



United States
Environmental Protection
Agency

Solid Waste And
Emergency Response
(5201 G)

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PB95-962910
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May 1995

SUPERFUND:

**Progress at
National
Priority
List Sites**



DELAWARE 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.

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

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

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

EPA ID# ABC00000000



COUNTY NAME
LOCATION

Other Names:

[illegible]

XXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXX

Proposed XX/XX/XX
Final XX/XX/XX

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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.

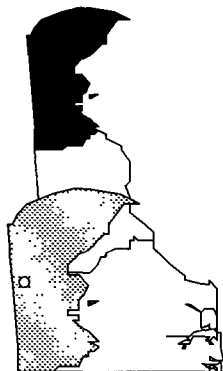


Cleanup Complete shows that all cleanup goals have been achieved for the contaminated site or part of the site.

EPA ID Number	Site Name
DED980494496	ARMY CREEK LANDFILL
DED980714141	CHEM-SOLV, INC.
DED980704860	COKER'S SANITATION SERVICE LANDFILL
DED980551667	DELAWARE CITY PVC PLANT
DED000605972	DELAWARE SAND & GRAVEL LANDFILL
DE8570024010	DOVER AIR FORCE BASE
DED980693550	DOVER GAS LIGHT CO.
DED980555122	E.I. DU PONT DE NEMOURS (NEWPORT LANDFILL)
DED980830954	HALBY CHEMICAL CO.
DED980713093	HARVEY & KNOTT DRUM, INC.
DED980552244	KOPPERS CO., INC. (NEWPORT PLANT)
DED043958388	NCR CORP. (MILLSBORO PLANT)
DED058980442	NEW CASTLE SPILL
DED980705255	NEW CASTLE STEEL PLANT
DED981035520	SEALAND LIMITED
DED041212473	STANDARD CHLORINE OF DE, INC.
DED980494637	SUSSEX COUNTY LANDFILL NO. 5
DED000606079	TYBOUTS CORNER LANDFILL
DED980705545	TYLER REFRIGERATION PIT
DED980704951	WILDCAT LANDFILL

ARMY CREEK LANDFILL DELAWARE

EPA ID# DED980494496



EPA REGION 3

New Castle County
2 miles southwest of New Castle

Other Names:
Llangollen Landfill
Llangollen Army Creek Landfills

Site Description

The Army Creek Landfill site occupies approximately 60 acres. It was used as a landfill for municipal and industrial wastes from 1960 to 1968. During that 8-year period, about 2 million cubic yards of refuse were landfilled. The site previously was used as a sand and gravel quarry. Approximately 30 percent of the waste lies below the seasonal high water table. Army Creek, which forms the southern and eastern borders of the site, flows into the Delaware River about 1 mile east of the site. Groundwater contamination was discovered in a nearby residential well in 1972. After studies were conducted by New Castle County, which identified alcohols and acidic compounds in leachate, recovery wells were installed to prevent the movement of groundwater toward public water supply wells. Approximately 3,370 people live within 1 mile of the site, which is in a largely rural and light industrial area. Llangollen Estates, a residential development, is several hundred feet beyond the southern edge of the site. An estimated 130,000 people living within 3 miles of the site are served by groundwater supplies. Another NPL site, the Delaware Sand and Gravel Landfill, is located immediately across from Army Creek to the east of the site.

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

NPL LISTING HISTORY

Proposed Date: 10/23/81

Final Date: 09/08/83

Threats and Contaminants



Volatile organic compounds (VOCs), such as benzene and dichloroethane, and heavy metals, including chromium and mercury, are found in monitoring wells, recovery wells, groundwater, and soils. The surface water of Army Creek contains heavy metals contamination including cadmium, chromium, mercury, iron, and zinc. Wetlands nearby the site could be adversely affected by contamination. People working or trespassing on the site could be exposed to contaminants in the soil by direct contact or ingestion of contaminated groundwater.

Cleanup Approach

Response Action Status



Emergency Actions: Tires in the vicinity of the site caught fire in the early 1980s, and threatened to ignite nearby hazardous wastes. The fire was extinguished by New Castle County, and the EPA provided emergency technical support and air monitoring during the fire control efforts. New Castle County installed a groundwater recovery system designed to capture contaminated groundwater. This series of downgradient pumping wells is designed to prevent the contaminated plume from reaching the source of the drinking water supply. Pumping has separated contamination from the water supply and has eliminated migration of the plume into the drinking water source.



Source Control: Cleanup activities began in 1990 with control of the source of contamination. Activities included: installation of a multi-layer cap over the landfill; operation of the downgradient recovery well network; and evaluation of the cap system and the groundwater recovery network for five years by monitoring well water levels and by pumping water and checking the water quality. Source control activities were completed in 1994. In five years, an evaluation will be carried out to determine if installation of upgradient controls is necessary. At the same time, the monitoring strategy for well water levels, pumping rates, and water quality will be re-evaluated.



Groundwater: A detailed study of the nature and extent of contamination and treatment alternatives for the water being pumped from the groundwater recovery wells was completed in 1990, leading to the final selection of a groundwater treatment remedy for recovery wells. Construction was completed in early 1994 and consists of the operation of a water treatment facility, which currently treats recovered groundwater before discharge to surface water. A plan for long-term monitoring, with respect to groundwater, surface water, sediments, and associated wetlands is currently under development.

Site Facts: On September 18, 1990, 18 potentially responsible parties signed a Consent Decree to implement the cleanup actions at the site and to reimburse the EPA for past response costs. Part of the settlement required the potentially responsible parties to deposit \$800,000 into a Trust Fund. The Department of the Interior, the National Oceanic and Atmospheric Administration (NOAA), and the State of Delaware will ensure that this money is used to create or enhance natural resources affected by contamination at the site.

Environmental Progress



All construction is complete at the site. Actions taken to date include installing groundwater recovery wells, responding to a site fire, and controlling the source contamination, and have reduced immediate threats posed by the site. Groundwater treatment and monitoring will continue until all site cleanup goals have been met.

Site Repository

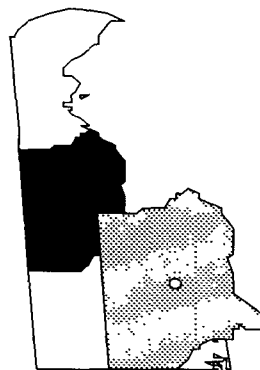


Delaware Department of Natural Resources & Environmental Control, Superfund Branch, 715
Grantham Lane, New Castle, DE 19720

CHEM-SOLV, INC.

DELAWARE

EPA ID# DED980714141



EPA REGION 3
Kent County
Cheswold

Site Description

The 1 1/2-acre Chem-Solv, Inc. site served as a small solvent distillation facility beginning in 1982. The facility recycled waste solvents by placing a drum on an electric coil heater, which distilled the solvents into a second drum. The contents of the second drum were filtered into a third drum, and the distilled residues were stored on site. In 1984, an explosion and fire at the site destroyed the entire distillation facility. Witnesses observed fluids flowing off a concrete pad into the soil. After the fire, the State conducted studies of the Upper Columbia Aquifer, underlying the site, where high concentrations of volatile organic compounds (VOCs) were found in the upper zone of the aquifer, and low concentrations of VOCs were found in the lower zone of the aquifer. An occupied 3-unit apartment building is located on the site. About 5,500 residents live and are served by private wells within 3 miles of the site. The site is surrounded by farmland, residential developments, and commercial businesses.

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

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 08/30/90

Threats and Contaminants



The groundwater is contaminated with VOCs, primarily trichloroethylene (TCE) and benzene, and heavy metals, including manganese. Soil excavation and treatment in 1985 removed the potential for exposure to soil contamination; treated soil has been returned to the site. The primary threat to human health is drinking contaminated groundwater; however, levels of contamination in residential wells in the area are within acceptable drinking water standards. In addition, data collected in 1994 indicate that concentrations of VOCs in groundwater have decreased through natural processes. One well, however, exceeded EPA health-based TCE levels. Bottled water is being provided until more permanent action can be taken.

Cleanup Approach

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

Response Action Status



Initial Actions: In 1985, the State excavated and treated 1300 cubic yards of contaminated soil using a process that passes air through the soil to remove VOCs. This process reduced contamination to levels that permitted the soil to be returned to the excavated area. The State also installed a groundwater extraction system. From 1985 to 1988 groundwater was extracted and treated on site by air stripping to remove VOCs. The treated water was discharged to a sanitary sewer system.



Entire Site: A study was conducted by a group of potentially responsible parties from 1989 to 1991 to determine the nature and extent of contamination at the site and to recommend alternatives for the final cleanup. In the spring of 1992, the EPA selected a remedy calling for groundwater extraction and either discharge to a local publicly owned treatment works or on-site treatment with discharge to local surface water (i.e., the Alston branch of the Leipsic River). The following components are also included in the remedy: a groundwater restriction zone in the contaminated area, deed restrictions, continued groundwater monitoring, provisions for an alternative water supply for domestic wells should they become contaminated before cleanup levels have been reached, and removal of existing recovery wells. The potentially responsible parties are designing the remedy with EPA oversight. The potentially responsible parties conducted field work in the fall of 1993, including well installation/abandonment, groundwater sampling, and an aquifer pump test. Groundwater sampling results showed that, through natural processes, VOC contamination has decreased naturally since the site study was performed in 1991, and concentrations are approaching cleanup levels established in the remedy. The potentially responsible parties proposed a long-term monitoring program to replace the active remedy. EPA is currently reviewing this proposal while the potentially responsible parties continue to monitor groundwater on a quarterly basis.

