United States
Environmental Protection
Agency

Solid Waste And
Emergency Response
(5201 G)

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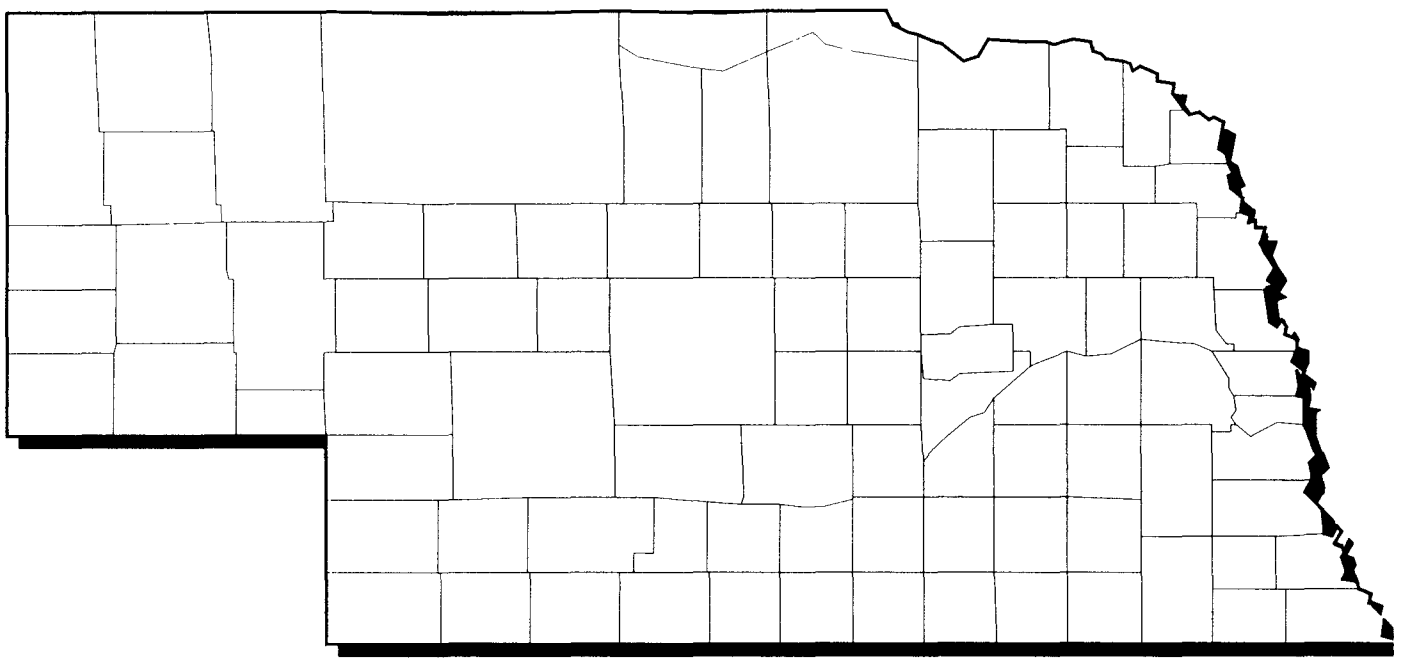
May 1995

SUPERFUND: Progress at National Priority List Sites



NEBRASKA 1995 UPDATE

Printed on Recycled Paper

How to Use the NPL Book

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

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

How Can You Use This State Book?

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

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

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

NPL LISTING HISTORY

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

SITE RESPONSIBILITY

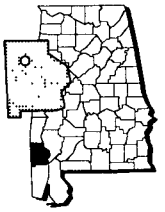
Identifies the Federal, State, and/or potentially responsible parties taking responsibility for cleanup actions at the site.

ENVIRONMENTAL PROGRESS

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

SITE NAME
STATE

EPA ID# ABC0000000



EPA REGION XX
COUNTY NAME
LOCATION

Other Names:

Site Description (A)

Site Responsibility:

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

Threats and Contaminants (B)

Cleanup Approach (C)

Response Action Status (D)

Site Facts: (E)

Environmental Progress

Site Repository

SITE REPOSITORY

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

A

SITE DESCRIPTION

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

B

THREATS AND CONTAMINANTS

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

C

CLEANUP APPROACH

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

D

RESPONSE ACTION STATUS

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

E

SITE FACTS

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

Guide to the NPL Book Icons

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

Icons in the Threats and Contaminants Section

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

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

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

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

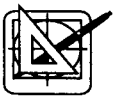
Threatened or contaminated *Environmentally Sensitive Areas* in the vicinity of the site. (Examples include wetlands and coastal areas or critical habitats.)

Icons in the Response Action Status Section

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

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

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



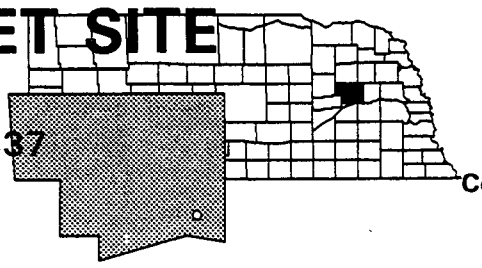
Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.

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

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

EPA ID Number	Site Name
NED981713837	10TH STREET SITE
NED986369247	AMERICAN SHIZUKI/OGALLALA ELECTRONICS CO
NED981713829	BRUNO CO-OP ASSOCIATION/ASSOCIATED PROPERTIES
NED981499312	CLEBURN STREET WELL
NE2213820234	CORNHUSKER ARMY AMMUNITION PLANT
NED980862668	HASTINGS GROUND WATER CONTAMINATION
NED068645696	LINDSAY MANUFACTURING CO.
NE6211890011	NEBRASKA ORDNANCE PLANT (FORMER)
NED084626100	SHERWOOD MEDICAL CO.
NED980862718	WAVERLY GROUND WATER CONTAMINATION

10TH STREET SITE
NEBRASKA
EPA ID# NED981713837



EPA REGION 7
Platte County
Columbus

Other Names:
Columbus Public Water Supply

Site Description

The 10th Street Site consists of nine municipal wells located in and around the City of Columbus. EPA sampling has revealed that several of the municipal drinking water supply wells are contaminated with volatile organic compounds (VOCs). Groundwater in the vicinity of the municipal well field is also contaminated with VOCs. The highest contaminant level in a monitoring well was detected under a city parking lot that formerly was used as a scrap metal yard. Among potential sources of soil contamination are a dry cleaning facility behind the lot and a laundromat. The municipal wells provide drinking water to approximately 18,600 people. All the wells use the alluvial aquifer, which is known to have been contaminated, as their water source.

