



United States
Environmental Protection
Agency

EPA Proposes Cleanup Plan for Former Cedar Creek Plant 2 Site

Cedar Creek

Cedarburg, Wisconsin

October 2007

For more information

If you are interested in the Cedar Creek Mercury Marine Plant 2 site cleanup, please attend a public meeting at 7 p.m., Wednesday, Oct. 10, 2007, at the Cedarburg City Hall, Council Chambers, W63 N645 Washington Ave.

Comments on the proposed plan should be submitted from Oct. 8 to Nov. 9:

- Orally or in writing at the public meeting
- Electronically via the Internet at epa.gov/region5/publiccomment/cedarcreek-pubcomment.htm
- Fax to Susan Pastor at 312-353-1155

Contact EPA

Susan Pastor

EPA Community Involvement
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EPA Remedial Project Manager
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EPA Region 5 toll-free:
800-621-8431,
weekdays 9 a.m. - 4:30 p.m.

Contact WDNR

Margaret Brunette
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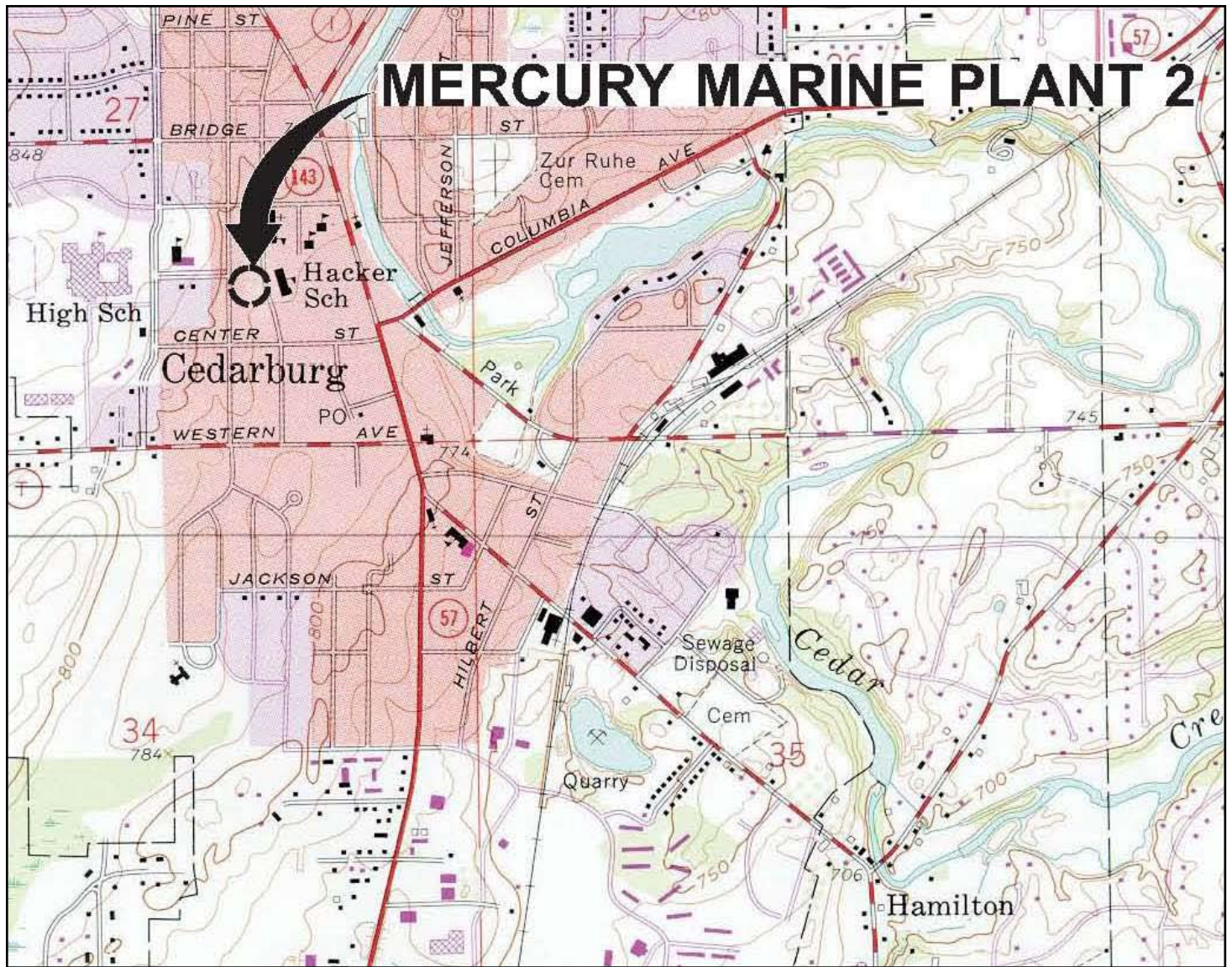
Cautionary sign at Cedar Creek Plant 2 site entrance