Site Facts: In 1984 and 1985, the State of Delaware issued orders to one of the potentially responsible parties to cease operations immediately, monitor groundwater, and remove all contaminated soil; however, no actions were taken. In 1988, a Consent Order was signed by the potentially responsible parties, the EPA, and the State, requiring the parties to conduct an investigation into the contamination at the site. The EPA issued a Unilateral Administrative Order (UAO) compelling the potentially responsible parties to conduct the cleanup activities. In winter 1993, a group of potentially responsible parties notified the EPA of their intent to comply with the terms of the UAO.

Environmental Progress



By treating the on-site soils in 1985, the State eliminated the immediate threat from contaminated soils. The State's groundwater extraction and air stripping operation also reduced the potential for exposure to hazardous materials in the groundwater. These actions have made the Chem-Solv, Inc. site safer while EPA determines the final course of action at the site.

Site Repository



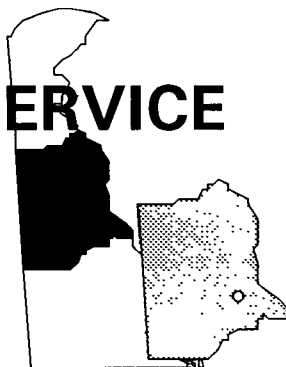
William C Jason Library, 1200 North DuPont Highway, Delaware State College, Dover, DE 19901, (302)739-3571

Delaware Department of Natural Resources & Environmental Control, Superfund Branch, 715 Grantham Lane, New Castle, DE 19720, (302) 323-4540

US EPA, Region III, Docket Room, 9th Floor, 841 Chestnut Building, Philadelphia, PA 19107, (215) 597-3037

COKER'S SANITATION SERVICE LANDFILLS DELAWARE

EPA ID# DED980704860



EPA REGION 3

Kent County
Cheswold

Other Names:
Reichold Chem Inc. #1
Coker's Landfill #1 & #2

Site Description

The two Coker's Sanitation Service Landfills cover approximately 25 acres near Cheswold. Coker's Landfill #1 covers 10 acres, and Coker's Landfill #2 covers about 15 acres. The landfills were used for disposal of latex rubber waste sludges from what is now the Reichold Chemicals, Inc. plant. Coker's Landfill #1, which operated from 1962 until 1976, consists of an unknown number of unlined trenches. Coker's Landfill #2 was operated under a State permit as a solid waste disposal site from 1976 to 1980, and consists of 51 lined trenches, each with a leachate collection and monitoring system and a groundwater monitoring system. The landfills are located above two groundwater systems: the Columbia Aquifer, which is a water table aquifer, and the Cheswold Aquifer, which is a deeper artesian aquifer. Approximately 4,000 people live within a 3-mile radius of the site, and two farms are adjacent to the landfills.

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

NPL LISTING HISTORY

Proposed Date: 04/10/85

Final Date: 07/22/87

Threats and Contaminants



On-site groundwater, leachate, and soil are contaminated with metals, volatile organic compounds (VOCs) such as ethyl benzene, and styrene from the latex rubber wastes. Off-site monitoring wells have shown the presence of VOCs. Potential risks to health are direct contact with leachate or ingestion of contaminated groundwater. There is a potential for contaminants to move off-site to nearby surface water, or into the underlying aquifers both of which are used as public water supplies. Area wetlands also are potentially threatened, since drainage from Coker's Landfill #1 runs through a wetland area on the Willis Branch of the Leipsic River, and Coker's Landfill #2 is partially bordered by wetlands.

Cleanup Approach

Response Action Status



Immediate Actions: In 1989, buried drums and a bin were discovered by geomagnetic surveys during the site investigation conducted by the parties potentially responsible for the site contamination. These materials were excavated, overpacked, and disposed of off site.



Entire Site: The potentially responsible parties conducted an investigation of the entire site to help determine the extent of remaining contamination and to identify cleanup technologies. In 1990, the EPA selected a cleanup remedy, which involves implementing deed restrictions, fencing and posting warning signs to limit access to the site, covering leachate seeps, backfilling and seeding settled areas in Landfill #2, grouting leachate collection wells in Landfill #2, monitoring groundwater and inspecting the landfills on an ongoing basis. Monitoring surface water and sediments of the Willis Branch will also be conducted. If various levels are met during the monitoring required as part of the remedial action, additional work may be warranted. Construction of cleanup remedies was completed in late 1993.

Site Facts: An Administrative Order on Consent was signed in 1988 by the EPA and Reichold Chemicals, Inc., Nabisco Brands, Inc., and Rapid American Corp. for an investigation to determine the extent of contamination and to identify cleanup technologies for the site. In 1992, the potentially responsible parties signed a Consent Decree with EPA agreeing to implement cleanup actions.

Environmental Progress



All construction at the site is complete. In addition, long-term monitoring of surface water, sediments and groundwater will evaluate the effectiveness of the remedy. Bi-annual monitoring data has shown that the remedy selected is operational, functional, and protective.

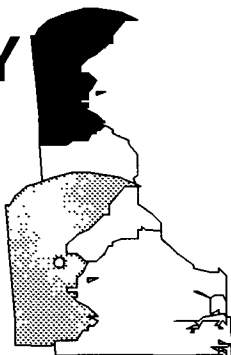
Site Repository



Clayton Post Office, Railroad Avenue, Clayton, DE 19938

DELAWARE CITY PVC PLANT DELAWARE

EPA ID# DED980551667



EPA REGION 3
New Castle County
2 miles west of Delaware City

Site Description

The 400-acre Delaware City PVC Plant site was built in 1966 and serves as a polyvinyl chloride (PVC) production facility. In the past during plant operations, earthen lagoons were used to dump waste PVC. Another area was used to bury PVC sludges and then was capped. The Columbia aquifer, which has been contaminated by past plant operations, is used locally as a domestic water supply. There are approximately 50 people living within one mile of the site, including one residence and several businesses located on top of the plume but away from the PVC plant. A water service company has wells within 3 miles of the site (but in a different aquifer) and serves an estimated 100,000 people.

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 ground water is contaminated with volatile organic compounds (VOCs), including vinyl chloride, from the earthen lagoons. The soil is also contaminated with VOCs. Ingesting or coming into contact with contaminated ground water or soil poses a health threat to nearby residences.

Cleanup Approach

This site is being addressed in four stages: immediate actions and three long-term remedial phases focusing on cleanup of the ground water; lagoon areas and the former PVC storage area and sludge pits; and the remaining areas of soil and groundwater contamination.

Response Action Status



Immediate Actions: Alternate water supplies were provided to nearby businesses and residences that were affected by contaminated groundwater. A majority of the PVC sludge was removed from the off-grade batch pits to eliminate the primary source of ground water contamination.



Ground water: The remedy selected for the groundwater contamination includes: installing groundwater recovery wells and treating the water through air stripping and then discharging it into the Delaware River. The groundwater recovery system continues to operate to ensure that contamination will be cleaned up to acceptable levels.



Lagoon Areas, PVC Storage Area, and Sludge Pits: The remedies selected for cleanup of the lagoon area included: excavating sludge and contaminated soils, selling the sludge as a product and disposing of residuals offsite; installing synthetic liners in the aeration basins, installing a tank in the old stormwater pond, and backfilling the off-grade batch pits. The remedies selected for the PVC storage area and sludge pits included: capping the PVC storage area; installing a second cap over the sludge pits; and establishing a vegetative cover over each area. All construction activities were completed in the summer of 1992.



Remaining Areas: In 1993, the potentially responsible parties submitted plans for additional investigations of soil and groundwater to identify the nature and extent of contamination in areas where contamination was not previously detected. These areas requiring additional studies were discovered when cleanup actions were being taken at the other areas of the site.

Site Facts: In 1984, the EPA and the State entered into a Consent Order with two potentially responsible parties to perform studies of cleanup alternatives and all necessary cleanup actions to eliminate contamination at the site. In 1987, the Consent Order was amended to outline the details of the cleanup design and implementation.

Environmental Progress



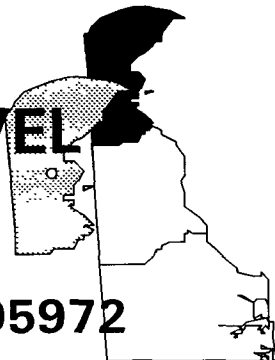
The provision of an alternate water supply to residents and area businesses and the completion of cleanup activities (including sludge removal, installation of liners, capping, and backfilling) at the Delaware City PVC Plant site has reduced the potential for exposure to contaminated materials. Further studies to identify other potential sources of contamination began in 1993.

