

St. Maries, Idaho  
March 2014



# St. Maries Creosote Site – Changes to 2007 Cleanup Plan

*The St. Joe River at the St. Maries, Idaho Creosote cleanup project. Contaminated bank soils beneath the rip rap in the foreground and river sediments offshore of this area will be removed and replaced with clean material.*

The United States Environmental Protection Agency has made four changes to the cleanup plan for the St. Maries Creosote Site. This fact sheet describes the changes, explains why they are necessary, and provides information about where you can learn more.

## Explanation of Significant Differences explains changes to cleanup plan

The EPA issued the original cleanup plan, called a Record of Decision, for the site in July 2007.

The agency accepted and responded to public comments at that time. This fact sheet, along with a notice to be published in the *St. Maries Gazette Record*, fulfill the EPA's responsibility to notify the public of changes to the cleanup decision. The EPA signed the document that describes the changes, called an "Explanation of Significant Differences," in February, 2014. The EPA is not accepting public comments on the four changes, which are final.

## Public Meeting

The EPA will host a public meeting  
**Wednesday, March 19, 2014**, from **6:00 to 8:00 p.m.** at  
**St. Maries High School** Multi Purpose Room  
424 Hells Gulch Road – St. Maries, Idaho 83861

At the meeting, you will have the opportunity to:

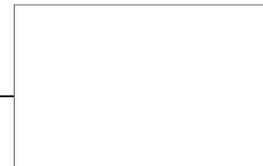
- Ask questions about changes to the cleanup plan.
- Learn how construction beginning in May will impact the community.
- Share your concerns, ideas and suggestions.

## What is changing and why?

The EPA has made four changes to the cleanup plan. These changes are described more fully in the *Explanation of Significant Differences*, which is available for you to view on EPA's web site at <http://go.usa.gov/Bmyk>. The table on the next two pages summarizes what is changing and why.

# Explanation of Significant Differences

Original Cleanup Plan (2007 ROD)	Why the change is necessary	Description of Change
<p>The most significant change is the sediment cleanup approach. The Record of Decision established numeric cleanup criteria for 16 individual chemicals and two chemical groups. It also broke the sediment into two areas and set forth different cleanup approaches for both. In the near-shore area, the ROD required removal by dredging of all sediment that exceeded any one of the established chemical-specific cleanup numbers. In the offshore area, the ROD allowed for sediments deeper than 10 cm below the surface to be left in place if a sediment scour study showed that subsurface contamination would not become exposed during future high flow events. The ROD required that any change to the sediment cleanup approach be documented in an ESD.</p>	<p>Since the ROD was issued, several new pieces of information have become available. First, additional sediment sampling was conducted. The samples were analyzed for chemical contamination and the results were used to create a 3D map of contamination. This showed contamination over a larger area than previously understood, increasing the complexity and cost of the cleanup. Sediment samples were tested to see whether they were toxic and these tests showed less toxicity than predicted. This means that achieving all of the sediment cleanup levels in the ROD is not necessary to protect bottom-dwelling organisms in the river.</p> <p>Second, a scour study was performed to see how future high flow events might impact the river bottom. This study showed that even during a 100 year flood, erosion would not go deeper than three (3) feet. This means that contamination buried deep in the river will not become exposed in the future.</p>	<p>A new approach has been developed to determine which sediments require cleanup. In addition to the concentration of chemicals in the sediment, the new approach considers the presence of creosote oils, proximity to the upland treatment area, and the potential for exposure of subsurface sediment during future scour events. Each of these four factors was used to generate a map of areas requiring cleanup. The maps were then layered on top of one another and added together to generate a new cleanup plan.</p> <p>The new cleanup plan will result in less sediment being removed from the river than required by the ROD. Some contamination will be left in place in deep portions of the sediment, where modeling shows they will remain safely buried. Some contamination that exceeds one or more of the ROD cleanup levels for individual chemicals will be left in place. However, the average concentration of contaminants in surface sediments will meet ROD cleanup levels for two key chemical groups which serve as indicators for all of the contaminants of concern.</p>
<p>The ROD required that the top 20 feet of contaminated soils in the upland portion of the site be excavated and thermally treated on site. Contaminated soils deeper than 20 feet (from 20 feet down to a maximum depth of 60 feet) would be treated by solidifying them in place.</p>	<p>Sampling conducted after the ROD was issued and preliminary engineering calculations have shown that removing the top 20 feet of soil would be dangerous and difficult to accomplish. Groundwater is encountered approximately 7 feet below the current ground surface. If surface soils were excavated to a depth of 20 feet, groundwater would flow into the excavation. It would be difficult to pump water out of the excavation fast enough to keep it open, and the extracted groundwater would need to be treated before it could be discharged to the river. In addition, groundwater in a sand layer beneath the excavation area puts upward pressure on the soil above it. If surface soils were excavated to a depth of 20 feet, water and soil could be pushed upward into the excavation, creating unsafe conditions for workers.</p>	<p>The EPA has changed the depth of soil that will be excavated and treated in the upland from 20 feet to a nominal depth of 10 feet. Soils deeper than 10 feet will now be included in the area to be solidified in place.</p>
<p>The ROD did not include an underground barrier wall.</p>	<p>Engineering calculations performed for the design support the addition of a barrier wall, which will:</p> <ul style="list-style-type: none"> <li>➤ Significantly reduce the flow of groundwater into the soil excavation area.</li> <li>➤ Contain excess soil “swell” during injection and mixing of slurry into subsurface soils.</li> <li>➤ Make conditions safer for construction workers.</li> </ul>	<p>An underground barrier wall has been added to the upland cleanup plan. The wall will encircle the area containing contaminated soils in the upland portion of the site. It will be constructed from the ground surface down to a depth of 65 feet, and will extend into a dense layer of silt that acts as a confining layer for groundwater.</p>
<p>Contaminated soils will be treated on site by heating them. The ROD established a soil cleanup number for benzene of 0.002 mg/kg. This number was selected in order to protect groundwater, assuming that benzene in treated soils left on the site would leach into groundwater.</p>	<p>Thermal treatment tests have shown that (1) the soil cleanup number of 0.002 mg/kg cannot be achieved with the thermal treatment technology selected for the site and (2) leachate from treated soils will not exceed the groundwater cleanup standard for benzene.</p>	<p>The EPA has revised the soil cleanup number for benzene from 0.002 mg/kg to 1.1 mg/kg, which is protective of people and animals. The EPA also added a new testing requirement to confirm that benzene in treated soils will not impact groundwater.</p>



