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Environmental Protection
Agency

Solid Waste and
Emergency Response
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EPA

Superfund At Work

Hazardous Waste Cleanup Efforts Nationwide

U.S. Environmental Protection Agency
Region 5 Library

Woodbury Chemical Co. Site Profile

Site Description:
Former pesticide formulation facility in Commerce City, Colorado

Site Size: 15 acres

Primary Contaminants:
Pesticides, heavy metals, and volatile organic compounds

Potential Range of Health Risks:
Acute toxicity, skin and eye irritations, increased risk of cancer

Nearby Population:
3,000 people within one mile

Ecological Concerns:
Contaminated surface water and potential contamination of the aquifer north of the site

Year Listed on NPL: 1983

EPA Region: 8

State: Colorado

Congressional District: 1

Success in Brief

Site Restored for Unrestricted Use in Colorado

Careless management practices characterized the operations of the Woodbury Chemical Company during almost 20 years of pesticide manufacturing. The company folded in 1971, leaving behind highly contaminated soil and debris as well as tainted surface water. State officials called upon the U.S. Environmental Protection Agency (EPA) to authorize an expedited cleanup under the Superfund program because of the property's proximity to a minority community. Using enforcement authority, EPA located the parties responsible for the contamination and negotiated a thorough remediation, allowing unrestricted redevelopment of the site. Highlights of the overall effort included:

- Excavation and incineration of 2500 truck loads of soil and debris and disposal of contaminated materials at permitted facilities;
- An extensive community relations program that included door-to-door outreach and Spanish translation of documents;
- Recovery of EPA's site investigation and oversight costs;
- Deletion of the site from EPA's National Priorities List in 1993, the first in Colorado and Region 8.

Despite the potential for considerable environmental damage from heavy concentrations of pesticide residues, the exposure to the local population was minimal.

Children play on a cool, spring morning after EPA staff explained the Superfund process to parents.

The Site Today

Excavation and incineration are complete; old buildings and concrete foundations are gone. The site has been backfilled with clean soil and planted with grass. Because of the efficient and conscientious removal of contaminants, the site can be converted to more productive uses, resulting in greater benefits for nearby residents.

A Site Snapshot

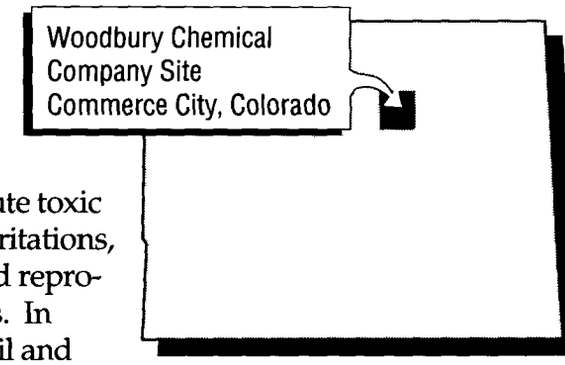
The 15-acre Woodbury Chemical Company site is located in Commerce City, Colorado on the north Denver County line. A mobile home park is located one-third of a mile from the property and about 3,000 people work or live within a one-mile radius.

Woodbury Chemical Company operated a pesticide formulation facility at the site from the late 1950s until 1971. When a fire destroyed the main building in 1965, debris and rubble, including water-soaked bags of pesticides and contaminated soil, were carelessly dumped in a vacant lot next door. A new building was constructed on the original site and manufacturing resumed.

