co. site was used as an electroplating facility from 1898 until 1982, when the owner filed for bankruptcy. Wastes from the operations were stored in drums, aboveground and underground storage tanks, and an unlined surface impoundment. Wastes generated included electroplating sludge; cyanide plating and cleaning solutions; and bronze, nickel, and brass sludges. In 1982, the State found that approximately 120 drums of various sizes were stored inside and outside the manufacturing building; many were dented, corroded, leaking, or uncovered. Approximately 4,800 gallons of wastes were stored in aboveground and underground tanks. An unlined lagoon contained approximately 166,500 gallons of liquid wastes and 1,230 cubic yards of sludges. Post-cleanup sampling data were collected by the State in 1987 and indicated that the groundwater is contaminated with volatile organic compounds (VOCs). The municipal water system in the area draws groundwater from an aquifer that has been contaminated by the sites. Approximately 6,000 people live within a 1-mile radius of the site. The closest residence is less than 1/10 of a mile away. Municipal water supply wells are within 3 miles of the site and are the sole source of drinking water for Belvidere's 15,200 residents. Area residents use the Kishwaukee River, 1,400 feet from the site, for fishing and recreational activities.

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

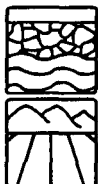
#### NPL LISTING HISTORY

Proposed Date: 01/22/87

Final Date: 07/22/87

### Threats and Contaminants

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Groundwater contains various VOCs. Soils on site contain heavy metals including arsenic, copper, and nickel. People who use the local municipal water supply system may be exposed to hazardous chemicals from the site.

## Cleanup Approach

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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

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**Initial Actions:** In 1984, the State of Illinois began to clean up the surface impoundment and the storage tanks on site and completed the action in 1985. Also in 1985, Filter Systems, Inc. purchased the building and moved all drums inside the building.



**Entire Site:** The State is carrying out a study of the nature and extent of contamination at the site, under EPA monitoring. To date, groundwater monitoring wells and soil borings have been installed and several samples have been collected. The study is expected to be completed in 1992. The EPA will use the results of this study to select alternative actions for the final cleanup of the site.

**Site Facts:** The State ordered the Parsons Casket Hardware Co. to repackage all leaking drums and to move them indoors before it filed for bankruptcy. The new owner, Filter Systems, Inc., agreed to recycle or remove the drums stored in the building on site.

## Environmental Progress



The cleanup of the surface impoundment and storage tanks has reduced the potential for exposure to hazardous materials at the Parsons Casket Hardware Co. site while further studies are taking place and cleanup activities are being planned.

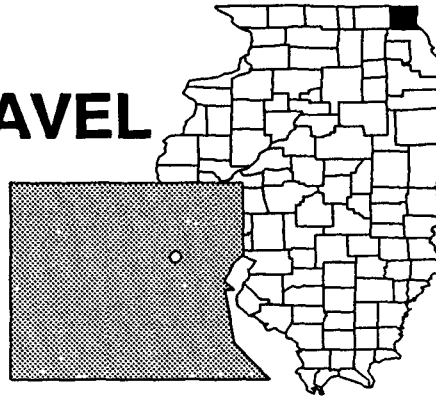
## Site Repository



Contact the Region 5 Superfund Community Relations Office.

# PETERSEN SAND & GRAVEL ILLINOIS

EPA ID# ILD003817137



## EPA REGION 5

Lake County  
1 mile north of Libertyville

### Site Description

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The 120-acre Petersen Sand & Gravel site is a quarry purchased by Raymond Petersen in 1952 to mine sand and gravel. The company dumped non-hazardous wastes, solvents, and paint wastes in buried drums at the site between 1955 and 1958. The Illinois Environmental Protection Agency (IEPA) inspected the site in 1971 and ordered it closed because of illegal dumping. The site consists of three disposal areas that are located in the quarry, just east of the Des Plaines River. The first disposal area, which the IEPA reinspected in 1972 and found to be properly closed, contains non-hazardous wastes. In 1976, the IEPA discovered 10 to 15 uncovered barrels of waste in the second disposal area of the gravel pit. Of these, about half contained paint and solvent wastes. Raymond Petersen owned the site until the Lake County Forest Preserve District (LCFPD) acquired it in 1979. The District planned to convert the quarry into a 240-acre recreational lake. In 1983, the LCFPD uncovered six more drums containing unknown liquids in an area of the site located outside the quarry, 100 yards east of the second disposal area. Barbed wire surrounds the perimeter of the gravel pit. Approximately 880 people live within a 1-mile radius of the site. The closest residence is an on-site trailer.

