United States
Environmental Protection
Agency

Solid Waste And
Emergency Response
(5201 G)

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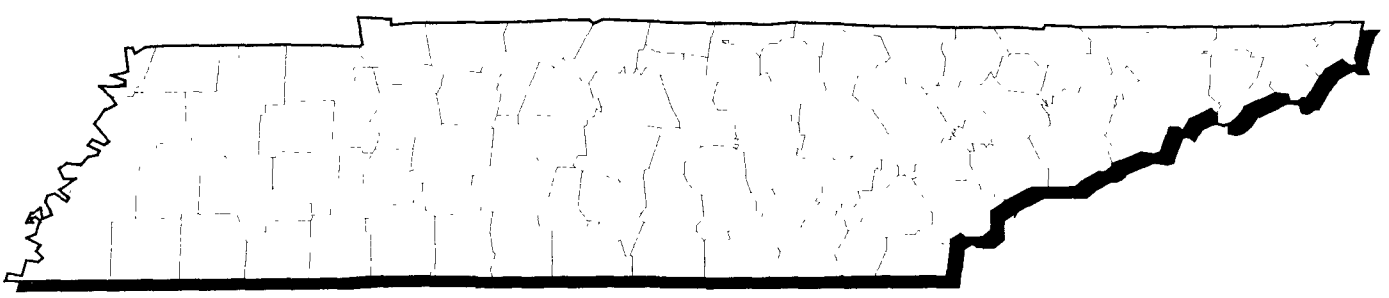
PB95-962944
9200.5-741C
May 1995

SUPERFUND: Progress at National Priority List Sites



TENNESSEE 1995 UPDATE

Printed on Recycled Paper

How to Use the NPL Book

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

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

How Can You Use This State Book?

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

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

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

NPL LISTING HISTORY

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

SITE RESPONSIBILITY

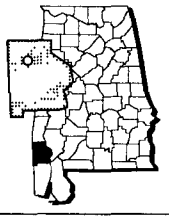
Identifies the Federal, State, and/or potentially responsible parties taking responsibility for cleanup actions at the site.

ENVIRONMENTAL PROGRESS

Summarizes the actions to reduce the threats to nearby residents and the surrounding environment and the progress towards cleaning up the site.

SITE NAME
STATE

EPA ID# ABC0000000



EPA REGION XX
COUNTY NAME
LOCATION

Other Names:

Site Description

A

Site Responsibility:

NPL Listing History
Proposed. XX/XX/XX
Final: XX/XX/XX

Threats and Contaminants

B

Cleanup Approach

C

Response Action Status

D

Site Facts:

E

Environmental Progress

Site Repository

SITE REPOSITORY

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

A

SITE DESCRIPTION

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

B

THREATS AND CONTAMINANTS

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

C

CLEANUP APPROACH

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

D

RESPONSE ACTION STATUS

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

E

SITE FACTS

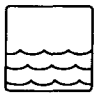
Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by the EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

Guide to the NPL Book Icons

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.

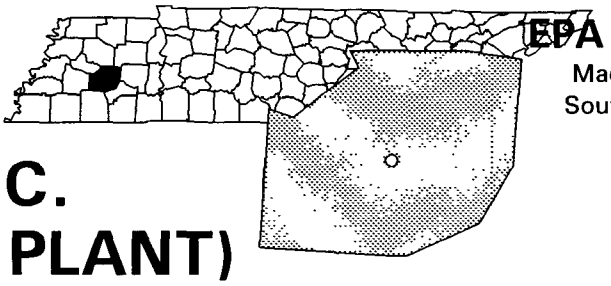
Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.

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.

EPA ID NUMBER	SITE NAME
TND007018799	AMERICAN CREOSOTE WORKS (JACKSON PLANT)
TND980729172	AMNICOLA DUMP
TND980468557	ARLINGTON BLENDING & PACKAGING
TN8570024044	ARNOLD ENGINEERING DEVELOPMENT CENTER (USAF)
TND044062222	CARRIER AIR CONDITIONING CO.
TND987768546	CHEMET CO.
TND980728992	GALLAWAY PITS
TND987767795	ICG ISELIN RAILROAD YARD
TND980729115	LEWISBURG DUMP
TND075453688	MALLORY CAPACITOR CO.
TN4210020570	MEMPHIS DEFENSE DEPOT
TN0210020582	MILAN ARMY AMMUNITION PLANT
TND980728836	MURRAY-OHIO DUMP
TND980558894	NORTH HOLLYWOOD DUMP
TN1890090003	OAK RIDGE RESERVATION (USDOE)
TND071516959	TENNESSEE PRODUCTS
TND980559033	VELSICOL CHEMICAL CORP. (HARDEMAN COUNTY)
TND980844781	WRIGLEY CHARCOAL PLANT

AMERICAN CREOSOTE WORKS, INC. (JACKSON PLANT)



EPA REGION 4
Madison County
South of Jackson

TENNESSEE

EPA ID# TND007018799

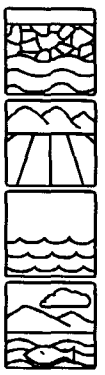
Site Description

The 60-acre American Creosote Works (Jackson Plant) site was a wood-treatment plant that began operations in the early 1930s and continued until late 1981, when the company filed for bankruptcy. Originally, the site consisted of the treatment buildings, pressure cylinders, boiler room tanks, oil storage tanks, tank cars, and railroad tracks. There also were four large wastewater lagoons, two sand filter units, and drip yards. Operators used creosote and pentachlorophenol (PCP) to treat and preserve wood. Workers discharged process wastewater directly to the South Fork of the Forked Deer River until 1973, when a levee was built around the facility to contain surface water runoff and wastewater. In 1974 the plant installed a wastewater treatment system. The pits created during construction of the levee were used to store treated process water and derivative sludges. Subsequently, flooding from the accumulation of rainfall caused the lagoons to overflow into the main process area. Jackson has a population of more than 60,000. A city well field lies approximately 1½ miles east of the site, and several public and private wells are located within a 3-mile radius. The closest homes are located within a mile of the site. Homes with private wells are located upgradient from the site, a situation that lessens risk. The south fork of the Deer River, less than ¼ mile from the site, receives runoff from the site via Central Creek and an unnamed tributary that follows the southern border of the site.

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

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

Threats and Contaminants



Groundwater underlying the facility and on-site soils are contaminated with volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and heavy metals from the wood-treating processes. On-site sediments contain PAH levels similar to those in soils. Cleanup workers may incur a health risk if they accidentally ingest contaminated soil or water. Wetlands lying along both sides of the river support a large variety of wildlife species.

Cleanup Approach

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

Response Action Status

Immediate Actions: In 1983, the EPA removed 30 million gallons of water from the site, treated 500,000 gallons of contaminated water, and solidified more than 100,000 cubic yards of sludge from on-site lagoons and treatment areas. Workers placed the solidified materials in an old lagoon and capped it with clay to await further cleanup. In 1986, EPA emergency response staff treated about 225,000 gallons of contaminated water from the storage tanks using hydrated lime and polymers, and 28,000 gallons of oil were consolidated in one secured tank. Workers built covers for the treatment system and for the open storage tanks. In 1988, the tank area and a large portion of the site was fenced. In 1989, the EPA completed a modification of the drainage system on the river side of the site.

Entire Site: In 1990, the contaminated soils and sludges were removed from the process area and incinerated off-site; all tank liquids were treated and disposed of; a security fence was installed around the entire perimeter of the site; and the process equipment was dismantled and the majority of it salvaged. Some construction debris remains on the site. The State repaired the levee on the river side of the site, and a sump pump and a large drainage pipe to the river were installed.

Groundwater: During a hydrogeological investigation completed in 1993, information was gathered to model the groundwater flow and the semi-confining clay layer under the site. Based on the investigation, the EPA determined that off-site groundwater is not significantly effected by the site and that no further action is required.

Soils and Sludges: An investigation, which focused on process area soils and sludges, was initiated in the summer of 1993. Preliminary results indicated significant shallow subsurface soil contamination with creosote in the process area as well as over the remaining areas of the site. The investigation is expected to be completed in 1995 and will determine alternatives for treating contaminated soils and sludges.

Site Facts: A Superfund State Contract was signed in May 1989. In December 1989, the EPA signed an Interagency Agreement with the U.S. Geological Survey for a hydrogeological survey to determine the nature and extent of contamination of the groundwater at the site.

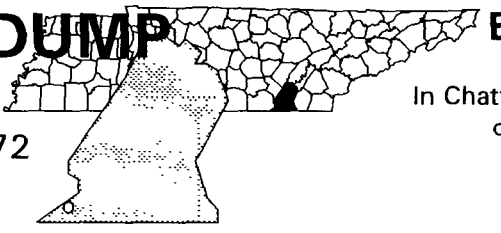
Environmental Progress

The numerous actions to treat and contain wastes and to build a perimeter security fence at the site have reduced the potential for exposure to hazardous materials at the site. Results of investigations indicated that the city's groundwater supply is not affected by site contamination. Final cleanup activities for soils and sludges are being investigated.

Site Repository

Jackson-Madison County Library, 433 Lafayette Street, East, Jackson, TN 38301

AMNICOLA DUMP
TENNESSEE
EPA ID# TND980729172



EPA REGION 4
Hamilton County
In Chattanooga, along the east bank of the Tennessee River

Site Description

The Amnicola Dump site is an 18-acre inactive construction debris disposal site located in Chattanooga, Tennessee. The site is situated along the eastern bank of the Tennessee River in an industrial area, ½ mile upstream from the city's water intake. During the 1930's the site was reportedly used for clay mining operations. These operations resulted in several water-filled pits. The Amnicola site was operated as a dump from 1970 until 1973 by the City of Chattanooga. The dump operations were closed in 1973 due to concerns of unauthorized dumping and the discharge of leachate from the site into the Tennessee River. Elevated levels of 10 inorganic compounds were detected in the leachate streams. Water quality downstream in the Tennessee River was not noticeably affected. The site owner reportedly handled, stored, and burned creosote-contaminated railroad ties. This activity has contributed to the elevated creosote contamination in the site's surface soil. Approximately 150,000 people live within a 2-mile radius of the site. There are no residences located within the immediate ½ mile radius of the site.

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

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

Threats and Contaminants

On-site surface soil and debris contained polynuclear aromatic hydrocarbons (PAHs). Groundwater monitoring indicated that chromium levels exceeded the primary drinking water standards in one monitoring well. No site-related contaminants have been found in the city's water supply. Direct contact with contaminated soil could have posed a threat to human health and the environment.