Site Repository



Delaware Department of Natural Resources and Environmental Control, Superfund Branch, 715 Grantham Lane, New Castle, DE 19720

DELAWARE SAND & GRAVEL LANDFILL DELAWARE EPA ID# DED000605972



EPA REGION 3

New Castle County
2 miles southwest of the
City of New Castle

Other Names:

Delaware Sand & Gravel Co. Landfill
Delaware Sand & Gravel-Llangollen
Army Creek Landfills

Site Description

The 27-acre Delaware Sand & Gravel Landfill site is an inactive industrial waste landfill located adjacent to another NPL site, the Army Creek Landfill. The site has four disposal areas, referred to as the Drum Disposal, Inert Disposal, Ridge, and Grantham South areas. Between 1968 and 1976, the site accepted household, construction, and industrial wastes including at least 7,000 drums containing liquids and sludges from perfume, plastics, paint, and petroleum refining processes. The Drum Disposal area contains thousands of buried drums and is a major source of organic contamination of the groundwater. The Ridge area consists of contaminated surface soil. The Inert Disposal area contains various construction and industrial wastes buried 25-40 feet thick; cars, trucks, and storage tanks are scattered on the surface. The Grantham South area contains construction debris and mixed chemical wastes. Approximately 2,000 people live within a mile of the site. The site is located in a mixed residential and lightly industrialized area. Properties adjoining the site include two residences and a maintenance garage. The nearest residence is about 30 feet from the edge of the landfill. The Llangollen Estates housing development is about ¼ mile southwest of the site. Underlying the landfill is the Potomac Aquifer, which is accessed by about 1 ¼ miles south of the site and is used as a public water source. Groundwater recovery wells located between the site and the public supply wells are effectively capturing groundwater borne contaminants. The recovered groundwater is routed through an on-site water treatment plant prior to its discharge into an adjacent stream.

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 is contaminated with volatile organic compounds (VOCs), semi-volatile organic compounds, and heavy metals. The soil is contaminated with VOCs, polychlorinated biphenyls (PCBs), and heavy metals. Specific contaminants exceeding surface water quality standards in Army Creek include cadmium, chromium, mercury, iron, and zinc. The greatest threat to health is accidental ingestion of groundwater. Workers, trespassers, and nearby residents may be exposed to contaminants in the soil and water.

Cleanup Approach

This site is being addressed in four stages: immediate actions and three long-term remedial phases focusing on cleanup of the Grantham South Area, Ridge and Drum Disposal Areas and the Inert Area.

Response Action Status



Immediate Actions: To reduce the threat of groundwater contamination, New Castle County installed a groundwater recovery system downgradient of the site to prevent contaminated water from reaching the nearby public water supply well field.

A water treatment plant is currently treating the recovered groundwater prior to its discharge to Army Creek and Army Pond. Continued monitoring in the area indicates that the groundwater recovery system has been effective in controlling the migration of contaminated groundwater. In 1984, the EPA removed approximately 600 drums from the surface of the Drum Disposal area. The flammable solids and PCB materials were bulked, drummed, and safely disposed of. Air monitoring was conducted to determine the affect of site activities on ambient air. Work areas of the site were regraded, hydroseeded, and spread with mulch. In 1991, a security fence was installed around the drum disposal area. A slurry wall around the drum disposal area to keep contaminants contained prior to final cleanup is currently under construction.



Grantham South Area: In 1991, the EPA completed the construction of a cap over the Grantham South Area to contain the source of contamination.



Drum Disposal and Ridge Areas: In the fall of 1993, the EPA revised the cleanup remedy. The selected remedy includes: excavation and off-site disposal of buried drums; treatment of contaminated soils using soil vapor extraction and bioventing technologies; and containing any residually contaminated soils with a slurry wall enclosing the drum disposal area and a multi-layer cap. Design activities began in the fall of 1994. Construction of the slurry wall was completed in December 1994. Drum excavation is scheduled for 1995 and treatment of contaminated soils will begin in 1996.



Inert Area: The selected action for the Inert Area includes removal and off-site disposal of all surface debris and construction of a multi-layer cap. The design of the multi-layer cap is complete and construction is expected to begin shortly.

Site Facts: In 1976, the state issued an enforcement action requiring the site owner to discontinue disposal activities. In accordance with a 1992 Administrative Order on Consent, some of the potentially responsible parties completed the design of a multi-layer cap for the Inert Area and constructed a slurry wall around the Drum Disposal area. In accordance with a 1995 Consent Decree, a group of potentially responsible parties agreed to design and perform the remaining cleanup activities.

Environmental Progress



Numerous cleanup activities have been completed at the Delaware Sand & Gravel Landfill site, including fencing; surface drum removal; capping; and construction of a slurry wall around, the Drum Disposal area. The groundwater recovery and treatment system is controlling the spread of contamination from the site while final cleanup actions are being completed.

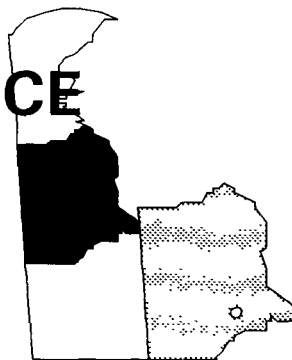
Site Repository



Delaware Dept. of Natural Resources & Environmental Control, Superfund Branch,
715 Grantham Lane, New Castle, DE 19720

DOVER AIR FORCE BASE DELAWARE

EPA ID# DE8570024010



EPA REGION 3

Kent County
Dover

Site Description

The 3,700-acre Dover Air Force Base (AFB) site is the base of operation for the 436th Military Airlift Wing. The base contains 23 areas on site that were used to dispose of industrial waste. An estimated 23,000 cubic feet of waste were disposed of from 1951 to 1970. The base's operations generated numerous wastes, some in drums, including paints, solvents, waste fuels, and oil. These wastes were disposed of in various on-base locations including 12 landfills and three fire training areas. All disposal sites are earth-covered to a depth of 3 feet, with the exception of the construction debris landfill. Access to the site is restricted. There are approximately 1,000 people living on base, and 39,000 people living within a 3-mile radius of the site. The distance from the base to the nearest residence is about ½ mile, and the site is located in a commercial and residential area that is densely populated. The base well system serves about 10,000 people and is routinely monitored by the Air Force. Contaminants have not been found in this system.

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

NPL LISTING HISTORY

Proposed Date: 10/01/84
Final Date: 03/13/89

Threats and Contaminants



Shallow on-site groundwater is contaminated with heavy metals including arsenic and cadmium and volatile organic compounds (VOCs) from former waste disposal practices. A variety of VOCs have been detected in off-site groundwater including trichloroethylene (TCE), tetrachlorethylene (PCE) and carbon tetrachloride. VOCs also have been detected in the sediments. VOCs and heavy metals including mercury, chromium, and cadmium have been detected in on-site stream waters. Potential health threats include exposure to contaminated groundwater used for drinking water and ingestion of contaminated fish and wildlife. Direct contact with contaminated surface water or sediments during recreational or site activities by area residents and workers also is a concern. A nearby freshwater wetlands is threatened by site contamination.

Cleanup Approach

This site is being addressed in four stages: initial actions and three long-term remedial phases focusing on cleanup of Fire Training Area #3, the Industrial Area, and on-site groundwater.

Response Action Status



Initial Actions: The Air Force has cleaned up the industrial waste basins and a drum site, and has provided an alternate water supply to affected residents. A landfill and some hazardous waste areas were excavated during the runway extension in 1988 and 1989.



Fire Training Area #3: Cleanup activities began early in 1992. An underground storage tank, oil/water separator, and all associated piping were removed from the site. Contaminated soils surrounding the tanks and underlying the fire training pit also were removed. The area was capped in the fall of 1993.



Industrial Area: In 1990, the Air Force began an investigation into the nature and extent of contamination and to identify cleanup alternatives. The area is comprised of source areas including treatment units, buildings, hangars, and industrial sewer lines that are close together. The Air Force has proposed cleanup plans for source control and the removal of contamination floating on the water table, as well as the removal of contaminated soils. A final decision on the remedy is expected in 1995.



On-Site Groundwater: Groundwater monitoring currently is underway as part of the ongoing site studies. In 1990, the Air Force began an investigation into the extent and nature of groundwater contamination. A decision on the remedy was made in mid-1994, which includes removal of the sources of contamination. The design activities are completed, and the cleanup activities are scheduled to be completed in 1996.

Site Facts: The EPA, the Air Force, and the State of Delaware have entered into an Interagency Agreement (IAG) for comprehensive cleanup and compliance with Federal standards. The Dover Air Force Base also is participating in the Installation Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities.

Environmental Progress



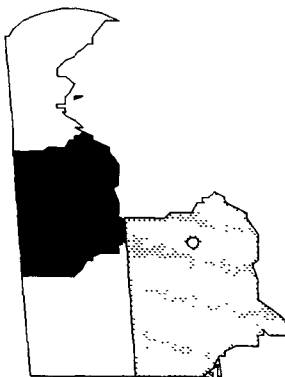
By cleaning up the industrial waste basins and drum sites, providing an alternate water supply to residents and workers at the Base, and cleaning up the Fire Training Areas, the Air Force has reduced the risk of immediate threats from the Dover Air Force Base site while further cleanup activities are being conducted.

Site Repository



Dover Air Force Base, 436 Military Airlift Wing, Dover, DE 19902

**DOVER GAS
LIGHT CO.
DELAWARE**
EPA ID# DED980693550



EPA REGION 3
Kent County
Dover

Site Description

The 1-acre Dover Gas Light Co. site operated as a coal gasification plant in Dover, Delaware from 1859 to 1948 and produced gas for street lamps from coal. When the plant was closed in 1948, all of the structures except a brick garage were demolished. Much of the plant was removed, but sections of the tanks and other process equipment containing coal oil, coal tar, and coke were buried on site. In 1984, remains of this coal gasification plant were found. The site currently is used as an unpaved parking lot, with a museum immediately adjacent. Also, a cemetery and historic church are nearby. Approximately 10,000 people are within 1 mile of the site and an estimated 45,000 people are served by public and private wells within 3 miles of the site. Seven of Dover's 14 municipal supply wells are located within one mile of the site; however, the Dover municipal system draws water from a lower, uncontaminated aquifer. The municipal wells were sampled in 1988 and 1991 and did not show signs of contamination.