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

#### NPL LISTING HISTORY

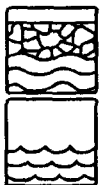
Proposed Date: 10/15/84

Final Date: 06/10/86

Deleted Date: 02/11/91

### Threats and Contaminants

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Groundwater, surface water, and sediments contained volatile organic compounds (VOCs); heavy metals including arsenic, cadmium, chromium, and lead; polychlorinated biphenyls (PCBs); and polycyclic aromatic hydrocarbons (PAHs). Because contamination levels were low and site contaminants are not migrating, no potential health threats existed.

## Cleanup Approach

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This site was addressed through initial actions; further investigations showed that no other cleanup actions are required.

## Response Action Status

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**Initial Actions:** In 1977, the IEPA removed approximately 350 drums from the second disposal area and placed them in a landfill permitted for hazardous waste. In 1983, approximately 400 empty drums, 2,600 yards of contaminated soil, and 26,000 gallons of surface water from a disposal trench were removed and placed in a permitted landfill for hazardous waste. Also, 750 drums and 1,000 paint cans were removed.



**Entire Site:** The State completed the final study of the site in 1988. Based on the results, the EPA has concluded that no further site contamination studies or other cleanup actions will be carried out at the site. The study proved that past removal actions were adequate and that no unacceptable risks remain. However, LCFPD plans to build a lake at the site, which could change the way any contaminants remaining at the site migrate. Therefore, although it is not required under EPA's decisions regarding the site, the LCFPD will monitor the surface water and sediments on site before and after the lake is built. Groundwater and rainwater that collect in the quarry pit will continue to be discharged to the Des Plaines River in compliance with the EPA's regulations for surface water until mining at the site stops.

**Site Facts:** The EPA and the IEPA conducted the study to determine the nature and extent of contamination at the site under a Cooperative Agreement signed in 1986.

## Environmental Progress



Studies performed at the Petersen Sand & Gravel site have shown that cleanup of this site is complete and no threats exist for nearby residents and the environment. The site was deleted from the NPL in 1991.

## Site Repository

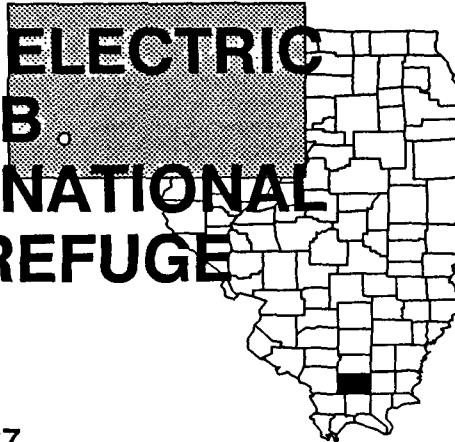


Information is no longer available.



# **SANGAMO ELECTRIC DUMP/CRAB ORCHARD NATIONAL WILDLIFE REFUGE (USDO) ILLINOIS**

EPA ID# IL8143609487



## **EPA REGION 5**

Williamson County  
Marion

### **Other Names:**

Olin Corp Ordill I Area  
Olin Corp Ordill Area 12  
Olin Corp Ordill D Area  
Olin Corp Ordill Ogden Road  
Olin Corp Ordill Fire Station  
Ordill Water Tower

## **Site Description**

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The 42,000-acre Crab Orchard National Wildlife Refuge currently is operated by the Fish and Wildlife Service (FWS) of the U.S. Department of the Interior (DOI). Manufacturing facilities have been operated on the Refuge for more than 45 years. Explosives, munitions, electrical equipment containing polychlorinated biphenyls (PCBs), boats, corrugated boxes, and plated metal are some of the products that have been manufactured on the Refuge. During the early 1940s, several defense-related operations began along the eastern portion of Crab Orchard Lake. In 1946, the War Department transferred the land to DOI, and other companies moved onto the Refuge to use buildings formerly used by wartime manufacturers. These small industries disposed of waste at several locations in the area. In 1984, potential contamination problems were brought to the attention of the EPA. The FWS, with the support of the EPA, has been conducting studies to determine the types and amounts of contaminants, as well as the extent of risks to public health and the environment. Based on initial field investigations and risk assessments, 31 subsites were studied and grouped into four areas: three subsites contaminated primarily with heavy metals; four subsites contaminated with PCBs and lead; four subsites associated with munitions or explosives manufacturing, which will be investigated by the Department of Defense (DOD); and the remaining subsite which will require additional investigations. Crab Orchard Lake is used as a drinking water source for Refuge personnel and visitors, the nearby Marion Federal Penitentiary, and industrial tenants. The lake also is used for various recreational activities and has been used in the past as an auxiliary source of water for the Marion Reservoir, a nearby public water supply.

