

United States Environmental Protection Agency
Region VII
POLLUTION REPORT

Date: Thursday, December 19, 2013

From: Heath Smith

To: Scott Hayes, EPA

Subject: Final Pollution Report
Southwest Jefferson County Mining Site OU3
13291 State Road CC, DeSoto, MO
Latitude: 38.1394353
Longitude: -90.4693197

POLREP No.:	14	Site #:	A7D2
Reporting Period:	6/30/2011 through 12/19/2013	D.O. #:	0030
Start Date:	7/14/2008	Response Authority:	CERCLA
Mob Date:	7/14/2008	Response Type:	Time-Critical
Demob Date:	8/27/2011	NPL Status:	NPL
Completion Date:	8/27/2011	Incident Category:	Removal Action
CERCLIS ID #:	MON000705443	Contract #	EP-R7-07-12
RCRIS ID #:			

Site Description

The Southwest Jefferson County Lead Site OU3 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. It is 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. 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 were 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 exists 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 began an integrated site assessment, which included soil and groundwater sampling in the area. During the sampling event, the EPA 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 parts per million (ppm), and 6 percent (22) had soils that exceeded 1,200 ppm for lead. Beginning in September 2006, the EPA 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, the EPA 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. The EPA advised the hauling company of the contaminated soil and not to use the contaminated sild for backfill. The EPA 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, the EPA 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, the EPA 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

There are no current or ongoing activities associated with this Operable Unit 03 of the Southwest Jefferson County Residential Lead Removal. The table below summarizes the complete list of properties remediated during this project. One hundred and fifteen residential properties along with one junior high and one high school were remediated under this operable unit.

Property ID	Excavation Complete	Tons Disposed
JC-0554	07/28/2008	409.98
JC-0555	08/11/2008	485.13
JC-0612	08/14/2008	280.71
JC-0629	08/19/2008	158
JC-0639	08/25/2008	356.07
JC-0564	08/19/2008	279.46
JC-0600	08/19/2008	445.11
JC-0558	08/27/2008	327.05
JC-0548	09/17/2008	445.29
JC-0613	09/26/2008	528.41
JC-0775	09/23/2008	193.92
JC-0954	10/06/2008	474.94
JC-0964	09/30/2008	320.98
JC-0948	10/06/2008	311.22
JC-0942	10/01/2008	150.94
JC-0678	10/16/2008	809.14
JC-0572	10/21/2008	217.26
JC-0611	10/21/2008	341.86
JC-0565	10/31/2008	26.82
JC-0651	11/03/2008	26.82
JC-0698	10/31/2008	259.47
JC-0842	10/24/2008	271.94
JC-0999	10/28/2008	218.26
JC-0620	10/29/2008	90.36
JC-0044	11/25/2008	82.62
JC-1054	01/07/2009	397.32
JC-0693	01/09/2009	210.62
JC-1033	01/08/2009	76.43
JC-0562	01/14/2009	86.68
JC-0748	01/15/2009	38.16