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

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

Threats and Contaminants



On-site soils are heavily contaminated with polycyclic aromatic hydrocarbons (PAHs) and xylene. Groundwater in the Columbia Aquifer is contaminated with PAHs and xylene. Chlorinated organic compounds have also been detected in groundwater and are believed to have originated from several dry cleaning establishments in the area. Sediments in the nearby Tar Branch and St. Jones River are contaminated with low levels of volatile organic compounds (VOCs), PAHs, metals, and pesticides. The sediments are not threatening aquatic organisms. Possible health threats include ingestion of or direct contact with the contaminated groundwater or soil. Although municipal supply wells are nearby, sampling has indicated that contamination in the upper aquifer does not pose a threat to Dover's water supply, which is drawn from a lower, uncontaminated aquifer.

Cleanup Approach

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

Response Action Status



Site Studies: In 1990, one potentially responsible party began an investigation to determine the nature and extent of contamination and to identify cleanup alternatives for soil, groundwater, and potential river sediment contamination at the site. The investigation was completed in the summer of 1994, at which time EPA selected a remedy to address contamination associated with the site. The remedy selected for the site includes: excavation of contaminated soil with thermal treatment off site; natural attenuation of contaminated portions of the groundwater plume; recovery of the non-aqueous phase liquid (NAPL) material from the groundwater, and groundwater monitoring. An additional study began in the summer of 1994 to determine the extent of contamination from the former dry cleaner.

Site Facts: In 1990, one potentially responsible party entered into an Administrative Order on Consent with EPA and the Delaware Department of Natural Resources and Environmental Control (DNREC) whereby the potentially responsible party agreed to perform an investigation to determine the nature and extent of contamination at the site and to develop, evaluate, and screen potential cleanup options.

Environmental Progress



After listing the Dover Gas Light Co. site on the NPL, EPA determined that site conditions do not present an immediate threat to nearby residents or the environment while a potentially responsible party is conducting investigations and cleanup activities at the site.

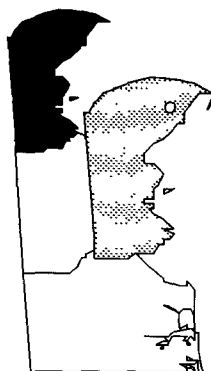
Site Repository



Dover Public Library, 45 S. State Street, Dover, DE 19901, (302) 736-7094.
U.S. EPA, Region 3, Docket Room, 841 Chestnut Building, Philadelphia, PA 19107, (215) 597-3037.

E.I. DuPONT DE NEMOURS (NEWPORT LANDFILL) DELAWARE

EPA ID# DED980555122



EPA REGION 3

New Castle County
Along the Christina River in Newport

Other Names:
Newport Pigments
DuPont-Newport

Site Description

The E.I. DuPont de Nemours site is a pigment manufacturing facility consisting of two industrial landfills: the 7-acre North Landfill and the 15-acre South Landfill. From 1902 to 1929, the plant manufactured Lithopone, a white inorganic pigment. In 1929, DuPont purchased the plant and, over the next several decades, phased-out production of Lithopone while beginning production of other organic and inorganic pigments. Other miscellaneous products have been produced at the site including chromium dioxide, which continues to be produced today. As part of the plant operations, waste was disposed of in the landfills. Ciba-Geigy purchased the pigment plant in 1984, while DuPont retained the chromium dioxide manufacturing facility. Approximately 21,000 people reside within a 3-mile radius of the site. Also located within 3 miles of the site are three public water supply wells which are part of an approximately 40 well system serving about 150,000 people. Approximately 10 residential wells are threatened by groundwater contamination. The site is within a 100-year flood plain. Contaminated wetlands are located immediately adjacent to both landfills. The Christina River, which has contaminated sediments, flows between the landfills and is used for recreational purposes.

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

NPL LISTING HISTORY

Proposed Date: 01/22/87
Final Date: 02/21/90

Threats and Contaminants



Heavy metals, including lead, and chlorinated solvents from past operations and disposal practices have been detected in the groundwater. Monitoring well information indicated contamination of the underlying Columbia and Potomac aquifers. Heavy metals have been detected at the landfills, underneath the Ciba-Geigy plant, and in wetland and river sediments and surface water. Thoriated nickel is buried in the north landfill. An organic heat transfer oil is seeping from the north bank of the Christina River and is causing an intermittent sheen on the river. The contaminated groundwater may migrate and eventually pose a threat to owners of nearby private wells. The groundwater and sediment contamination also pose a threat to aquatic life in the Christina River and the wetlands. Soil contamination poses a threat to wildlife and to workers who come in direct contact with contaminants on the unpaved portions of the plant, or to people using the adjacent ballpark.

Cleanup Approach

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

Response Action Status



Initial Actions: One potentially responsible party is undertaking actions to address the oil seeps along the north bank of the Christina River, including driving sheet piles along the river bank to limit the oil seepage.



Entire Site: The EPA selected a remedy in the summer of 1993, which includes capping the north landfill, treating waste and then capping the South Landfill, installing a groundwater barrier wall along the north river bank, dredging the river and adjacent wetlands, and installing a public water supply line. The design of the remedy began in mid-1994.

Site Facts: DuPont entered into an agreement with the EPA in 1988, under which Dupont agreed to perform a study to determine the nature and extent of the contamination and to identify alternative cleanup technologies. DuPont also entered into an agreement with the EPA in 1993, under which the party agreed to prevent the oil seeps from entering the Christina River. In 1994, the EPA issues a Unilateral Administrative Order (UAO) to DuPont and Ciba-Geigy requiring that the companies implement the selected remedy.

Environmental Progress



Several actions have been taken to alleviate potential threats while decisions are made regarding the long-term cleanup actions. These include sampling of the nearest residential wells and installing a snow fence around a small pond at the north landfill to prevent animals from drinking the water. Also, oil absorbing booms have been placed along the north bank of the Christina River as a temporary measure to limit any oil sheen on the river.

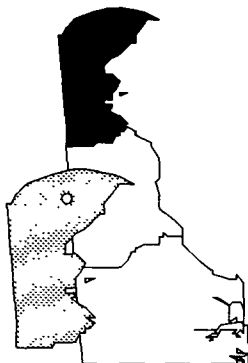
Site Repository



Kirkwood Highway Library, 600 Kirkwood Highway, Wilmington, DE 19808

HALBY CHEMICAL CO. DELAWARE

EPA ID# DED980830954



EPA REGION 3
New Castle County
Wilmington

Site Description

The 14-acre Halby Chemical Co. site operated as a chemical production facility from 1948 to 1977. The site includes the former chemical manufacturing plant area and approximately 10 acres of undeveloped land. The plant area includes: a building with four laboratories, several offices, and a warehouse; a chemical process area; and a tank farm. Wastewater from the production of sulfur compounds at the plant was discharged into a 1 1/2-acre unlined lagoon and then drained into a tidal marsh leading to the Christina River. There are high concentrations of inorganic and organic contaminants in soils, surface water, sediments, and groundwater. Approximately 1,800 people live within a mile of the site. Area residents receive water from the Artesian Water Company, which draws water from several uncontaminated wells. There are only one residential well and one public well 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: 09/18/85
Final Date: 06/10/86

Threats and Contaminants

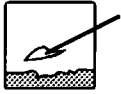


The groundwater is contaminated with volatile organic compounds (VOCs), carbon disulfide, and heavy metals including arsenic and zinc. The contaminant plume does not present an immediate threat to any wells used for potable water. Heavy metals including arsenic and zinc, and polycyclic aromatic hydrocarbons (PAHs) also were detected in the soil. Sampling of the lagoon sediments identified high levels of carbon disulfide, ammonia, zinc, arsenic, and lead. Tests indicate that lagoon sediments may cause stress (toxicity) to the aquatic life. The surface water is contaminated with heavy metals including arsenic, lead, and cadmium. Chemicals identified in an abandoned laboratory and former chemical production area present a threat due to the potential for fire and explosion, and subsequent release of chemicals to the environment.

Cleanup Approach

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

Response Action Status



Immediate Actions: A removal action is underway to dispose of process lines and equipment vessels, drums, and other containers located at the former chemical production area, and to stabilize and remove chemicals in tanks.



Soil: Based on the EPA's investigations, a remedy for the soil inside the process plant area was selected in 1991. The remedy includes: consolidating all debris; excavating, stabilizing, and backfilling the top 6 inches of contaminated surface soil; placing an asphalt cap over the stabilized soil; implementing deed restrictions; and initiating public education programs. After the construction phase is completed, long-term monitoring and site maintenance will ensure the effectiveness of the remedy. Design of the remedies is scheduled for completion in 1995 after future land-use issues are resolved.



Surface Water, Groundwater, and Sediments: In 1993, the EPA began an investigation of the nature and extent of contamination in the surface water, groundwater, and sediments in the outfall area and tidal marsh area. This study is scheduled for completion in 1995, at which time a remedy will be selected.

Site Facts: The EPA and the Witco Corporation signed a Consent Decree in early 1992 under which the party has agreed to perform the soil cleanup actions required at the process plant area.

