

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 #4
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: 1/6/2012

Reporting Period: May 12, 2011 through January 10, 2012

1. Introduction

1.1 Background

Site Number:	07CR	Contract Number:	ERRS:EP-R7-07-12 / SS: EP-S7-11-07
D.O. Number:	ERRS:0092 / SS: N/A	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:	1/17/2011	Start Date:	1/17/2011
Demob Date:		Completion Date:	
CERCLIS ID:	MOD98112689	RCRIS ID:	
ERNS No.:		State Notification:	
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. As of Action Memorandum Amendment #3, work at the Central Middle School site has been incorporated into this action.

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. Seven 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. The 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 the EPA as

a probable human carcinogen and is a cumulative toxicant. A significant amount of lead that enters the body is stored in the bones 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

The 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 the 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 on 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. The EPA discovered surface soils at the Site to have elevated concentrations of lead.

2.1.2 Response Actions to Date

The following table describes the accomplishments to date. Work has been completed at 14 area Schools, 25 Child Day Care Centers and 2 Head Start Facilities. Approximately 105,000 cubic yards of lead contaminated waste has been removed from these facilities.

SCHOOLS			
Facility Name	Excavation Began	Restoration Complete	Cubic Yards Soil Removed
Central Middle School, Park Hills, MO	08/04/2010	07/25/2011	18,600 yd ³
Central Elementary, Park Hills, MO	01/18/2011	05/25/2011	12,570 yd ³
North County Parkside Elementary, Desloge, MO	01/18/2011	08/12/2011	12,720 yd ³
West Elementary, Park Hills, MO	03/04/2011	06/09/2011	14,418 yd ³
Special Acres State School, Park Hills, MO	03/02/2011	06/06/2011	9,666 yd ³
St. Joseph School, Bonne Terre, MO	06/02/2011	06/29/2011	1,122 yd ³
North County Primary School, Bonne Terre, MO	07/15/2011	07/29/2011	1,662 yd ³
Jefferson Elementary, Farmington, MO	05/16/2011	07/27/2011	1,956 yd ³
W.L. Johns Early Childhood Development Center, Farmington, MO	05/12/2011	05/13/2011	90 yd ³
Truman Kindergarten, Farmington, MO	05/12/2011	05/13/2011	102 yd ³
Bismarck Elementary / High School, Bismarck, MO	06/10/2011	06/29/2011	876 yd ³
St. Joseph Elementary School, Farmington, MO	07/14/2011	08/02/2011	420 yd ³
St. Paul Lutheran School, Farmington, MO	07/19/2011	08/02/2011	840 yd ³
North County Middle School, Desloge, MO	09/20/2011	WORKING	1,289 yd ³
North County Intermediate School, Desloge, MO	09/13/2011	10/21/2011	4,005 yd ³
Central High School, Park Hills, MO	12/05/2011	WORKING	7,144 yd ³
North County Senior High School, Bonne Terre, MO	09/20/2011	WORKING	6,362 yd ³
Unitech Career Center, Bonne Terre, MO	10/31/2011	WORKING	1,535 yd ³

Head Start Facilities			
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Mid St. Francois County Head Start, Park Hills, MO	01/28/2011	03/04/2011	672 yd ³
Bonne Terre Head Start, Bonne Terre, MO	04/01/2011	04/18/2011	708 yd ³

Child Daycare Centers			
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Facility Name	Excavation Began	Restoration Complete	Cubic Yards Soil Removed
Scribbles Play and Learn Center, Desloge, MO	01/18/2011	01/28/2011	246 yd ³
Tender Care Day Care Center, Park Hills, MO	01/18/2011	01/28/2011	330 yd ³
Start Daycare, Park Hills, MO	02/14/2011	03/04/2011	426 yd ³
Angie Rokiski's Day Care, Park Hills, MO	02/22/2011	03/03/2011	216 yd ³
Grandma's House Child Care Center, Desloge, MO	00/22/2011	02/23/2011	144 yd ³
All Aboard Play and Learn Center, Park Hills, MO	03/01/2011	03/03/2011	108 yd ³
Little Britches Daycare and Pre-Schools, Park Hills, MO	03/07/2011	03/18/2011	468 yd ³
West Counties Happy Times Day Care, Leadwood, MO	03/07/2011	03/30/2011	804 yd ³
Becky's Day Care Center, Park Hills, MO	04/18/2011	05/11/2011	66 yd ³
A to Z Learning Tree, Bonne Terre, MO	03/30/2011	04/19/2011	1146 yd ³
Kidz Connection, Desloge, MO	05/09/2011	08/12/2011	174 yd ³
Patches and Pigtales Child Care, Bonne Terre, MO	04/18/2011	04/18/2011	36 yd ³
North County Educational Center, Bonne Terre, MO	04/19/2011	04/19/2011	36 yd ³
Childrens Zone LLC, Desloge, MO	05/10/2011	05/11/2011	36 yd ³
Munchkinland Inc., Farmington, MO	05/17/2011	05/18/2011	186 yd ³
Klassy Kids Pre-School Daycare, Farmington, MO	06/07/2011	06/24/2011	828 yd ³
Creative Kids Learning Center, Bonne Terre, MO	07/27/2011	08/03/2011	360 yd ³
Alison's Wonderland, Farmington, MO	07/28/2011	08/09/2011	132 yd ³
Kids R Kids, Farmington, MO	08/02/2011	08/16/2011	516 yd ³
Rainbow Kids Learning Center	06/06/2011	06/09/2011	264 yd ³
Stepping Stones Daycare and Preschool	08/03/2011	08/22/2011	754 yd ³
Adventures in Learning West	08/16/2011	08/22/2011	186 yd ³
Debbie's Tiny Tots	08/23/2011	08/31/2011	486 yd ³
Melody's Happy Faces	08/26/2011	08/26/2011	30 yd ³
Burlbaw's Jack In The Box Day Care	08/29/2011	08/29/2011	3 yd ³

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

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

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Lead-Contaminated Soil	Solid	105,000yd ³	N/A	N/A	Site Repository

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

The EPA plans to complete excavations in the contaminated areas at six schools and, two child day care facilities. Approximately 300 residential properties are planned to be addressed as well.

2.2.1.2 Next Steps

Crews will continue working on open properties and moving to new properties as time allows. 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.

Action Memorandum Amendment #3 was authorized for the Site effective December 28, 2011. The amendment incorporated the actions being taken at Central Middle School and the remaining schools into one removal action. The Central Middle School Action will be closed out. Work at Central Middle School is very near complete. As with all of the large areas excavated, there could be some additional work in getting grass established.

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 the 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	\$4,402,021.00	\$4,375,594.00	\$26,427.00	0.60%
TAT/START	\$273,000.00	\$219,000.00	\$54,000.00	19.78%
Site Specific Cleanup Contract	\$4,161,209.00	\$246,004.00	\$3,915,205.00	94.09%
Intramural Costs				
USEPA - Direct	\$202,500.00	\$100,000.00	\$102,500.00	50.62%
USEPA - InDirect	\$3,302,045.00	\$0.00	\$3,302,045.00	100.00%
Total Site Costs				
	\$12,340,775.00	\$4,940,598.00	\$7,400,177.00	59.97%

* 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

The 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 EPA RPM
EPA Site Specific Cleanup Contractor

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
RPM	Remedial Project Manager
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 #4 Last Updated 1/28/2012