

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Big River Mine Tailings Site, OU1 -- Area of Response - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VII

Subject: POLREP #3
Progress Report
Big River Mine Tailings Site, OU1 -- Area of Response
07CR
Park Hills, MO
Latitude: 37.8625800 Longitude: -90.5087260

To: Adam Ruiz, US EPA

From: Heath Smith, OSC

Date: 5/12/2011

Reporting Period: March 4, 2011 through May 12, 2011

1. Introduction

1.1 Background

Site Number:	07CR	Contract Number:	EP-R7-07-12
D.O. Number:	0092	Action Memo Date:	12/6/2010
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	NPL	Operable Unit:	01
Mobilization Date:	1/14/2011	Start Date:	1/17/2011
Demob Date:		Completion Date:	
CERCLIS ID:	MOD981126899	RCRIS ID:	
ERNS No.:		State Notification:	MDNR
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) incident category: Inactive Production Facility (Mining-Metals [Pb]).

1.1.2 Site Description

1.1.2.1 Location

The Big River Mine Tailings Site, OU-1 (Site), consists of schools, child day care facilities, and properties where children less than 84 months of age, or other sensitive populations exist which exceed screening levels of 400 milligrams/kilogram (mg/kg) of lead in soils. The Site is within the boundaries of St. Francois County, Missouri. This response action does not include ongoing actions at the Lake Timberline Sub-Site or the Central Middle School portions of the Site.

The Site exists within an area of approximately 436 square miles and includes all of St. Francois County with the exception of the former Mine La Motte tract that extends into St. Francois County's southern border just north of the community of Mine La Motte, Missouri. St. Francois County is the location of a former mining region known as the "Old Lead Belt". The area is still referred to as the "Mineral Area". The population center of the area is located approximately 70 miles south of St. Louis. Six large areas of mine waste covering an area of approximately 110 square miles are present within the Site. 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, the National Mine Tailings Site, and the Doe Run Mine Tailings Site. Migration of lead-contaminated mine waste from these large tailings piles through human and environmental mechanisms has occurred. This response is not limited to these mine waste areas.

1.1.2.2 Description of Threat

The primary contaminant of concern at the Site is lead and lead compounds. Lead and lead compounds are hazardous substances as defined by Section 101(14) of CERCLA, listed at 40 CFR § 302.4, and have been detected in the soils at the Site. EPA has documented total lead concentrations in soil at the Site at levels exceeding the residential soil screening level of 400 mg/kg. Lead is classified by EPA as a probable human carcinogen and is a cumulative toxicant. A significant amount of lead that enters the body is stored in the bone for many years and can cause irreversible health effects.

Please refer to the Agency for Toxic Substances Disease Registry (ATSDR) Toxic Substances Portal for lead for more information: <http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=96&tid=22>

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA initiated a limited Removal Site Evaluation (RSE) at the Site on October 4, 2010, to assess a limited number of residential properties around the Columbia Lead Mine Sub-Site, as well as school and child day care facilities located across the "Area of Contamination" established in the 2004 Administrative Order on Consent between EPA and the Doe Run Company.

Field screening results of composite samples collected from areas of exposed soil documented that a release of a hazardous substance (lead) occurred at the Site. The initial investigation focused areas where children play. Lead was identified by field portable X-Ray Fluorescent (XRF) Spectroscopy at elevated levels, based on the residential screening level of 400 mg/kg lead, in 11 of 11 school properties, 16 of 17 child day care facilities, and 19 of 19 residential properties.

Previous assessments by the Potentially Responsible Party (PRP) also identified properties with elevated lead concentrations that have not been remediated to date. Approximately 34 residential properties have previously been identified with lead concentrations exceeding 1,200 mg/kg. Approximately 729 residential properties are known to exist at the Site with lead concentrations in the 400 to 1,199 mg/kg range.

The greatest areas of concern at the Site that require removal action are the exposed lead-contaminated soils in areas where children 84 months of age or less or other sensitive populations could be exposed.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

The Site consists of schools, child day care facilities, and residential properties in St. Francois County, Missouri. EPA discovered surface soils at the Site to have elevated concentrations of lead.

2.1.2 Response Actions to Date

Weather delays were a major factor during this operating period. Removal crews were unable to operate 26 out of 54 working days during this operational period.

Removal and Restoration of Central Elementary, North County Parkside Elementary, West Elementary, Special Acres and North County Primary School are near completion. Crews are currently excavating the Outdoor Classroom at Central West Elementary and restoring excavated areas at Special Acres State School.