Cleanup Approach

Response Action Status

Entire Site: In 1993, all cleanup activities at the site were completed, which included excavating and disposing of contaminated soil and debris off site, and backfilling the area with crushed stone. The site will undergo quarterly groundwater monitoring, and the entire site will be reviewed in five years to ensure the effectiveness of the remedy.

Site Facts: In 1991, the EPA and the parties potentially responsible for site contamination signed a Consent Decree for these parties to undertake engineering design and cleanup activities.

Environmental Progress

All cleanup at the site is complete. Excavating and disposing of contaminated soil and debris and backfilling the area have reduced the threat of exposure to contamination at the site while groundwater monitoring is conducted. The site will be reviewed in five years to ensure the effectiveness of the remedy.

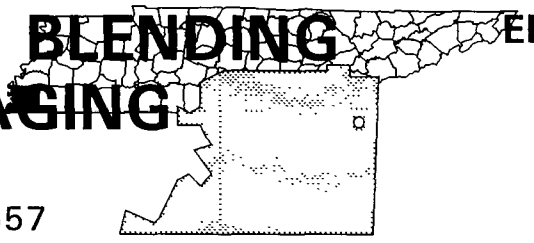
Site Repository

Chattanooga Hamilton County Bicentennial Library, Local History Dept., 1001 Broad St., Chattanooga, TN 37402

ARLINGTON BLENDING AND PACKAGING

TENNESSEE

EPA ID# TND980468557



EPA REGION 4
Shelby County
Arlington

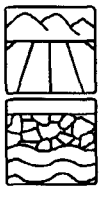
Site Description

From 1971 to 1978, the more than 2 acre Arlington Blending and Packaging site housed a pesticide blending and packaging operation, engaged in the mixing and packaging of various pesticides, herbicides, and other chemical formulas. During normal business operations, spills and leaks of chemicals handled at the site occurred. These chemicals soaked into site soils and building flooring and migrated off site through surface runoff and drain ditches. In the mid-1970s, the State took action against the company for its violations of the Clean Water Act, demanding that it reduce pesticide contamination in tributaries leading to the Loosahatchie River Canal. A 1976 report was issued by the company to satisfy State concerns. In 1979, after sampling the site and an adjacent housing development, the State recommended that the developer install a fence between the homes and the plant and apply 1 to 2 inches of clean topsoil in the backyards of the two homes closest to the plant. Between 1980 and 1983, the site owner removed some pesticide wastes from the site. The site is bordered by the Tennessee Department of Transportation facility to the west and a small residential area to the east of the site. The closest home is 50 feet away. Approximately 2,700 people live within 3 miles of the site, drawing drinking water from two water systems serving the communities of Arlington and Gallaway. An Arlington City well is within 1,200 feet of the site. The site is in the flood plain of the Loosahatchie River Canal, which is approximately 3,000 feet due north of the site. The probable drainage route from the site leads to a nearby canal that is used for recreation.

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

NPL LISTING HISTORY
Proposed Date: 01/22/87
Final Date: 07/22/87

Threats and Contaminants



In 1983, the EPA discovered high concentrations of various pesticides in on-site soils and around the housing development. In 1985, the State detected pesticides in a shallow monitoring well on the site. The three water-bearing zones under the site are used as drinking water sources and have the potential for contamination from pesticide residues at the site. The upper zone is contaminated with chlordane and other pesticides. Although removal actions have reduced the potential for exposure of people to contaminants, any remaining groundwater contamination could threaten those who drink it.

Cleanup Approach

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

Response Action Status

Immediate Actions: In 1983, the EPA removed 3,500 gallons of chemicals from the drums, collected debris, and excavated 1,920 cubic yards of contaminated surface soils both on and off the site. All of the material was transported to EPA-approved disposal facilities. In 1990, the EPA, while conducting an investigation, discovered a significant concentration of pesticides in the backyard of a residence adjacent to the site. Immediate actions included the excavation and backfilling of the affected property, which eliminated the health risks posed to the residents.

Soil and Groundwater: In mid-1991, the EPA completed an intensive study of soil and groundwater pollution at the site. The selected remedy includes: excavation and decontamination of contaminated soil through on-site thermal desorption; replacement of the treated soil in excavated areas; dechlorination of liquids with off-site disposal; activated carbon treatment of the contaminated groundwater, with discharge of the treated effluent into a local wastewater treatment plant; and on-site solidification of soils containing arsenic and other trace metals. The cleanup activities have begun. Groundwater cleanup will be initiated once the soil cleanup is complete.

Site Facts: A Unilateral Administrative Order was issued in January 1992 to the potentially responsible parties compelling them to perform the design and complete the cleanup activities at the site.

Environmental Progress

The immediate soil and drum removal actions described above have reduced the potential for exposure to hazardous materials at the Arlington Blending and Packaging site while cleanup activities are underway.

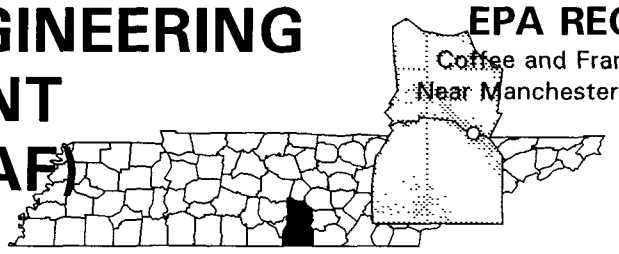
Site Repository

Arlington Public Library, 11968 Walker Street, Arlington, TN 38002

ARNOLD ENGINEERING DEVELOPMENT CENTER (USAF)

TENNESSEE

EPA ID# TN8570024044



EPA REGION 4

Coffee and Franklin Counties
Near Manchester and Tullahoma

Site Description

The 32,000-acre Arnold Engineering Development Center (AEDC) is located in Coffee and Franklin counties in south-central Tennessee near the cities of Manchester and Tullahoma. AEDC is a test organization of the Air Force Material Command with the primary purpose of simulating actual flight conditions in aerodynamic, propulsion, and space ground-test facilities. In addition, AEDC conducts research and applies new technology to improve environmental facilities and associated testing techniques and instrumentation. The Camp Forrest Army Training Center previously occupied the site, part of which was transferred to the federal government by the state of Tennessee in 1951. Approximately 30,000 acres of AEDC property are heavily forested and is covered under a management plan allowing the Tennessee Wildlife Resources Agency to operate and manage a wildlife program. Several potentially contaminated source areas are located at the site, including Landfill No. 2, Leaching Pit No. 2, Retention Reservoir, and the Main Testing Area. Landfill No. 2 is a 15-acre area used for disposal of hazardous wastes. Leaching Pit No. 2 was used for the disposal of chrome plating solutions and other acidic wastes. The Retention Reservoir is a 175-acre impoundment, which is used as a retention basin for wastewaters and surface water runoff. Polychlorinated biphenyls (PCBs), trichloroethane, methylene chloride, and toluene are reported to have entered the Retention Reservoir. The Main Testing Area, situated on developed lands in the central portion of the site, has been the site of a wide variety of waste handling activities and spills involving jet and rocket fuels, chlorofluorocarbon solvents, nitric acid, and other shop wastes. Surface water runoff from the Main Testing Area enters Woods Reservoir via several streams. The AEDC drinking water intake, which serves 3,800 workers, is located at the confluence of Brumalow Creek and Woods Reservoir.

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

NPL LISTING HISTORY
Proposed Date: 08/23/94

Threats and Contaminants

Surface water and sediment samples collected from multiple locations downstream from the site are contaminated with PCBs. Soils at the Main Testing Area are contaminated with PCBs. Fish tissue samples collected from Rollins/Rowland Creek and surface water from Bradley Creek and Brumalow Creek within the wildlife management area boundaries are contaminated with PCBs. Touching or ingesting contaminated surface water, sediments, soils, or fish could have adverse health effects.

Cleanup Approach

This site will be addressed through a long-term remedial phase focusing on cleaning up the entire site.

Response Action Status

Entire Site: The EPA is planning site-wide investigations into the nature and extent of contamination at the site. Upon completion, final cleanup remedies will be selected.

Environmental Progress

The EPA has determined that the Arnold Engineering Development Center (USAF) site poses no immediate threats to human health or the environment while it plans site-wide investigations.

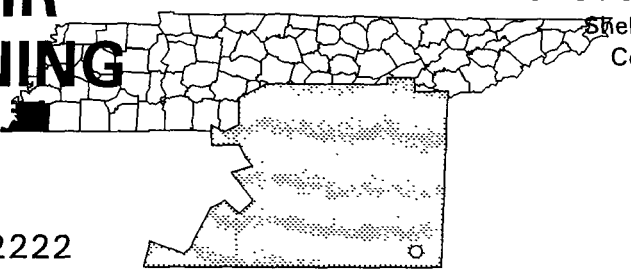
Site Repository

Not yet established.

CARRIER AIR CONDITIONING COMPANY

TENNESSEE

EPA ID# TND044062222



EPA REGION 4

Shelby County
Collierville

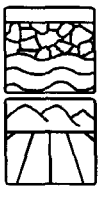
Site Description

Carrier Air Conditioning Company, part of United Technologies, manufactures residential air conditioners on approximately 145 acres of land. Three releases of trichloroethylene (TCE) to the environment have been documented. Starting in 1972, Carrier operated an unlined, 200-cubic-foot wastewater lagoon for storage of TCE-contaminated paint sludges, which leaked from 1972 to 1980. In 1978, a filter cover failed on a vapor degreaser, spilling 2,000 to 5,000 gallons of TCE. A third release occurred in 1985 when, following a period of heavy rainfall, an unknown volume of TCE leaked from underground pipes. The company was able to recover 542 gallons of TCE. As a result of this spill, wells were installed at the facility to monitor the Memphis Sands Aquifer. The Carrier facility is located within 2,000 feet of Water Plant Well #2 of the City of Collierville. An estimated 12,800 people obtain drinking water from wells in the aquifer 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: 02/21/90

Threats and Contaminants



TCE was detected in several monitoring wells at the facility in 1986 from plant operations. Low levels of TCE were found in both wells at Water Plant #2 of the City of Collierville. Soil samples collected at the spill site by the State in 1986 contained TCE. Accidentally ingesting contaminated groundwater or soil may pose a health risk.

Cleanup Approach

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

Response Action Status

Immediate Actions: In 1980, Carrier removed wastes and soil from the lagoon and sent them to an EPA-regulated hazardous waste facility. In 1990, Carrier and the Town of Collierville designed and installed an air stripping system at the Well Field #2 treatment plant to remove TCE from raw water and allow the town to fully use Well Field #2.

