

**United States Environmental Protection Agency**  
**Region VII**  
**POLLUTION REPORT**

**Date:** Thursday, January 15, 2009

**From:** Janice Kroone

**To:** Dave Williams, US EPA

**Subject:** Central Mining District Camden County Lead Site  
Camden County, MO  
Latitude: 38.0094000  
Longitude: -92.7569000

|                          |                      |                            |                |
|--------------------------|----------------------|----------------------------|----------------|
| <b>POLREP No.:</b>       | 14                   | <b>Site #:</b>             | A7L9           |
| <b>Reporting Period:</b> | January 9 - 15, 2009 | <b>D.O. #:</b>             |                |
| <b>Start Date:</b>       | 9/22/2008            | <b>Response Authority:</b> | CERCLA         |
| <b>Mob Date:</b>         | 9/22/2008            | <b>Response Type:</b>      | Time-Critical  |
| <b>Demob Date:</b>       |                      | <b>NPL Status:</b>         | Non NPL        |
| <b>Completion Date:</b>  |                      | <b>Incident Category:</b>  | Removal Action |
| <b>CERCLIS ID #:</b>     | MON000705679         | <b>Contract #</b>          |                |
| <b>RCRIS ID #:</b>       |                      |                            |                |

**Site Description**

Contamination from mining activities potentially impact 37,050 residents of Camden County.

The Camden County Mining area was mined from 1830 to 1910, with lead as the principal product. After 1910, most of the mining had been for barite, with galena (lead) as a minor byproduct. Lead production in the Central Mining District up until 1947 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. The 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. The climate of the area is characterized by cool winters and hot summers. The average total annual precipitation is about 38 to 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. Sampling is continuing in this area.

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 located 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 total of 646 properties were sampled in the Central Mining District area. Thirty one properties were found to have lead greater than EPA's MCL of 15 ug/l, one property was found to have cadmium exceeding 5 ug/l and eight properties were found to exceed the arsenic MCL of 10 ug/l. 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 residents that responded after November 13, 2006 when site assessment activities ended and also 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 vs mining contamination. Also ENSVs toxicologist was tasked with completing a site specific streamlined risk assessment. The naturally occurring contamination project and 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 ug/l for lead, 5 ug/l for cadmium and 10 ug/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, EPA's toxicologist completed a 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 ug/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 includes continued sampling of drinking water sources, excavating contaminated soils in yards, and providing alternative drinking water sources to properties which exceed the RAL for this site.

#### **Current Activities**

During this reporting period, one hundred and thirteen drinking water samples were taken and one hundred and two yards were screened for lead. Soil at four properties were screened for lead, but no drinking water samples were taken as these properties share a well with other properties sampled.

Over two thousand residents have responded and EPA is contacting those requesting additional information.

#### **Planned Removal Actions**

Continue to conduct soil and water sampling activities in Camden County and respond to resident inquiries.

Resample at the tap and the wellhead, those properties found to be above 15 ug/l for lead, 10 ug/l for arsenic and/or 5 ug/l for cadmium.

#### **Next Steps**

Continue to conduct soil and water sampling in Camden County.

#### **Key Issues**

None

#### **Estimated Costs \***

|                             | <b>Budgeted</b>     | <b>Total To Date</b> | <b>Remaining</b>    | <b>% Remaining</b> |
|-----------------------------|---------------------|----------------------|---------------------|--------------------|
| <b>Extramural Costs</b>     |                     |                      |                     |                    |
| ERRS - Cleanup Contractor   | \$75,000.00         | \$42,000.00          | \$33,000.00         | 44.00%             |
| RST/START                   | \$68,900.00         | \$45,000.00          | \$23,900.00         | 34.69%             |
| <b>Intramural Costs</b>     |                     |                      |                     |                    |
| USEPA - Direct (Region, HQ) | \$30,000.00         | \$5,500.00           | \$24,500.00         | 81.67%             |
| USEPA - InDirect            | \$54,783.00         | \$5,700.00           | \$49,083.00         | 89.60%             |
|                             |                     |                      |                     |                    |
| <b>Total Site Costs</b>     | <b>\$228,683.00</b> | <b>\$98,200.00</b>   | <b>\$130,483.00</b> | <b>57.06%</b>      |

\* 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.

[response.epa.gov/CMDCamdencounty/leadsite](http://response.epa.gov/CMDCamdencounty/leadsite)

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