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

NPL LISTING HISTORY
Proposed Date: 10/26/89
Final Date: 08/30/90

Threats and Contaminants

The groundwater serving municipal wells is contaminated with the VOCs tetrachloroethylene (PCE) and trichloroethylene (TCE). PCE and TCE also have been found in the soil. People could be exposed to these contaminants through the use of the municipal water supply. Additional exposure is possible if private wells are installed and used in areas of high levels of groundwater contamination.

Cleanup Approach

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

Response Action Status

Entire Site: The EPA has begun an investigation of the site to evaluate the nature and extent of contamination. The EPA is considering a remedy to contain groundwater contamination. After completion of the investigation, scheduled for late 1994, the EPA will be able to determine the best methods for the site cleanup.

Environmental Progress

After adding this site to the NPL, the EPA performed preliminary investigations and determined that no immediate actions were required at the 10th Street Site while studies are taking place and cleanup activities are being planned.

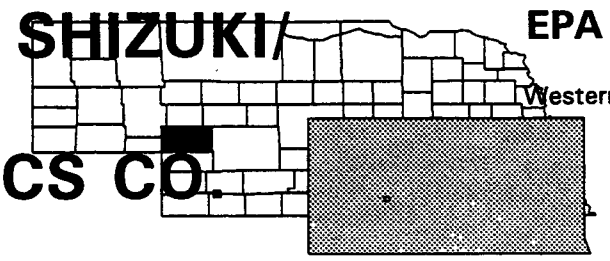
Site Repository

Columbus Public Library, 2504 Fourteenth Street, Columbus, NE

AMERICAN SHIZUKI/ OGALLALA ELECTRONICS CO.

NEBRASKA

EPA ID# NED986369247



EPA REGION 7

Keith

Western part of Ogallala

Site Description

The American Shizuki Corp./Ogallala Electronics Co. site consists of two properties approximately 15 acres and 1 acre in size, respectively. These properties, a block apart from each other, are located in the western part of Ogallala along the South Platte River. The area is primarily industrial, commercial, and residential. The first of the two properties has been used to manufacture electrical components since the early 1960s. The facility on this property was owned and operated by TRW, Inc. until 1986. American Shizuki Corp. took over the operations in 1987. Ogallala Electronics, which occupies the second property, also manufactures electronics components. The Nebraska Department of Health (NDH) first detected volatile organic compounds (VOCs) in five of the nine municipal wells serving Ogallala in 1987. The two companies were identified as the source of contamination during subsequent investigations. Public and private wells within 4 miles of the site supply drinking water to an estimated 5,100 people; the water from these wells also is used for irrigation.

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

NPL LISTING HISTORY
Proposed Date: 10/14/92

Threats and Contaminants

Various VOCs, including trichloroethane (TCE) and trichloroethane (TCA), were detected during a soil-gas survey conducted by the Nebraska Department of Environmental Control (NDEC) in mid-1990. These contaminants were used by both operations. Similar contaminants have been detected in monitoring wells in and around both properties and in numerous municipal wells.

Cleanup Approach

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

Response Action Status

Entire Site: The EPA began an investigation into the nature and extent of contamination and other possible sources of contamination in the fall of 1994. After this investigation, the EPA will select a remedy to clean up site contamination.

Environmental Progress

Initial assessments of the American Shizuki Corp./Ogallala Electronics and Manufacturing, Inc., site indicate that the site poses no immediate threats to the health of the nearby population or the integrity of the environment while a full-scale study into site conditions is underway.

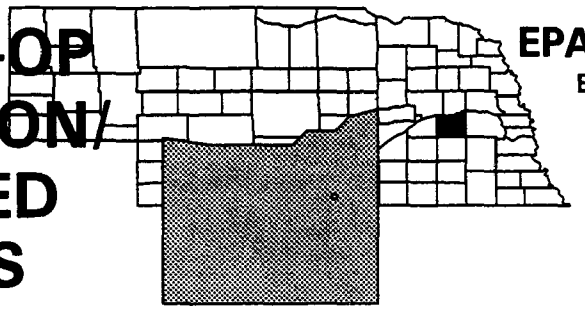
Site Repository

Not yet established.

BRUNO CO-OP ASSOCIATION/ ASSOCIATED PROPERTIES

NEBRASKA

EPA ID# NED981713829



EPA REGION 7
Butler County
Bruno

Site Description

The Bruno Co-op Association/Associated Properties site consists of two contaminated municipal wells in Bruno. One well is located at the intersection of Pine and Third Streets. The second well, 1,000 feet northwest of the first, is located on property that has been used to store grain since the 1940s. The site was originally owned by C & NW Railway Co. From 1947 to the 1960s, part of the property was leased to the U.S. Department of Agriculture (USDA), which used it as a Federal grain storage facility. Local farmers purchased all but one of the corn crib bins in 1964 and moved them off site. Bruno Co-op purchased the remaining bin. In 1988, the company also purchased Wagner Mills, Inc., a second business operating on the site. Currently, Bruno Co-op has two functional bins. Volatile organic compounds (VOCs) were first detected in 1986. These contaminants had been poured or pumped into the grain as fumigants. The surrounding area is primarily agricultural, commercial, and residential.

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

NPL LISTING HISTORY
Proposed Date: 10/14/92

Threats and Contaminants

Both the EPA and the Nebraska Department of Health (NDH) conducted tests from 1986 to 1988 and detected various VOCs, including carbon tetrachloride, and chloroform, in the two wells. Elevated levels of carbon tetrachloride have been identified in the Fremont well and the grain storage facilities. People who touch or ingest contaminated groundwater could be at risk.

Cleanup Approach

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

Response Action Status

Initial Actions: The EPA supplied bottled water to 150 residents of Bruno from mid-1989 to late 1990 as the Bruno Public Water Supply Co. constructed new wells.