Entire Site: In 1989, the parties potentially responsible for site contamination began a study of the nature and extent of site contamination, along with an assessment of techniques for site cleanup. A treatability study was completed at the former lagoon demonstrating that soil vapor extraction is effective in cleaning up soil at one of the TCE sources. A remedy was selected in late 1992 addressing site soils and groundwater through the use of soil vapor extraction and the continued use of the air stripping system described in the immediate actions section. These final cleanup activities are scheduled for completion in late 1995.

Site Facts: The EPA and Carrier entered into an Administrative Order, requiring the potentially responsible parties to conduct a study to determine the extent of the contamination and to evaluate the technologies available for the cleanup. Carrier was issued a Unilateral Administrative Order in February 1992 to perform the design of and cleanup for the selected remedy.

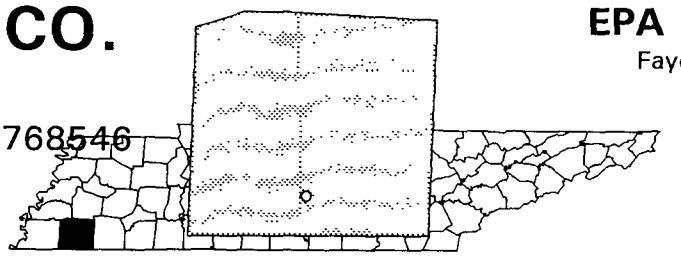
Environmental Progress

The removal of wastes and soil, as well as the installation of an air stripping system, have reduced risks to the public health and the environment at the Carrier Air Conditioning Company. The groundwater air stripping system currently in place is effectively treating the groundwater. Soil is being cleaned through the use of a soil vapor extraction system.

Site Repository

Memphis Shelby County Public Library, 91 Walnut Street, Collierville, TN 38017

CHEMET CO.
TENNESSEE
EPA ID# TND987768546



EPA REGION 4
Fayette County

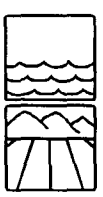
Site Description

The Chemet Co. site is located approximately 1 mile east of the City of Moscow. Three buildings and two ponds make up the 5-acre site, which operated from 1978 to 1987 as an antimony oxide plant. The Tennessee Department of Health and Environment (TDHE) visited the site in 1983 and 1989 and found drums containing antimony slag, two 15-gallon drums of sulfuric acid, and several bags of soda ash. TDHE also found the site to be easily accessible to trespassers. In 1990, the facility was secured with a 5 1/2 foot fence. A playground at the LaGrange-Moscow Elementary School borders the eastern edge of the Chemet Co. site. In 1992, Chemet Co. constructed a fence around the areas of off-site contamination to prevent the 600 students and 65 workers at the elementary school from further contact with the soil. Approximately 77 people reside within one mile of the site.

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

NPL LISTING HISTORY
Proposed Date: 01/18/94
Final Date: 05/31/94

Threats and Contaminants



Samples collected from on-site ponds, drainage pathways, and the ball field of the adjacent school showed elevated levels of heavy metals including arsenic, antimony, and lead. Although the facility and surrounding contaminated areas are fenced, making contact unlikely, touching or ingesting contaminated surface water or soils could pose a health threat.

Cleanup Approach

This site will be addressed through a long-term remedial phase focused on cleanup of the entire site.

Response Action Status

Initial Actions: In early 1990, TDHE constructed a 5 1/2 foot fence around the facility. In addition, in mid-1990, TDHE removed approximately 300 tons of contaminated soil from an area north of Building No. 3 and stored and locked it in Building No. 2. A second removal of soil occurred later in 1991. In mid-1992, Chemet Co. installed a fence surrounding the area of off-site contamination, preventing the 600 students and 65 workers at the school from further contact with the contaminants.

Entire Site: The EPA and the State of Tennessee are planning a site-wide investigation to determine the nature and extent of contamination at the site. This study will lead to the selection of final remedies to clean up the site.

Site Facts: On March 19, 1990, the TDHE signed an order requiring the construction of an 8 foot fence around the site and the removal and disposal of hazardous substances from the facility.

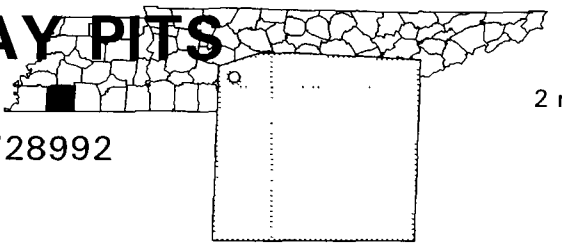
Environmental Progress

Fencing the facility and off-site areas and removing contaminated soils has made the site safe while studies leading to final cleanup remedies are being planned.

Site Repository

Not yet established.

GALLAWAY PITS
TENNESSEE
EPA ID# TND980728992



EPA REGION 4
Fayette County
2 miles northeast of Gallaway

Other Names:
Gallaway Dump

Site Description

The Gallaway Pits site is on a 10-acre parcel of land that was extensively mined for sand and gravel, producing a landscape dotted with water-filled pits up to 50 feet deep. The site was used for unlicensed dumping of municipal and industrial wastes. Disposal of hazardous materials at the site occurred for an undetermined period of time, probably in the 1970s and 1980s. Wastes included pesticides, residential/industrial solid waste, trash, and debris. Drums containing liquid waste were drained and/or dumped in the water-filled pits. Approximately 50 homes are located within ½ mile of the site, with the closest home being 1,600 feet away. The majority of these homes obtain drinking water from private wells.

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

On-site surface water and soil were contaminated with pesticides, including chlordane and toxaphene, from unauthorized dumping activities. Off-site migration of contaminated surface water and soil posed a potential risk to local residents and the environment.

Cleanup Approach

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

Response Action Status

Immediate Actions: The EPA set up a water treatment system in 1983 to treat water from the pits at the rate of 100 gallons per minute. Approximately 360,000 gallons of water were treated, and 475 cubic yards (66 truckloads) of soil were removed and disposed of.

Entire Site: The EPA completed the following activities to clean up the site: contaminated soil and sediments were excavated from the pits and solidified; a cap was designed and constructed to place over the soil and sediments; monitoring wells were installed to monitor the cap's integrity; and the contaminated pit-water was treated to meet water quality standards and discharged to a nearby tributary. The State of Tennessee applied for a Cooperative Agreement and received additional funding to conduct restoration activities at the site. Upon completion of this additional work, the State will take over operational and maintenance responsibilities, scheduled for the summer of 1995.

Environmental Progress

The cleanup activities described above have been completed. The State of Tennessee is conducting restoration activities at the site. The process for deleting the site from the NPL will be pursued once these activities are completed and the State assumes operational and maintenance responsibilities.

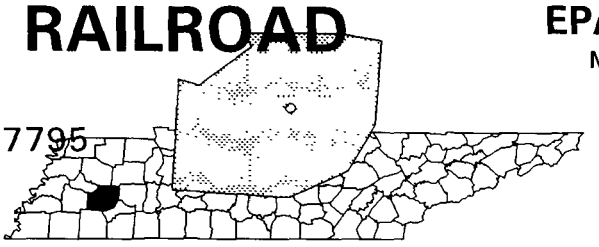
Site Repository

Gallaway City Hall, 607 Watson Drive, Gallaway, TN 38036

ICG ISELIN RAILROAD

TENNESSEE

EPA ID# TND987767795



EPA REGION 4

Madison County
Jackson

Site Description

The ICG Iselin Railroad Yard site is an 80-acre property located at the intersection of Eastern Street and Magnolia Street in Jackson. The facility has had several owners over the years, each of whom used it for various purposes related to railroad operation. The Mobile and Ohio Railroad Co. operated the facility as a railroad station and maintenance depot from 1906 until 1940, when Gulf Mobile and Ohio Railroad Company purchased Mobile and Ohio Railroad Co. Gulf Mobile continued to use the facility as a railyard. In 1972, Gulf Mobile reorganized as the Illinois Central Gulf Railroad Co. (ICG). ICG used the site as a locomotive maintenance facility from 1972 until 1986, when the Williams Steel Co. purchased much of the property. Norfolk Southern Railway Co. owns the remainder of the property, which is not currently considered to be part of the ICG Iselin Railroad Yard site. Williams Steel Co. used its portion of the property as a steel fabrication facility from 1986 until 1989, when Iselin Properties, Inc. assumed ownership. ICG currently owns the site, and waste disposal practices at the site are unknown prior to ICG's operation of the facility. At one time, the facility may have included a round house, a steam locomotive fueling station, a coal-fired power plant, and a locomotive maintenance building. Currently, the site has several contaminated units: a main warehouse; numerous railroad tracks; storage tanks; a battery waste disposal pile; a rail car fueling platform under an open-air shed; and the railyard's pollution control system, which includes a neutralization tank, a concrete tank, several drainage ditches, and a surface impoundment. The EPA required ICG to construct the pollution control system as a requirement of the temporary National Pollutant Discharge Elimination System (NPDES) permit it approved for the facility in 1973. This permit allowed ICG to discharge limited quantities of waste into the Jones Creek at intervals that would not harm the surrounding community or the environment. However, ICG exceeded the limits set by the NPDES permit in 1975 and again in 1980, when it reported that it had released large quantities of heavy metals into the creek. In 1990, the Tennessee Department of Health and Environment sampled surface soils at the site and found them to be contaminated with heavy metals. The EPA conducted subsequent studies of the surface soils, as well as on-site sediments, in 1991. The EPA confirmed that these media were contaminated with heavy metals, in addition to volatile organic compounds (VOCs) such as vinyl chloride and benzene. The site is located in a suburban, residential area. About 31,000 people use ten municipal wells within 4 miles of the site.

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

NPL LISTING HISTORY
Proposed Date: 05/10/93

Threats and Contaminants

The soil is contaminated with heavy metals, primarily chromium, copper, and lead, as well as VOCs. Sediments at the site are contaminated with VOCs, including vinyl chloride, tetrachloroethene, and benzene. People who touch or ingest contaminated sediments or soil may be at risk.