To clean up PCB contamination at the Cedar Creek Mercury Marine Plant 2 site, U.S. Environmental Protection Agency Region 5 is proposing to remove soil from targeted areas containing PCB concentrations above established safety levels, remove the plant's concrete slab to the extent necessary for excavations or redevelopment, and replace excavated areas with clean soil. The cleanup goal is to prevent human exposure to harmful levels of PCBs, which is short for polychlorinated biphenyls and VOCs, or volatile organic compounds. PCBs were commonly used in manufacturing as a coolant and lubricant but often spilled or leaked from machines and soaked into the soil of industrial sites. The safety level for PCBs in soil is set at 50 parts per million. A part per million is a tiny amount, similar to one second in 12 days. Soil that will not be covered will be removed to a level of 1 ppm. Soil that will remain covered with a concrete-like material will be removed to 50 ppm.

The safety level for the main VOC of concern (tetrachloroethene, or PCE), is .5 parts per billion. This is equal to one second in 32 years.

The purpose of this proposed plan is to provide background information about the Cedar Creek site, describe the various cleanup options considered, and identify EPA's recommended cleanup alternative.¹ The public is

¹ Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA known as the Superfund law) requires publication of a notice and a proposed plan for the site remediation. The proposed plan must also be made available to the public for comment. This proposed plan fact sheet is a summary of more detailed information contained in the remedial investigation, feasibility study, and other documents in the administrative record for the Cedar Creek Plant 2 site. Please consult those documents for more detailed information.



Former Cedar Creek Mercury Marine Plant 2 site map

encouraged to comment on this proposed plan. EPA will be accepting comments from Oct. 8 to Nov. 9. See the box on Page 1 for ways to provide comments to EPA. You also can attend and participate in a public meeting at the Cedarburg City Hall on Wednesday, Oct. 10.

EPA along with its state partner Wisconsin Department of Natural Resources will select a final cleanup plan for the Cedar Creek Plant 2 site. This will occur after review and consideration of information provided by the public during the comment period and public hearing. The final cleanup proposal, which will be announced with a local newspaper notice and presented in an EPA document called a record of decision, could differ from this proposed plan depending on information or comments EPA receives during the public comment period.

The public also is encouraged to review the supporting documents for the Cedar Creek site at the Cedarburg

City Hall and Public Library. The information includes documents called the remedial investigation and feasibility study and the site-wide human health assessment report, found in the remedial investigation. The remedial investigation studies the nature and extent of contamination at the site, while the feasibility study evaluates different cleanup options. The risk assessment evaluates potential health risks to people and the environment from contamination at the site.

About the Cedar Creek site

The Cedar Creek site is in a suburban residential area in southeastern Wisconsin north of Milwaukee in the city and township of Cedarburg (Ozaukee County) (see map above). The entire site consists of Mercury Marine's Plant 2, the former Amcast facility, and the segment of Cedar Creek from below the Ruck Pond Dam to the point where it meets the Milwaukee River. This segment includes open



Demolition activity at the Cedar Creek Plant 2 site

stretches of creek as well as areas known as Columbia Pond, Wire and Nail Pond, and the former Hamilton Pond totaling 5.1 creek miles.

PCBs from two local companies contaminated Cedar Creek, the Plant 2 property, the former Amcast property and some private properties near Amcast. One source was the boat engine manufacturer Mercury Marine. It operated a plant on St. John Avenue from 1951 to 1982. Fluids containing PCBs leaked from equipment and were washed into floor drains. These drains emptied into storm sewers that ran to Ruck Pond on the creek.

The second source of contamination in the area was Amcast, a local automotive production facility and industry supplier on Hamilton Road in Cedarburg. The company, which closed in 2005, also had a plant that emptied PCBs into the creek via storm sewers. One of them emptied into Hamilton Pond, upstream of Green Bay Road. Due to heavy rains and creek flooding in 1996, the Hamilton Dam collapsed and was removed. The pond was drained leaving behind several acres of mud flats containing PCBs that Mercury Marine removed in 2000.

