



# EPA Finishes Cleanup on Little Menomonee River

Moss-American Superfund Site

Milwaukee, Wisconsin

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## For More Information

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Project documents are available at the site information repository:

Mill Road Public Library  
6431 N. 76th St.  
Milwaukee

or at:

[www.epa.gov/region5/sites/mossamerican](http://www.epa.gov/region5/sites/mossamerican)

## What are PAHs?

Polycyclic aromatic hydrocarbons, or “PAHs,” are the most common ingredient in coal tar (creosote is a byproduct of coal tar). PAHs can cause cancer and skin rashes, and may affect the eyes, kidneys and liver.



*Middle portion of the river before dredging between the railroad bridge and Silver Spring Drive.*

U.S. Environmental Protection Agency finished the cleanup of the Little Menomonee River in early December. The final phase of the cleanup, which began in August, consisted of dredging contaminated sediment, or mud, in the final stretch of river. About 5,500 tons of sediment was removed from 4,300 feet of river, starting immediately south of Silver Spring Drive moving north to just past Appleton Avenue. This area is known as Segments (or Reaches) 4 and 5.

Residents near this stretch of river may have noticed extra truck traffic or heard more noise than usual. This was due to the bulldozers, excavators, dump trucks, pumps and other types of equipment that operated 24 hours a day, six days a week.

Temporary access roads in and out of the river were built south of Mill Road near Little Menomonee River Parkway. These roads, which have already been removed, were needed to accommodate large trucks taking sediment from the river to a staging area near 107<sup>th</sup> Street and Silver Spring Drive. Here, the material was allowed to dry before being trucked to a licensed municipal solid waste landfill about five miles away for proper disposal. A couple of small, temporary “haul” roads and gravel piles still remain near Segments 2 and 3 near Good Hope Road. They will be taken out this spring.

Sediment removal, rather than a reroute as was done in other areas of the river, was necessary due to the many bridges that cross over the river. Other work included restoration of all areas disturbed during the cleanup and reseeded areas that were cleared with native grasses and plants.



*Fall storms caused the Little Menomonee River to flood.*



*Flooding in the Little Menomonee River put the dredging project three to four weeks behind schedule.*

## Ups and downs

Federal Superfund money was used to finish the cleanup because the previous site owner, Tronox (formerly part of Kerr-McGee), filed for bankruptcy in January 2009.

### What's next?

EPA is reviewing the status of the site's cleanup. This type of review is required at least every five years and ensures that the cleanup continues to protect people and the environment. The review includes:

- An evaluation of background information.
- Cleanup requirements.
- Effectiveness of the cleanup and any anticipated future actions.
- An analysis of how EPA's completed cleanup can be operated more efficiently.

This is the third five-year review for Moss-American. A report, which will be available in April, will detail the site's progress. Previous reviews were done in 2005 and 2000. Contact the site community involvement coordinator and/or the remedial project manager to provide input on the review process.

An active ground water treatment system is still operating because cleanup goals have not yet been met.

EPA will continue to monitor the site through 2026. At that time, EPA will determine if it can be removed from the Superfund list. The final determination for the site's status will be based on several requirements, including approval of a closeout report (this was done in November 2009), completion of all cleanup actions, WDNR concurrence with EPA findings, completion of a public comment period and EPA's response to comments.

The original schedule called for construction to start by April 2009, but Tronox informed EPA in March that it would not be able to do the work because of the bankruptcy. Since the cleanup was nearly done, EPA decided to complete it using Superfund money. Under the Superfund law, EPA was required to reach an agreement with Wisconsin Department of Natural Resources on the state providing a 10 percent share of the cost. This agreement was finalized in June 2009.

Working with WDNR, Milwaukee Parks and Transportation and Public Works departments, and Alderman James Bohl's office, EPA started working around the Appleton Avenue and Silver Spring Drive bridges in Segments 4 and 5. This is where a significant portion of the sediment to be removed was located. Given the physical limitations, such as height and physical barriers, a considerable amount of time was spent there. At the Appleton Avenue Bridge, EPA unexpectedly encountered additional tar-like material and removed an extra 94.5 tons of material from the river.

Heavy September and October rains were also a factor. Dredging in the last area was delayed three to four weeks due to river flooding. Once the skies cleared and the water receded, work continued under an aggressive schedule to ensure that the cleanup would be done by mid-November.

EPA's estimated cost to clean up Segments 4 and 5 with Superfund money is \$3.2 million.

### River reroute

EPA and Tronox had already rerouted three segments of the Little Menomonee River from 2002 to 2005. The reroute included digging a new channel close to the river's original path. About 26,000 tons of contaminated sediment was removed and stored on the Moss-American property at Brown Deer and Granville roads. Plants and trees were replaced and the river bank was stabilized.



Middle portion of the river after the cleanup.

