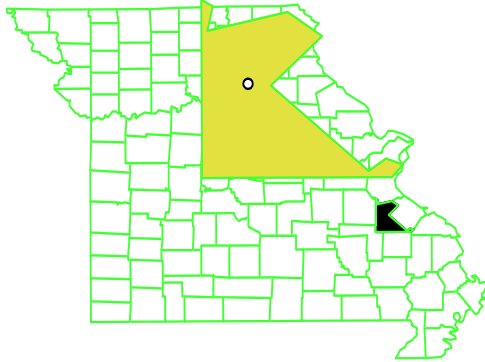


**BIG RIVER MINE
TAILINGS/ST. JOE
MINERALS
CORPORATION SITE
MISSOURI
EPA ID# MOD981126899**

**EPA Region 7
City: Desloge
County: St. Francois County
Other Names:**

02/12/2009



SITE DESCRIPTION

The Big River Mine Tailings/St. Joe Minerals Corp. site is located in a former mining region known as the "Old Lead Belt", which is 70 miles south of St. Louis. This site is composed of six large areas of mine waste in this rural region, approximately 110 square miles in size. The areas included are the Bonne Terre Mine Tailings Site, the Leadwood Mine Tailings Site, the Elvins Mine Tailings Site, the Federal Mine Tailings Site, the Desloge Mine Tailings Site, and the National Mine Tailings Site. Also included are the surrounding residential and recreational areas. In 1977, heavy rains caused an estimated 50,000 cubic yards of tailings to slump into the Big River. The residual lead content in the tailings material is about one-half percent; other minerals such as cadmium and zinc are also present. The Missouri Department of Conservation has detected elevated lead levels in fish downstream of the mining area above World Health Organization Standards. The State of Missouri advises people fishing not to eat fish they catch from the Big River downstream of this area. The Big River is used for recreational purposes such as fishing and canoeing, as well as for commercial activities such as watering livestock. Approximately 23,000 people reside within 4 miles of the site. Dust created by wind erosion contaminates the surrounding area and is a potential hazard to residents. A 1997 human health exposure study by the Missouri Department of Health (MDOH) showed that 17% of the children under seven years old had blood-lead concentrations exceeding the health-based standard of 10 microgram per deciliter. Since EPA has implemented its response actions at residential properties, MDOH has reported that blood-lead concentrations in children have dropped to 5% (2008).

Site Responsibility:

This site is being addressed through Federal and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 02/07/92

Final Date: 10/14/92

Deleted Date:

THREATS AND CONTAMINANTS



Elevated levels of lead, cadmium, and zinc have been detected in the tailings pile. Surface water and various forms of biota in the Big River contain elevated concentrations of lead. Wind erosion and airborne dust have transported contaminants to the surrounding area and are a potential hazard to on-site workers, residents, and children. Fish in the Big River have shown elevated levels of lead. People on-site and in the areas surrounding the mine waste piles are at risk of being exposed to contaminants in the dust and soil.

CLEANUP APPROACH

Response Action Status

Initial Actions: In 1995, the parties potentially responsible for site contamination began a non-time critical removal action to regrade the mine wastes at the Desloge pile. The regrading improved the structural stability of the pile thereby preventing sloughing into the river. Other activities at the site include covering and revegetating to control wind and weather erosion and providing rock slope protection at the waterline to prevent undercutting by the river.

Entire site: The other five major mine waste areas have been documented to have contaminant releases and will be controlled through non-time critical removal actions (NTCRA). The first step in a non-time critical removal action is to prepare an engineering evaluation/cost analysis (EE/CA). Mine waste EE/CA schedules are as follows:

Site	Status	Year
Federal Mine Tailings	completed for stabilization	1996
Bonne Terr Mine Tailings	completed	1999
Elvins Mine Tailings	completed	2005

National Mine Tailings	completed	2005
Leadwood Pile	completed	2006
Federal Mine Tailings (2nd)	to be completed	2009
Mine waste Removal Action schedules		
Elvins Mine Tailings	scheduled for completion	2009
Leadwood Pile	scheduled for completion	2011
National Mine Tailings	scheduled for completion	2011