Cleanup Approach

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

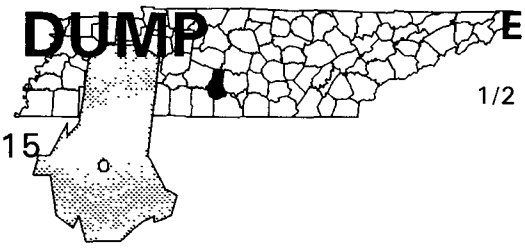
Response Action Status

Entire Site: The EPA initiated a full-scale investigation into the nature and extent of contamination at the site in the summer of 1994. The investigation is scheduled for completion in 1996 and will identify alternatives for cleanup at the site.

Environmental Progress

The EPA has determined that this site poses no immediate threat to the public or the environment while site studies are ongoing.

LEWISBURG DUMP
TENNESSEE
EPA ID# TND980729115



EPA REGION 4
Marshall County
1/2 mile north of Lewisburg

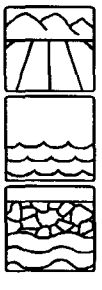
Site Description

The 20-acre Lewisburg Dump operated as a municipal dump for 20 to 25 years. The site includes a 4-acre landfill and a 2-acre quarry pond. A State-sponsored geological survey found the site unfit for use as a sanitary landfill, and it was closed in 1979. The dump accepted mostly municipal waste and some industrial waste, such as inorganic chemicals and solvents. Waste partially filled a former limestone quarry that contains a shallow lagoon fed by groundwater. Runoff from the site eventually discharges into Big Rock Creek. The dump lies in a remote area; approximately 30 people reside in the nearest homes to the site, which are about 1/2 mile away. Private wells are located within 1/4 mile from the site.

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

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

Threats and Contaminants



The soil, leachate, and surface water are contaminated with a plastic called Bis-2Ethylhexyl phthalate (DEHP), heavy metals including copper, and volatile organic compounds from the site's dump activities. Pond sediments on site are similarly contaminated, but at much lower levels. One on-site well was contaminated with low levels of DEHP. Direct contact with or accidental ingestion of contaminated groundwater, surface water, or soil may be a risk.

Cleanup Approach

Response Action Status

Entire Site: In 1987, under EPA orders, several potentially responsible parties began an intensive study of the site's pollution problems. The first phase of this investigation explored the nature and extent of site contamination; the second prescribed the best alternatives for final cleanup. The final draft of the study was reviewed by the EPA, the State of Tennessee, and the U.S. Geologic Survey (USGS). The selected remedy included regrading the cap and clearing the site of vegetation and industrial debris to prevent further infiltration. The design of the remedy began in 1991 and was completed in late 1992. Cleanup of the dump began in late 1992, and was completed in late 1993. The investigation indicated that the groundwater was contaminated at very low levels. Monitoring and testing of the groundwater was performed during the design of the cleanup remedies and continued through the completion of the cleanup. Long-term groundwater monitoring, begun in the fall of 1993, will be performed for up to 5 years if required, as part of the operation and maintenance phase. The site is planned for deletion from the NPL if the remedy is shown to continue to be effective.

Site Facts: The EPA signed a Consent Order with several potentially responsible parties to perform the study characterizing the contamination at the site. The parties agreed to pay the full costs of the selected cleanup actions.

Environmental Progress

Construction of the all site remedies has been completed at the Lewisburg Dump site. Once final sampling and monitoring of the lagoon has been completed, scheduled in 1995, and the effectiveness of the remedies in meeting cleanup goals is confirmed, the site will be deleted from the NPL.

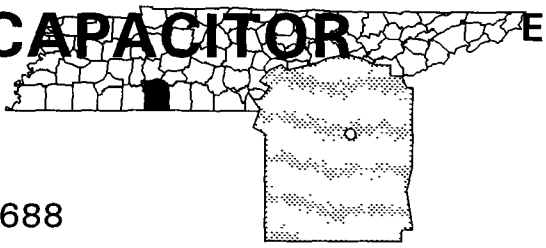
Site Repository

Marshall County Memorial Library, 310 Farmington Pike, Lewisburg, TN 37091

MALLORY CAPACITOR COMPANY

TENNESSEE

EPA ID# TND075453688



EPA REGION 4

Wayne County
Waynesboro

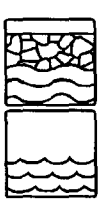
Site Description

Electrical capacitors were manufactured on the 8½-acre Mallory Capacitor site from 1969 to 1984. The operators first used polychlorinated biphenyls (PCBs) as the dielectric fluid in the capacitors, switching to a plastics chemical in 1978. The factory changed hands when Dart Industries purchased it in 1979. Dart later sold the property in 1980 to Emhart Industries, Inc. As part of the sales agreement with Emhart, certain PCB wastes, a buried tank, and contaminated soil were removed from the site and sent to an approved PCB disposal facility. The plant continued to operate, but voluntarily closed in 1984 when PCBs were discovered throughout the site. The EPA found that PCBs entered the environment through spills, leaks, and intentional discharges. The plant is located in a small community. Approximately 900 people get drinking water from wells and springs within 3 miles of the site. The site is in the flood plain of the Green River. Surface water within 3 miles of the site is used for fishing and swimming.

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

NPL LISTING HISTORY
Proposed Date: 01/22/87
Final Date: 10/04/89

Threats and Contaminants



PCBs and volatile organic compounds (VOCs) have been detected in groundwater. Off-site wells are contaminated with PCBs and volatile organic compounds (VOCs) such as trichloroethylene (TCE) and dichloroethylene. Coming in contact with or accidentally ingesting contaminated groundwater could pose a human health threat. The presence of PCBs and VOCs poses a threat to the environment, as they are toxic to aquatic wildlife.

Cleanup Approach

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

Response Action Status

Immediate Actions: From 1988 to 1989, before the start of the field work on the site study, a potentially responsible party removed approximately 20,100 tons of PCB-contaminated soil and 3,400 cubic yards of plant debris and sent them to an EPA-approved disposal facility.

Entire Site: In 1989, the potentially responsible party installed several monitoring wells on and off site to better define the extent of the contamination. Under EPA orders and supervision, the potentially responsible party conducted an intensive investigation of the site contamination. The study focused on the extent of PCB and VOC contamination and assessed the possible toxicological effects to Cold Water Creek. In 1991, the EPA selected a remedy which involves on- and off-site hydraulic containment of the contaminated groundwater plume with extraction and treatment. In 1993, engineering designs for groundwater cleanup were completed. Groundwater extraction and treatment began in late 1993, and is scheduled for completion in 1996.

Site Facts: The potentially responsible parties, working with the EPA under an Administrative Order, completed a study of the nature and extent of the contamination and identified possible cleanup solutions. The cleanup design and activities are being performed by the potentially responsible parties under a Unilateral Administrative Order.

Environmental Progress

The removal of contaminated soil and debris has reduced the potential for exposure to contamination at the Mallory Capacitor Company site while extraction and treatment of the groundwater are taking place.

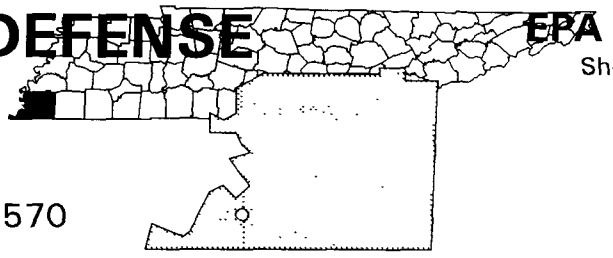
Site Repository

Wayne County Public Library, U.S. Highway 64, East Waynesboro, TN 38485

MEMPHIS DEFENSE DEPOT

TENNESSEE

EPA ID# TN4210020570



EPA REGION 4
Shelby County
Memphis

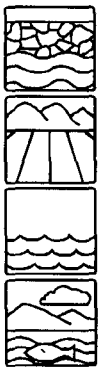
Site Description

The Memphis Defense Depot site comprises 642 acres in a mixed residential/commercial/ industrial area of south-central Memphis. The site consists of two adjacent sections: Dunn Field, an open storage and burial area of about 60 acres, and the main installation. The Depot, which is a major field installation of the Defense Logistics Agency, has been in operation since 1942. Its primary function is to provide material support, including clothing, food, medical supplies, electronic equipment, petroleum products, and industrial chemicals, to all U.S. military services, as well as some civilian agencies. To fulfill this function, the Depot has conducted numerous operations dealing with hazardous substances. A total of 75 waste disposal areas have been identified. According to the Department of Defense (DOD), among the wastes disposed of at the site are oil, grease, paint thinners, methyl bromide, and pesticides. In addition, stored materials have reportedly spilled and leaked at the main installation as well as at Dunn Field, contaminating the soil with volatile organic compounds (VOCs), metals, polychlorinated biphenyls (PCBs), organics, and pesticides. An estimated 154,300 people obtain their drinking water from public and private wells located within 4 miles of the site. The nearest well, which is located within ½ mile of hazardous substances at the Depot, also provides water for commercial food production. These wells draw from deep groundwater, which is not currently contaminated. Until 1986, when the DOD found pesticides and PCBs in lake sediments and fish tissues, Lake Danielson was used for recreational fishing.

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

NPL Listing History
Proposed Date: 02/07/92
Final Date: 10/14/92

Threats and Contaminants



Shallow groundwater is contaminated with the heavy metals arsenic, lead, chromium, and nickel, and the VOCs tetrachloroethane (PCE) and tricloroethene (TCE). Soil is contaminated with various VOCs, metals, PCBs, organics such as polynuclear aromatic hydrocarbons (PAHs), and pesticides. The lake sediments are contaminated with the heavy metals cadmium, chromium, lead, and zinc. Fish in Lake Danielson are contaminated with pesticides and PCBs. Accidentally touching or ingesting contaminated groundwater, soils, surface water, or fish could pose a health threat. The Agency for Toxic Substances and Disease Registry (ATSDR) is developing a preliminary health assessment to characterize these threats.

Cleanup Approach

This site is being addressed in four long-term phases addressing cleanup of the Dunn Field area, Southwest Quadrant and Main Installation area, the Southwest Watershed and Golf area, and the North Central area.

Response Action Status

Dunn Field Area: In 1994, during an investigation of the Dunn Field Area, a groundwater plume was identified beneath the area. Further investigations will be conducted to identify the nature and extent of the groundwater contamination. These investigations are expected to be completed in 1996. The proposed remedy for the groundwater plume is a pump and treat system, and if necessary, discharge of treated water into the city water system. The remedy is expected to be finalized in 1996.

Southwest Quadrant and Main Installation Area: An investigation into the nature and extent of contamination in this area is underway and is scheduled to be completed in mid-1998, at which time, an appropriate remedy will be chosen.