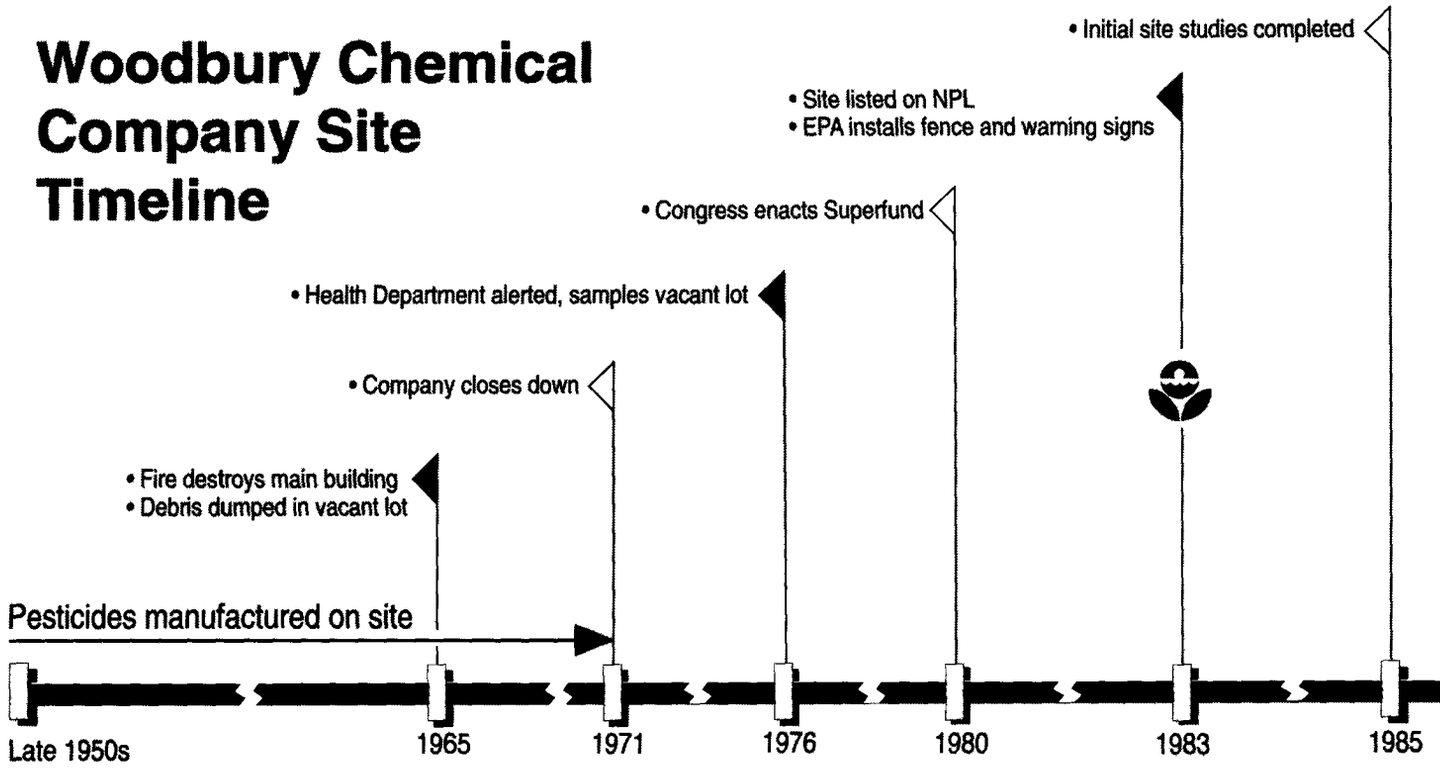
Five years after Woodbury Chemical closed its doors, the local health department was alerted to contaminated storm runoff from the vacant lot. Analysis of samples revealed chlorinated pesticides, heavy metals, and volatile organic compounds (VOCs) in the soil and an aquifer north of the site. Fortunately, samples of six wells in the vicinity found no evidence of contamination.

Most synthetically-derived pesticides are highly persistent, meaning residues are left in the environment for long periods of time, even years. These pesticides can cause a variety of acute toxic reactions, skin and eye irritations, cancers, birth defects, and reproductive system disorders. In addition, pesticides in soil and ground water can render habitat unusable for a variety of species, including birds, mammals, reptiles, and indigenous plants.

Because of health and environmental effects, EPA has banned many different pesticides, including aldrin, DDT, sodium arsenite, and vinyl chloride, some of the same chemicals used at Woodbury Chemical.



Woodbury Chemical Company Site Timeline



Pesticides Taint Soil and Surface Water in Adams County

EPA Begins Cleanup under Superfund

Woodbury Chemical was just one of hundreds of industrial problem sites that had gained national attention during the late 1970s. In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act, which established the "Superfund" cleanup program. Having no legislative authority themselves, the states identified their worst sites for inclusion on EPA's National Priorities List (NPL). The Woodbury Chemical site was nominated by the State of Colorado and then included on the NPL in 1983.

To prevent public access and to help stabilize the site, EPA posted warning signs, installed a fence around the property, and graded the soil to prevent additional runoff from rain and snowmelt. In 1985, EPA completed studies confirming high levels of pesti-

cides and heavy metals within the rubble piles from the 1965 fire and in lower concentrations in the soil. Based on these findings, EPA recommended removing the contaminants to a permitted incinerator for destruction. Soil with lower levels of contamination and the ash from incineration would be disposed of at an EPA-approved facility.