Until May 2005, much of the Plant 2 site was occupied by a 66,000-square-foot building. The plant, which began operations in 1953, was composed of a series of additions that were constructed over the years. The original building at the site dated back to the early 1900s and served as a rail car barn and repair shop, and later in the 1940s as a canning factory. Mercury Marine acquired the building in the early 1950s for use as an aluminum die casting and machining facility.

Summary of site risks

A study of potential risks to public health was done for the Cedar Creek Plant 2 site. Coming into contact with

PCBs, arsenic-contaminated soil or underlying ground water (underground supplies of fresh water) and lead-contaminated soil during routine activities was found to be the greatest health risk to people. It is also possible for construction workers digging in the soil to be exposed to contaminants due to shallow ground water. The study, called a risk assessment, found the cleanup goals of 50 ppm for PCBs and .5 ppb for PCE will protect people's health and the environment. EPA is most concerned about the PCBs.

Cleanup options

EPA considered four options for cleaning up the Cedar Creek Plant 2 site, each of which was evaluated against nine criteria required by the Superfund law (see criteria explanation in the box on Page 4). Options 3 and 4 would require a cover made of heavy plastic to control water seepage, and both involve shallow soil removal and ground-water monitoring. The four options are summarized below.

Option 1 – No further action

EPA includes a “no-action” option as a basis for comparison with other cleanup options. Since no action would be taken, this option would increase the potential for human and animal contact with the contamination.

Cost—\$0

Option 2 – Capping with ground-water monitoring

This option requires that the site fence, concrete slab, and cap currently covering the site would continue to be monitored and maintained as a direct contact barrier and to prevent surface water infiltration. Periodic monitoring of site ground water would be done to document changes in concentrations over time.

Cost—\$370,000

Option 3 – Remove shallow soil and monitor ground water

This option assumes the site will be redeveloped and a majority of Plant 2's concrete slab will remain in place. Shallow soil around the slab would be removed to reduce risk associated with potential direct contact. Removal areas would be backfilled with clean soil. Soil would be removed using readily available earthmoving equipment, such as backhoes, and properly disposed of at an off-site disposal facility. To reduce the risk to construction workers and others, the concrete slab would be removed only to the extent needed to accommodate the

redevelopment of the site, and soil would be excavated only to the depth necessary for construction. Clean soil would be backfilled into the excavation areas to reduce the risk to future construction workers. The rest of the slab would remain across the site to eliminate direct contact and minimize surface water infiltration. Deed restrictions would be implemented to control future uses and to provide for appropriate cap maintenance.

Cost—\$840,000

Option 4 – Remove shallow and subsurface soil and monitor ground water (EPA’s recommended option)

This option assumes the site will be redeveloped and removal of the concrete slab might be required to excavate highly contaminated areas. This option is the same as Option 3, except excavation would be done to accommodate redevelopment of the site and in areas where investigations showed high PCB levels. The excavation of subsurface soil with elevated PCBs reduces potential future risk. The concrete slab would be removed to the extent necessary for targeted excavations or as needed to accommodate the redevelopment. In the

areas where higher PCB concentrations exist, targeted excavations would be done. The rest of the slab would remain across the site to eliminate direct contact and minimize surface water infiltration. New slab or building footings would be placed over the excavated areas. Deed restrictions would be implemented to control future uses of the site and to provide for appropriate cap maintenance and ground-water monitoring.

Cost—\$2.6 million

How do the options compare?

EPA evaluated the various cleanup options against seven of the nine criteria required by the Superfund law (see the comparison chart below) and selected its recommended option. State and community acceptance will be evaluated after EPA receives public comments. More information about the evaluation is in the feasibility study report.

Cleanup goals for the Plant 2 site are to protect people’s health by reducing or eliminating exposure to soil with high levels of PCBs; preventing exposure to contaminated ground water; and ensuring that contaminant levels in ground water are reduced in a reasonable period.

Evaluating the options

EPA uses nine criteria to evaluate and compare cleanup options. See the table on Page 5 comparing the options against these criteria.

1. Overall protection of human health and the environment addresses whether an option adequately protects human health and the environment. This criterion can be met by reducing or eliminating contaminants or by reducing people’s exposure to them.

2. Compliance with applicable or relevant and appropriate requirements, referred to as ARARs, ensures that each cleanup option complies with federal, state, and local laws and regulations.

3. Long-term effectiveness and permanence evaluates how well a cleanup option will work in the long term, including how safely remaining contaminants can be managed.

