

United States Environmental Protection Agency
Region VII
POLLUTION REPORT

Date: Wednesday, July 14, 2004

From: Doug Ferguson

Subject: Annapolis Lead Mine Site
Iron County, Annapolis, MO
Latitude: 37.3633000
Longitude: -90.6746000

POLREP No.:	3	Site #:	07XLRV01
Reporting Period:		D.O. #:	0045
Start Date:	2/18/2004	Response Authority:	CERCLA
Mob Date:	2/18/2004	Response Type:	Time-Critical
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:	MO0000958611	Contract #	68-S7-02-04
RCRIS ID #:			

Site Description

The Annapolis Lead Mine site is the location of a lead mine that operated in the 1920's and 1930's. During that operational period tons of mine wastes were abandoned at the surface of the site. This mine waste contains elevated levels of lead along with cadmium, thallium and arsenic. The mine waste is slowly washing off of the site through a small ditch that drains from the site. The ditch empties into Sutton Branch, which, only about a mile south, empties into Big Creek. Environmental assessments have been performed by both the U.S. Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR) in the past. The EPA performed a removal action at the site in 1997 in response to children with elevated blood-lead levels living on-site. However, the current action is the first action taken to stabilize the tailings pile and end the contamination migration from off-site.

Between February 2002 and May 2002, the EPA was on-site on an intermittent basis. The EPA and the EPA contractor, Superfund Technical Assessment and Response Team (START), roughed in the outer boundaries of the lead-contaminated soil with an X-Ray Fluorescent (XRF) Analyzer. An EPA surveyor was utilized to grid the site off into 50'X 50' cells. The START contractor mobilized to the site to perform lead assessment activities on each grid and modify the outer boundary of lead-contaminated soil based upon their findings. A map was generated that visually depicts the area contaminated by lead. The map is broken into three separate ranges: 0 - 400, 401 - 999, 1000 - infinity.

The Emergency and Rapid Response Service (ERRS) contractor crews mobilized to the site on May 10, 2004. By the time they were mobilized to the site, a clean area had been constructed near the county road. Office trailers, storage and portable toilets were placed on the clean area. The office trailers were connected to electricity and had phone service installed.

During the weeks of May 10 and 17, 2004, the ERRS crews utilized two bull dozers and an excavator to begin constructing roads and drainage ways around the tailings pile as well as clearing trees, concrete structures and rubbish. During the week of May 24, 2004, and Memorial Day week beginning June 2, 2004, the ERRS crews constructed a lower settling basin. The settling basin, constructed before Memorial Day weekend, effectively placed a physical barrier between the tailings pond and Sutton Branch Creek.

During the week of June 2, 2004, a large off-road dump truck was mobilized to the site. Construction of the upper settling basin was completed June 12, 2004.

Work is proceeding according to a set of plans and specifications completed for the EPA by the START contractor.

An National Pollutant Discharge Elimination System (NPDES) permit has been obtained from the MDNR. Initial flow and discharge measurements were taken after the first significant rain event. Analytical results are pending but, visual inspection of the run-off indicated the settling basins are

highly effective in reducing the spread of lead-contaminated soils off-site.

The START contractor is also currently on-site performing removal oversight and documentation of site conditions.

Current Activities

Tailings material is still being transported to the top of the repository to maximize volume for future waste that may be added to the repository. Area around the repository is being graded to meet engineering specifications for slope and drainage. Site activities during the week of July 19, 2004, should include excavation of contaminated material from cells located in the area north of the repository where lead production activities occurred in the former Annapolis Lead Mine.

Planned Removal Actions

The primary purpose for this removal action is to stabilize the tailings pile that has been washing away for approximately 60 years. With the construction of the upper and lower settling basin, sediments migrating from the tailings pile can be managed before they impact Sutton Branch or Big Creek. The settling basins are temporary and will be maintained during the course of this action and cleaned and closed before demobilization. The area to be capped (repository) as well as the drainage will be constructed in accordance with the engineering plans and specifications.

Next Steps

Areas around the tailings pile contaminated with lead will be excavated and the soil removed, drainage from the site will be diverted into the wastewater train made up by the upper and lower settling basins and the drainage channel that runs through the site. Tailings will be shaped as prescribed by the plans and specifications. A borrow area will be established on-site. Once the tailings are shaped to plans and specifications a cap will be installed over them. Grass will be sown over the cap to establish a vegetative cover.

Key Issues

Sam A. Baker State Park is located about 15 miles downstream of the site on Big Creek. Two sediment samples were taken in Big Creek near the intersection of Highway 143 and Big Creek. The samples were analyzed for lead and other heavy metals commonly associated with mining in the area. The samples did not indicate a problem with heavy metals in the sediments of Sam A. Baker State Park.

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