These actions and others will address the source releases from the mine waste areas. A focused remedial investigation and feasibility study (RI/FS) was started in January 1997 to evaluate the human health and ecological impacts on areas surrounding and between the mine wastes areas. The RI/FS and subsequent Interim Record of Decision (IROD) will be completed by December 2009. It will require many years to carry out all the remedies. Until long-term remedial action is taken, a combined effort of federal, state, and local governments and the potentially responsible parties will take actions to reduce child blood-lead levels. Actions to reduce child blood-lead levels include in-home cleaning, health education, and yard soil replacement. EPA will also evaluate the result of testing at day-care centers, public parks, and other common areas, and action will be taken to reduce the soil exposures, if needed. Prioritization of the actions takes into account actual threats and local concerns.

Site Facts:

Enforcement Actions:

- Administrative Order on Consent = AOC
- Engineering Evaluation/Cost Analysis = EE/CA
- Unilateral Administrative Order = UAO
- Non-Time Critical Removal Action = NTCRA
- Time Critical Removal Action = TCRA

Site	Order	Year	Parties	Actions
Site-wide	AOC	1994	Doe Run Resources Corp., St. Francois Cty. Env. Corp.	Removals
Bonne Terr	AOC	1997	Doe Run Resources Corp.	EE/CA
Site-wide	AOC	1997	Doe Run Resources Corp., ASARCO	Focused RI/FS
Federal	AOC	1997	Doe Run Resources Corp., ASARCO, state of MO	EE/CA
National	AOC	1998	Doe Run Resources Corp., NL Industries	EE/CA
Elvins & Leadwood	AOC	2000	Doe Run Resources Corp.	EE/CAs
Site-wide	AOC	2000	Doe Run Resources Corp.	Blood-lead screenings & soil removals
Bonne Terr	AOC	2001	Doe Run Resources Corp.	NTCRA
Site-wide	AOC	2004	Doe Run Resources Corp.	TCRA
Elvins	UAO	2005	Doe Run Resources Corp.	NTCRA
Leadwood	UAO	2006	Doe Run Resources Corp.	NTCRA
National	UAO	2006	Doe Run Resources Corp., NL Industries, city of Park Hills	NTCRA

Non-Enforcement Action:
EPA completed an Ecological Risk Assessment in 2006

ENVIRONMENTAL PROGRESS



Stabilizing the Desloge tailings pile is completed and progress is being made to develop a permanent vegetative cover on the remaining uncovered areas. Construction of NTCRAs has been completed at the Bonne Terre and Elvins Mine Tailings Piles except for the sedimentation basin at the Elvins Pile, which is expected to be complete by 2009. Construction of a NTCRA is ongoing at the Leadwood Mine Tailings Pile and the National Tailings Pile. The second draft of an EE/CA for the Federal Mine Tailings Pile has been submitted to EPA and has been reviewed. To supplement the EE/CA for the Federal Mine Tailings Pile, over 330 surface soil samples and over 80 subsurface soil samples were collected by MDNR and EPA. EPA also collected over 40 samples for Lead bioaccessibility. Data showed elevated lead in the tailings present at the Federal Mine Tailings Pile. More than 400 yards have had lead contaminated soils replaced.

COMMUNITY INVOLVEMENT

Numerous meetings, ads, Fact Sheets, Press Releases and other communication venues have been used to interact with the citizens who reside near these mining areas in St. Francois County. Ongoing communication by EPA has been noted positively by community members and elected officials.

SITE REPOSITORY



Desloge Public Library, 209 N.
Desloge Drive, Desloge, MO 50613
St. Francois County Health
Department, 1025 West Main, Park
Hills Mo 63601

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:

Jason Gunter
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(913) 551-7358

COMMUNITY INVOLVEMENT

COORDINATOR:

PHONE NUMBER:

E-MAIL ADDRESS:

Debbie Kring
(913) 551-7725
kring.debbie@epa.gov

STATE CONTACT:

PHONE NUMBER:

Gregory Bach
(573) 431-5322

MISCELLANEOUS INFORMATION

STATE:

MO
07CR

CONGRESSIONAL DISTRICT:

08

EPA ORGANIZATION:

SFD-SUPR/FFSE

MODIFICATIONS

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