The first segment between Brown Deer and Bradley roads and the first phase for Segments 2 and 3 from Bradley to Mill roads involved:

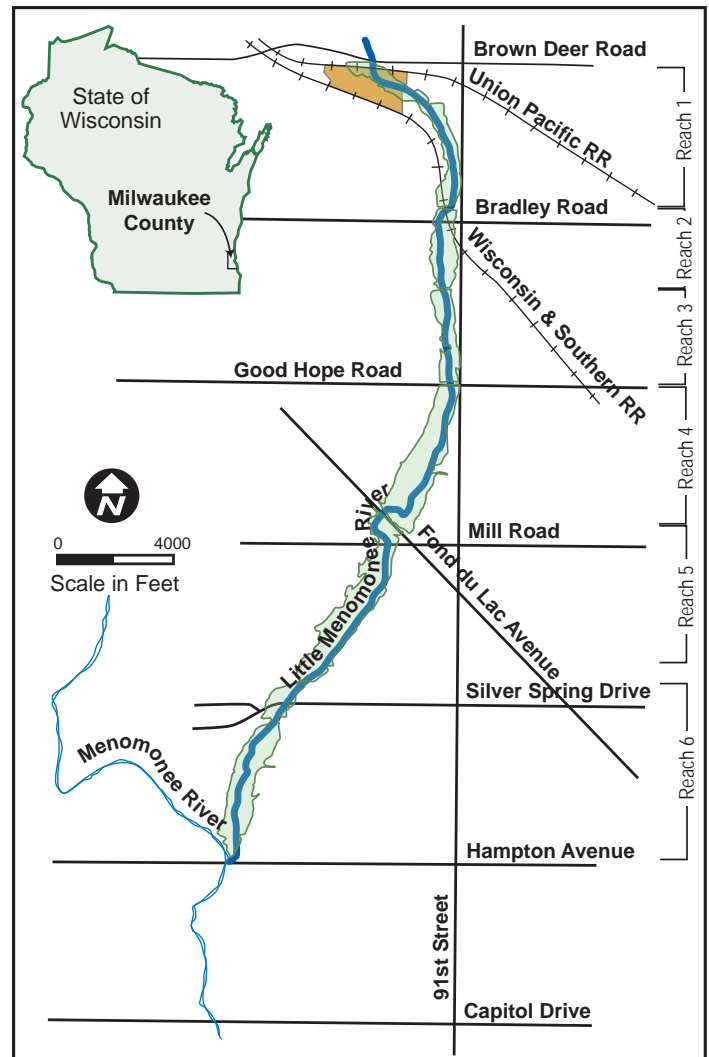
- Digging a new channel.
- Controlling invasive plants.
- Burying PVC pipe to connect the new and existing channels while getting rid of standing water in Segment 1.
- Controlling erosion near the foot bridges.
- Repairing fences.

Phase 2 of the cleanup of Segments 2 and 3, from Bradley Road south to Good Hope Road, included:

- Sections of the river being drained.
- River flow being diverted into newly excavated channels.
- Most of the contaminated sediment being removed.
- Old segments being filled and graded.
- Access roads being built.
- Fences being maintained.
- In-stream “probing” being done to find creosote in sediment.

## Cleanup history

EPA and WDNR have overseen cleanup activities along the Little Menomonee River and at the Moss-American site for several years. The 6-mile river project followed a cleanup of the Moss-American property on the northwest side of Milwaukee. Since this was the source of the river’s contamination, on-site ground water and soil were addressed first before moving on to the river.



Site Map

From 1995 to 1999, about 1,100 gallons of spilled creosote were cleaned up from soil and ground water on the Moss-American property. The creosote was removed via ground water pumping wells and taken off site for proper disposal. Ground water cleanup continued into 2000. The treatment methods prevented the polluted ground water from seeping into the river. Contaminants were removed through the addition of high-pressure air streams and nutrients. From 2001 to 2002, cleanup included low-energy heat treatment and disposal of 137,200 tons of contaminated soil.

Tronox estimated that it spent \$40-50 million since 1999 on the total site cleanup, prior to temporarily suspending work due to bankruptcy proceedings. The company also spent \$150,000 annually for operation and maintenance.

## Background

From 1921 to 1976, the T. J. Moss Tie Co. treated railroad ties at the 88-acre site with a creosote and fuel-oil mixture. Until 1971, the facility discharged waste to settling ponds that ultimately discharged to the Little Menomonee River. Kerr-McGee purchased the facility in 1963 and changed its name to Moss-American. It was changed again in 1974 to Kerr-McGee Chemical Corp. Forest Products Division. In 1998, the name of this company changed to Kerr-McGee Chemical LLC. In 2005, the company became Tronox LLC.

In 1971, several local residents working on a cleanup project of the Little Menomonee River received chemical burns from a tarry substance while wading more than three miles downriver from the site. Sampling results indicated that the tar-like substance was creosote and that the Moss-American facility was the source.

Under a state order, Kerr-McGee Chemical LLC cleaned out eight former settling ponds and dredged about 1,700 feet of river to remove creosote-contaminated soil and sediment. After the facility closed in 1976, the eastern portion of the property was acquired by Milwaukee County in 1978 (about 65 acres), while the Chicago and Northwestern Railroad (now Union Pacific Railroad) bought the western parcel in 1980 (23 acres). Buildings on the site were demolished in 1978. The site is currently used for industrial, commercial, residential and recreational use.

The Moss-American site is one of Wisconsin's oldest Superfund sites. It was added to EPA's list in 1984. After Kerr-McGee studied the site according to Superfund law, EPA approved a comprehensive cleanup plan in 1990. That plan went through some revisions in 1997, 1998 and 2007. The cleanup was carried out from 2000 to 2009.

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