Entire Site: An investigation into the nature and extent of contamination is being planned. After the investigation is completed, the EPA will select a final remedy to clean up site contamination.

Site Facts: The EPA has identified four parties potentially responsible for site contamination in addition to Bruno Co-op and the USDA.

Environmental Progress

By providing a drinking water supply to affected residents, the EPA has reduced immediate threats posed to the nearby population. Additional cleanup activities will be selected following a full-scale study into site conditions.

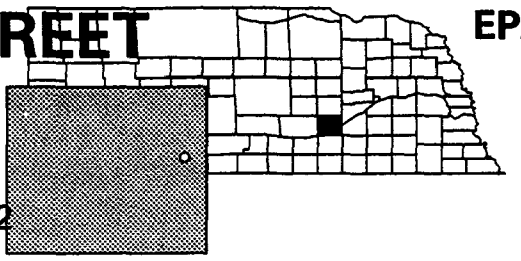
Site Repository

Not yet established.

CLEBURN STREET WELL

NEBRASKA

EPA ID# NED981499312



EPA REGION 7
Hall County
Grand Island

Site Description

The Cleburn Street well was once a drinking water source for the City of Grand Island. The municipal water system, serving 38,500 people, consists of 12 wells within city limits and 12 wells in the Platte River Island Well field southeast of the city. Now disconnected from the municipal water supply, the contaminated Cleburn Street well was found to be contaminated by tetrachloroethylene (PCE) in 1986. Subsequent studies indicated PCE-contamination in the groundwater and sub-surface soils. Results of EPA investigations indicate four separate areas of contamination: a former solvent company; and three dry cleaners who have used or stored PCE. The EPA is currently investigating the extent of contamination at all four areas and is evaluating cleanup alternatives. Some 1,100 residents not served by the municipal water system draw water from shallow private wells. The Cleburn Street Well is within 4 miles of food and forage crops irrigated by 333 wells.

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

NPL LISTING HISTORY
Proposed Date: 07/29/91
Final Date: 10/14/92

Threats and Contaminants

PCE and other volatile organic compounds (VOCs) were first discovered in the Cleburn Street well in 1986. PCE also was detected in on-site soils. Recent studies show PCE contamination of the shallow groundwater used by the city for drinking water. Ingestion of, or other contact with, contaminated groundwater or soil is a risk to public health.

Cleanup Approach

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

Response Action Status

Immediate Actions: The Cleburn Street well was disconnected from the municipal water supply in 1986. In the summer of 1993, the EPA began pumping to contain the most highly contaminated groundwater and to prevent further migration of the contaminants toward other municipal wells.

Entire Site: The EPA conducted a soil-gas investigation in 1988; PCE and other VOCs were detected in three areas on site. Site-wide investigations into the nature and extent of groundwater and soil contamination were initiated in 1991 and are expected to be completed in late 1994. The EPA currently is evaluating alternatives for long-term cleanup of groundwater and subsurface soils at each of the source areas.

Environmental Progress

Disconnecting the contaminated Cleburn Street well from the municipal water supply and containing the contaminated groundwater plume to prevent further migration of contaminants toward other municipal supply wells reduced the risk of residents coming into contact with contaminants from the site while investigations leading to final cleanup are underway.

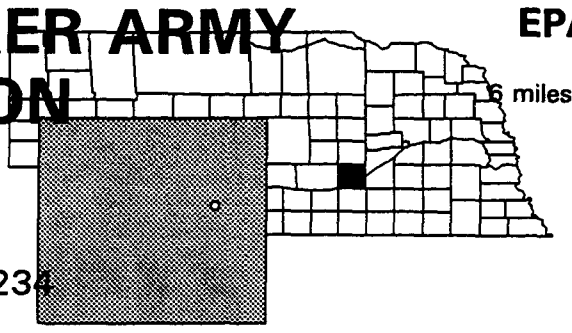
Site Repository

Edith Abbott Memorial Library, 211 N. Washington Street, Grand Island, NE 68801

CORNHUSKER ARMY AMMUNITION PLANT

NEBRASKA

EPA ID# NE2213820234



EPA REGION 7

Hall County

6 miles west of Grand Island

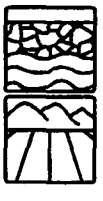
Site Description

The 19-acre Cornhusker Army Ammunition Plant is a U.S. Army Armament, Munitions, and Chemical Command facility. On standby status since 1973, the operation leases 16 square miles of land for agriculture, grazing, and wildlife management activities. The plant was built in 1942 to produce munitions and to provide support functions during World War II and has gone in and out of production over the years. It consists of five major components: (1) five major production areas where munitions were loaded, assembled, and packed; (2) a fertilizer manufacturer; (3) two major storage facilities; (4) a sanitary landfill; and (5) a burn ground where materials contaminated with explosives were ignited. When the plant was active, staff disposed of wastewater contaminated with explosives into 56 earthen surface impoundments, which were located near the five production areas. Dried solids from the bottom of the pits periodically were scraped and ignited at the burning ground. Releases from the surface impoundments have contaminated about 500 private wells. Activities at the site currently are limited to maintenance and leasing operations. Once the environmental studies required for real estate transactions are completed, the Army plans to sell the property. Polluted groundwater has migrated off the site and has been detected as far as 3½ miles beyond the plant's border. The area affected by groundwater contamination is mostly suburban, and residents rely on public and private wells for drinking water. Approximately 3,000 people live within 1 mile, and 27,000 live within 3 miles of the site. Groundwater also is used for farmland irrigation and for watering livestock.

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

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

Threats and Contaminants



Groundwater both on and off the site are contaminated with various explosives. Soils are contaminated with various explosives and heavy metals such as lead, chromium, and cadmium. Human and livestock health can be adversely affected by drinking the contaminated groundwater or through direct contact with contaminated soil.

Cleanup Approach

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

Response Action Status

Immediate Actions: The Army provided bottled water to the 250 homes with contaminated wells until residences could be hooked up to the city's water system. In 1986, the municipal water system was extended to 800 residences in Grand Island. A dewatering system was completed to control the high water table. In 1987, the Army started an incineration program to treat the contaminated soil in the 56 surface impoundments. Workers excavated the soil and then incinerated it to destroy the contaminants. The excavated pits were backfilled with sand and gravel from off the site, and the ash from the incinerator was landfilled on the site. The Army had burned 40,000 tons of soil by 1988, when the State-monitored operation ended. In 1991 and 1992, the Army began providing bottled water to additional homes with contaminated wells. This will continue until residences can be hooked up to the city's water system, expected to be completed in 1995. In addition, the EPA constructed a protective barrier around the burning grounds unexploded ordinance in 1993.