Environmental Progress



Immediate threats to public health or the environment are being addressed by the immediate actions. Investigations and design activities also are underway to address longer-term issues associated with site contamination.

Site Repository

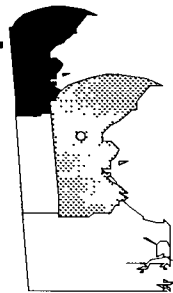


Wilmington Institute Library, 10th and Market Streets, Wilmington, DE 19801

HARVEY & KNOTT DRUM, INC.

DELAWARE

EPA ID# DED980713093



EPA REGION 3

New Castle County
About 5 miles from Kirkwood

Site Description

The Harvey & Knott Drum, Inc. site operated as an open dump and burning area between 1963 and 1969 on a portion of a 20-acre site. The facility accepted sanitary, municipal, and industrial wastes believed to be sludges, paint pigments, and solvents. Wastes were emptied onto the ground surface into excavated trenches or left in drums, some of which were buried on site. Several hundred drums have been removed from the site. A security fence, enclosing about 2 1/2 acres, was erected around the most visible areas of contamination. The enclosed area included drum stockpiles, waste piles, and a small pond. Trailer homes and a residential development are located to the north of the property. Water supplies for some of the nearby residences are obtained from a shallow water-table aquifer. There are approximately 300 people living within 1 mile of the site. The site facility is set back several hundred feet from the highway in an open field in a relatively undeveloped area and is surrounded by woodlands. Wetlands are located to the south of the site.

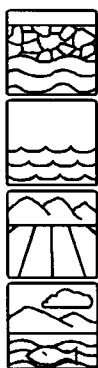
Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 07/23/82

Final Date: 09/08/83

Threats and Contaminants



Specific contaminants detected in the groundwater include volatile organic compounds (VOCs) such as ethyl benzene and toluene and heavy metals including arsenic, cadmium, and lead. Heavy metals were detected in on-site sediments and surface water. Contaminants detected in soils and sediments include VOCs, heavy metals, and polychlorinated biphenyl (PCBs). The site is in a stabilized condition because the source of contamination (surface and subsurface drums) has been removed. Lead contamination of the soils is limited to "hot spots" within the fenced area. Contamination of the groundwater with VOCs is localized and is being intercepted by the adjacent wetlands. Potential health threats exist through accidental ingestion of, inhalation of, and direct contact with contaminated soil.

Cleanup Approach

Response Action Status



Immediate Actions: The State supplied emergency drinking water to affected residents in 1981. In 1982, the EPA completed immediate measures which included installing a security fence, overpacking and staging 43 leaking drums, and conducting a sampling survey. In addition, 17 monitoring wells were installed to identify the nature and extent of groundwater contamination. In 1983 and 1984, 46 drums were removed and disposed of off site, a soil berm and a surface drainage ditch around a PCB-contaminated waste pile were constructed, 500 empty drums were crushed and staged, and 200 partially filled drums were staged.



Drum Removal and Monitoring: General Motors (GM) began site cleanup in early 1988, under EPA monitoring. Over 100 drums and 955 cubic yards of contaminated soil were excavated and removed to an off-site, licensed disposal facility. Approximately 180,000 gallons of water was pumped from the pond located in the disposal area. In 1990, GM finished removing hazardous waste from the site. EPA has concluded that the removal of all surface and subsurface drums coupled with natural dissipation over time have significantly cleaned up the groundwater contamination at the site. Soil within the fenced area is contaminated with lead; however, the lead-contaminated soils were capped; pond sediments were excavated; and a decontamination pad was dismantled and removed. Groundwater and surface water monitoring are ongoing to ensure that these actions are effective in cleaning up the site.

Site Facts: In 1987, EPA reached a settlement with GM requiring the party to design and implement the remedy selected. In 1988, an agreement was signed with another potentially responsible party, Harvey and Harvey, Inc., in which the party will contribute financially to the remedy.

Environmental Progress



All construction at the site is complete. By providing an emergency drinking water supply to affected residents, installing a security fence around the site, and removing all the surface and subsurface drums, contaminated soils, and sediments the EPA reduced the potential for exposure to hazardous materials at the Harvey & Knott Drum, Inc. site. Capping of the contaminated soils; implementing a groundwater and surface water monitoring plan; and implementing institutional controls will ensure that the remedy continues to be protective of human health and the environment.

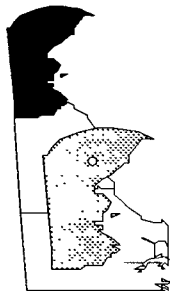
Site Repository



Delaware Department of Natural Resources & Environmental Control, Superfund Branch, 715
Grantham Lane, New Castle, DE 19720

KOPPERS CO., INC. (NEWPORT PLANT) DELAWARE

EPA ID# DED980552244



EPA REGION 3

New Castle County
Newport

Site Description

The 317-acre Koppers Co., Inc. (Newport Plant) site operated as a wood preserving plant from 1929 until 1971. During operations, Koppers loaded railroad ties and telephone poles into cylinders and pressure-injected them with either creosote or a mixture of No. 2 fuel oil and pentachlorophenol (PCP). The site contains a pond located on the northwest corner of the property that was used for fire protection, and two effluent holding ponds and two sumps that discharge effluent into wetlands. In 1971, Koppers sold the site to DuPont. As part of the sales agreement, the process equipment was removed. All structures were removed from the site; the site currently is vacant. Two potential historical homesteads exist on the property. In 1984, the EPA detected creosote compounds in on-site soil and in nearby creek sediments. The Artesian Water Company draws drinking water from three wells within 3 miles of the site and combines the water with other water to serve its 150,000 customers. The three wells tap the Lower Potomac Formation, hydraulically connected to the overlying Columbia Formation, permitting water to move between them. Wetlands are found both on and around the site.

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

NPL LISTING HISTORY

Proposed Date: 10/26/89
Final Date: 08/30/90

Threats and Contaminants



Soil and nearby creek and pond sediments are contaminated with polynuclear aromatic hydrocarbons (PAHs) from the wood preserving treatment processes. Some of the PAHs found on-site are potential carcinogens. Potential health threats include accidental ingestion of, and direct contact with, contaminated soil and sediments. Churchmans Marsh, the Christina River, Hershey Run, White Clay Creek and their associated wetlands and habitats also may be threatened.

Cleanup Approach

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

Response Action Status



Entire Site: In 1991, an investigation began to determine the nature and extent of contamination at the site. Currently, a work plan and schedule are being negotiated with the potentially responsible parties to complete the investigation. Once the investigation is completed, final cleanup remedies will be selected.

Site Facts: In 1991, EPA issued an Administrative Order requiring the parties potentially responsible for site contamination to conduct the investigation into contamination.

Environmental Progress



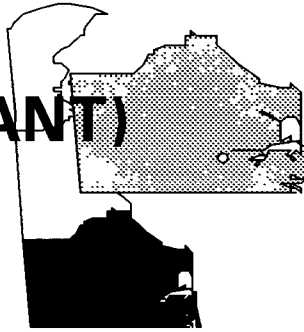
The EPA assessed conditions at the Koppers Co., Inc. (Newport Plant) site and determined that no immediate actions were required; however, an evaluation of potential off-site migration is necessary.

Site Repository



Not yet established.

**NCR CORP.
(MILLSBORO PLANT)
DELAWARE**
EPA ID# DED043958388



EPA REGION 3
Sussex County
1/2 mile southeast of Millsboro

Other Names:
First Freedom Center

Site Description

NCR Corporation manufactured cash registers from 1967 to 1975 and electronic equipment from 1975 to 1980 on a portion of this 140-acre site, which is located 1/2 mile southeast of Millsboro. Enameling, plating, and degreasing operations also were conducted at the NCR plant. The solvent, trichloroethylene (TCE), used in degreasing operations, was stored in a tank outside the manufacturing building. Waste suspensions from the plating operation were discharged to on-site concrete lagoons for sedimentation and clarification. The chromium-bearing sludge that accumulated in the lagoons was disposed of in a pit on the NCR property. In 1981, prior to the sale of the property, the chromium sludge was excavated and disposed of off site. The State required NCR to monitor groundwater after the sludge was removed. The monitoring revealed that groundwater under the property was contaminated with TCE and other volatile organic compounds (VOCs), and chromium. The contaminated groundwater discharges to Iron Branch Creek, which flows into the Indian River. Chromium and TCE have also been found in the surface water and sediments of Iron Branch Creek. Communities located close to the site rely on groundwater as a primary source of drinking water. Quarterly groundwater monitoring has shown that the contaminant levels in the residential wells remain within acceptable drinking water standards. Annual stream monitoring results indicate that the concentrations of TCE and chromium in the Iron Branch remain within levels that EPA has determined are protective of aquatic life.

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

NPL LISTING HISTORY Proposed Date: 04/10/85 Final Date: 07/22/87

Threats and Contaminants



The groundwater is contaminated with VOCs including TCE, and with trivalent and hexavalent chromium. A plume of groundwater contamination has reached Iron Branch Creek, but domestic supply wells have not been adversely affected. People who come into direct contact with or ingest contaminated groundwater or surface water may be at risk.

Cleanup Approach

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

Response Action Status



Initial Actions: NCR excavated chromium-bearing sludge from a bentonite-lined pit and drained and removed toxic materials from two concrete-lined storage lagoons in 1981. NCR also installed 28 monitoring wells and implemented a groundwater monitoring program. In 1988, a groundwater recovery well and an air stripper were put into operation to prevent off-site migration of contaminants.