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

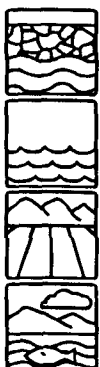
### **NPL LISTING HISTORY**

Proposed Date: 10/15/84

Final Date: 07/22/87

## Threats and Contaminants

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Groundwater contaminants include chromium, lead, arsenic, cadmium, PCBs, and various volatile organic compounds (VOCs). Sediments and soils are contaminated with PCBs and various heavy metals. Fish have been contaminated with PCBs; therefore, eating contaminated fish may pose a public health threat. Accidental ingestion of contaminated soil or sediments also may pose a health threat.

## Cleanup Approach

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This site is being addressed in four long-term remedial phases focusing on cleanup of the Metals Areas, PCB Areas, Munitions/Explosives Manufacturing Area, and Miscellaneous Areas.

## Response Action Status

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**Metals Areas:** In 1990, the EPA selected a remedy which includes: excavating contaminated soil and sediment; treating the hazardous materials by stabilization and fixation; disposing of the residuals in an on-site solid waste landfill; monitoring and maintenance of the area; and implementing land use restrictions. The design of the technical specifications is underway and is expected to be completed in 1993.



**PCB Areas:** Based on the results of an investigation completed in 1990, the EPA has selected the following remedies for cleanup of the site: incineration of PCB-contaminated soils and sediments and stabilization of lead-contaminated ash, followed by disposal of the stabilized ash in an industrial landfill and placement of the clean ash on the site. The incineration method will be used unless the potentially responsible Federal agencies demonstrate through a treatability test that in-situ (in-place) vitrification of the soil can better address cleanup goals. In-place vitrification is a remedy whereby the soil is treated electrically to form a glassy, solid material resistant to leaching. The design of these technologies is scheduled to begin in the near future.



**Munitions/Explosives Manufacturing Area:** The DOD has completed Phase I of the investigation of those areas contaminated with chemicals from munitions and explosives manufacturing. The investigation is expected to be concluded in 1994 with recommendations for final cleanup activities.



**Miscellaneous Areas:** The FWS is continuing an investigation into the remaining areas of the Refuge to identify any additional contaminated areas and to outline actions to be taken. This study is scheduled to be completed in 1994.

## Environmental Progress



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After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Sangamo Electric Dump/Crab Orchard National Wildlife Refuge site while cleanup activities are being planned.

## Site Repository

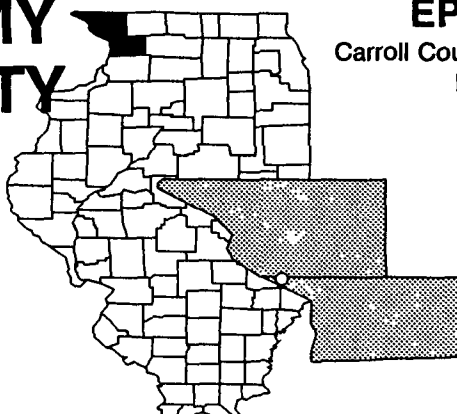


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Contact the Region 5 Superfund Community Relations Office.

# SAVANNA ARMY DEPOT ACTIVITY ILLINOIS

EPA ID# IL3210020803



## EPA REGION 5

Carroll County and Jo Daviess County  
North of Savanna

### Site Description

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The 13,062-acre Savanna Army Depot site is an Army munitions installation located on the eastern bank of the Mississippi River. The facility has handled, processed, and stored munitions, explosives, and industrial chemicals since operations began in 1918. Renovation and loading of artillery shells and bombs began at the site in the 1930s and has occurred intermittently. Several areas of the facility have been used for the demolition and burning of obsolete armaments. Approximately 70 areas within the facility have been identified as potential sources of hazardous waste. Public access to the site is restricted. There are approximately 650 people within 3 miles of the site, and a large wintering population of bald eagles resides on the facility.