Entire Site: An investigation by the Department of the Army in 1990 identified several areas of potential contamination. The Army is investigating the plume of groundwater that has moved off the site to determine the types and levels of contaminants present, and the extent of its threat to human health and the environment. The Army submitted a draft report on their investigation in early 1993, but the EPA, the Army, and the State of Nebraska agreed that additional work would be necessary due to data gaps. This work involved dividing the site into smaller areas to facilitate the additional field work required. A Focused Feasibility Study to study ways to prevent further contaminant migration for the groundwater contaminated with explosives was completed in 1994. An interim cleanup remedy involving groundwater containment was signed in 1994. Additional fieldwork is planned for the second area in 1995.

Site Facts: Cornhusker Army Ammunition Plant is participating in the Installation Restoration Program, a specially funded program established by the DOD in 1978 to identify, investigate, and control migration of hazardous contaminants at military and other DOD facilities. An Interagency Agreement between the EPA, Nebraska Department of Environmental Control (NDEC), and the DOD was signed in 1990. Under this Agreement, the Army will investigate and clean up the site.

Environmental Progress

The continuing extension of the municipal water supply to over 800 residences and the provision of bottled water to additional homes has reduced the potential of exposure to hazardous substances in the drinking water. The incineration of contaminated soil has reduced other pathways of contamination at the Cornhusker Army Ammunition Plant. These actions will protect the public health and the environment while further studies are conducted and cleanup activities are being planned.

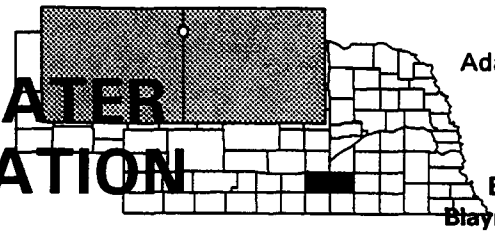
Site Repository

Grand Island Public Library, 211 North Washington Street, Grand Island, NE 68802
Cornhusker Army Ammunition Plant, 102 North 60th Road, Grand Island, NE 68803

HASTINGS GROUND WATER CONTAMINATION

NEBRASKA

EPA ID# NED980862668



EPA REGION 7

Adams County and Clay County
City of Hastings

Other Names:
Blayney Ammunition Depot
Blayney ExNaval Ammunition Base
Hastings Plume
Former Naval Ammunition Depot (NAD)

Site Description

Approximately 23,000 people live in the City of Hastings. Like most communities, industries have expanded to areas outside of the city limits. Farms and pastures surround the urban area, and many private and public wells lie within a 3-mile radius of the city. Ground water is used to irrigate crops and water stock and provides water for home and business use. A nearby stream and lake are used for recreation.

Concerns regarding volatile organic compounds (VOCs), including commercial grain fumigants in the Hastings city water supply, were investigated by the State in 1983. As a result, Hastings took two municipal supply wells out of service and placed other contaminated wells on a standby basis. Community Municipal Services, Inc. (CMS), a private water supply system serving the areas east of Hastings, also took two of its three wells off-line due to pollution. Frequent testing by the City and the State is conducted to assure that the water supplied to users by these two utilities is safe to drink.

Due to the size and complexity of the Hastings site, the following site description is organized into its four geographical areas: Central Industrial Area; Commercial Area; Hastings East Industrial Park/Former Naval Ammunition Dump; and South Landfill.

Central Industrial Area: This area encompasses commercial and industrial properties situated in the heart of Hastings, along the Burlington-Northern railroad right-of-way. The three subsites that make up this area are Colorado Avenue, Second Street, and Well #3. Three different industrial solvents have been detected in soils around Colorado Avenue. The source is suspected to be industrial discharges into the storm or sanitary sewers along this street. The Second Street subsite was identified during the 1987 to 1988 investigation of Colorado Avenue. Pollution from an old coal gas plant operation was detected in the soil at this subsite and in the downgradient ground water. Contaminants include VOCs, polycyclic aromatic hydrocarbons (PAHs), and phenols. Well #3 subsite, named for M-3, one of the city wells taken out of service, is contaminated with carbon tetrachloride (CCl_4), a grain fumigant. A second plume of contaminated ground water was identified in EPA's most recent investigation.

Commercial Area: This area, east of the Hastings city limits, contains the FAR-MAR-CO and North Landfill subsites. Operators of the FAR-MAR-CO subsite stored and handled agricultural products, mostly grains, for more than 30 years. VOCs, including toxic grain fumigants, have seeped into the soils and ground water. Grain dust explosions and spills from fumigant equipment on the subsite have contributed to the problem. While investigating soils at the FAR-MAR-CO

subsite, the EPA discovered trichloroethane (TCA) contamination on a portion now owned by a different company. The new owner acknowledged the use of TCA as a metal cleaning solvent. This area became the TCA Contamination Area portion of the subsite, which was cleaned up in 1989. The North Landfill originally was a local brickmaker's clay pit. Hastings operated it as a landfill in the 1960s to dispose of various municipal and industrial wastes. Studies have revealed that the FAR-MAR-CO and North Landfill subsites are polluting downgradient wells with VOCs.

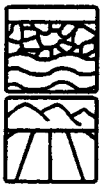
Hastings East Industrial Park/Former Naval Ammunition Depot (NAD): The former NAD, located about 2 miles east of Hastings, straddles two counties: Clay and Adams. The 48,000-acre NAD was used for loading armaments until the early 1950s, and later for the demilling of armaments until it was decommissioned in the early 1960s. The U.S. Army Corps of Engineers is conducting studies at the site under the authorization of the Department of Defense (DOD). The Corps has discovered that explosives, heavy metals, and VOCs are the major contaminants. Although contaminants that have been detected are generally consistent with the chemicals used by the Navy operations, the industries established in the Hastings East Industrial Park (HEIP) since the 1960s may have generated some of the VOCs being detected. The portion of this investigation focusing on surface contamination on 2,600 acres of the HEIP has been completed.

