

**MADISON COUNTY  
MINES  
MISSOURI  
EPA ID# MOD098633415**

**EPA Region 7  
City: Fredericktown  
County: Madison County  
Other Names:**

**01/20/2009**



## **SITE DESCRIPTION**

The Madison County Mines Project is located in southeastern Missouri near Fredericktown in the Old Lead Belt where heavy metal mining has occurred since the early 1700s. Past mining operations have left at least 13 major tailings and chat deposits from mineral processing operations within the county. Additionally, there may be other piles or locations where these deposited materials have been placed. These materials may have been moved by erosion, both wind and water, or relocated by other means to other locales throughout the county. The tailings and chat contain elevated levels of lead and other heavy metals which pose a threat to human health and the environment. In addition, these deposits have contaminated soils, sediments, surface water, groundwater, and are impacting ecological systems. Throughout the area, sensitive populations (young children, pregnant women, and senior adults) continue to be exposed to these contaminants.

### **Site Responsibility:**

The site is being addressed through federal and potentially responsible party actions.

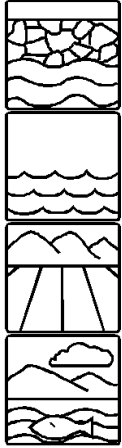
### **NPL LISTING HISTORY**

**Proposed Date:** 04/30/2003

**Final Date:** 09/29/2003

**Deleted Date:**

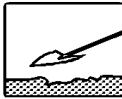
## THREATS AND CONTAMINANTS



Contaminants currently being investigated and ultimately addressed include heavy metals resulting from the mining and processing of ore throughout the county. In particular, exposure to lead can represent a significant risk to the health of young children, pregnant women, and the elderly, as well as a risk to the environment. The media being evaluated and addressed include: chat and tailings piles; residential yards; public areas; drainage ways; road, street, and highway right-of-ways; groundwater; surface water; and sediments.

## CLEANUP APPROACH

### Response Action Status



**Initial Actions:** A large number of residential yard soil evaluations have been completed. To date, approximately 3,000 homes have been sampled and the remainder of the county's residential properties will be sampled in the future. Approximately 852 residential property soils have been determined to be at or above the removal action level for lead (1,200 parts per million (ppm)) and over 800 residential properties had been cleaned up by the end of 2008.



**Site Studies:** A characterization study to determine the presence, concentration, and extent of heavy metal contamination is underway at Operable Unit #1 (OU-1), which is located in the northern portion of the site. It is being conducted by Potentially Responsible Parties (PRPs) with oversight by EPA.

Negotiations are ongoing with other PRPs to conduct a characterization study on OU-2, which is southeast of Fredericktown.

A Remedial Investigation (RI) which covers OU-3, OU-4, OU-5, and OU-6 was completed in 2008. Additionally, a Feasibility Study (FS) for the residential properties across the county, part of OU-3, was also completed in 2008. Soon after finishing the RI/FS, the Proposed Plan was publicly issued to obtain community input. The Proposed Plan presented EPA's preferred alternative or clean-up

approach to address all soil from residential yards and public areas in Madison County which pose an elevated risk to human health. After obtaining community input, EPA selected a remedy for residential properties in an Interim Record of Decision (ROD) in 2008. The remedy included excavation, removal, and disposal of lead-contaminated residential soil as well as health education and an institutional controls pilot project. The Remedial Design (RD) was also completed in 2008 followed by construction contract preparation, bidding, and awarding. The remedial action to address approximately 1,100 residential properties began in late 2008 and will continue for an estimated four years. An FS for OU-4, which includes a large tailings pile, an unnamed intermittent stream, and other nearby affected media, is underway.

**Site Facts:** In 1999, approximately 16% of the children tested in Madison County had blood lead levels greater than 10 ug/dL, the level of health concern for EPA and its partner, the Agency for Toxic Substances and Disease Registry. In 2005, that percentage had decreased to 6%, due to the removal and replacement of lead-contaminated residential soil by the Superfund Removal Program and EPA-funded lead health education provided by the Madison County Health Department.

---

## **ENVIRONMENTAL PROGRESS**

---



Two time-critical removal actions were completed in October 2006. These removals cleaned up properties where lead-contaminated soils were creating an unacceptable risk to young children. To date, approximately 3,000 homes have been sampled and the remainder of the county's residential properties will be sampled in the future. Approximately 852 residential properties have soils determined to be at or above the removal action level for lead (1,200 ppm) and over 800 of these properties have been cleaned up. These properties included day-care facilities, playgrounds, parks, and other properties used frequently by young children. Additionally, an Ecological Risk Assessment, which identifies and quantifies impacts to the ecosystem by mine waste releases, and a Human Health Risk Assessment, which identifies and quantifies impacts to human health by mine waste releases, have been completed.

---

## **COMMUNITY INVOLVEMENT**

---

A Community Involvement Plan serves as a support vehicle at this site, defining "who, what, when, where, and why" EPA has a presence in Madison County. The Madison County Environmental Roundtable was established as a dialogue forum for EPA, health officials, state representatives, elected officials, and local interested persons. This group has remained active since its formation and typically meets every other month. EPA also has a toll-free telephone number for the Regional Office in Kansas City, Kansas to give the public easy access to site representatives.

---

## SITE REPOSITORY



Fredericktown Branch of the Ozark  
Regional Library  
115 South Main Street  
Fredericktown, Missouri 63645  
573/783-2120  
Debby Anderson - Librarian

Superfund Records Center  
901 N. 5th St.  
Kansas City, KS 66101  
Mail Stop SUPR  
(913)551-7166

## REGIONAL CONTACTS

**SITE MANAGER:**

**E-MAIL ADDRESS:**

**PHONE NUMBER:**

Emily Wheeler/SUPR/R7/USEPA/US  
wheeler.emily@epa.gov  
(913) 551-7917

**COMMUNITY INVOLVEMENT**

**COORDINATOR:**

**PHONE NUMBER:**

**E-MAIL ADDRESS:**

Debbie Kring/OEP/R7/USEPA/US  
  
(913) 551-7725  
kring.debbie@epa.gov

**STATE CONTACT:**

**PHONE NUMBER:**

Dana Deweese  
(573) 522-1795  
Dana.Deweese@dnr.mo.gov

## MISCELLANEOUS INFORMATION

**STATE:**

MO  
0701102

**CONGRESSIONAL DISTRICT:**

Missouri 5th

**EPA ORGANIZATION:**

SFD-

## MODIFICATIONS

**Created by:**

Lynette  
Motley/SUPR/R7/USEPA/U  
S

**Created Date:**

11/16/2005 04:02 PM

**Last Modified by:**

Emily  
Wheeler/R7/USEPA/US

**Last Modified Date:**

01/20/2009 01:38 PM