Entire Site: Between 1988 and 1991, under State supervision, NCR conducted an intensive study of stream and groundwater contamination at the site and potential continuing sources of groundwater contamination. In 1991, a remedy was selected including treatment of VOC contamination in groundwater by air stripping; treatment of chromium contamination by chemical reduction, coagulation precipitation and filtration, as necessary; discharge of treated groundwater to on-site groundwater infiltration galleries or Iron Branch; quarterly groundwater monitoring; annual monitoring of Iron Branch; and implementation of groundwater use restrictions within the area of the contaminated plume. The design of the groundwater remediation system was completed in the fall of 1994. Construction of selected cleanup remedies began in 1994, and is expected to be completed in early 1997.

Site Facts: In 1981, the State of Delaware ordered NCR to excavate sludges and dispose of the waste off site. In 1988, the State and NCR signed a Consent Order under which NCR agreed to conduct initial response actions and a study to determine the nature and extent of site contamination and options for cleanup. In 1992, EPA issued a Unilateral Administrative Order compelling the potentially responsible parties to design, construct, operate and maintain the EPA selected remedy.

Environmental Progress



The removal of contaminated sludge, the construction and operation of an air stripper and recovery well, and the installation of monitoring wells to chart contaminant levels have reduced the potential for exposure to hazardous materials at the NCR site while the final remedy is being implemented.

Site Repository



Millsboro Town Hall, 322 Wilson Highway, Millsboro, DE 19966

NEW CASTLE SPILL DELAWARE

EPA ID# DED058980442



EPA REGION 3

New Castle County
New Castle

Other Names:
Witco Chem. Co.
TRIS Spill Site

Site Description

Beginning in 1954, the now inactive Witco Chemical Company processed materials used in the production of plastic foam on this 6-acre site. Operators stored drums containing pre-polymer feedstocks and spent solvents on the southern boundary of their property adjacent to the New Castle Board of Water and Light (NCBW&L) property. In 1977, employees of NCBW&L noticed dead grass near the drum storage area. Shortly after sampling, during which contaminants at levels above the accepted State and EPA levels were found, the NCBW&L was directed by the Delaware Department of Natural Resources and Environmental Control (DNREC) to pump the shallow aquifer and to discharge the water to the nearby wetlands. The surrounding area is industrial and residential; 5,500 people live within 3 miles of the site. The closest home is 750 feet from the site. The shallow aquifer being used by the NCBW&L was taken out of service, and measures are being taken to prevent its future use. Approximately 7,000 people now are served by another source for their potable water supply.

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

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants

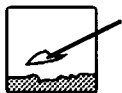


Trichloroethylene (TCE) is found in the groundwater, but is believed to be from an off-site source now under investigation by the State. The groundwater is also contaminated with other volatile organic compounds (VOCs) including acetone and tris-chloropropyl phosphate (TRIS), a semivolatile organic compound. TRIS, a flame retardant, which can be related back to Witco's activities, was detected in soils near the drum storage area. On-site soil is contaminated with VOCs, polychlorinated biphenyls (PCBs), TCE, creosote, and phthalates from plastics production. However, soil contamination was not determined to pose a significant threat to human health and to the environment. Drinking contaminated groundwater could pose a health threat; however, a new water supply has been provided to residents found to be at risk. Wetlands adjacent to the site have not been adversely impacted by TRIS contamination. The site is secured by a locked fence.

Cleanup Approach

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

Response Action Status



Initial Actions: The shallow aquifer used by the NCBW&L was taken out of service and affected residents were provided an alternative water source. From 1977 to 1978, the NCBW&L, under the DNREC's instruction, pumped the groundwater from the shallow aquifer to prevent migration of TRIS into aquifers below the Columbia, the most shallow aquifer beneath the site.



Entire Site: In 1989, the EPA selected a remedy requiring quarterly monitoring of TRIS in the shallow groundwater aquifer until the accepted safe level is reached, through natural attenuation, in an estimated four to five years. In addition, the remedy requires annual monitoring of the deeper groundwater aquifer, surface water, and sediments of the wetland; establishing institutional controls; and reviewing the effectiveness of the remedy in five years. Quarterly groundwater, surface water and sediment monitoring began in 1992. The State has established the institutional controls by restricting the installation of wells in the shallow aquifer within 1/2 mile of the site. TRIS levels in the groundwater have decreased considerably in the most highly contaminated area of the site. TRIS levels in the surface water and sediment samples have consistently been well below cleanup levels. Monitoring will continue until clean-up levels are achieved through out the contaminated area.

Site Facts: An Agreement was signed in 1990, in which the potentially responsible parties will conduct the five-year review of the remedy to confirm that it continues to be protective of human health. The Agreement was recognized by the courts in April 1991.

Environmental Progress



By providing an alternative municipal water source and by limiting the future use of the groundwater until the cleanup levels have been reached, the potential for exposure to hazardous materials at the New Castle Spill site has been reduced while continued monitoring of groundwater, surface water, and sediments is underway.

Site Repository

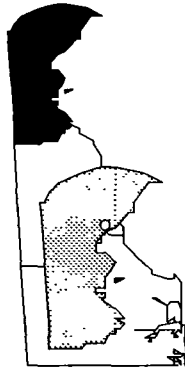


Delaware Dept. of Natural Resources & Environmental Control, Superfund Branch,
715 Grantham Lane, New Castle, DE 19720, (302) 323-4540.

U.S. EPA, Region III, Docket Room, 9th Floor, 841 Chestnut Building, Philadelphia, PA 19107,
(215) 597-3037.

NEW CASTLE STEEL PLANT DELAWARE

EPA ID# DED980705255



EPA REGION 3

New Castle County
Near the Delaware River in the
City of New Castle

Other Names:
Deemer Steel Company

Site Description

The New Castle Steel site is a 3-acre disposal landfill which received foundry wastes from the Deemer Steel Company beginning in 1907. The waste consisted of black sands, slag, coke, iron oxide scale, fine sand dust and metal scrap. In 1955, an electric furnace was put into operation and in 1973 a baghouse system was installed to control dust emissions from the furnace. This baghouse dust was mixed with black sand and spread over the disposal area from 1973 to 1980. In 1980, the plant began to recycle the dust until the plant closed in 1987. Regulations in 1980 indicated that the baghouse dust was a hazardous waste because of unacceptable levels of heavy metals including cadmium, chromium, and lead. The site was placed on the NPL in 1982 because of potential groundwater contamination. Since 1982, it has been determined that baghouse dust does not pose a serious health threat; therefore, it is no longer classified as a hazardous waste by the EPA. Although metals associated with the site have entered soils, sediments, surface water, and groundwater, the EPA and the State have determined through studies that contamination levels at the site are not threatening and do not require cleanup actions. A number of the metals of concern including cadmium, chromium, and lead are naturally occurring.

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

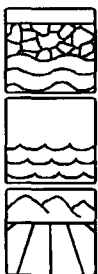
NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Deleted Date: 03/17/89

Threats and Contaminants



The groundwater, sediments, soil, and surface water were contaminated with low levels of heavy metals including arsenic, chromium, lead, cadmium, and nickel from the wastes disposed of on site. However, contamination levels were very low and it was determined that they did not pose threats to nearby residents or the environment.

Cleanup Approach

Response Action Status



Entire Site: After years of data collection and study, including an intensive investigation undertaken by the Deemer Steel Company, both the EPA and the State determined that this site does not constitute a threat to human health or the environment. Therefore, it was determined that no cleanup actions were required to clean up the site. EPA is in the process of conducting a Five Year Review of the site. Five Year Reviews are intended to evaluate whether any actions taken at the site remain protective of public health and the environment.

Environmental Progress



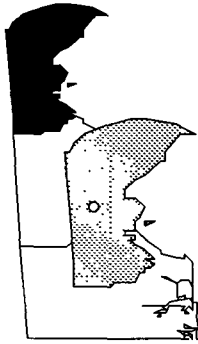
Because the site studies have indicated that site contamination does not pose a risk to people or the environment, the EPA, in conjunction with the State, deleted the New Castle Steel Plant site from the NPL in 1989.

Site Repository



Information is no longer available.

**SEALAND
LIMITED
DELAWARE**
EPA ID# DED981035520



EPA REGION 3
New Castle County
Mount Pleasant

Site Description

Operations at the 2-acre Sealand Limited site began in 1971, when Adams Laboratory rented the property from Conrail, Inc. to operate a rendering plant. In 1979, the owner reportedly cleaned up the property after its tenant abandoned the plant. The property remained unused until 1982 when it was leased to Sealand Limited, Inc., to operate a waste oil recycling plant. The operation accepted coal tar, gas tar, and ink oil wastes, allegedly for recycling, and stored them on site in tanks and drums. When the tenants abandoned the facility in 1983, the site contained 22 storage tanks, a boiler house, mixing chambers, pressure vessels, several hundred 55-gallon drums containing assorted creosote-related chemicals, and a 10,000-gallon wooden storage tank. A State investigation in 1983 revealed that the wooden tank and numerous drums were leaking. Analyses of the contents of the tanks and drums and site soil detected polycyclic aromatic hydrocarbons (PAHs), creosotes, solvents, and other toxic organic compounds. A combined State and EPA study in 1984 showed contaminants in an on-site monitoring well. However, groundwater contamination was not found during investigations completed in 1991. The area surrounding the site is primarily agricultural and residential. Private wells within 3 miles of the site provide drinking water to an estimated 1,000 people.