South Landfill: This landfill, southeast of the Hastings city limit, was operated by the City and accepted industrial waste during the 1960s and 1970s. Contamination at this subsite consists primarily of several types of VOCs.

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

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

Threats and Contaminants



Ground water and soils at the various subsites are contaminated with a wide range of VOCs and other organic compounds. The NAD site is contaminated with heavy metals and explosives in addition to VOCs, and the Second Street subsite also contains PAHs. The city water supply is safe for drinking, but people and livestock may experience adverse health effects from drinking contaminated ground water around the subsites, which are located outside the city limits.

Cleanup Approach

Because of the size and complexity of the site, a number of long-term remedial phases are required to address the overall control of contamination in the ground water and soil (source control). Source control actions have been given priority. The site has been divided into subsites which generally focus on addressing the source of contamination and the resulting ground water contamination at each of the area subsites.

Response Action Status

Well #3 Plume 1/Source Control: The EPA selected a remedy for the Well #3 subsite in 1989, which focuses on cleaning up the source of CCl_4 in the ground water. The remedy featured soil vapor extraction whereby volatile contaminants are "vacuumed" from the soils, and the vapors are treated with activated carbon to remove the contaminants. The EPA and the State completed the soil cleanup at the Well #3 subsite in 1993.

Well #3 - Plume 2/Source Control: A second contamination plume, consisting primarily of the VOCs TCA, trichloroethylene (TCE), and tetrachloroethylene (PCE), was found in the EPA's most recent investigation in the fall of 1993. The EPA and a party potentially responsible for site contamination have completed two soil gas surveys to determine the sources of the plume. Investigations are expected to continue until late 1995, when the EPA anticipates selecting the appropriate cleanup remedy.

Well #3 Ground water - Plume 1 (CCl_4): Studies into the nature and extent of ground water contamination at this subsite began in 1991 and were completed in 1993. Currently, the EPA and the State are designing the ground water cleanup system to address this plume. Cleanup actions are expected to begin in 1995.

Well #3 Ground water - Plume 2: The EPA decided in 1993 to extract and treat the second plume related to Well #3. As part of the plume 2 source control, the EPA will determine those potentially responsible for contamination to lead the implementation of the selected cleanup action. Design of the extraction and treatment system is anticipated to start in early 1995.

Colorado Avenue Source Control: In 1988, the EPA selected a cleanup approach which focuses on cleaning up 42,700 cubic yards of soil polluted with VOCs that are associated with the contaminated sewers along Colorado Avenue. The parties potentially responsible for the contamination at this subsite will "vacuum" volatile chemicals from the soil without digging it up, treat the removed vapor with activated carbon, if necessary, and monitor soil, air, and ground water at the site. Design of the cleanup action began in 1988, based on a pilot study of the proposed cleanup technology. The cleanup actions are expected to begin in 1995.

Colorado Avenue Ground water: The EPA completed a study into the nature and extent of ground water contamination at this subsite in 1991. The EPA has chosen to extract and treat the ground water in the most contaminated area of the plume. The potentially responsible parties began predesign work and completed an aquifer/pump test at the subsite in 1993. Treatment of the ground water is expected to begin in 1996.

Second Street: The EPA completed an investigation of the Second Street area in 1994. The EPA and the State currently are reviewing this subsite and its cleanup needs. In the meantime, additional work to define the extent of ground water contamination at this area is continuing. A cleanup decision is expected by 1996.

North Landfill Ground water: The EPA began an intensive study of ground water contamination at this subsite in 1985. Workers installed three ground water monitoring wells at the landfill and tested wells east of the site. Data revealed contamination by a variety of VOCs. In 1989, the parties potentially responsible for contamination at the landfill agreed to take over this study. This effort included recommending to the EPA the best strategies for final cleanup. In 1991, EPA selected an extraction and treatment remedy as an interim action. The design of the interim treatment system is currently underway by the City of Hastings and Dutton Lainson Company, under EPA monitoring, and is expected to be completed in late 1994.

North Landfill Source Control: Studies to determine the sources of soil and ground water contamination at the North Landfill and to determine cleanup alternatives are complete. In 1991, a landfill cap and gas monitoring remedy was selected as an interim cleanup measure. The design of the landfill cap is currently underway by the City of Hastings and Dutton Lainson Company, and is scheduled for completion in late 1994.

FAR-MAR-CO Soil: The EPA selected a remedy for soil cleanup at this subsite in 1988. A fumigant spill resulted in contamination of about 33,800 cubic yards of soil, and the ground water beneath it is also highly polluted. Features of the remedy include soil vapor extraction, whereby volatile chemicals are "vacuumed" from the soil without displacing it and treated with activated carbon to remove vapor, if necessary; temporarily covering the contaminated soils to restrict contact; and monitoring soil, air, and ground water at the site. The parties potentially responsible for site contamination completed the design of the cleanup remedy in 1994. Cleanup actions are expected to begin soon.

FAR-MAR-CO Ground water: The potentially responsible parties are conducting an investigation of the ground water contamination in the FAR-MAR-CO area. The results of the investigation will be used to develop a technical approach for restricting the flow of contaminated ground water beneath the site and to evaluate the need for ground water treatment. The potentially responsible parties, who are conducting the investigation at this subsite, relocated two residents from this subsite in 1990. The investigation is expected to be completed in 1995.

TCA Contamination Area: The party potentially responsible for the TCA contamination removed the polluted soil and transported it to a licensed hazardous waste disposal facility in 1989. The same party signed a Consent Order with the EPA and completed a study of the contamination in 1990. Based on the results of this study, the EPA recommended that the potentially responsible party monitor the ground water for a period of two years. This ground water testing showed no further contaminants, indicating that the removal action effectively prevented migration of TCA to the ground water.

South Landfill: The EPA completed a soil gas investigation at the subsite in 1994. The field investigations needed to characterize the nature and extent of contamination at this subsite have been discussed with the City of Hastings and the other parties potentially responsible for its contamination. The EPA has determined that further investigations are needed to define the nature and extent of the ground water contamination. These investigations are planned to be completed in late 1996.