Southwest Watershed and Golf Course Area: An investigation into the nature and extent of contamination in this area is underway and is scheduled to be completed in mid-1998, at which time, an appropriate remedy will be chosen.

North Central Area: An investigation into the nature and extent of contamination in this area is underway and is scheduled to be completed in mid-1998, at which time, an appropriate remedy will be chosen.

Site Facts: The Memphis Defense Depot is participating in the Installation Restoration Program, a specially funded program established by the DOD in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.
In early 1995, the EPA, the Tennessee Department of Environment and Conservation, and the Memphis Defense Depot signed a Federal Facilities Agreement (FFA), establishing a schedule for cleaning up site contamination.

Environmental Progress

Initial investigations indicate that the Memphis Defense Depot site does not pose an immediate threat to the health and safety of the nearby population while further studies are being conducted and actions to prevent the migration of the groundwater plume are being evaluated.

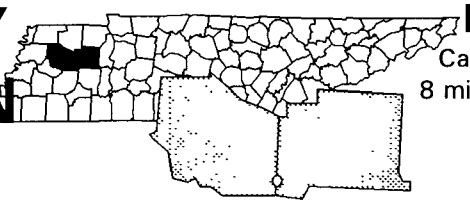
Site Repository

Memphis/Shelby County Public Library, Main Branch, Government and Law Section, 1850 Peabody Avenue, Memphis, Tennessee 38104-4021 - Government and Law Section (901) 725-8877

Memphis/Shelby County Public Health Department, Pollution Control Division, 814 Jefferson Avenue, Memphis, Tennessee 38106 - (901) 576-7741

Cherokee Public Library, 3300 Sharp Avenue, Memphis, Tennessee 38111-3758 - (901) 743-3655

MILAN ARMY AMMUNITION PLANT



EPA REGION 4
Carroll and Gibson Counties
8 miles from the town of Milan

TENNESSEE

EPA ID# TN0210020582

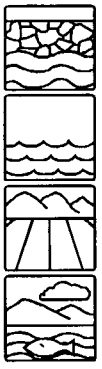
Site Description

The Milan Army Ammunition Plant site comprises 22,540 acres and is located in a rural area. The plant currently produces munitions for the Army and is operated by Martin Marietta Ordnance Systems, Inc. The "O"-Line, a conventional munitions demilitarization facility at Milan, has operated since 1942. The major mission of the "O"-Line is to remove trinitrotoluene (TNT) and other explosives from munitions by injecting a high-pressure stream of hot water and steam into the open cavity of the munitions. The resulting wastewater from these operations subsequently was discharged into 11 unlined settling ponds. Approximately 9,000 people live in the town of Milan, located 5 miles from the facility and 8 miles from the NPL site. The nearest off-site residence is located approximately 1 mile from the contaminated area. There are 1,400 employees of Martin Marietta, the current operator, working at the site. Three water supply wells serve the residents of Milan. Some private wells are located less than 3 miles from the area of known groundwater contamination. More than 13,000 people within 5 miles of the facility depend on groundwater as a source of drinking water.

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

NPL LISTING HISTORY
Proposed Date:10/15/84
Final Date: 07/22/87

Threats and Contaminants



On- and off-site groundwater, surface water, soils, and sediments are contaminated with explosives and heavy metals including cadmium, mercury, and lead; volatile organic compounds (VOCs) such as chloroform, benzene, and methylene chloride; and nitrates and nitrites. Area residents may be subject to exposure to contaminants when drinking or coming into direct contact with polluted groundwater. Site-related contaminants have been detected in off-site surface water used for the watering of livestock, irrigation, and recreational purposes, and in the groundwater which is the source of public drinking water. Area residents could be exposed to contaminants in the surface water or by eating fish, crops, and locally raised meat and dairy products that contain bioaccumulated contaminants.

Cleanup Approach

The site is being addressed in three stages: initial actions and three long-term remedial phases directed at cleanup of the "O"-Line Ponds Area, Northern Area, and remaining areas of contamination.

Response Action Status

Initial Actions: The Army had the unlined settling ponds dredged in 1971, and the soils were placed near the side of the ponds. Areas of surface soils suspected to be contaminated with the remnants of explosives were removed, and a multi-layer cover was placed on top of the ponds and the dredged soils in 1984. Wells to monitor the migration of site-related contaminants into the groundwater have been installed, and more wells will be installed. Activities associated with post-closure, such as maintenance of the grounds and fences, are underway. Regular sampling and analysis continues to monitor groundwater contamination of existing wells. In addition, soils throughout the facility contaminated with lead based paint from water towers were removed and disposed of at a treatment and disposal facility.

"O"-Line Ponds Area: The EPA reviewed the initial actions at the "O"-Line Ponds Area in 1987 to determine whether they are comparable to EPA guidelines for investigating the most effective ways to clean up the site, and to ensure that they comply with the National Contingency Plan, the Federal regulations by which Superfund cleanup actions are conducted. An investigation of remedies started in 1990 at the "O"-Line Ponds Area and 10 other Resource Conservation and Recovery Act (RCRA) Solid Waste Management Units. An interim cleanup remedy was selected that entails pumping and treating the groundwater plume in the "O"-Line Ponds. Cleanup activities have begun for the groundwater. A final remedy for the "O"-Line Ponds soil was selected, and a capping system will be constructed to prevent explosive-contaminated soil remaining in the ponds from leaching into the groundwater.

Northern Area: An interim investigation of the entire facility was completed in 1991. Further investigations of the ditches in the northern area and affected groundwater, believed to be associated with traces of explosive compounds found in the city of Milan and private wells, were begun in 1992. An interim remedy has been selected by the Army for the Northern Boundary groundwater. The remedy is a pump and treat system designed to contain the plume.

Remaining Areas: Investigations are being performed at all remaining areas of the site to determine if further cleanup actions are needed.

Site Facts: Milan Army Ammunition Plant 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. The Army conducted a survey of area residents in 1988 to determine if they were concerned about potential health risks posed by the site. The results indicated a high degree of public interest and moderate concern for potential risks. The Milan Army Ammunition Plant has established a committee to review technical aspects of the site cleanup. This group includes private citizens from the community and local government. Several public meetings have been held to keep the community informed of the status of the site. A "Contingency Plan" was implemented to begin replacement of city wells. The Army provided the City of Milan with the funds to implement the plan.

Environmental Progress

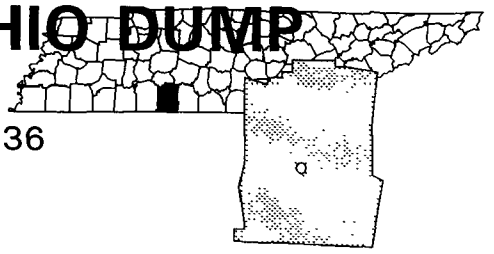
The covering of the "O"-Line Ponds and excavation of contaminated soils have made the site safer while further investigations continue at the Milan Army Ammunition Plant site.

Site Repository

Mildred G. Fields Library, 1075A East Van Hook Street, Milan, Tennessee 38358

Chief Engineer's Office, Milan AAP, Milan, Tennessee 38358

MURRAY-OHIO DUMP
TENNESSEE
EPA ID# TND980728836



EPA REGION 4
Lawrence County
Lawrenceburg

Other Names:
Murray Ohio Site #2

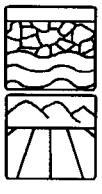
Site Description

The 27-acre Murray-Ohio industrial dump accepted paint and electroplating sludges from 1963 until 1982. Wastes are buried on about 6 acres, and there is another 1/4-acre disposal area located 1,000 feet away from the site. Seeps containing heavy metal contamination have been observed along drainageways. Groundwater under the site and a tributary of Shoal Creek are thought to be contaminated with chromium. Shoal Creek is approximately a mile from the site. The main site was capped, revegetated, and is periodically maintained. Approximately 2,600 people live within 3 miles of the site. The closest residence is about 1/3 mile away. Public and private water supply wells lie within a 3-mile radius.

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

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

Threats and Contaminants



On-site groundwater and soil are believed to contain contamination from heavy metals including chromium, nickel, and zinc, as well as volatile organic compounds (VOCs). Human health threats could arise from exposure to hazardous substances in contaminated groundwater and soil.

Cleanup Approach

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

Response Action Status

Immediate Actions: Murray-Ohio Manufacturing capped and vegetated the site in 1981.

Soil and Groundwater: Under EPA supervision, Murray-Ohio Manufacturing began an intensive study of soil and groundwater pollution at the site in 1990. The investigation explored the nature and extent of contamination and evaluated cleanup alternatives. A remedy was chosen in the summer of 1994 that consists of repairing various areas of the cap, institutional controls, and deed restrictions.

Site Facts: A Consent Order was agreed to in 1990, which required Murray-Ohio Manufacturing to complete the study of the contamination at the site.

Environmental Progress

The immediate action to cap the site reduced the potential for exposure at the Murray-Ohio Dump and helped to minimize the migration of contaminants while final cleanup activities are being planned.

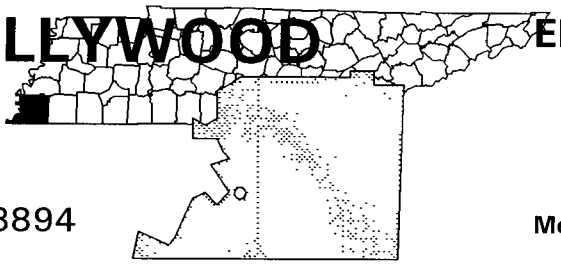
Site Repository

Lawrenceburg Public Library, 519 East Garnes Road, Lawrenceburg, TN 38464

NORTH HOLLYWOOD DUMP

TENNESSEE

EPA ID# TND980558894



EPA REGION 4

Shelby County
North Memphis

Other Names:
Hollywood Dump
Memphis Public Works/
Hollywood Dump

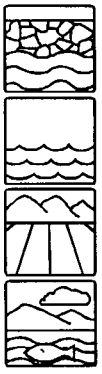
Site Description

The 70-acre North Hollywood Dump site was used as a municipal dump from the 1930s until the City closed it in 1967. However, some dumping of non-chemical refuse probably continued until 1980. In the late 1940s, the Hayden Chemical Company used the dump to dispose of wastes generated in the production of sodium hydrochloride. Hayden later was bought out by Velsicol Chemical Corporation, which continued the practice of dumping at the site. At one time, pesticide-contaminated sludge from a closed sewer line leading to the Velsicol plant was removed and buried in a small area known as the "Endrin Pit." The dump was also used for the disposal of other industrial wastes from plants in the Memphis area. In the 1960s, Buckeye Cellulose in Memphis sent copper-contaminated material to the dump for disposal. In 1980, the EPA found pesticides and heavy metals in surface soil, groundwater, and pond sediments on the dump. Because of high community concern in the early 1980s, the State of Tennessee recommended this site as the State's highest priority hazardous waste site. Approximately 10,000 people live within 3 miles of the dump site. An elementary school is situated close to the dump.