JC-0777	01/16/2009	664.2
JC-0701	01/21/2009	444.57
JC-0617	02/02/2009	179.89
JC-0652	01/22/2009	528.14
JC-0655	02/02/2009	372.74
JC-0667	02/04/2009	121.03
JC-0642	02/10/2009	350.07
JC-0556	02/09/2009	800.66
JC-0825	02/12/2009	472.83
JC-0891	02/17/2009	368.86
JC-0571	02/24/2009	15.41
JC-0575	02/13/2009	167.05
JC-1156	02/25/2009	201.78
JC-1162	02/23/2009	215.01
JC-0658	03/20/2009	19.97
JC-0584	03/11/2009	247.69
JC-0648	03/26/2009	122.02
JC-0634	04/22/2009	560.37
JC-0567	05/01/2009	277.04
JC-0559	05/07/2009	236.83
JC-0729	05/07/2009	247.68
JC-1144	04/24/2009	48.1
JC-0597	05/14/2009	369.87
JC-1231	05/20/2009	211.36
JC-0675	05/14/2009	355.51
JC-0717	05/19/2009	269.78
JC-0725	06/08/2009	229.86
JC-0616	05/18/2009	258.13
JC-0706	06/30/2009	876.22
JC-0955	07/09/2009	300.22
JC-0626	07/10/2009	338.09
JC-0245	06/17/2009	420.66
JC-0941	07/06/2009	66.63
JC-1233	07/02/2009	140.91
JC-1361	06/26/2009	198.71
JC-1238	07/08/2009	82.9
JC-0550	07/22/2009	68.76
JC-1382	07/16/2009	359.03
JC-0566	07/27/2009	1124.19
JC-0580	08/03/2009	377.56
JC-1180	08/07/2009	568.62
JC-0563	08/13/2009	259.78
JC-0982	08/31/2009	145.87
JC-1090	10/01/2009	184.83
JC-0576	10/01/2009	257.1
JC-0582	10/13/2009	1186.49
JC-0568	10/20/2009	324.06
JC-0551	11/03/2009	400.98
JC-0778	11/09/2009	246.14
JC-0615	12/07/2009	245.46
JC-0590	12/01/2009	191.11
JC-0577	12/02/2009	258.42
JC-1048	12/10/2009	801.98
JC-0624	02/12/2010	128.34
JC-0716	03/08/2010	513.19
JC-0797	03/08/2010	427.16
JC-0588	03/17/2010	390.42
JC-0846	03/02/2010	228.27
JC-0790	03/17/2010	538.92
JC-0991	03/31/2010	256.07
JC-0915	04/02/2010	79.04
JC-0780	04/09/2010	112
JC-0677	04/09/2010	193.02
JC-0961	03/29/2010	481.8
JC-0854	04/06/2010	366.73

JC-0603	04/06/2010	664.29
JC-1080	04/30/2010	561.92
JC-0785	05/18/2010	154.42
JC-0573	05/12/2010	250.86
JC-1111	04/30/2010	390.21
JC-0958	05/05/2010	351.01
JC-1019	05/03/2010	666.51
JC-1619	06/01/2010	290.14
JC-1486	06/14/2010	263.06
JC-0650	04/07/2010	493.12
JC-1717	07/19/2010	231.22
JC-1648	07/06/2010	370.81
JC-0712	08/02/2010	57.34
JC-0676	07/08/2010	513.15
JC-0672	08/17/2010	447.3
JC-0637	08/24/2010	94.93
JC-0697	08/24/2010	171.22
JC-1654	08/19/2010	230.83
JC-0878	08/26/2010	113.28
JC-1993	07/05/2011	84.32
JC-1659	08/11/2011	135.42
JC-2014	08/20/2011	586.22

Planned Removal Actions

In September 2012, a Record of Decision was authorized allowing the remedial program to begin transitioning into the lead role at the site. Additional sampling of soil and water will be provided through the remedial program of R7 EPA.

No further action planned.

Next Steps

No further action planned.

Key Issues

None

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$4,458,062.00	\$4,711,621.00	(\$253,559.00)	-5.69%
RST/START	\$283,810.00	\$283,810.00	\$0.00	0.00%
Intramural Costs				
EPA - Direct (Region, HQ)	\$80,000.00	\$70,000.00	\$10,000.00	12.50%
EPA - InDirect	\$2,112,740.00	\$1,755,156.70	\$357,583.30	16.93%
Total Site Costs	\$6,934,612.00	\$6,820,587.70	\$114,024.30	1.64%

* 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.

Disposition of Wastes

Waste Stream	Quantity	Manifest #	Disposal Facility
Lead contaminated soil	36,939 tons	N/A	IESI Timber Ridge Landfill 12581 State Hy H

response.epa.gov/jeffersoncountyleadou3

POLREP #14 Last Updated 4/7/2014