On March 15, 2011 EPA began assessing schools in Farmington and Bismarck, Missouri. Results of this effort identified 8 additional schools and 9 additional child day care centers that require remediation. Twelve (12) city parks were assessed in the Bonne Terre, Park Hills and Desloge Missouri towns. Eleven (11) of the 12 were found to have elevated levels of lead on the premises.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

EPA is currently exploring enforcement alternatives and conducting PRP search work that includes all of St. Francois County. As part of this work, EPA is researching whether there are any viable surviving companies or mining entities that operated in St. Francois County.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
Lead-Contaminated Soil	Solid	52,398yd³	N/A	N/A	Site Repository

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

EPA plans to complete excavations in the contaminated areas at 6 schools, 16 child day care facilities, and 1 residential property at this time. Residential properties will primarily be addressed through other contracting mechanisms. The schools and child day care facilities include:

Schools

1. Central Elementary, Park Hills, Missouri (EXCAVATION 95% COMPLETE; RESTORATION 95%)

COMPLETE).

2. North County Parkside Elementary, Desloge, Missouri (EXCAVATION 95% COMPLETE; RESTORATION 85% COMPLETE).
3. West Elementary, Park Hills, Missouri (EXCAVATION 80% COMPLETE; RESTORATION 75% COMPLETE).
4. Special Acres State School, Park Hills, Missouri (EXCAVATION COMPLETE; 30% RESTORED).
5. St. Joseph School, Bonne Terre, Missouri.
6. [North County Primary School, Bonne Terre, Missouri. \(COMPLETE\)](#)
7. Jefferson Elementary, Farmington, Missouri
8. W.L. Johns Early Childhood Development Center, Farmington, Missouri (WORKING)
9. Truman Kindergarten, Farmington, Missouri (WORKING)
10. Bismarck Elementary / High School, Bismarck, Missouri
11. St. Joseph Elementary School, Farmington, Missouri
12. St. Paul Lutheran School, Farmington, Missouri
13. Farmington Middle School, Farmington, Missouri
14. Farmington Senior High School, Farmington, Missouri
15. North County Middle School, Desloge, Missouri
16. North County Intermediate School, Desloge, Missouri
17. Central High School, Park Hills, Missouri
18. North County Senior High School/ Unitech Career Center, Bonne Terre, Missouri

Child Day Care Facilities

1. [Scribbles Play and Learn Center, Desloge, Missouri \(COMPLETE\).](#)
2. [Tender Care Day Care Center, Park Hills, Missouri \(COMPLETE\).](#)
3. [Start Daycare, Park Hills, Missouri \(COMPLETE\).](#)
4. [Mid St. Francois County Head Start, Park Hills, Missouri \(COMPLETE\).](#)
5. [Angie Rokiski's Day Care, Park Hills, Missouri \(COMPLETE\).](#)
6. [Grandma's House Child Care Center, Desloge, Missouri \(COMPLETE\).](#)
7. [All Aboard Play and Learn Center, Park Hills, Missouri \(COMPLETE\).](#)
8. [Little Britches Daycare and Pre-Schools, Park Hills, Missouri \(COMPLETE\)](#)
9. [West Counties Happy Times Day Care, Leadwood, Missouri \(COMPLETE\)](#)
10. [Becky's Day Care Center, Park Hills, Missouri \(COMPLETE\)](#)
11. [A to Z Learning Tree, Bonne Terre, Missouri \(COMPLETE\)](#)
12. [Kidz Connection, Desloge, Missouri \(COMPLETE\)](#)
13. [Bonne Terre Head Start, Bonne Terre, Missouri \(COMPLETE\)](#)
14. [Patches and Pigtales Child Care, Bonne Terre, Missouri \(COMPLETE\)](#)
15. [North County Educational Center, Bonne Terre, Missouri \(COMPLETE\)](#)
16. [Childrens Zone LLC, Desloge, Missouri \(COMPLETE\)](#)
17. Munchkinland Inc., Farmington, Missouri
18. Klassy Kids Pre-School Daycare, Farmington, Missouri
19. Kare 4 Kids, Bonne Terre, Missouri
20. Creative Kids Learning Center, Bonne Terre, Missouri
21. Superior Children's Center, Farmington, Missouri

22. Alison's Wonderland, Farmington, Missouri
23. Kids R Kids, Farmington, Missouri
24. Kathie's Kids Daycare, Farmington, Missouri
25. Kreative Kids Learning Center, Farmington, Missouri

In addition to what is listed above, EPA plans to begin excavation and restoration of 300 residential properties in the area by 2013.

2.2.1.2 Next Steps

Crews will continue working on the properties as provided in the previous section. Additional properties may be included should new information arise.

2.2.2 Issues

The schools and child day care facilities that are being excavated at this time are active.