Yard Dump and Bomb and Mine Complex: As part of the NAD investigation, the U.S. Army Corps of Engineers is currently evaluating the nature and extent of contamination in this area. The on-going study is focusing on defining the extent of metals, volatiles and explosives contamination. The area is located along the southern boundary of the NAD, approximately one mile north of the town of Glenville. The study is expected to be completed in early 1996, at which time a cleanup approach will be selected to address the contamination.

Hastings East Industrial Park (HEIP) Surface Soils: The U.S. Army Corps of Engineers began an intensive study of ground water contamination at this subsite in 1986. The HEIP subsite is in the former Navy Ammunition Depot. In 1988, the Corps released the results of the first part of the study, which identified sources of ground water contamination. The report confirmed that explosives are the major contaminants at the site, along with PAHs, heavy metals, and VOCs. In 1990, the Corps issued a final report on this study addressing contaminated ground water and soils. Also in 1990, a remedy was selected for the cleanup of the surface soils. The remedy recommended that soils above a predetermined cancer risk level be incinerated off site. Soils slightly below this risk level, as well as soils of a non-carcinogenic nature, are to be stabilized and placed in an on-site landfill. The remedy also called for a treatability study which was completed in 1993. Results of the treatability study and additional information gathered during design investigations support minor amendments to the 1990 remedy. These amendments included transportation of soils requiring incineration to an off-site facility for treatment and disposal, stabilization of the soil contaminated by metals, and disposal of stabilized soils and soils contaminated with low level organics in an on-site landfill. In addition, the proposed remedy is an interim action for addressing PAH contamination. The Army Corps of Engineers continues to fully characterize PAH contamination at the site. A final remedy specifically addressing PAHs will be selected once this further investigation is completed. The technical design for the cleanup of soil contaminated by VOCs and heavy metals is expected to be completed in 1995.

HEIP Ground water and Vadose Zone: A portion of this study was completed concurrently with the study of this area's surface soils described above. As part of this ongoing study, the Army Corps of Engineers issued a Ground water Modeling Study in 1990. The Corps continues to modify this ground water model to address different cleanup alternatives. Additional investigations are ongoing for both ground water and vadose contamination. These investigations are planned to be completed in early 1996.

Site Facts: Funding provided by EPA, the State, the Department of Defense, the City of Hastings and the potentially responsible parties is being used to cleanup the Hastings site. In compliance with a 1988 Administrative Order on Consent (AOC), several parties potentially responsible for site contamination demonstrated successful recovery of VOCs at the Colorado Avenue subsite. Thereafter, the EPA issued two Unilateral Administrative Orders that require the potentially responsible parties at the Colorado Avenue to perform the cleanup. The EPA and the City of Hastings signed an AOC in 1989 for conducting an investigation at the North Landfill subsite. The EPA, the City, and the Dutton Lainson Company signed an AOC in 1992 to perform the technical design to implement the ground water extraction and treatment system and the landfill cap at the North Landfill. Hastings Irrigation Pipe Company and the EPA signed an AOC in 1989 requiring the firm to perform an investigation and remove polluted soil from the

TCA Contamination Area. Farmland Industries and the EPA signed an AOC to conduct treatability studies and complete the technical design for controlling the source of contamination at the FAR-MAR-CO soil subsite. Morrison Enterprises is performing an investigation of the ground water at the FAR-MAR-CO subsite under the terms of the AOC. The EPA and Dutton Lainson entered into an AOC requiring Dutton Lainson to perform a soil gas investigation at their property at the Well #3 Plume 2 subsite.

Environmental Progress

Due to the numerous cleanup actions and the number of contaminated areas and subsites at the Hastings Ground Water site, the status of cleanup activities varies. The ground water actions will be long-term. In general, however, the potential for exposure to hazardous substances in the ground water has been greatly reduced by closing down contaminated wells while further studies and cleanup activities are being planned and conducted. Further contamination of the ground water is being prevented by the EPA and other parties' efforts to clean up the sources of contamination. The EPA continues to monitor the quality of the ground water adjacent to the Hastings site, informing property owners and businesses when contaminant levels exceed acceptable limits. Discussions between the EPA, the State, the City and the potentially responsible party group continue in an effort to apply the Superfund process to determine a final remedy for the Hastings Ground Water site.

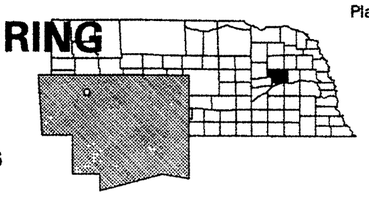
Site Repository

Hastings Public Library, Fourth and Denver Streets, Hastings, Nebraska 68901. In addition, the Central Community College Library, E. U.S. Highway 6, Hastings, NE 68901 contains some documents.

LINDSAY MANUFACTURING CO.

NEBRASKA

EPA ID# NED068645696



EPA REGION 7

Platte County
Lindsay

Site Description

The Lindsay Manufacturing Company generates sulfuric acid waste from a galvanizing process at its plant. The wastes were discharged into an unlined pond for at least 15 years. The pit was closed in 1983, when three monitoring wells showed contamination. The site is surrounded by agricultural land. Approximately 3,000 people live within a 3-mile radius of the site, with the nearest residence being 300 feet away.

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

NPL LISTING HISTORY
Proposed Date: 06/24/88
Final Date: 10/04/89

Threats and Contaminants

On-site groundwater contains heavy metals including zinc, iron, cadmium, chromium, and lead from former process wastes. Off-site groundwater contains heavy metals including cadmium, zinc, and volatile organic compounds (VOCs). VOCs also have been identified in the perched sand channel in the northern half of the site, in clay soils in the area around the northern quarter of the main plant, and between the main plant and the southern end of the galvanizing building. People could be exposed to contaminants by drinking water from contaminated private wells, by direct contact with contaminated water, by inhaling contaminants released during water use, or by eating food in which contaminants have bioaccumulated.

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 1984, Lindsay began operating an interim pump and treat system, whereby the groundwater is treated by neutralizing and removing contaminants. A second extraction well was installed in 1989 to control off-site migration of contaminants and increase the radius of influence. Off-site monitoring wells show that the project is controlling the migration of contaminants from the site.