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

NPL LISTING HISTORY
Proposed Date: 10/23/81
Final Date: 09/08/83

Threats and Contaminants



The groundwater and surface water ponds are contaminated with pesticides including chlordane and endrin. The soil is contaminated with pesticides and heavy metals including lead, copper, and arsenic. Accidentally drinking or otherwise coming into contact with contaminated groundwater or soil could adversely affect the health of people. Also, people may be exposed to contaminants that may have entered the food chain through contaminated fish caught in ponds on or near the dump.

Cleanup Approach

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

Response Action Status

Emergency Actions: In 1980, the EPA took an emergency action to slow the movement of contaminants from the site. Also, the EPA installed a chain-link fence around the site and began a program to monitor the on-site wastes. In 1981, a technical assistance group made up of representatives from the State, the City of Memphis, Shelby County, local industry, and the EPA, removed some of the chemical wastes from the surface.

Entire Site: In 1982, the EPA assumed the lead role from the State to complete investigations into the extent and nature of contamination at the North Hollywood Dump site. The potentially responsible parties took over in 1984. The study, completed in 1990, recommended retrofitting the landfill to meet legal sanitation standards. The selected remedy includes: placement of a 2-foot clay cap, grading, and revegetation; drainage of an adjacent 40-acre pond known to hold contaminated sediments; installation of a 3-foot cover over the contaminated sediments; and the removal of fish found to be contaminated, followed by re-stocking of the pond. Groundwater will be monitored to ensure contamination levels remain low. In addition, the site will be fenced and restrictions on future use of the site will be put in place. The engineering design of the remedy and was completed in late 1993. Cleanup activities began in early 1994 and the capping and grading of the landfill and the drum removal is expected to be completed in 1995. Work on the contaminated sediments is expected to start in 1995 and be completed in 1996.

Site Facts: The State of Tennessee ordered the potentially responsible parties to investigate the site under State monitoring, which was agreed to in 1984. In late 1988, the EPA replaced the State in the monitoring role. In early 1991, two potentially responsible parties entered into a Consent Decree with the EPA to perform design and cleanup activities at the site.

Environmental Progress

The emergency actions to remove chemical wastes have reduced the potential for exposure to contaminated materials while final cleanup activities are being conducted at the site.

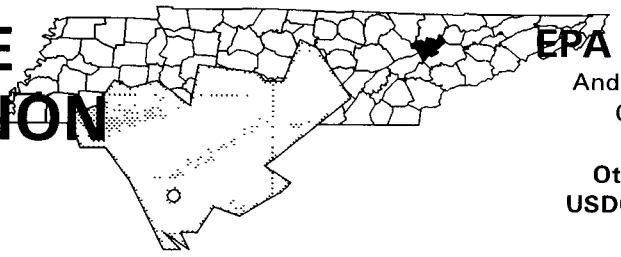
Site Repository

Memphis-Shelby County Public Library, 1850 Peabody Avenue, Memphis, TN 38104

OAK RIDGE RESERVATION (USDOE)

TENNESSEE

EPA ID# TN1890090003



EPA REGION 4

Anderson County
Oak Ridge

Other Names:
USDOE Oak Ridge

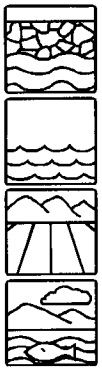
Site Description

The Oak Ridge Reservation site, a U.S. Department of Energy (DOE) facility, covers 37,000 acres and includes 294 on-site contaminated areas and off-site surface waters including Poplar Creek, the Clinch River and Lower Watts Bar Reservoir of the Tennessee River. The site consists of three industrial facilities: the Oak Ridge National Laboratory or X-10, a research facility that includes nuclear reactors and ongoing energy, chemical and biological programs; the K-25 Plant, a former production facility that enriched uranium-235 by gaseous diffusion; and the Y-12 Plant,a production facility that formerly enriched uranium-235 by an electromagnetic process, and currently produces nuclear weapon components, processes nuclear materials, and performs other functions that relate to energy and national defense programs. Site operations generate a variety of radioactive, non-radioactive and mixed (radioactive and non-radioactive) hazardous wastes, most of which are containerized and buried below ground or stored in buildings on site. Leakage from buried waste areas and former processing facilities has contaminated on site and off-site soils, surface water and sediments, and groundwater. Site related contaminants above levels of concern can be found in sediment, water, and biota of Poplar Creek. The State of Tennessee has advised against consuming fish and coming into contact with water from Poplar Creek, which flows to the Clinch River and ultimately to the Tennessee River. An estimated 43,200 people obtain water from surface water intakes on the Tennessee River along a 118-mile stretch downstream from the site.

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

NPL LISTING HISTORY
Proposed Date: 07/14/89
Final Date: 11/21/89

Threats and Contaminants



Heavy metals, organic compounds, and radionuclides have been detected in on-site groundwater, surface water and soil. Cesium-137 has been detected in channel sediments approximately 23 miles downstream from the site boundary. Mercury has been detected in flood plain sediments of East Fork Poplar Creek and Poplar Creek. The groundwater and soil at the South Campus Facility are contaminated with trichloroethylene. The groundwater at the Bear Creek area is contaminated with volatile organic compounds (VOCs) and nitrates. East Fork Poplar Creek flows through populated areas within the City of Oak Ridge. Exposure to site-related contamination by people or plants and wildlife (aquatic and terrestrial) could cause adverse health and ecological effects directly or indirectly through the food chain.

Cleanup Approach

This site is being addressed in numerous stages focusing on cleanup of each contaminated area.

Response Action Status

East Fork Poplar Creek (Lower Reach): This area includes the East Fork Poplar Creek, which begins immediately downstream of the Y-12 Plant and extends to its mouth at Poplar Creek. Investigations into the nature and extent of contamination concluded that mercury contamination in the flood plain sediments poses a risk. Currently, cleanup alternatives are being evaluated to determine the best approach for addressing the contaminated sediments. A decision is expected by late 1995 on the final remedies to clean up the mercury contamination. More than 1 million cubic feet of contaminated sediments could be removed from the floodplain, affecting a total area of 27 acres.

Poplar Creek: This area includes Poplar Creek from the mouth of East Fork Poplar Creek to the mouth of Poplar Creek at Clinch River. Poplar Creek has received contaminants directly from the K-25 Plant and indirectly from the Y-12 Plant from the East Fork Poplar Creek. The lower reach of Poplar Creek, which experiences periodic backflow as a result of discharges from Melton Hill Dam, has received contamination from the X-10 laboratory. The contaminants in Poplar Creek include a variety of radionuclides, metals, and organic compounds that are found in the sediment, water, and biota. Currently, the State of Tennessee has advised against consuming fish and making direct contact with the water in Poplar Creek. Before cleanup of Poplar Creek can be addressed, the cleanup and control of upstream on- and off-site sources of contamination will be conducted. However, if necessary, early cleanup actions may be taken to reduce localized high levels of contamination in Poplar Creek prior to selecting the final source cleanup and control remedies. Investigations of the area are underway.

Clinch River: This area includes Melton Hill Reservoir and the Clinch River from Melton Hill Dam to the mouth of the Clinch River within Watts Bar Reservoir near Kingston, Tennessee. All Oak Ridge Reservation on-site surface water flows into the Clinch River located downstream from the site. Since Cesium-137 and Cobalt-60 sediment contamination is buried beneath approximately 2 feet of mostly uncontaminated sediment cover, the preliminary cleanup strategy consists of continued monitoring and institutional controls that will restrict dredging of contaminated sediments. The State of Tennessee has advised against consuming fish from the Clinch River arm of the Watts Bar Reservoir. Investigations to determine the final cleanup strategy for the Clinch River are scheduled for completion in 1997.

Watts Bar Reservoir (Lower Reach): This area consists of the lower reach of the Watts Bar Reservoir from the mouth of the Clinch River at Kingston, Tennessee, downstream to the Watts Bar Dam. Surface waters from both the Tennessee and Clinch Rivers flow into the reservoir; however, the Clinch River is the source of site-related contaminants. Non-site related contaminants enter Watts Bar Reservoir via the Tennessee River. Because Watts Bar Dam was completed prior to the start of site operations and the reservoir acts as an efficient trap for sediments and any associated particle-reactive contaminants, the site-related contaminants that have migrated off site have accumulated in the bottom of Watts Bar Reservoir. Due to such accumulation, field investigations indicate that existing concentrations of site-related contaminants downstream of Watts Bar Dam do not exceed standards established for human health and ecological protection. The low concentration level and widespread nature of Watts Bar Reservoir contamination has led to the selection of a preliminary cleanup strategy for this area that will prevent exposure to risk. Activities include sediment dredging restrictions administered by the Tennessee Valley Authority and the U.S. Army Corps of Engineers and maintaining existing fish consumption advisories issued by the State of Tennessee. Investigations leading to the selection of a final cleanup remedy are scheduled for completion in 1995.

South Campus Facility: The South Campus Facility is located on the extreme eastern end of the Oak Ridge Reservation, off of Scarboro Road. The South Campus Facility conducted animal research on the fate and metabolism of radionuclides. Investigations at this site show that there is a relatively small zone of soil and groundwater contaminated with the VOC trichloroethylene. The remedy for this area is scheduled to be selected in 1996.

UNC Landfill: The UNC Landfill is a 1-acre low-level radioactive landfill, located at the Y-12 plant. The selected remedies included construction of a multi-layer closure cover and long-term monitoring. The cleanup was completed in 1993. Currently, long-term operation and maintenance activities are being conducted at the site, including monitoring groundwater wells, maintaining the cap, and conducting 5-year reviews of the site.

Mercury Tank Remediation: In 1991, a remedy was selected which provided for the removal of sediments contaminated with mercury from process tanks to prevent their migration through the surface water runoff. Cleanup activities were completed in late 1993.