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

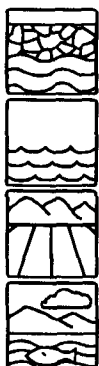
#### NPL LISTING HISTORY

Proposed Date: 10/15/84

Final Date: 03/31/89

### Threats and Contaminants

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Groundwater is contaminated with various explosives, trichloroethylene (TCE), chloroform, and nickel. Sediments and surface water are contaminated with various explosives. Soil is contaminated with explosives and polycyclic aromatic hydrocarbons (PAHs). Potential health threats include drinking contaminated groundwater and coming in direct contact with surface water, soil, and sediments.

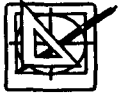
## Cleanup Approach

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This site is being addressed in two long-term remedial phases focusing on cleanup of the TNT Washout Facility Lagoons and the entire site.

## Response Action Status

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**TNT Washout Facility Lagoons:** In 1992, the U.S. Army completed an investigation into the nature and extent of contamination at the TNT Washout Facility Lagoons located on site. As a result, the EPA evaluated the study findings and selected to incinerate the explosive-contaminated lagoon soils as the final cleanup remedy. Design of the remedy began in 1992 and is expected to be completed in 1993.



**Entire Site:** The U.S. Army is negotiating a work plan for an investigation into the nature and extent of the contamination at the entire site. The investigation will define the contaminants and will recommend alternatives for the final cleanup. The work plan was completed in 1992. The investigation is planned to be completed in 1994.

**Site Facts:** In 1989, the EPA, the State, and the U.S. Army signed an Interagency Agreement regarding further cleanup activities at the site. The Savanna Army Depot Activity site 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.

## Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Savanna Army Depot site while the Army continues its investigations leading to final cleanup activities.

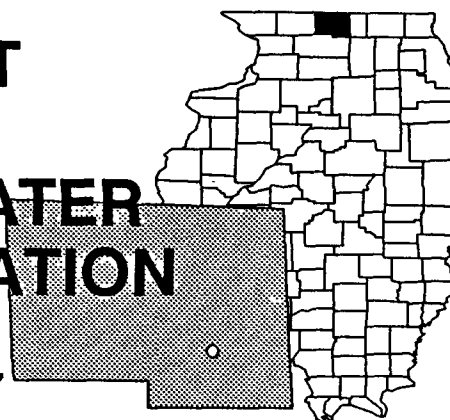
## Site Repository



Contact the Region 5 Superfund Community Relations Office.

# SOUTHEAST ROCKFORD GROUNDWATER CONTAMINATION ILLINOIS

EPA ID# ILD981000417



## EPA REGION 5

Winnebago County  
Rockford

**Other Names:**  
Southeast Rockford Dry Well

## Site Description

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The 2-square-mile Southeast Rockford Groundwater Contamination site covers 83 city blocks; however, contamination could affect an even larger area, since these boundaries only indicate where the EPA has performed sampling. Conversely, the boundaries do not indicate that all homes or businesses within this area are affected by groundwater contamination. The groundwater at the site is contaminated with volatile organic compounds (VOCs). The Rock River is located 2 miles west of the site, but is not used as a drinking water supply. Some homes and businesses located within the site boundaries are already connected to the municipal water supply and are not affected by the groundwater contamination. Approximately 155,000 people living within 3 miles of the site use groundwater for drinking purposes. The majority of the people use city water, which is drawn from a protected aquifer.

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

### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 03/31/89

## Threats and Contaminants

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On-site groundwater is contaminated with various VOCs. Potential health threats to people include drinking or coming in direct contact with contaminated groundwater.

## Cleanup Approach

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

## Response Action Status

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**Initial Actions:** In 1989, the EPA sampled the wells of 78 homes and tested the samples for specific VOCs. The EPA provided water to 283 homes. Bottled water was replaced with carbon filtration systems. All 283 homes subsequently were connected to the city water supply in 1990.



**Alternate Water Supply:** In early 1991, a study was completed which identified additional residences with contaminated water supplies above the federal standards. This action has initiated additional hookups to the city water supply. All additional homes are expected to be connected to the city water supply by late 1992.



**Groundwater:** The State, under EPA monitoring, is conducting an investigation into the source, nature, and extent of groundwater contamination at the site. The investigation will define the contaminants and will result in recommended alternatives for the final groundwater cleanup. The investigation is planned to be completed in 1994.

