

United States Environmental Protection Agency
Region VII
POLLUTION REPORT

Date: Friday, September 11, 2015

From: Todd Campbell

To: Dave Williams, US EPA

Subject: Final POLREP

Central Mining District Camden County Lead Site

Camden County, MO

Latitude: 38.0094000

Longitude: -92.7569000

POLREP No.:	39	Site #:	A7L9
Reporting Period:	12/16/14-9/18/15	D.O. #:	
Start Date:	9/22/2008	Response Authority:	CERCLA
Mob Date:	9/22/2008	Response Type:	Time-Critical
Demob Date:	12/25/2014	NPL Status:	Non NPL
Completion Date:	9/18/2015	Incident Category:	Removal Action
CERCLIS ID #:	MON000705679	Contract #	
RCRIS ID #:			

Site Description

The Camden County area was mined from 1830 to 1910, with lead as the principal product. After 1910, most of the mining was for barite, with galena (lead) as a minor by-product. By 1947, lead production in the Central Mining District had totaled 24,855 short tons. Since 1950, no lead and very little barite have been mined. Mining operations and associated lands in the CMD area have been owned, operated, and managed by various entities and/or private citizens (USGS and Missouri Division of Geological Survey and Water Resources 1967). Hazardous substances typically associated with historic mining sites in Missouri include arsenic, barium, lead, and cadmium. These mining waste products often end up on driveways, in yards, and in children's play areas.

The CMD–Camden County covers approximately 655 square miles in central Missouri. Contamination from mining activities potentially impacts 37,050 residents of Camden County.

The climate of the area is characterized by cool winters and hot summers. The average total annual precipitation is about 38–42 inches. Camden County site soils range widely in texture, natural drainage, depth to bedrock, and other characteristics. The predominant soil types are deep to moderately deep, sloping to very steep, very cherty silt that forms on uplands.

Several properties in the CMD–Camden County area were found to exceed the removal action level for lead. Initial site assessment activities were conducted July–November 2006. Properties were sampled based on the Geological Survey and Resource Assessment Division's (GSRAD) Inventory of Mines, Operations, and Prospects database which identified more than 900 mining locations in the five-county Central Mining District area. The locations were then mapped out, and door to door sampling began.

A Regional Decision Team (RDT) meeting was held on 27 February 2007 where the proposed future actions of a second phase of sampling would be conducted. The purpose of this second phase was to sample the properties of residents who responded after November 13, 2006, when site assessment activities ended, and to expand sampling into the other mining areas where limited sampling was conducted. At this meeting it was also agreed that site assessment would investigate the potential for naturally occurring contamination versus mining contamination. Also the EPA's toxicologist was tasked with completing a site-specific streamlined risk assessment. The naturally occurring contamination project, with associated sampling event and receipt of data, was completed in October 2007. This sampling event included sampling all properties that were found to exceed the MCL of 15 µg/l for lead, 5 µg/l for cadmium, and 10 µg/l for arsenic. At that time both wellhead and tap samples were taken. This information was provided to the removal program.

In June 2007, draft action memos were developed for the Central Mining District to address alternate drinking water sources, soil contamination, and continued drinking water sampling. On September 21,

2007, the EPA's toxicologist completed site-specific removal action levels for lead in the Central Mining District memorandum. This memo set the Removal Action Level (RAL) for lead in drinking water at 30 µg/l. This memo is an attachment to the signed action memo.

The action memo for Camden County was signed on September 22, 2008. The response action included continued sampling of drinking water sources, excavating contaminated soils in yards, and providing alternative drinking water sources to properties which exceeded the RAL.

A second Regional Decision Team (RDT) meeting was held on July 30, 2009. At this meeting it was agreed that the action memo would be amended to reflect the lower drinking water removal action level (RAL) of 15 µg/l per the September 17, 2008 Memo from Debbie Dietrich, Director, Office of Emergency Management, entitled "Revised Superfund Removal Action Levels". Also the Central Mining District Lead sites did not score high enough in the hazard ranking system (HRS) to be placed on the NPL, and therefore no follow-up remedial actions were possible at these sites. Also it was not anticipated that the Central Mining Lead Sites would exceed the expenditure of two million dollars in funds (per site).

The RDT also agreed that yards that exceeded 400 ppm of lead in soil would be excavated.

Properties where drinking water filters were installed were sampled quarterly for one year (to ensure effectiveness) and after that time, five filters were left for the residents to change out as appropriate.

All properties with water softeners, that did not exceed the RAL for lead, arsenic, and cadmium, were referred to the Missouri Department of Natural Resources (MDNR) for follow-up.

A total of 715 properties were screened for lead contamination using an XRF spectrometer, and water was collected from 1,677 private drinking water wells. In all, a removal action (excavation of lead-contaminated soil) was taken at 20 residential properties. An additional eight properties were provided with an alternative source of safe drinking water.

Current Activities

Please refer to POLREPs 1-38 for previous site activities. During this reporting period, the remaining five properties (ID # 10031, 10890, 11130, 11772, and 11820) with outstanding drinking water issues were provided a safe source of alternative drinking water. This included the final installation of a filtration system and a limited supply of filters to maintain the newly installed systems. In addition it took some time to reconcile a double billing issue by the filter provider. All remaining time-critical actions specified under this action memorandum are considered complete at this time.

Planned Removal Actions

No additional removal actions are planned at this time. In summary 20 properties underwent a removal action to remove lead-contaminated surface soils and an additional eight properties were provided a safe alternative source of drinking water.

Next Steps

None

Key Issues

Numerous property owners did not respond when they were offered drinking water filters, and numerous letters were returned undeliverable. Several property owners denied EPA access to excavate contaminated soils.

Numerous sewer projects and natural gas pipeline and associated excavation work is occurring in this area. MDNR and other engineering firms have contacted the EPA for information on lead in soil in the area.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$517,615.01	\$443,339.01	\$74,276.00	14.35%
RST/START	\$459,853.10	\$459,821.56	\$31.54	0.01%
Intramural Costs				
USEPA - Direct (Region, HQ)	\$230,000.00	\$57,000.00	\$173,000.00	75.22%
USEPA - InDirect	\$485,154.00	\$64,000.00	\$421,154.00	86.81%

Total Site Costs	\$1,692,622.11	\$1,024,160.57	\$668,461.54	39.49%
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* 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

Hazardous Waste solids (lead) will be solidified. Contaminated soil is sent to a Class D landfill in Jefferson City, MO

Waste Stream	Quantity	Manifest #	Disposal Facility
Hazardous waste, solid n.o.s. (lead)	7 - 55 drums	010339572JJK	EQ Detroit, Inc
Contaminated Soil	1850.75Tons		Jefferson City Landfill Authroity, Allied Waste, Jefferson City, MO

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POLREP #39 Last Updated 9/25/2015