



# Smurfit-Stone Mill Missoula, Montana

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## Background

The Smurfit-Stone Mill was a large integrated pulp and paper mill that was in operation from late 1957 through early 2010. The former mill is located 11 miles northwest of the City of Missoula and approximately 3 miles south of Frenchtown in Missoula County, Montana. The site has often been referred to as the Frenchtown Mill.

The site began operation as a pulp mill in the fall of 1957. Later expansions and improvements allowed the facility to produce paper, primarily rolls of kraft linerboard that is used in the production of corrugated containers (i.e., the outside layers of cardboard boxes). Linerboard produced at the mill was shipped to box plants where it was used to make a variety of corrugated containers. The mill ceased operations in January 2010.

The mill is approximately 3,200 acres, with the core industrial footprint of the mill site approximately 100 acres. Over 900 acres of the site consist of a series of unlined ponds used to store both treated and untreated wastewater effluent from the mill, as well as primary sludge recovered from the wastewater treatment process.

Various hazardous chemicals were used or produced on site, including bleaching chemicals. The use of chlorine for the bleaching of pulp produces chlorinated organic compounds, including dioxins and furans, through the reaction of chlorine with residual lignin.

## What is EPA doing?

The U.S. Environmental Protection Agency (EPA) recently completed a Preliminary Assessment and Site Inspection at the former Smurfit-Stone Mill. This is a screening assessment to determine if hazardous contaminants are present at the site and if nearby human and aquatic receptors are impacted by contaminant migration.

## What contaminants have been found at the site?

The soil samples collected from the site indicate that there are multiple contaminants present above background conditions in the surface and subsurface soils at the site. Various dioxin and furan compounds, common byproducts of bleaching operations, were detected in the sludge ponds soils, emergency spill pond soils, and the wastewater storage pond soils. Heavy metals, including Manganese, Arsenic, Lead, Barium, and Cadmium were also detected at the site in the sludge pond soils and emergency spill pond soils. Phenanthrene and 4-methylphenol were detected in the emergency spill pond and a sludge pond.

## Have any contaminants migrated from the site to the Clark Fork River?

Yes. Multiple dioxin and furan compounds have been detected in the sediments in the Clark Fork River. Manganese was detected in water samples collected from the river.

## **Have any contaminants migrated from the site to the groundwater?**

Yes. Dioxin and furan compounds have been detected in shallow groundwater at the site at levels greater than the EPA's cancer risk screening concentration. Metals, including manganese and arsenic were detected above screening concentration as well.

## **Does an emergency situation exist?**

No. While documented releases to the Clark Fork River and shallow groundwater exist, sampling results do not indicate a need to take an emergency action by EPA's Emergency Response Program.

## **Is drinking water in the area at risk?**

At this time the EPA is not aware of any people who are drinking contaminated water. Nearby drinking water wells were sampled and did not show any evidence of impact from the site. Missoula's water supply comes from upstream sources and Frenchtown's water supply is a groundwater source further down gradient than the sampled domestic wells.

## **Does EPA know the extent of contamination?**

No. The Site Inspection that was recently completed is a screening level assessment. It is designed to determine whether or not hazardous contaminants are present and if the contaminants are migrating away from the site. It is not designed to determine the extent of contamination at a site.

## **How can further investigation occur?**

If the site is listed on the National Priorities List (NPL), the EPA can conduct a Remedial Investigation to determine the nature and extent of contamination, as well as determine if long term threats to human health and the environment exist.

## **What is the National Priorities List (NPL)?**

The National Priorities List contains sites that require further detailed investigation and potentially cleanup. Sites are proposed to the NPL via a formal rulemaking process. The next opportunity to add sites to the NPL is in April 2013.

## **What are the benefits of the NPL?**

The NPL provides access to technical and financial resources that are otherwise unavailable. Placement of a site on the NPL ensures that a comprehensive investigation and risk assessment will occur, and, if necessary, that contamination will be cleaned up while addressing any identified human and environmental risks. NPL listing unlocks resources for communities to help them better understand the technical issues and guarantees the citizens and other stakeholders will have the opportunity to provide input in the process and comment on decisions before they are made. Community involvement is on-going throughout the investigation and clean-up.

## **What would be next?**

After the site is listed on the NPL, a Remedial Investigation would be the next step. This comprehensive investigation is designed to determine the nature and extent of contamination, evaluate risk among all pathways and develop clean-up options, if necessary.

### **For more information**

<http://www.epa.gov/region8/superfund/mt/smurfitstone>

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