## Environmental Progress



The provision of alternate water supplies has eliminated the potential of exposure to hazardous substances in the drinking water and will continue to protect residents near the Southeast Rockford Groundwater Contamination site while the permanent replacement water supply is installed.

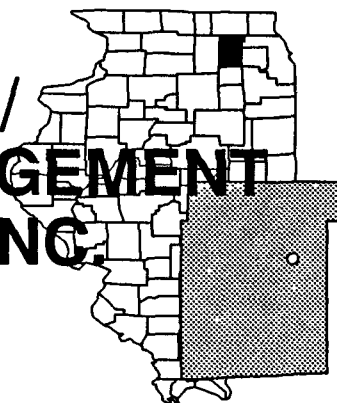
## Site Repository



Rockford Public Library, 215 North Wyman Street, Rockford, IL 61101

# TRI-COUNTY LANDFILL CO./ WASTE MANAGEMENT OF ILLINOIS, INC. ILLINOIS

EPA ID# ILD048306138



## EPA REGION 5

Kane County  
South Elgin

### Site Description

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The 46-acre Tri-County Landfill Co./Waste Management of Illinois, Inc. site previously was part of a gravel mining operation. The landfill site originally was owned and operated by the Tri-County Landfill Company from 1968 to 1973. The company had a permit from the State to accept general municipal refuse. Waste Management of Illinois, Inc. operated the site from 1973 until it was closed in 1977. In 1984, the EPA detected contaminants in monitoring wells downgradient of the site. The Fox River, approximately a mile west of the site, is used extensively for fishing and boating. A freshwater wetland is 1,100 feet away from the site. Over 10,000 people use wells within 3 miles of the site for drinking water, and a residential well is 1,800 feet away from the site. The nearest residence is located 1/2 mile from the site.

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

#### NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 03/31/89

### Threats and Contaminants

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The groundwater is contaminated with various volatile organic compounds (VOCs), as well as cyanide. Direct contact with or accidental ingestion of contaminated groundwater may pose a threat to the health of the nearby population. Leachate from the site reportedly has entered nearby ponds and ditches. The contaminants from the site could affect the adjoining wetlands. There are drainage ditches and tributaries that enter the Fox River. This surface water resource is used for various recreational activities.



## Cleanup Approach

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

## Response Action Status

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**Entire Site:** The EPA is conducting an investigation of the site to determine the nature and the extent of the contamination. The field work was completed, and a report of investigations into potentially contaminated groundwater, surface water, sediments and soil was submitted. The study was completed in mid-1992. The results of the investigation will be used to evaluate various cleanup alternatives and to select a preferred cleanup remedy in late 1992.

## Environmental Progress



After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the Tri-County Landfill Co./Waste Management of Illinois, Inc. site while cleanup activities are being planned.

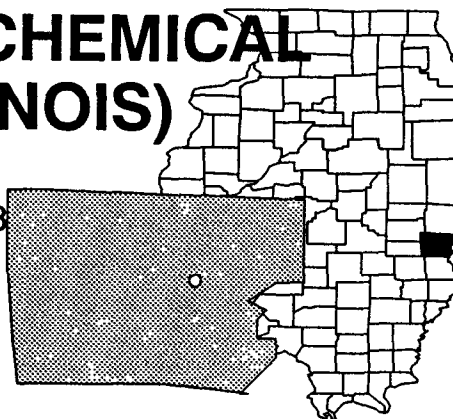
## Site Repository



Gail Borden Public Library District, 200 North Grove Avenue, Elgin, IL 60120

# VELSICOL CHEMICAL CORP. (ILLINOIS) ILLINOIS

EPA ID# ILD000814673



## EPA REGION 5

Clark County  
1 mile north of Marshall

**Other Names:**  
**Marshall Plant**

## Site Description

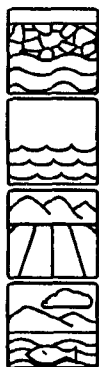
The Velsicol Chemical Corp. (Illinois) site is a manufacturing facility that was in operation between the mid-1930s and 1987 and occupied an area of approximately 420 acres; 172 of which were used for the production or disposal of petroleum resins, solvents, and pesticides. Chlordane production began in the mid-1940s, with manufacturing operations at the facility remaining virtually unchanged until 1979, when Velsicol withdrew from the resin market. Manufacturing of chlordane was the sole product at the facility from 1980 to 1987. Hazardous wastes generated from various manufacturing activities were stored in on-site impoundments. Overflow from these impoundments resulted in releases of these wastes to a tributary of East Mill Creek. All the ponds that previously were used for waste storage now are used only to hold stormwater and plant runoff. There are approximately 40 residences located within 1/4 mile of the site. The population of Marshall, 1 mile from the site, is approximately 17,000.