## ***St. Maries Creosote Site Changes to 2007 Cleanup Plan***

***Read inside for details***

### **Community Impact**

Soil, groundwater and sediment in the St. Joe River are contaminated with creosote released from a wood treating company that operated on the site from 1939 to 1960. Cleanup of the site will begin in May 2014 and continue through December 2014. ARCADIS U.S., Inc. will perform the cleanup work under the oversight of EPA and the Coeur d'Alene Tribe. Removing and treating contamination at the site will require construction in the river and on the upland portion of the site.

***Cleanup construction will impact people in St. Maries.*** A temporary steel sheetpile wall will be built in the river around the most heavily contaminated sediments. The wall will extend about half way across the river, narrowing the channel used by boaters. A no-wake zone will be established in the construction area and no swimming or innertubing will be allowed. Neighbors may be affected by noise, lights, and odors from upland cleanup activities. EPA will discuss these and other impacts with community members at a public meeting on March 19 – see page 1 for details.

### **Learn More**

The Explanation of Significant Differences and supporting documents will become part of the Administrative Record (documents that support the cleanup decision) for this site, which is available for review at the following locations:

#### **St. Maries Public Library**

822 W. College Avenue  
St. Maries, ID 83861  
☎ 208-245-3732

#### **U.S. EPA Region 10**

**Superfund Records Center**  
1200 Sixth Avenue  
Seattle, WA 98101  
Please call for appointment  
206-553-4494

In addition, the ESD and many of the supporting documents are available at: <http://go.usa.gov/Bmyk>

#### **For general information:**

**Debra Sherbina** ([sherbina.debra@epa.gov](mailto:sherbina.debra@epa.gov))

Community Involvement Coordinator

☎ Toll free 1-800-424-4372 ext. 0247 or 206-553-0247

#### **For technical information:**

Helen Bottcher ([bottcher.helen@epa.gov](mailto:bottcher.helen@epa.gov))

Remedial Project Manager

☎ Toll free 1-800-424-4372 ext. 6069 or 206-553-6069

📞 *TDD or TTY users, please call 1-800-877-8339  
and give the operator Debra Sherbina's phone number.*