East Fork Poplar Creek (Upper Reach): This area receives contamination through groundwater and surface water releases from the Y-12 Plant. The preliminary cleanup strategy includes source control actions to minimize future releases to the creek. Currently, releases of mercury contamination to East Fork Poplar Creek are being addressed through an action to reduce mercury concentrations in plant effluent as required by a 1994 National Pollutant Discharge Emissions System (NPDES) permit issued by the State of Tennessee under its Clean Water Act authority. The permit has established a compliance schedule of 7 years. At the end of this compliance schedule, releases from the Y-12 Plant must comply with Clean Water Act standards. Further investigations are being conducted to determine a final cleanup remedy.

Bear Creek: The Bear Creek area includes the S-3 Ponds, Sanitary Landfill I, Boneyard/Burnyard, Oil Landfarms, and the Bear Creek Burial Grounds. In addition, the area also includes groundwater and surface water contamination within Bear Creek Valley. A treatability study is scheduled for completion in 1995, which will determine the feasibility of using certain technologies to clean up groundwater contaminated with VOCs and nitrates. Investigations leading to the selection of a final cleanup remedy are expected to be completed in 1996.

Rust Spoils Areas, Spoil Area 1, and SY-200 Yard: These areas of Bear Creek are contaminated with mercury, other metals, radionuclides, and organic compounds. Investigations leading to the selection of a final cleanup remedy are scheduled for completion in 1995.

Chestnut Ridge: This area consists of the Filled Coal Ash Pond and associated contamination released to surface water, creek sediments of McCoy Branch, and groundwater. Contaminants include metals and uranium. Investigations leading to the selection of a final cleanup remedy are scheduled for completion in 1995.

Y-12 Plant Study Areas: The Y-12 Plant Study Areas consist of 57 potentially contaminated areas that require investigations to determine the nature and extent of contamination. Studies of these areas, in conjunction with studies of the Upper Reach of East Fork Poplar Creek, are being conducted to determine appropriate cleanup activities.

Drum Storage Yard: This area consists of 77,814 drums containing stabilized and raw sludge mixed with low-level hazardous and radioactive contamination removed from the K-1407-B Ponds and K-1407-C Retention Basin. Due to waste stabilization failure and drum deterioration caused by weather exposure, drummed waste posed a threat to the environment. The cleanup remedy selected consists of overpacking the drummed waste, treating raw sludges and placing the treated materials into containers; temporarily storing containerized material inside the K-25 permitted storage facilities; and transporting the material to a permitted mixed waste facility located in Utah for final disposal. Cleanup activities have begun and are scheduled for completion in late 1995. The overpacked waste is expected to be placed in the K-25 facility in the spring of 1995.

K-1407-B Holding Pond and K-1407-C Retention Basin: From 1987 to 1989, sludges from these waste impoundments were removed, stabilized and placed into drums. Residual radioactive contamination remained after sludge removal was completed. In the fall of 1993, a remedy was selected that called for controlling the source of contamination by installing a cap. The cleanup activities are ongoing and are expected to be completed in late 1996.

K-901 and K-1070 Areas: These areas include the K-901-A Holding Pond and K-1070-A Old Contamination Burial Ground. Contaminants include metals, radionuclides and organic compounds. Investigations leading to the selection of a final cleanup remedy are scheduled for completion in late 1997.

SW-31 Spring: Cleanup activities for this area were divided into phases. Phase I provided for the collection and treatment of spring water contaminated with VOCs. This cleanup action was necessary to prevent contaminant migration from the surface water. Phase I is complete and currently in the operation and maintenance stage. Phase II provides for upgrading the K-25 Plant waste treatment facility to operate more efficiently and cost-effectively. This phase is scheduled for completion in 1996.

K-1070-C and K-1070-D Burial Grounds: This areas encompasses a 22-acre classified burial ground used from the 1970s until 1989. Radioactive-contaminated equipment was buried in three large trenches and VOC-contaminated liquid was disposed of in open pits. These burial grounds contribute to the contamination at the SW-31 Spring. Field investigations indicate that soil and groundwater in the area of the former pits contain significant VOC contamination. Investigations leading to the selection of a final cleanup remedy are scheduled for completion in late 1997.

K-25 Plant Study Areas: Ongoing investigations into the nature and extent of contamination at 35 separate areas will determine the most appropriate cleanup remedies.

Waste Area Group (WAG) 11: WAG 11 consists of an area that was used as a scrap yard by the facilities at the Oak Ridge Reservation. An interim cleanup action began in 1993 to remove the contaminated surface debris, which minimized the potential for further contamination and to allowed for further investigations into the nature and extent of surface and subsurface contamination. Radioactive-contaminated debris was containerized and transferred for storage in underground silos at WAG 6. Other hazardous materials, including compressed gas cylinders, were transferred to permitted waste handling facilities for proper handling and disposal. Interim cleanup activities were completed in the fall of 1994.

WAG 1 Surface Impoundments: This area is the main industrial complex of the X-10 Plant. The surface impoundments were used as part of the wastewater system that handled radioactive liquid wastes. While the primary contaminants of concern are the radioisotopes, these impoundments also contain sediments with elevated levels of other inorganic and organic contaminants. Investigations leading to the selection of cleanup remedies are scheduled for completion in 1997.

WAG 13: This area was used for the study of the migration of Cesium-137. An interim action began in early 1993 to excavate cesium-contaminated soils to a level of less than 120 picocuries per gram, with disposal into silos at WAG 6. The interim cleanup action was completed in the summer of 1994. No further actions at WAG 13 are anticipated.

WAG 5: WAG 5 consists of a major burial ground complex that was used for the disposal of radioactive wastes. The burial complex consists of shallow land burial trenches, auger holes for disposal of higher activity wastes, and two surface impoundments. Two removal actions to intercept and treat two groundwater seep areas that were contributing significant quantities of Strontium-90 to the surface water at the site are underway and scheduled for completion in 1995. Investigations leading to the selection of a final cleanup remedy are scheduled for completion in late 1998.

WAG 6: WAG 6 consists of a major burial ground complex that was used for the disposal of radioactive wastes. The burial complex consists of shallow land burial trenches and auger holes which were used for the disposal of higher activity wastes. Field investigations have shown that releases from this burial complex do not pose as significant a threat as releases from other waste sites at the X-10 Plant; therefore, remedy selection for this waste area is being delayed to allow other, higher priority areas to be addressed.

WAG 1 North-South Tank Farm: This area consists of gunite and stainless steel tanks that were used in the handling of radioactive wastes. Investigations into the contents of these tanks and potential releases have been completed. A treatability study is being implemented to evaluate the feasibility of removing the radioactive sludges from these tanks for treatment and long-term storage. Data generated by this treatability study will be applicable to all DOE sites where waste removal from underground tanks is a concern.

WAG 2: WAG 2 consists of the surface water system at the X-10 Plant. This surface water system serves as the local groundwater sink for shallow groundwater in the area, and also collects runoff in its drainage basin. Investigations into the nature and extent of contamination in this area have enabled the DOE to identify the different waste areas that are releasing contaminants into the surface water. Some of these contaminants are transported into the Clinch River system through this surface water pathway. Investigations at WAG 2 are being conducted in three phases. Phase I determined the nature and extent of contamination in the surface water system and at upstream sources of contamination. This phase determined that the upstream sources were still contributing specific quantities of contamination and needed to be addressed before cleanup of the surface water system. Phase II of the investigation is a monitoring phase, which involves cutting off contamination sources and ensuring that new sources do not develop. In Phase III, cleanup alternatives are being investigated to address the contaminated sediments and flood plain soils in the surface water system. Phase I investigations at WAG 2 have resulted in the initiation of removal actions addressing ongoing contaminant releases into the surface water at WAG 5 and WAG 1. Other response actions are being planned as a result of investigations of the surface water systems.

X-10 Plant Study Areas: Investigations into the nature and extent of contamination at 69 potential areas will determine the most appropriate cleanup actions.

Site Facts: The DOE has established an agreement with the State of Tennessee to support regulatory oversight activities, and has entered into a Federal Facility Agreement with the EPA and the State of Tennessee. The Federal Facility Agreement establishes enforceable cleanup schedules for the site. The DOE has made much progress toward the environmental restoration of the Oak Ridge Reservation since the site was listed on the NPL in 1989. The DOE has developed an integrated data information system which includes survey data of environmentally sensitive areas, remotely-sensed data, and long-term Oak Ridge Reservation-wide ecological monitoring data. Cleanup areas have been divided into "source" and "integrator" projects. The integrator projects will address on- and off-site surface waters and groundwater, which are contaminated by multiple sources. Field investigations suggest that the source of most of the off-site contamination is the surface water. Projects are prioritized for action based on a system that evaluates the net benefit for performing each cleanup action. The system evaluates the before action and after action risks based on the impact on public health, environmental protection, and site personnel safety. This evaluation is enhanced by considering stakeholder expectations, mission considerations, and cost-effectiveness. Future challenges to restore the site include addressing up to 278 separate source areas that require cleanup action and another 166 potentially contaminated areas that require evaluation to determine the need for cleanup.

Environmental Progress

Capping the UNC Landfill, stabilizing drums removing contaminated sediments and sludges, collecting and treating spring water, and removing radioactive debris have reduced the threats to people and the environment at the Oak Ridge Reservation (USDOE) site while further cleanup actions are being planned and conducted.

Site Repository

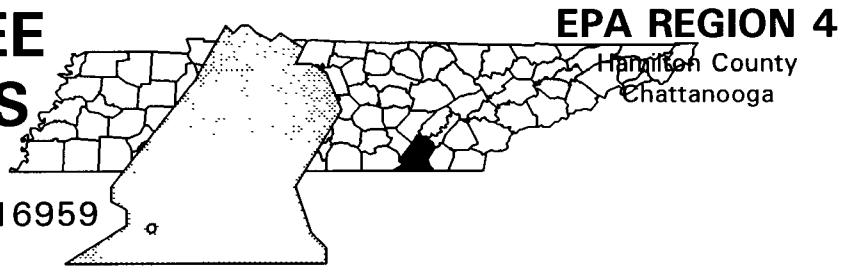
Information Resource Center, 105 Broadway Avenue, Oak Ridge, Tennessee 37831

Oak Ridge Public Library, 1401 Oak Ridge Turnpike, Oak Ridge, Tennessee 37830

TENNESSEE PRODUCTS

TENNESSEE

EPA ID# TND071516959



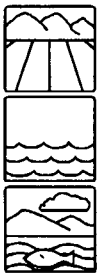
Site Description

The Tennessee Products site is an aggregation of Southern Coke Corporation (Southern Coke), Chattanooga Creek Tar Deposit Site and Hamill Toad Dump No. 2. The site is located approximately 1 mile west of Chattanooga creek in a heavily populated, low-income, urban and industrial area in the Chattanooga Creek basin. The site consists of the former Tennessee Products coke plant and its associated uncontrolled coal-tar dumping grounds in Chattanooga Creek and its floodplain. Historical sampling and aerial photographic evidence indicate that the tar was dumped into the creek, on the banks, and in areas near the creek over several years during the 1940s and 1950s. During World War II, the U.S. Government purchased the Tennessee Products facility and operated it for the war effort. After the war, the company bought back the facility. Documentation of disposal practices of Tennessee Products during this time period is not available; however, Tennessee Products maintained a private sewer line that discharged directly into the creek. The coal-tar wastes are located along an approximate 2 1/2 mile section of the creek extending from just upstream of Hamill Road bridge to the creek's confluence with Dobbs Branch. Coal-tar wastes were dumped directly into the creek and onto the floodplain within the immediate vicinity of the creek channel. The largest coal-tar deposits have been found in the creek bed and along its banks within a 1 mile segment of the creek between Hamill Road and 38th Street, plus an additional 1 1/2 miles of the creek downstream from this segment.