4. Reduction of toxicity, mobility, or volume through treatment addresses how well the cleanup option reduces the harmful effects, movement, and amount of contaminants.

5. Short-term effectiveness compares how quickly the cleanup can be completed and the health risks posed to cleanup workers and nearby residents while the option is under construction.

6. Implementability assesses how difficult the cleanup option will be to construct and operate, and whether technology, materials, and services are readily available.

7. Cost compares the expense of each option over time in a financial calculation called present worth. Cost includes capital expenditures such as buildings, machines, and wells plus operation and maintenance costs. Present worth cost is the total cost of an option over time in terms of today’s dollar value. A cleanup is considered cost effective if its costs are proportionate to its overall effectiveness.

8. State acceptance is whether the state environmental agency, in this case WDNR, agrees with EPA’s recommended option. EPA evaluates state acceptance after it receives public comments on its preferred option.

9. Community acceptance evaluates how well the community near the site accepts the option. EPA and WDNR will evaluate community acceptance after the public comment period.

Next steps

EPA in consultation with WDNR will evaluate public reaction to the recommended cleanup option during the comment period before deciding on a final cleanup plan. Based on new information or public comments, EPA may modify its recommended option or select another. EPA encourages you to review and comment on the cleanup alternatives.

EPA will respond in writing to the comments in a “responsiveness summary,” which will be attached to the document detailing the final cleanup plan called the record of decision. EPA will announce the selected cleanup plan in a local newspaper advertisement and will place a copy of the record of decision in the local information repositories and post it on its Web site.

Regarding Cedar Creek, EPA is doing a separate study to find ways to clean it up. A proposed plan for the creek that will detail cleanup options should be completed by fall 2008.

What are PCBs?

PCBs were once widely used by industry as coolants, insulators and lubricants. The manufacture of PCBs in the United States was stopped in 1977, but the compound stays a long time in the environment. They are linked to cancer, as well as reproductive and developmental problems in people and animals. PCB-contaminated river sediment (mud) affects fish, wildlife and people as it rises through the food chain. In the 1970s, Wisconsin advised residents not to eat fish from various rivers throughout the state because of the contamination. The advisories are still in effect.

What is tetrachloroethene?

Tetrachloroethene is a synthetic chemical that is widely used for dry cleaning of fabrics and for metal-degreasing operations. It is also used as a starting material for making other chemicals and is used in some consumer products. It has a sharp, sweet odor, is nonflammable at room temperature and evaporates easily into the air. Other names for it include perchloroethylene, PCE, PERC, tetrachloroethylene, perclene, and perchlor.

Evaluation Criteria for the Cedar Creek Site

Evaluation Criteria	Option 1	Option 2	Option 3	Option 4*
Overall protection of human health and the environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compliance with ARARs	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Long-term effectiveness and permanence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Reduction of toxicity, mobility, or volume through treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short-term effectiveness	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implementability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cost	\$0	\$370,000	\$840,000	\$2.6 million
State acceptance	Will be evaluated after public comment period			
Community acceptance	Will be evaluated after public comment period			
<input checked="" type="checkbox"/> Fully meets criteria	<input type="checkbox"/> Partially meets criteria	<input type="checkbox"/> Does not meet criteria		
*EPA's recommended option				

CDAR CREEK PLANT 2 SITE: EPA Proposes Cleanup Plan for Former Cedar Creek Plant 2 Site

Region 5
Office of Public Affairs (P-19J)
77 W. Jackson Blvd.
Chicago, IL 60604

United States
Environmental Protection
Agency



FIRST CLASS

Upcoming Public Meeting about Cedar Creek Plant 2 Cleanup

Wednesday, Oct. 10, 2007

7 p.m.

Cedarburg City Hall, Council Chambers

At the meeting, EPA will explain the proposed plan and provide opportunities to ask questions and make oral comments. You may also submit written comments. If you need special accommodations for the public meeting, contact Susan Pastor by Oct. 3. Her contact information is on Page 1.

Site information is also posted on the Internet at:
www.epa.gov/region5/sites/cedarcreek.

Read the documents

Site-related documents and files may be viewed at the following locations:

Cedarburg City Hall

W63 N645 Washington Ave.

Cedarburg Public Library

W63 N583 Hanover Ave.

An administrative record, which contains detailed information that will be used in the selection of the cleanup plan, is also located at the library and at EPA's Chicago office.

Fold on Dashed Lines, Tape, Stamp, and Mail

Name _____

Address _____

City _____ State _____

Zip _____

Place Stamp Here

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