Entire Site: Lindsay began a study of the nature and extent of contamination remaining at the site, as well as the alternative technologies for cleanup. The study was completed in 1990. Based on the results of the study, the EPA selected a remedy that included a pilot study to evaluate the feasibility of vacuum extraction of on-site soils, installation of such a system if it is deemed practical, enhancement and utilization of the existing groundwater extraction and treatment systems, installation of additional groundwater monitoring wells, and continued monitoring of the groundwater collection/treatment system during cleanup activities. Lindsay began the technical design for these activities in 1992. In early 1993, a third extraction well became operational to assist in pumping and treating the groundwater. The soil vapor extraction pilot study was concluded in January 1993. Pilot results show that a full scale system is practicable. Design of the full scale system was completed in mid-1994; construction began shortly thereafter and is expected to be completed in 1996.

Site Facts: In April 1992, a Consent Decree was signed that requires the potentially responsible parties to design the remedy and clean up the site under EPA monitoring.

Environmental Progress

The groundwater restoration project described above has reduced the potential for exposure to hazardous materials at the Lindsay Manufacturing site while construction of the final cleanup actions is underway.

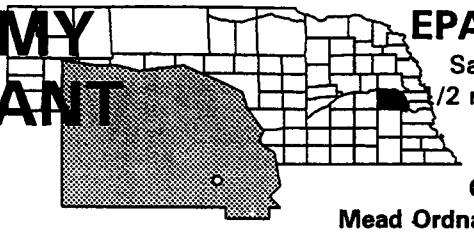
Site Repository

Columbus Public Library, 2504 14th Street, Columbus, NE 68801

NEBRASKA ARMY ORDNANCE PLANT

NEBRASKA

EPA ID# NE6211890011



EPA REGION 7

Saunders County
1/2 mile east of Mead

Other Names:
Mead Ordnance Plant; University of Nebraska, Mead Field Laboratory

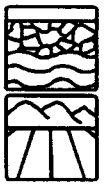
Site Description

The 17,000-acre Nebraska Army Ordnance Plant site operated from 1942 to 1956 as a munitions production plant for four bomb loading lines during World War II and the Korean War. In addition, the plant was used by the Army for munitions storage and ammonium nitrate production. The Air Force also built and maintained three Atlas missile silos at the facility from 1959 to 1964. Some of the processes associated with these activities used organic solvents. Beginning in 1962, portions of the plant were sold to various entities. Today, the major production area of the former plant, approximately 9,000 acres, belongs to the University of Nebraska, which uses it as an agricultural research station. The remaining acreage is owned by the Nebraska National Guard and numerous individuals and corporations. Approximately 400 people obtain drinking water from wells within 3 miles of the site. Groundwater also is used for crop irrigation and livestock watering.

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

NPL LISTING HISTORY
Proposed Date: 10/26/89
Final Date: 08/30/90

Threats and Contaminants



The groundwater is contaminated with volatile organic compounds (VOCs) and munitions wastes. The soil also is contaminated with munitions wastes, as well as polychlorinated biphenyls (PCBs). People who have direct contact with or ingest contaminated groundwater or soil may be at risk.

Cleanup Approach

Several emergency cleanup actions have been taken at the site, and will continue to be taken on an as-needed basis. Long-term cleanup of the site is being addressed in three phases: the first addresses soil contaminated by munitions waste; the second focuses on groundwater contamination; and the third focuses on the remaining site contamination.

Response Action Status

Emergency Actions: In 1989, the U.S. Army determined that a private well was contaminated. The EPA immediately responded by providing the owners with bottled water, which later was provided by the Army. The Army since has installed a carbon filtration system at that residence and another nearby residence. The Army removed "hot spots" of PCB-contaminated soils from the site in 1994.

Soils: The Army began conducting an investigation in 1991 to determine the extent of soil contamination at the site. The investigation was completed in 1993. The results currently are being evaluated to select the appropriate technology for cleaning up the soil. Selection of a cleanup approach is expected to take place in 1995.

Groundwater: The Army completed an investigation into the nature and extent of groundwater contamination at the site in 1994. The results currently are being evaluated to select the appropriate technology for cleaning up the groundwater. Selection of a cleanup approach is expected to take place in 1996.

Site-wide: In addition to analyzing soil and groundwater contamination at the site, the Army also is conducting investigations into other possible contamination. The Army began these investigations in late 1994 and is expected to complete them in late 1996.

Site Facts: The Nebraska Army Ordnance Plant site is participating in the Defense Environmental Restoration Program, a specially funded program established by the Department of Defense (DOD) in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities. An Interagency Agreement between the EPA, State, and Army was signed in 1991 to coordinate cleanup responsibilities.

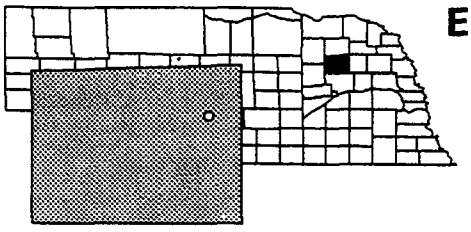
Environmental Progress

Providing bottled water, installing a carbon filtration system, and removing "hot spots" of PCB-contaminated soil have reduced the potential of exposure to hazardous substances in the drinking water while further investigations are underway at the Nebraska Army Ordnance Plant site.

Site Repository

Contact the Region 7 Superfund Community Relations Office.