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

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

Threats and Contaminants



Low levels of PAHs, creosotes, solvents, and other toxic compounds from the former recycling operation were found in on-site soils. However, because of the emergency actions undertaken by EPA, soil contamination is now within acceptable health standards and does not pose a risk to individuals who may come into contact with the soil.

Cleanup Approach

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

Response Action Status



Emergency Actions: In 1983, in response to an imminent threat to human health, the EPA removed 240,800 gallons of coal tar, 320 drums, and 80 cubic yards of solid waste. Workers transported the hazardous materials to an EPA-approved facility, cleaned the storage tanks, and capped the site with a layer of clay and topsoil to keep rainwater and runoff from spreading pollutants.



Entire Site: Under EPA oversight, the parties potentially responsible for the site contamination completed an intensive study of the nature and extent of site contamination in 1991. The study showed that, because of the emergency actions undertaken by EPA, the site no longer poses an unacceptable risk to human health and the environment. EPA will review conditions at the site in 1996 to ensure that its decision for no further action remains protective. In the meantime, the State will conduct additional groundwater studies under its Hazardous Substance Cleanup Act.

Site Facts: In December of 1988, EPA and 15 potentially responsible parties entered into an Agreement for the responsible parties to conduct investigations to determine the nature and extent of contamination at the site.

Environmental Progress



By removing contaminated materials from the Sealand Limited site, EPA eliminated the risk to area residents and the environment. EPA has determined that no further cleanup activities are necessary at the site.

Site Repository



Appoquinimink Public Library, 218 North Broad Street, Middletown, DE 19709

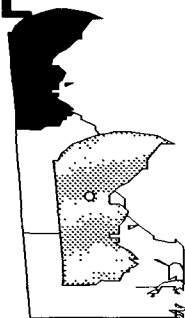
STANDARD CHLORINE OF DELAWARE, INC.

DELAWARE

EPA ID# DED041212473

EPA REGION 3

New Castle County
Delaware City



Site Description

Standard Chlorine of Delaware, Inc. is a manufacturer of chlorinated benzene compounds. The 46-acre Standard Chlorine site was listed on the NPL due to a 1981 benzene spill that occurred while workers were filling a railroad tanker car onto the property. An additional spill occurred in 1986; 569,000 gallons of various volatile organic compounds (VOCs) spilled after a 375,000-gallon tank of VOCs split open, collapsed, and damaged three nearby tanks of VOCs, causing the latter tanks to partially spill. About 152,000 people draw groundwater from public and private wells within a 3-mile radius of the site. Approximately 30 people reside within a mile of the site.

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

NPL LISTING HISTORY

Proposed Date: 09/18/85

Final Date: 07/22/87

Threats and Contaminants



Chlorobenzenes from spilled material have been found in the groundwater, soil, sediments, and surface water. People may be exposed to the chemicals by direct contact with contaminated soil or ingestion of contaminated soil or water. Wetlands near the site are threatened by contamination emanating from the spill areas. The levels of contamination in the soils, surface water, and sediment may impact the quality of the wildlife and the ecosystems along the nearby Red Lion Creek.

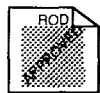
Cleanup Approach

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

Response Action Status



Emergency Actions: The Delaware Department of Natural Resources and Environmental Control (DNREC) and Standard Chlorine took the following emergency actions in response to the January 1986 spill: (1) built a filter fence along the mouth of the wetland coves; (2) recovered some of the material which had flowed off site; (3) performed pre-excavation sampling and constructed an earthen dike to isolate the upper portions of the wetland from contaminants; (4) excavated contaminated soils and sediments upstream of the dike; and (5) constructed a double-lined containment pond to store dredged materials.



Entire Site: Under State order, Standard Chlorine conducted an intensive study of the effect the spill had on local groundwater quality, soil, and wetland contamination. The investigation explored the nature and extent of the contamination and identified the best strategies for cleanup. The study was completed in the Fall of 1993. A proposed plan was issued in the Spring of 1994 and the final remedy was selected in early 1995.

Site Facts: In 1988, the DNREC entered into an agreement with Standard Chlorine of Delaware, Inc. to conduct preliminary cleanup and perform site investigations to determine the nature and extent of the contamination.

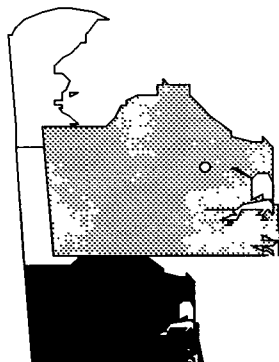
Environmental Progress



Emergency actions undertaken by the DNREC and Standard Chlorine have reduced the risk of contamination at the site while final cleanup actions are underway.

SUSSEX COUNTY LANDFILL NO. 5 DELAWARE

EPA ID# DED980494637



EPA REGION 3

Sussex County
Laurel

Site Description

The inactive 37 1/2-acre Sussex County Landfill No. 5 operated from 1970 until 1979. The landfill accepted mixed municipal and industrial wastes and, according to a 1978 Congressional report, an unknown quantity of various volatile organic compounds (VOCs). In certain areas of the landfill, wastes were deposited in the ground below the water table, threatening groundwater. In 1986, the EPA detected several organic chemicals and solvents in on-site monitoring wells. The landfill overlies the Columbia Formation, which is connected to and recharges the Manokin Aquifer. Together, the two units provide drinking water to people within 3 miles of the site. A private well is located 1,000 feet from the site. Public and private wells within 3 miles of the site provide drinking water to an estimated 5,700 people and irrigate 5,100 acres of cropland.

Site Responsibility: This site is being addressed through a combination of Federal, State, and local actions.

NPL LISTING HISTORY

Proposed Date: 06/24/88

Final Date: 10/04/89

Threats and Contaminants



Several groundwater monitoring wells have shown contamination from VOCs, including benzene and vinyl chloride, from former disposal practices. Possible health threats include drinking or coming in direct contact with the contaminated groundwater. One domestic well to the north of the landfill was found to be contaminated with low levels of VOCs. Sussex County has provided this residence with bottled water and a water purification system to alleviate the risk presented by the contaminated water supply. All other residential wells in the area which have been sampled during investigations at the site have not shown contamination at levels of concern. Bioaccumulation of contaminants in locally raised crops is a potential threat if contaminated groundwater is used for watering or irrigation.

Cleanup Approach

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



Initial Actions: The landfill was closed by the Delaware Department of Natural Resources and Environmental Control (DNREC) in 1979. Sussex County installed a carbon treatment unit to eliminate VOC contamination. Plans are being developed for the County to install a water line to supply residents downgradient of the landfill with public water, continue groundwater monitoring, and maintain the cover on the landfill. These actions are expected to eliminate any potential future risk associated with possible exposure to VOCs in the groundwater.



Entire Site: The DNREC installed monitoring wells on the site as a part of a groundwater assessment program. In 1984, the DNREC conducted a preliminary assessment, which indicated that a leachate plume extended 400 to 500 feet downgradient of the site. In 1984, the EPA inspected the site and detected elevated levels of VOCs in the groundwater. Several more wells have been installed in the vicinity of the landfill and are monitored on a regular basis by Sussex County as part of the requirements of an agreement between the County and DNREC. In addition, some domestic wells in close proximity to the landfill are monitored. During 1992, Sussex County, under an EPA Administrative Order, conducted an investigation at the site which included installing several additional monitoring wells, and sampling groundwater, surface water, air, soil, and sediments. This investigation confirmed that the groundwater is contaminated primarily with several VOCs and that contaminated groundwater is the primary concern at this site. The Human Health Risk Assessment conducted by EPA determined that current and potential future risk levels posed by the very low levels of VOCs in the groundwater are within or slightly above EPA's acceptable risk range. Because of the low levels of contamination, the low risk levels, and the actions being taken by the State and the County, EPA determined that no further actions are needed at the site.

Site Facts: Sussex County and the DNREC entered into an agreement in 1988 to establish a groundwater management program near the landfill which includes the future construction of a water line. In 1991, an Administrative Order for the site investigation conducted by the County, was signed by Sussex County and the EPA.

Environmental Progress



By closing the Sussex County Landfill No.5 and installing a carbon treatment system, the State has reduced threats to human health and the environment posed by the site. An alternate water supply has been provided to one residence with a contaminated water supply, and additional homes downgradient of the landfill are scheduled to be connected as well.

Site Repository

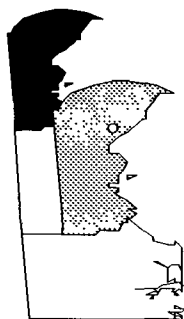


Laurel Public Library, 6.E. Fourth Street, Laurel, DE 19956, (302) 875-3184

U.S. EPA, Region 3, Docket Room 9th Floor, 841 Chestnut Bldg., Philadelphia, PA 19107,
(215) 597-3037

TYBOUTS CORNER LANDFILL DELAWARE

EPA ID# DED000606079



EPA REGION 3
New Castle County
10 miles south of Wilmington

Site Description

Tybouts Corner Landfill Site is located approximately 10 miles south of Wilmington and 4 miles west of the Delaware River, which is close to the confluence of Pigeon Run Creek and Red Lion Creek. The landfill consists of two noncontiguous sections: a west landfill that is about 4 acres and the main landfill that is about 47 acres. The fill currently ranges from 5 to 40 feet thick. The site was used by the New Castle County Department of Public Works as a municipal sanitary landfill that also accepted industrial wastes from December 1968 until July 1971. The industrial wastes contained volatile organic compounds (VOCs) and various other organic and inorganic chemicals. The first reported occurrence of contamination from the Tybouts Site was a domestic water well in May of 1976. A second private well was found to be contaminated in 1983. There are only two water supply wells reported to be contaminated from the site.

