United States
Environmental Protection
Agency

Office of Public Affairs
Region 5
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Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

Moss-American Cleanup Continues

Milwaukee County, Wisconsin **August 2000**

This Fact Sheet Explains

- the ground-water cleanup
- the status of the sediment cleanup design
- other cleanup efforts
- how to learn more about the site

Site Photo

Installation of piping for Treatment Gates 1 and 2

Check out the Moss-American Site Cleanup at
http://www.epa.gov/region5/mossamerican

Background

The Moss-American Superfund site, located at the southeast corner of Brown Deer and Granville Roads on Milwaukee's northwest side, was the location of a former wood preserving facility that treated railroad ties with a creosote and oil mixture. The soil and ground water at the site, as well as sediment in the Little Menomonee River, was contaminated with polynuclear aromatic hydrocarbons (PAHs) and organic compounds such as benzene, toluene, ethylbenzene, and xylene (BTEX). PAHs are organic compounds normally associated with petroleum products, and some are suspected carcinogens (cancer causing). Napthelene, an example of a PAH, is the most common ingredient in coal tar, and therefore creosote. To address this contamination, U.S. EPA will clean up on-site soil, sediment, and ground water.

Ground-water Cleanup Progresses

Before the installation of a ground-water treatment system could begin, about 1,100 gallons of free-product creosote (liquid material not dis-

solved in the ground water) had to be pumped from below ground to an on-site storage tank. This was completed last year after four seasons of operation. Kerr-McGee has since pulled out seven extraction wells to make way for the ground-water cleanup system. This work was done under U.S. EPA and Wisconsin Department of Natural Resources (WDNR) oversight.

Installation of the ground-water cleanup system was completed in July. Former site operator, Kerr-McGee Chemical Corporation used an in-place biological treatment system called the "funnel and gate" approach. This involved mixing coarse soil with "native" soil at six specific locations arranged in three sets of two treatment areas on site. Ground water was directed to flow through certain areas, or "gates," which were placed in a west to east configuration to conform with ground-water movement patterns. Sheet pile walls were driven into the ground to prevent contaminated ground water from entering the Little Menomonee River. Within each area, air, nutrients and microbes were successfully introduced into the ground water to biologically destroy ground-water contaminants. A treatment building was erected immediately south of the storage tanks that were on site. These tanks were removed last November. This new building houses mixers, pumps and other types of equipment.

Ground-water Treatment To Begin

Now that construction of the treatment building is completed, the treated water will be sampled regularly as it passes through a particular gate zone to combine the results of the contaminant removal with ongoing ground- water monitoring sampling results. U.S. EPA and WDNR will continue to closely monitor the funnel and gate system to ensure that State and Federal ground-water cleanup goals are met. If progress is not satisfactory, U.S. EPA and WDNR will require Kerr-McGee to use a more conventional collection and treatment method featuring extraction wells and above-ground treatment such as oil / water separation. By trying the funnel and gate approach first, however, U.S. EPA hopes to provide Kerr-McGee an opportunity to reduce its ground-water cleanup operation and maintenance costs compared to those associated with a more conventional ground-water cleanup system. If this approach is unsuccessful, U.S. EPA will have Kerr-McGee use another method.

Soil Cleanup Slated for Fall

While ground-water cleanup is an important step in the total cleanup of the Moss-American site, contaminated soil will also need to be addressed. Installation of some of the ground-water cleanup components has occurred in and near contaminated soil throughout the site. A temporary area was built on site to safely store contaminated soil while awaiting further treatment. This area will also allow for segregation of highly contaminated soil that will later require treatment using a technology called thermal desorption.

U.S. EPA will oversee the use of thermal desorption which indirectly heats the soil so contaminants will vaporize and consequently separate from the soil. U.S. EPA and WDNR have received and commented on a preliminary thermal desorption design plan from Kerr-McGee. Over the Summer, Kerr-McGee finalized the design plan and obtained contractors to begin treating the soil this Fall. A contract was awarded to a Georgia firm that has experience doing thermal desorption at Superfund sites around the country.

Area residents and businesses should not experience any inconvenience during the construction of the thermal desorption system because all equipment and vehicles will enter and exit the site via an access road from Granville Road. However, heavy construction equipment will be used and there may be some noise, dust and motor exhaust similar to other construction projects of this size.

Pilot Program Started

A pilot program began in August to test naphthalene-contaminated soil, which is the easiest soil to treat because it is the most biodegradable soil on the site. The program may prove that this soil is not so contaminated that it will need thermal

desorption to clean it up. It may only need a simpler treatment process like land farming or biodegradation, processes by which the contaminants decompose under natural conditions or by microorganisms. Results of this program will be available to U.S. EPA and WDNR by December. They will also be available to the public at the information repository (see For Further Information). A plan may then be developed for an easier, yet effective, treatment method.

Additional Cleanup Efforts to be Addressed

While positive steps have recently been taken to clean up the site, other areas still need work. Lesser contaminated soil on site still needs to be contained and contaminated river sediment still needs to be addressed. A simpler design of the containment process will begin in September. This involves successfully treated leftover soil which had been run through the desorption system and storing it on site. This soil will then be covered with clean soil and grass seed.

Pre-design work for river sediment cleanup is expected to be completed by December. If it is decided to try dredging the river, a change in the original cleanup decision is required by law. The decision, which originally called for rerouting, would be amended. A new proposed cleanup plan would be drafted and available for public comment before an amendment is finalized.

A site owner, Milwaukee County, has filed deed restrictions on portions of its property to permit only industrial uses. Because it is unlikely that homes would be built on site, these deed restrictions would enable the site to be cleaned up to an industrial standard, as opposed to the originally proposed residential standard. Negotiations with another site owner, Union Pacific Railroad, regarding similar deed restrictions are ongoing.

For Further Information

Anyone interested in learning more about the Moss-American site is encouraged to review the information repository located at the **Mill Road Library, 6431 N. 76th Street, Milwaukee.** An Administrative Record, which contains detailed information upon which the selected cleanup plans were based, is also located at the Mill Road Library and at the U.S. EPA Region 5 office in Chicago.

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