SHERWOOD MEDICAL CO.
NEBRASKA
EPA ID# NED084626100



EPA REGION 7
Madison County
Norfolk

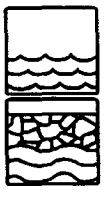
Site Description

The 60-acre Sherwood Medical Co. site consists of the plant property and nearby wells contaminated with volatile organic compounds (VOCs). Since 1962, Sherwood Medical Co. has manufactured disposable medical supplies. From 1961 until early 1967, the floor drains in the tool room, thought to be a major source of contamination, discharged into Sherwood Lake. In early 1967, the drains were rerouted to a concrete catch basin and then to septic system leach fields on the west side of the plant. In early 1969, the discharge from the drain was diverted into a 2000-gallon underground storage tank and then to the leach fields. Approximately 7 gallons of solvent were placed in the tank each month. The tank also received larger volumes of diluted, nonhazardous caustic waste along with the toolroom wastewater from 1969 to 1989. This arrangement continued until 1974, when use of the leach fields was discontinued and a sewage treatment system was installed for the plant. Discharges from the tool room continued to go into the tank through late 1989, when the tank was removed from service. A local pumping service periodically emptied the tank between 1974 and 1989. From 1973 to 1986, plastic injection molds were cleaned in two plant areas that had floor drains connected to a septic system. Local wells were sampled by the EPA and the Nebraska Department of Health from 1987 to 1989. VOCs were detected in Sherwood Well #5, used for industrial purposes, and the main well serving the residences of the Park Mobile Home Court (PMHC). Soil-gas surveys led site investigators to believe that contaminants are migrating in a north/northeast direction with groundwater flow into PMHC's main well and backup wells. In 1989, the EPA detected VOCs in the tank and the settling basin. Public and private wells within 4 miles of the site provide drinking water to an estimated 5,900 people. Corn grown for livestock consumption is located on land irrigated by wells within 3 miles of the site. The surrounding area is used for agricultural, residential, and commercial purposes.

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

NPL LISTING HISTORY
Proposed Date: 07/29/91
Final Date: 10/14/92

Threats and Contaminants



At the plant facility, VOCs were present in the septic system, including the tank and settling basin. Discharges of wastewater to the disposal pond also were found to contain VOCs. Contamination has migrated through the groundwater and is seeping into the water supply of a well used for industrial purposes and the main and backup wells of PMHC.

Cleanup Approach

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

Response Action Status

Immediate Actions: In 1988, the EPA supplied the residents of PMHC with bottled water. Later, a carbon treatment system was installed to treat the PMHC drinking water and the EPA discontinued supplying water to the residences. In 1989, PMHC was connected to an uncontaminated well. Other immediate actions taken included cleaning the septic tank and settling basin, taking them out of service, and rerouting floor drains to the plant's sewage treatment system.

Entire Site: Under the supervision of the EPA, Sherwood conducted an investigation at the site to determine the extent and nature of contamination and to identify alternative technologies for cleanup. Sherwood completed the study in 1993 and the EPA selected a remedy that includes excavation and low temperature thermal treatment of contaminated soils in two source locations, groundwater monitoring, provision of drinking water to PMHC and to affected and nearby industrial properties, and removal of the septic and underground storage tank systems. The design of the cleanup remedies are scheduled to begin soon.

Site Facts: An Administrative Order on Consent between the EPA and Sherwood Medical Co. was signed in August 1989, requiring the company to perform immediate cleanup actions. An Administrative Order on Consent for the potentially responsible party to investigate site contamination went into effect in March 1991.

Environmental Progress

Immediate actions such as supplying bottled water and installing a carbon treatment system have reduced health and safety risks to the nearby population while Sherwood Medical Co. plans activities for final cleanup of the site.

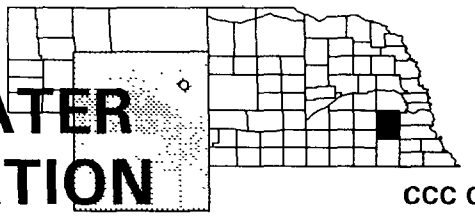
Site Repository

Not established.

WAVERLY GROUND WATER CONTAMINATION

NEBRASKA

EPA ID# NED980862718



EPA REGION 7

Lancaster County
Waverly

Other Names:
CCC Commodity Credit Corporation
Hedrick Site

Site Description

The Waverly Ground Water Contamination site extends over an 11-acre area underlying the City of Waverly. The U.S. Department of Agriculture operated a Federal grain facility in Waverly from 1952 to 1974. A grain fumigant consisting of carbon tetrachloride and carbon disulfide was used at the facility from 1955 to 1965. Since 1975, the property has been owned by Lancaster County, which operates a district office and maintenance facility on the premises. The EPA and the State of Nebraska sampled the municipal wells in 1982 and found them to be contaminated. One well was taken out of service, two wells were placed on standby status, and the city drilled new wells to replace them. The area surrounding the site is predominantly agricultural. The population of Waverly is approximately 1,700 people. There is a residential area adjacent to the former grain facility. Several private wells near the site are used for livestock and crop irrigation. Runoff from the site drains into Salt Creek.

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

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

Threats and Contaminants

Samples taken from the municipal wells contained concentrations of heavy metals, volatile organic compounds (VOCs), nitrates, and sulfates. The soil is contaminated with VOCs including carbon tetrachloride and chloroform. Contaminants from the soil have seeped into the aquifer, the source of water for the municipal water supply. The polluted wells were taken out of service, and new wells were drilled; therefore, the municipal water supply is safe to use. The new wells are upgradient of the site and are not likely to be threatened. If contaminated water is used for irrigation or for watering livestock, pollutants may accumulate in the crops or animals which, if eaten, may pose a health threat to people. Because ground water discharges into Salt Creek, fish in the creek may be contaminated and cause adverse health effects in people who eat them.

Cleanup Approach

Response Action Status

Immediate Actions: In 1988, as an immediate response to the ground water contamination, the EPA installed ground water monitoring wells, a system of pipes and wells in the ground connected to a pump to remove vapors contaminating soil (soil gas extraction system), and a ground water treatment system using air stripping. The ground water treatment involves forcing a stream of air through the contaminated water to evaporate the chemicals, which then are released into the atmosphere. Air monitoring is conducted to ensure that emissions are within acceptable limits. Treated ground water is discharged to a ditch near the site. The U.S. Department of Agriculture (USDA) is performing the operation and maintenance on the ground water extraction and soil gas treatment system. An additional extraction well was added to the system in 1994 to address contamination discovered outside the influence of the current ground water extraction well.

Entire Site: The USDA completed an investigation into the nature and extent of contamination at the site. Based on the results of this investigation, the EPA recommended that the immediate actions described above be continued until cleanup of soil and ground water is achieved. Operation and maintenance of the ground water treatment system is expected to continue for 6 years.

Environmental Progress

Construction at the site is complete. With the ground water cleanup actions described above underway and new wells providing drinking water to residences, the potential for accidental contact with contaminated ground water or soil has been reduced while operation of the ground water treatment system continues.

Site Repository

Contact the Region 7 Superfund Community Relations Office.