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

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

Threats and Contaminants



Local drinking water wells and soils are contaminated with VOCs and other organic compounds from former disposal practices. The contaminants of concern include the VOCs, 1,2-dichloroethane, trichloroethylene, benzene and various other organic and inorganic chemicals. Ingesting or coming into direct contact with contaminated groundwater or soil may threaten the health of the people in the area.

Cleanup Approach

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

Response Action Status



Immediate Actions: The EPA installed a fence in 1982. Between 1984 and 1986, the EPA extended the public water lines to provide service to all 42 residences and facilities surrounding the landfill. The EPA repaired and reconstructed the security fence around the site and posted warning signs in 1987. A new fence was installed around the main landfill in the Spring of 1993.



Source Control and Groundwater Cleanup: In 1986 EPA selected a cleanup remedy calling for excavation and consolidation of the west landfill to the main landfill; installation of a multi-layered cap to minimize infiltration of rainfall; installation of a subsurface drain to minimize lateral migration of groundwater and another subsurface drain to collect leachate; and a pump and treat system for the contaminated groundwater and leachate. The selected remedy was modified in May 1992 to replace one of the subsurface drains with a slurry wall and the other subsurface drain with interceptor wells. Construction of the remedy began in early 1993. The west landfill and the perimeter of the main landfill have been excavated onto the consolidation area at the main landfill. The landfill has been regraded with several feet of overburden material placed on top at the main landfill. The slurry wall construction was completed in late 1993. The multi-layer cap was completed in late 1994. The cap was seeded during the spring of 1995. Construction completion is scheduled for late 1995.

Site Facts: In 1988, EPA signed a Consent Decree in which several parties agreed to implement and partially finance the selected remedy.

Environmental Progress



With the construction of a fence around the site to limit access and the provision of a safe drinking water source to affected residents and businesses, the EPA has made the Tybouts Corner Landfill site safer while long term cleanup activities are underway.

Site Repository

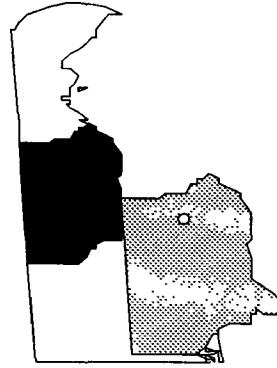


Delaware Department of Natural Resources and Environmental Control, 715 Grantham Lane, New Castle, DE 19720.

TYLER REFRIGERATION PIT

DELAWARE

EPA ID# DED980705545



EPA REGION 3

Kent County
Smyrna

Site Description

From 1952 to 1969, Tyler Refrigeration, located on a 3-acre parcel of land, used solvents to degrease and clean refrigeration equipment, and dumped the spent solvents, paint room wastes, and sludges into two unlined disposal pits. In the 1970s, Clark Equipment Company excavated the pit to a depth of 20 feet, filled it in, capped it with 6 inches of topsoil and clay, and planted vegetation. The site is now occupied by Metal Masters, an active manufacturer of commercial kitchen equipment. Public access is unrestricted, but most of the old pit's surface area has been paved. Since 1977, trichloroethylene (TCE) and trichloroethane (TCA) have been detected in Smyrna's municipal wells. The state identified the Tyler pit as a likely contributor to this pollution, although there may be other sources, since TCE has not been found in on-site soils or groundwater. In 1982, EPA conducted an investigation which revealed the presence of elevated concentrations of toluene, 1,1-dichloroethane and TCA in the soil taken around the former pit area. In 1988, EPA tasked the state to conduct a follow up site inspection. Analyses of the groundwater in the pit area revealed elevated concentrations of TCA. About 5,000 people receive drinking water from the Smyrna municipal wells. Sixty homes stand within 1/4 mile of the site; the closest is located within 300 feet.

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

NPL LISTING HISTORY

Proposed Date: 06/10/86

Final Date: 02/21/90

Threats and Contaminants



The groundwater near the former disposal pits is contaminated with volatile organic compounds (VOCs), including trichloroethane. Monitoring wells also have detected the pesticide, dieldrin, in groundwater samples down gradient of the former disposal pits. The soils contain elevated levels of VOCs. Accidental ingestion of or direct contact with contaminated soil or groundwater may pose a health threat.

Cleanup Approach

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

Response Action Status



operate.

Immediate Action: To remove VOC contamination in the municipal wells, the town improved the efficiency of its air-stripping process and added an activated carbon filtration unit to its water treatment system. The treatment system continues to



Groundwater: The parties potentially responsible for the site contamination began an investigation of contamination at the site in 1991. This investigation revealed that the groundwater is contaminated with VOCs. The groundwater contamination, however, does not appear to be related to the former disposal pits. An upgradient source on the nearby Metal Masters property is suspected to be the cause of the groundwater contamination. Metal Masters under state oversight is investigating the source and extent of this contamination.

Site Facts: A Consent Order was signed in 1991, under which the potentially responsible party agreed to perform an investigation of site contamination. In early 1995, the State of Delaware issued a Consent Decree to Metal Masters to perform an investigation to determine the source and extent of contamination.

Environmental Progress



By improving the air-stripping process and adding an activated carbon filtration unit to its water treatment system, the Town of Smyrna is reducing the threat of VOC contamination from municipal wells, making the public water supply safer while investigations to select the final remedy are conducted at the Tyler Refrigeration Pit site.

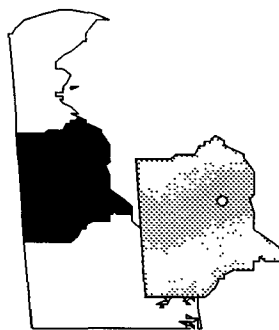
Site Repository



Smyrna Public Library, 107 South Main Street, Smyrna, DE 19977

WILDCAT LANDFILL DELAWARE

EPA ID# DED980704951



EPA REGION 3

Kent County
2 1/2 miles south of Dover,
adjacent to the St. Jones River

Site Description

From 1962 until 1973, a landfill operated on 44 acres of the 84-acre Wildcat Landfill site, situated next to the St. Jones River in Dover, 1/2 mile west of the Dover Air Force Base (AFB) NPL site. The privately owned landfill accepted municipal and industrial waste until it was closed under a State order for numerous violations of a State permit. Operators dumped wastes into wetlands and frequently left them uncovered. Groundwater is contaminated with heavy metals, organics, and low levels of polychlorinated biphenyls (PCBs). Open and empty metal drums, tires, solid latex, and municipal trash were scattered over the surface of the site. A 3-acre pond collected surface drainage from the western half of the landfill. Monitoring of drinking water wells in 1987 showed no contamination, but contaminant levels in groundwater underneath and downgradient of the site were at levels of public health concern. The St. Jones River, which borders the site, is used for recreational fishing and boating. Two trailer parks, the Dover AFB housing complex, and 12 residences are located within 1/2 mile of the site. Local residents rely on ground water for drinking water supplies and are served by public or private wells. There are 24 active wells within 1/2 mile and 16 within 1,000 feet of the site.

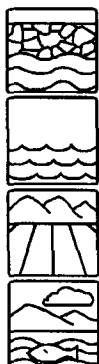
Site Responsibility: This site is being addressed by Federal, State, and potentially responsible party actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants



The groundwater was contaminated with chlordane, a pesticide, and volatile organic compounds (VOCs) including methylene chloride and xylene. On-site surface water, leachate, soils, and sediments contained PCBs and chlordane. Accidentally ingesting or coming into direct contact with contaminated groundwater, surface water, soil, sediments, or contaminated aquatic organisms may have threatened the health of people at or near the site. The State has issued a health advisory on fish caught from the St. Jones River.

Cleanup Approach

The site has been addressed in two long-term remedial phases focusing on source control and pond cleanup.

Response Action Status



Source Control: The remedy selected to clean up contamination from the landfill includes: restricting development of the site and preventing installation of drinking water wells on or near the site; grading, covering, and seeding on-site areas where direct risks of contact with contaminants have been identified; removing and disposing of drums; replacing two private domestic wells adjacent to the site with uncontaminated wells drilled deeper into the aquifer; and monitoring groundwater. All construction activities were completed in 1992. Monitoring of the groundwater continues to ensure the long-term effectiveness of the remedy.



Pond Cleanup: The remedy for the 3-acre pond that drained the western half of the landfill consisted of filling in the existing pond and building a new shallow pond southeast of the landfill. These activities were completed in 1992. Long-term monitoring will ensure the remedy remains effective.

Environmental Progress



Removal of site contaminants, placement of restrictions on the use of groundwater in the area, the replacement of contaminated wells, and pond replacement have eliminated the threat of exposure to hazardous materials from the Wildcat Landfill site. Long-term monitoring will ensure the remedy remains effective.

Site Repository



Delaware Department of Natural Resources & Environmental Control, Superfund Branch, 715 Grantham Lane, New Castle, DE 19720