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

### NPL LISTING HISTORY

Proposed Date: 12/30/82  
Final Date: 09/08/83

## Threats and Contaminants



Groundwater is contaminated with various volatile organic compounds (VOCs) and pesticides. Sediments and on-site soils are contaminated with VOCs, pesticides, and cadmium. Elevated concentrations of pesticides were detected in fish. Adverse health effects may exist for people who accidentally ingest or come in direct contact with contaminated soil, sediments, or groundwater or eat contaminated fish.

## Cleanup Approach

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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

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**Immediate Actions:** In the 1980s, all contaminated soil and sediments were consolidated and stabilized with cement and fly ash and then covered with a temporary clay cap and seeded with grass.



**Entire Site:** In 1988, the following activities were selected to clean up the site: excavation of 10,200 cubic yards of contaminated stream and pond sediments and 87,900 cubic yards of contaminated soil, backfilling of those areas with clay, and reseeded the areas; consolidation of all excavated material on site; construction of a groundwater collection drain followed by disposal through either deep well injection or treatment of the water with granular activated carbon prior to off-site discharge; monitoring of both groundwater and surface water; and implementation of land use and deed restrictions. The pond sediments have been excavated, and the demolition of the existing plant has been accomplished. Also accomplished during 1990 were the closure of injection well #1, the integrity testing of well #2, the closure of some groundwater monitoring wells, and the sampling of the others remaining. The design of the permanent cap for this site was completed in 1991. The closure of the tank and container storage areas and the construction of the groundwater collection trench have been completed. Stream sediments are expected to be excavated and treated in 1992, and the final site cover is scheduled to be completed in 1994.

**Site Facts:** In 1989, the EPA and the State reached a settlement with the parties potentially responsible for the site contamination to conduct the cleanup actions.

## Environmental Progress



The completed excavation and closure actions described above have reduced the potential for exposure to hazardous materials and have contained the migration of contamination from the Velsicol Chemical Corp. (Illinois) site while further cleanup actions are taking place.

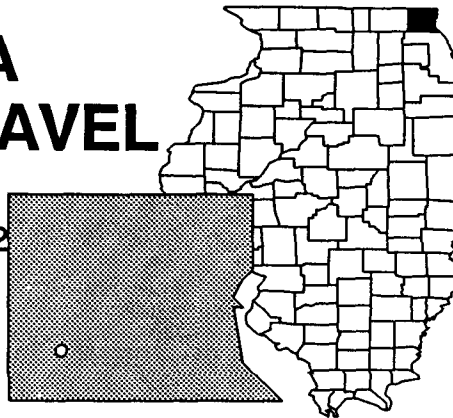
## Site Repository



Marshall Public Library, 612 Archer Avenue, Marshall, IL 62441

# WAUCONDA SAND & GRAVEL ILLINOIS

EPA ID# ILD047019732



## EPA REGION 5

Lake County  
1 mile north of Wauconda

### Site Description

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The 74-acre Wauconda Sand and Gravel site includes 52 acres of licensed and unlicensed landfill areas. Prior to 1941, a sand and gravel pit operated at the site. After 1941, the site was used as a landfill for municipal waste until 1978. Approximately 3 million cubic yards of waste were placed in the two landfills operated on the site, one licensed and the other unlicensed. The entire site was closed and covered with a layer of clay and soil in 1978. Since the late 1970s, leachate from the site was entering nearby Mutton Creek, and surface water samples taken from this creek in the early 1980s revealed low concentrations of volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and heavy metals. PCBs have not been detected in any subsequent studies. Although the site currently is restricted, the property once had been used for various recreational activities. Approximately 12 homes are located within a mile of the landfill.

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

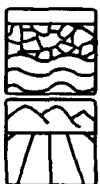
#### NPL LISTING HISTORY

Proposed Date: 07/16/82

Final Date: 09/08/83

### Threats and Contaminants

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Sampling of the groundwater indicates contamination with heavy metals, VOCs, and pesticides. Leachate is contaminated with heavy metals and cyanide. Health threats include accidental ingestion of or direct contact with contaminated groundwater or leachate.

