

United States Environmental Protection Agency
Region VII
POLLUTION REPORT

Date: Friday, December 4, 2009

From: Jim Silver

To: Scott Hayes, EPA

Subject: On-Going Activities

Southwest Jefferson County Mining Site OU3

13291 State Road CC, DeSoto, MO

Latitude: 38.1394353

Longitude: -90.4693197

POLREP No.:	6	Site #:	A7D2
Reporting Period:	10/06/09 thru 12/04/09	D.O. #:	0030
Start Date:	7/14/2008	Response Authority:	CERCLA
Mob Date:	7/14/2008	Response Type:	Time-Critical
Demob Date:		NPL Status:	NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:	MON000705443	Contract #	EP-R7-07-12
RCRIS ID #:			

Site Description

The Jefferson County Lead Site OU 03 consists of high concentrations of lead contamination from soil delivered by trucking companies from a contaminated farm field to numerous residences and businesses throughout Jefferson County. The primary problem areas at this site that require action are lead contaminated soils in yards and lead contaminated dust in homes.

Jefferson County is located in southeastern Missouri. Bordered on the north by St. Louis County and the Meramec River, on the east by the Mississippi River, on the south by St. Genevieve and St. Francis Counties, and on the west by Washington and Franklin Counties. The county encompasses 664 square miles. According to the 2000 Census, the population of Jefferson County is 198,099 people. Jefferson County, named in honor of former President Thomas Jefferson was organized in 1818. The county seat is located in Hillsboro, Missouri.

Mining activities in Jefferson County began in the early 1800s, in southern Jefferson County where the Cambrian dolomite source rock is concentrated along the Big River and other major streams. The first production operation was a lead shot tower erected in 1809, in the southern part of Herculaneum. Two mines in operation as early as 1818, the Gray's Mine located on the Big River and the McKane's Mine located on the Dry Creek. In the 1830s and 1840s, there were many other mines opened for the production of lead, zinc, and barium (tiff). By 1855, three smelters were operating in Jefferson County, including the Valles Mines, the Mammoth Mines, and the Sandy Mines. Historical records indicate annual shipping of over three million pounds of lead out of Jefferson County, during this time period, making it one of the leading lead producers.

The Inventory of Mines, Operations, and Prospects database lists 253 historical sites associated with mining and production operations in Jefferson County. Of the 253 mining sites, 202 were for lead or lead and other commodities, particularly zinc and tiff. Most of the remaining sites were exclusively tiff mines. Past mining operators in Jefferson County included the St. Joe Lead Company (now the Doe Run), the Valles Mining Company, the Big River Lead Company, Del Stocking, the Magnolia Mining & Milling Company, the Sandy Mining Company, the National Lead Company, the Bennett Lead & Zinc Company, the Walther Mining Company, Ed Dixon, the Big River Lead Mine, the M. Development Company, and Iva Schmitz-Rome & John. Of these operators, the Doe Run is the only mining operator currently listed in Jefferson County.

Its predecessor, the St. Joe Lead Company, opened the Doe Run's smelter in 1892. In 2003, the Doe Run smelter was producing over 100,000 tons of lead a year. The Valles Mining Company still exist but no longer mines for lead. According to historical records, the company operated the lead mine and smelting operation at the Valles Mines from approximately 1824 through the 1930s. The ruins of several ore-milling structures, a former smelter, chat piles, and mill wastes are still present in the vicinity of the

In September 2006, the U.S. Environmental Protection Agency (USEPA) began an integrated site assessment, which included soil and groundwater sampling in the area. During the sampling event, USEPA sampled the soil at 353 residences located on or near mining or mine waste disposal areas. Based on this data, approximately 22 percent (55) of these residential properties had soils that exceeded 400 ppm, and 6 percent (22) had soils that exceeded 1,200 parts per million (ppm) for lead. Beginning in September 2006, USEPA also sampled approximately 304 private drinking water wells in Jefferson County. Of these 304 wells sampled, 36 (12 percent) were found with lead levels greater than 15 parts per billion (ppb) and/or cadmium levels greater than 5 ppb.

In September 2006, USEPA sampled a farm field in anticipation of purchasing the soil for use as backfill following the excavation of lead contaminated soil from residences in Washington County, Missouri. The soil contained lead at levels greater than 1,200 ppm. USEPA advised the hauling company of the contaminated soil and not to use the contaminated soil for backfill. USEPA sent a letter to the property owner in June of 2007, stating that “it is important that the contaminated soil from your property not be sold or transported off of your property for use elsewhere.” In September 2007, USEPA sent a 104(e) letter to the property owner asking for “information and documents related to the delivery of contaminated soil, sand, gravel, and/or rock found in residential yards.”

The property owner furnished the names of several trucking companies that had purchased soil from his property. In November 2007, USEPA again sampled the property owner’s property at three locations. Analysis of the soil by an X-Ray Fluorescence instrument indicated lead levels from 1,000 ppm to nearly 4,000 ppm.

Current Activities

As part of the ongoing community involvement activities, USEPA recently interviewed DeSoto, Missouri, members of city management, Health Department, Chamber of Commerce, county executives, and owners of remediated property to acquire opinions on the work conducted by USEPA at the site.

Excavation of lead contaminated soil greater than 1,200 parts per million (ppm) is ongoing. Properties are prioritized by (1) households of pregnant women, (2) households with children 6 years old or less, and (3) households where children reside.

Properties identified with lead levels greater than 1,200 ppm - 113

Properties where cleanup is complete - 80

Planned Removal Actions

USEPA will continue to sample residences as owners grant access. Excavation of those properties with elevated lead levels will continue.

Next Steps

USEPA is working with county officials to draft an ordinance that would prohibit the selling of lead contaminated soil and gravel in Jefferson County.

Key Issues

A different type of straw matting is being used successfully to prevent erosion of newly backfilled yards, saving the cost of regrading.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$3,029,602.00	\$2,824,778.00	\$204,824.00	6.76%
RST/START	\$231,855.00	\$193,099.00	\$38,756.00	16.72%
Intramural Costs				
USEPA - Direct (Region, HQ)	\$80,000.00	\$35,000.00	\$45,000.00	56.25%
USEPA - InDirect	\$1,301,680.00	\$1,177,494.00	\$124,186.00	9.54%
Total Site Costs	\$4,643,137.00	\$4,230,371.00	\$412,766.00	8.89%

* 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.

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