Under Section VI.A.1., Proposed Actions and Estimated Costs of the Action Memorandum, the EPA provided a plan for sampling lead-contaminated material generated on-site by the Toxicity Characteristic Leaching Procedure (TCLP) prior to final placement at the repository. The Action Memorandum indicates that EPA would treat soils that fail TCLP (>5mg/L Lead) with an appropriate lead stabilization chemical. Since authorization of the Action Memorandum, EPA determined that mine waste excavated on-site and placed at the on-site repository, does not require waste characterization testing or treatment.

2.3 Logistics Section

The temporary site office is located at 100 Chamber Street, Park Hills, Missouri 63601. The site phone number is (573) 431-5004. All other logistical issues are being addressed by EPA contractors.

2.4 Finance Section

2.4.1 Narrative

The total EPA costs for this removal action are based on full cost accounting practices.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$3,422,672.00	\$2,497,270.00	\$925,402.00	27.04%
TAT/START	\$273,000.00	\$135,000.00	\$138,000.00	50.55%
Intramural Costs				
USEPA - Direct	\$202,500.00	\$75,000.00	\$127,500.00	62.96%
USEPA - InDirect	\$3,302,045.00	\$0.00	\$3,302,045.00	100.00%
Total Site Costs				
	\$7,200,217.00	\$2,707,270.00	\$4,492,947.00	62.40%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer

No significant safety issues reported during this operational period

2.6 Liaison Officer

EPA has coordinated with the Farmington RVII School District, Bismarck RV School District, St. Francois County Central RIII School District, North St. Francois County School District, the City of Park Hills, City of Bonne Terre, City of Farmington and the City of Desloge. As the project progresses, administrators of other schools, cities and child day care facilities that are part of this removal action will be contacted.

2.7 Information Officer

2.7.1 Public Information Officer

The site does not require a PIO.

2.7.2 Community Involvement Coordinator

The site does not require a CIC to be present at the continuously. The EPA held a Public Availability Session at Mineral Area College in Park Hills, Missouri on February 28, 2011, to share information and answer questions about its proposal to establish a supplemental soil repository in Leadwood, Missouri. This repository will be used to store contaminated soil from properties throughout St. Francois County, Missouri.

The EPA community involvement coordinator (CIC) for the Site has helped develop a Site Fact Sheet. The fact sheet is available in the documents section of <http://www.epaosc.org/BRAOR>. A public meeting was held at the Mineral Area College in Park Hills, Missouri, on Monday, November 29, 2010.

3. Participating Entities

3.1 Unified Command

The limited scope of the response does not warrant a full Incident Management Team (IMT) or Unified Command. Operations, safety, logistics, planning, and finance functions are primarily being handled by contractor staff.

3.2 Cooperating Agencies

Cooperating and assisting agencies include:

St. Francois County Central RIII School District,
North St. Francois County School District,
Farmington RVII, School District
Bismarck RV School District
City of Farmington,
City of Bismarck,
City of Bonne Terre,
City of Park Hills,
City of Desloge,
Missouri Department of Natural Resources,
Missouri Department of Health and Senior Services

4. Personnel On Site

1 EPA OSCs
1 START
26 ERRS Crew Members
- 1 ERRS Response Manager
- 1 ERRS Cost Accountant
- 3 ERRS Foremen
- 21 truck drivers / laborers / operators

5. Definition of Terms

AOC	Area of Contamination / Administrative Order on Consent
AOR	Area of Response
ATSDR	Agency for Toxic Substances and Disease Registry
CAMU	Corrective Action Management Unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	Environmental Protection Agency
ERRS	Emergency & Rapid Response Services Contract
MDHSS	Missouri Department of Health and Senior Services
MDNR	Missouri Department of Natural Resources
mg/L	milligrams per Liter
mg/kg	milligrams per kilogram
NCP	National Contingency Plan
ng/m ³	nanograms per cubic meter
NPL	National Priorities List
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
Polrep	Pollution Report
PPE	Personal Protective Equipment
PPM	Part Per Million
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act
Sitrep	Situation Report
START	Superfund Technical Assessment and Response Team
SU	Sample Unit
TCLP	Toxicity Characteristic Leaching Procedure
XRF	X-Ray Fluorescent Spectrometer
yd ³	Cubic Yard

6. Additional sources of information

6.1 Internet location of additional information/report

For additional information, please refer to <http://www.epaosc.org/BRAOR>

6.2 Reporting Schedule

The Pollution Report (Polrep) serves as the OSC's record of the response actions, notifications, and decisions made to support the response action. Polreps will be completed and posted as conditions warrant and at the conclusion of site activities.

7. Situational Reference Materials

Please refer to the documents section of <http://www.epaosc.org/BRAOR> for maps, data, diagrams, etc.

POLREP #3 Last Updated 1/4/2012