### Cleanup Approach

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This site is being addressed in two long-term remedial phases focusing on leachate collection and cleanup of the entire site.

## Response Action Status

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**Leachate Collection:** In 1985, the following interim cleanup remedies were selected for leachate collection: installing leachate collection drains to stop surface leachate discharge into Mutton Creek; providing for proper disposal of leachate either at the Wauconda Sewage Treatment Plant or a hazardous waste treatment facility; regrading depressed and eroded areas on the existing landfill soil cover with sufficient slope to promote rain runoff; revegetating bare and eroded areas to prevent erosion of soils into Mutton Creek; and placing a fence around the site. By 1987, all of these actions had been completed.



**Entire Site:** In 1989, based on the site investigations performed by the potentially responsible parties, the EPA selected the following remedies: long-term monitoring of groundwater and Mutton Creek; additional air emission controls, including new and additional vents and, if required, an active collection system with a ground flare or other appropriate treatment; imposing restrictions on use of on-site groundwater; required upgrading of the site cover to reduce infiltration and surface gas emissions, and to control erosion due to runoff from the site and the erosion from Mutton Creek; continued operation of the leachate collection system; and long-term inspection and maintenance of the gas venting and leachate collection systems, site cover, fence, and the monitoring well network. The design of the technical specifications was completed in 1992 and all cleanup activities are scheduled for completion in 1993.

**Site Facts:** An Administrative Order on Consent was reached between the EPA, the Illinois Environmental Protection Agency (IEPA), and the Wauconda Task Group in 1986 for additional investigations and the performance of interim cleanup measures. In 1989, an additional Unilateral Order was issued for the final cleanup of the entire site.

## Environmental Progress



The leachate collection efforts, surface drainage control, and fencing of the site have reduced the potential for exposure to contaminated materials at the Wauconda Sand and Gravel site while further cleanup activities are being completed.

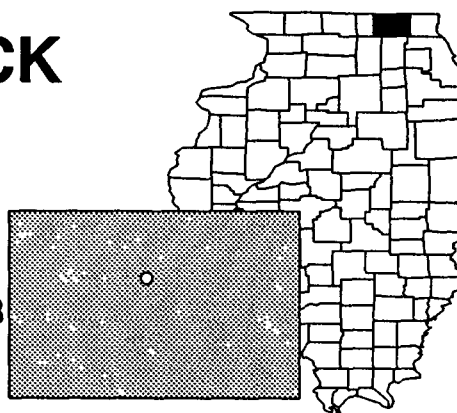
## Site Repository



Wauconda Area Library, 801 North Main Street, Wauconda, IL 60084

# WOODSTOCK MUNICIPAL LANDFILL ILLINOIS

EPA ID# ILD980605943



## EPA REGION 5

McHenry County  
Woodstock

### Site Description

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The 50-acre Woodstock Municipal Landfill site was a local dump and open burning area from 1935 to 1958, when the City of Woodstock purchased the property and began to bury municipal waste in on-site trenches. The landfill also accepted industrial wastes. Approximately 7,200 cubic yards of nickel sludge generated by the Autolite Plant in Woodstock were disposed of at the landfill from 1972 to 1974. The landfill stopped accepting waste in 1975. The EPA conducted an inspection of the site in 1985 and observed leachate seeping out of the wastes. The site presently is unfenced. Freshwater wetlands surround the landfill. Approximately 12,400 people obtain drinking water from public and private wells located within 3 miles of the site. The city's six municipal wells also are located within 3 miles of the site. The distance from the nearest residential well to the site is 50 feet.

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

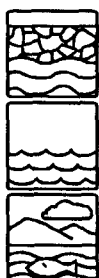
#### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

### Threats and Contaminants

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On-site groundwater is contaminated with volatile organic compounds (VOCs). Surface water contains heavy metals. VOCs and metals were found in sediments. On-site workers could be exposed to site-related contaminants when coming in direct contact with or accidentally ingesting surface water, groundwater, or sediments. Since the site is unfenced, trespassers also could be exposed to these contaminants. Because the soil underlying the site is highly permeable, contaminants migrate readily through the soil into the groundwater. The wetlands surrounding the site are affected by metal and VOC contaminants that have migrated from the site.