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

NPL LISTING HISTORY
Proposed Date: 01/18/94

Threats and Contaminants



Uncontrolled dumping of coal-tar wastes into the Chattanooga Creek has contaminated soils at the facility, as well as the surface water, sediments, wetlands, and fisheries downstream of the facility. Sampling at the site has revealed elevated levels of polyaromatic hydrocarbons (PAHs) in the soil, surface water, and sediments. Touching or ingesting contaminated soils, surface water, sediments, or fish could pose a health risk.

Cleanup Approach

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

Response Action Status

Immediate Actions: In late 1993, the EPA fenced sections of the Chattanooga Creek to prevent public access. The installation took place late in 1993.

Entire Site: The EPA is planning an investigation of the nature and extent of contamination. This investigation will lead to the selection of site cleanup remedies.

Site Facts: The Agency for Toxic Substances and Disease Registry (ATSDR) issued a Public Health Advisory for the Tennessee Products Site on August 20, 1993 because of the chemical and physical hazards presented by coal-tar deposits.

Environmental Progress

After installing fences to restrict access to sections of the Chattanooga Creek, the EPA has determined that the site does not pose an immediate risk. The EPA will continue sampling areas of the site while it plans a full investigation of site contamination.

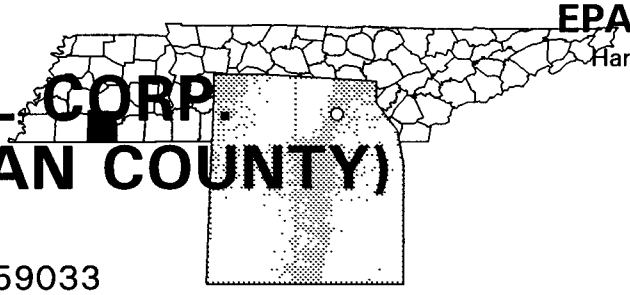
Site Repository

Alton Park Community Health Center, 100 E 37th St., Chattanooga, TN 37410

VELSICOL CHEMICAL CORP. (HARDEMAN COUNTY)

TENNESSEE

EPA ID# TND980559033



EPA REGION 4

Hardeman County
Toone

Site Description

Velsicol Corporation purchased and used 242 acres of land as the Hardeman County landfill for disposal of pesticides and volatile organic compounds (VOCs), beginning in 1964. As of 1973, when the site was closed, waste had been disposed of in three specific areas, covering a total of approximately 27 acres. Approximately 130,000 drums of plant waste were disposed of in these three areas in trenches and were covered with 3 feet of soil. In 1980, a low permeability cap was installed over the surface of the three disposal areas, the surface was regraded to facilitate surface water drainage, sediment ponds were backfilled, and topsoil and seed for revegetation were applied. Currently, the site is fenced with barbed wire and has a locked gate. Approximately 60 people live within a 1-mile radius of the site. Since 1979, private wells in the vicinity have not been used for drinking water; alternate water supplies have been provided. There are public supply wells within a 3-mile radius of the site; however, monitoring data indicates that these wells are not contaminated.

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

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

Threats and Contaminants

The groundwater is contaminated with various VOCs, mainly carbon tetrachloride, and chloroform. Capping, regrading, fencing, and security have virtually eliminated direct contact with the contaminants on the site. However, there may be a health threat if the contaminated groundwater in the area is used for drinking water.

Cleanup Approach

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

Response Action Status

Immediate Actions: As a result of chlorinated hydrocarbons detected in two residential wells adjacent to the site in 1979, an alternate water source was provided to 26 homes that were located within a 1-mile radius of the site. In 1980, capping, surface regrading, backfilling, and revegetating of the site were performed.

Groundwater: In 1989, Velsicol Chemical Company began a study of the type and extent of groundwater contamination and an evaluation of alternative cleanup remedies. The investigation was completed in 1991. The plan for groundwater cleanup includes extraction of groundwater and treatment using settling tanks, air stripping, and carbon adsorption, followed by the discharge of treated water to nearby surface water. In addition, the property will be fenced, restrictions will be placed on the use of wells, and the effectiveness of the remedy will be monitored. The design of the cleanup remedies began in 1991, and is expected to be completed in early 1995.

Source Control: In 1991, the Velsicol Chemical Company initiated studies into the nature and extent of contamination sources at the site. These studies are expected to be completed in 1995, at which time a remedy for source control will be chosen.

Site Facts: Under an Administrative Order on Consent, Velsicol agreed to complete the site investigations under EPA oversight. Several citizens in the area around the site were involved in litigation with the Velsicol Chemical Company concerning pollution of their wells. Concerns about groundwater contamination were very high about 10 years ago, when water supply wells became contaminated. Concerns have lessened since alternate water supplies were provided. Velsicol is presently performing design and cleanup activities under a Unilateral Administrative Order.

Environmental Progress

The initial actions to cap the surface of the site, secure access to the site, and provide an alternate water supply to nearby residents have eliminated immediate threats at the Velsicol Chemical Corp. (Hardeman County) site while further investigations and cleanup activities are taking place.

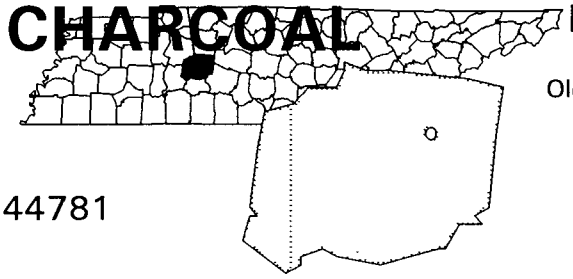
Site Repository

Velsicol Hardeman County Public Library, 213 North Washington Street, Belivaar, TN 38008

WRIGLEY CHARCOAL PLANT

TENNESSEE

EPA ID# TND980844781



EPA REGION 4

Hickman County
Old Charcoal Road, Wrigley

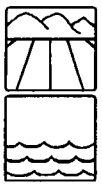
Site Description

The 300-acre Wrigley Charcoal Plant site is composed of 4 sub-site areas located on a 3,000-acre tract of land. From the late 1800s to the early 1960s, a number of companies, including the Tennessee Products Corporation, produced charcoal briquettes, iron products, and wood alcohol on the site. After pig iron and wood distillation activities ended, the Tennessee Farmers Co-op acquired. They later sold a portion of the site to an individual. During a 1985 inspection, the Tennessee Division of Solid Waste Management discovered pits containing a tar-like substance, waste piles, and old drums. Leachate was entering the north fork of Mill Creek, which is adjacent to the site. In 1985, the State, and, in 1986, the EPA, detected toluene, benzenes, and phenols in the wastes and the leachate. In 1988, the Bon Aqua Utility District drinking water intake was relocated to an upstream portion of Mill Creek due to concerns over potential tar pit failure. This intake serves an estimated 5,500 people. Approximately 300 people obtain drinking water from wells within 3 miles of the site.

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

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

Threats and Contaminants



The leachate and wastes on the primary site and storage basin contain volatile organic compounds (VOCs) including toluene, benzene, and phenol and PAHs. The North Fork of Mill Creek is contaminated with low levels of the same elements as those found in the leachate. Health threats include the accidental ingestion of or direct contact with the wastes on site. Geologic conditions at the site make it easy for contaminants to move into the shallow groundwater, which lies about 5 feet below the site.

Cleanup Approach

The site is being addressed in four stages: immediate actions, an interim action and two long-term remedial phases focusing on cleanup of the tar wastes and metals hot-spots and cleanup of the groundwater.

Response Action Status

Immediate Actions: In 1988, the EPA stabilized the tar pits by building a 16-foot berm to prevent erosion and seasonal flooding. A stream was rerouted to prevent leachate from entering Mill Creek. In 1989, the EPA excavated and shipped six truckloads of tar to the Allied Signal Facility where the tar was effectively destroyed.

Interim Action: In 1991, the EPA completed studies of the nature and extent of contamination from exposed tars, asbestos-containing material, and metallic wastes at the Burn Pit. An interim remedy was selected in late 1991 which includes addressing the above problem at the primary site as well as posting access restrictions at the Storage Basin where tar sludges were found. Cleanup activities addressing the primary site were successfully completed by the summer of 1994. The activities included removing waste debris piles, process tanks and associated tars, cleaning up the Burn Pit in the maintenance building, reconstructing a spillway, removing tar-contaminated soils from a sump at the still house, and conducting additional sampling at an irrigation and an athletic field to ensure that further cleanup actions were not necessary. The second phase of cleanup addressing the Storage Basin is scheduled for completion in the fall of 1995. Activities will begin in mid-1995 and will include excavating and cleaning raw wood tar sludges and recycling the tar waste to be used as fuel in an industrial boiler.

Tar Wastes and Metals Hot-Spots: Following the completion of both phases of the interim cleanup action, the EPA will evaluate metals "hot spots" and tar pit cleanup alternatives at the site.

Groundwater: In 1991, an investigation was completed that addressed surface and near-surface groundwater at the site. Once both phases of the interim cleanup action are completed, additional groundwater investigative activities may be initiated. These activities would likely precede any additional cleanup activities for tar pits or metals hot spots.

Environmental Progress

The immediate and interim cleanup activities conducted at the Wrigley Charcoal Plant site have reduced the threat to the community and the environment while further cleanup activities and investigations are conducted.

Site Repository

Hickman County Public Library, 120 West Swann Street, Centerville, TN 37033