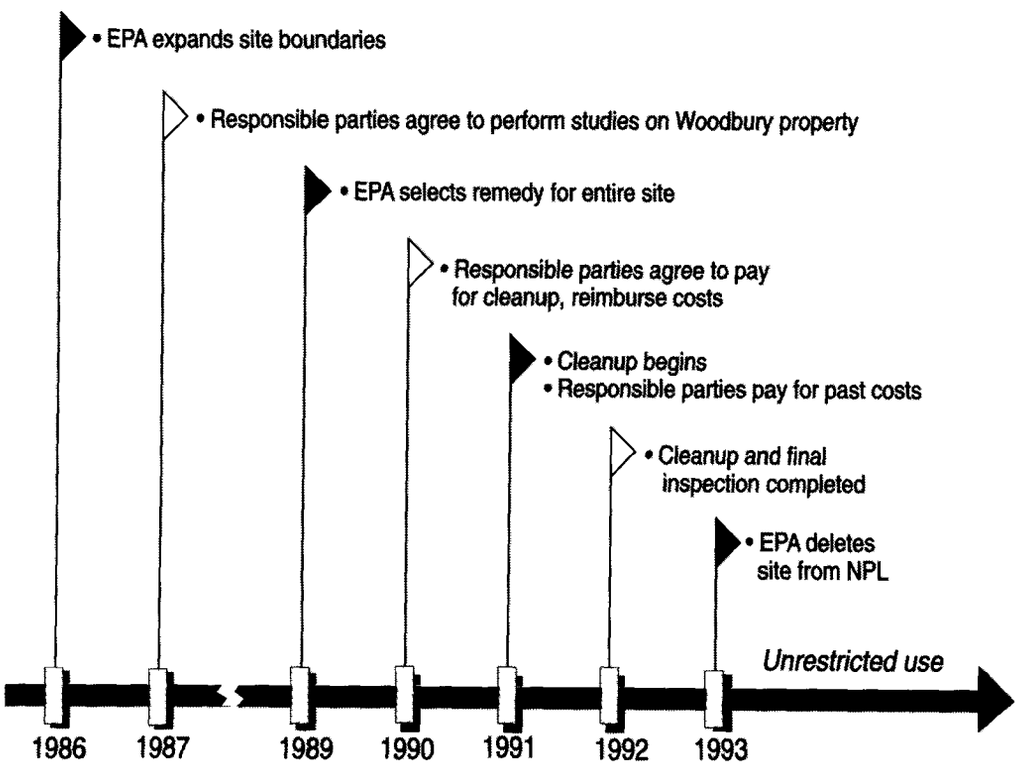
Before the remedy was carried out, EPA discovered that contaminated surface water had polluted a significant amount of additional soil west of the vacant lot where Woodbury Chemical operated. EPA expanded the site boundaries in 1986 to include the Woodbury property and a second vacant lot in the cleanup.

McKesson Chemical Company had purchased the Woodbury property in 1971, and in 1987 signed an Administrative Order on Consent to study the extent of contamination for the expanded site boundary. The community approved of the plan to incinerate the hazardous wastes and landfill the remaining materials.

Remedial Work Begins

In 1990, McKesson Chemical Company and Farmland Industries, a former property owner, signed a Consent Decree to clean up the entire Woodbury Chemical site and to reimburse EPA for earlier costs. Another former property owner, Maytag, also agreed to pay a portion of EPA's costs.

With EPA monitoring activities, the remedial work began in June 1991 and included excavation and incineration of soil and debris. Less contaminated soil and rubble, including train rails and ties, were disposed of at a permitted facility. The site buildings were demolished and concrete foundation and footings removed. Site air and



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ground water were monitored to safeguard against the spread of contamination during cleanup activities.

Following excavation, the site was backfilled with clean soil and seeded with native grasses. EPA and Colorado State officials made a final inspection of the site in June 1992, about one year after cleanup began. Final tests confirm that the site no longer poses an environmental threat and can be redeveloped without restrictions. Because of the thoroughness of the remedy, neither a five-year review nor any operation and maintenance activities were required.

In March 1993, the site was deleted from the National Priorities List. The Superfund sign was removed during a special ceremony attended by EPA, state and local officials, environmental groups, and area residents.

EPA Informs and Protects Residents

EPA undertook an aggressive community relations program for residents living near the Woodbury Chemical site. The program included a door-to-door outreach effort and distribution of bi-monthly fact sheets in English and Spanish.

Translators attended public meetings and encouraged area residents to review and comment on EPA's selection of remedy and cleanup criteria. Proposed routes that trucks would take to transport contaminated materials off site were designed to prevent traffic through neighborhoods.

Community Relations Coordinators and the Remedial Project Manager for the site held many informal meetings with local residents and coordinated with county health departments and the Colorado Division of Wildlife. Community and environmental groups expressed their support and praise for the safe and efficient cleanup of the site.

Success at Woodbury Chemical

EPA supervised the fast and efficient removal of pesticides, heavy metals, and organic compounds from an old industrial plant and an adjacent vacant lot. Current and former property owners paid $15 million to clean up the site and EPA recovered 99.5% of investigation and oversight costs.

Extensive outreach efforts informed local residents of the site's history, precautions to take, and progress made in restoring the site. The Woodbury Chemical property is now safe for economic redevelopment with unrestricted use.

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