## Cleanup Approach

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

## Response Action Status

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**Entire Site:** In 1989, under EPA monitoring, some of the parties potentially responsible for site contamination began an investigation into the nature and extent of contamination. Some of the work being conducted under this investigation includes groundwater, soil, surface water, and air testing and a public and environmental health assessment. The first phase of field sampling work began in 1990. Five leachate and 12 monitoring wells were installed. Leachate, groundwater, sediment, and surface water samples were taken and analyzed, as well as samples from nearby residential wells. Nine piezometers and four additional monitoring wells were installed for the second phase of the investigation. Sampling activities are underway. The investigation is scheduled for completion in 1993. Alternatives for cleanup will be recommended based on the results of this investigation.

**Site Facts:** The City of Woodstock, Allied Chemical Corporation, and others identified by the EPA as potentially responsible parties agreed to conduct an investigation into the nature and extent of site contamination and the most effective methods to clean up the site in 1989. These activities are in compliance with an Administrative Order issued by the EPA in 1989.

## Environmental Progress



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

## Site Repository

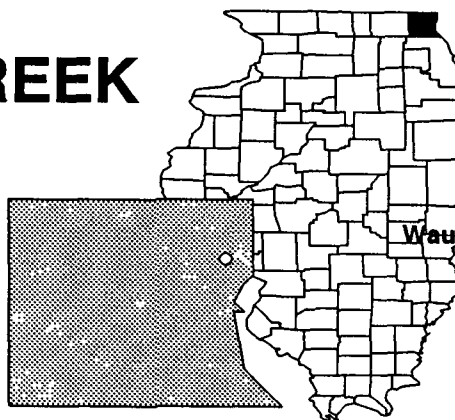


Woodstock Public Library, 414 West Judd Street, Woodstock, IL 60098

# YEOMAN CREEK LANDFILL

## ILLINOIS

EPA ID# ILD980500102



## EPA REGION 5

Lake County  
Waukegan

### Other Names:

Waukegan Land Reclamation Project  
Edwards Field  
National Disposal

## Site Description

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The approximately 70-acre Yeoman Creek Landfill site operated as a landfill from 1959 to 1969. The landfill has no bottom liner, and the underlying soils are permeable. More than 67,000 people in Waukegan are supplied with drinking water from a Lake Michigan intake 10,000 feet downstream of contaminants found in Yeoman Creek at Yeoman Park. Approximately 1,500 people draw drinking water from private wells within 3 miles of the site. The nearest well is 1,600 feet from the site. Apartments, businesses, and wetlands surround the site. Leachate has been observed seeping into Yeoman Creek since 1969, although the quantity decreased substantially after the site cover was upgraded in 1980.

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

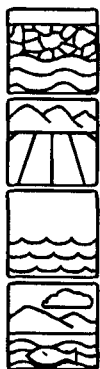
### NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 03/31/89

## Threats and Contaminants

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Groundwater and leachate are contaminated with ammonia, polychlorinated biphenyls (PCBs), and heavy metals including barium, iron, and sodium. In addition, leachate is contaminated with various volatile organic compounds (VOCs). Sediments of Yeoman Creek at the landfill, and farther downstream at Yeoman Park, contain PCBs and other organic chemicals. Potential health threats include coming in direct contact with or accidentally ingesting contaminated groundwater, surface water, soil, or sediments. The surrounding wetlands could be threatened by the contaminants.



## Cleanup Approach

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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

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**Immediate Actions:** In 1980, the City upgraded the site cover in most areas of the Yeoman Creek landfill. In 1990, the potentially responsible parties installed a fence around the site, under an agreement with the EPA.



**Entire Site:** The potentially responsible parties, under EPA monitoring, are conducting an investigation involving ecological assessment and groundwater, leachate, and stream sampling to determine the nature and extent of the contamination at the site. The investigation, scheduled for completion in 1994, will define the contaminants and will recommend alternatives for the final cleanup.

## Environmental Progress



Early actions taken by the City to restore the landfill cover have reduced the potential for exposure and further contamination. The Yeoman Creek Landfill site is now fenced, restricting any public access to contamination while site investigations are underway.

## Site Repository



Waukegan Public Library, 128 North County Road, Waukegan, IL 60085

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# GLOSSARY

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## Terms Used in the NPL Book

**T**his 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.

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## GLOSSARY

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**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.

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## GLOSSARY

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**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.

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

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

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

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

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

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

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

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

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

**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.

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## GLOSSARY

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**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].

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**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.

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**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.



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**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.

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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.

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**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.

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**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.

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**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.