

PROPOSED PLAN
ANNAPOLIS LEAD MINE SITE
OPERABLE UNIT-2 (BIG CREEK)
CERCLIS ID # MO000059611
IRON COUNTY, MISSOURI

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| Site: | <i>Annapolis, MO</i> |
| ID # | <i>MO000059611</i> |
| Break: | <i>5.0</i> |
| Other: | <i>3-2007</i> |
| | <i>PLAZ</i> |
| | <i>gma</i> |

Prepared by

United States Environmental Protection Agency
Region VII
901 North 5th Street
Kansas City, KS 66101
March 2007

40264705



Superfund

A. Introduction

This Proposed Plan has been developed by the United States Environmental Protection Agency (EPA) to address mine waste in Big Creek, which is designated as Operable Unit-2 (OU-2), of the Annapolis Lead Mine (ALM) Site located in Iron County, Missouri. This plan is published in accordance with the requirements of Section 117 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also referred to as the Superfund Law, 42 U.S.C. § 9617.

The EPA has coordinated the development of this Proposed Plan with the Missouri Department of Natural Resources (MDNR). The EPA is the lead agency and the MDNR is the support agency.

B. Purpose of the Proposed Plan

The primary purpose of the Proposed Plan is to present to the public a clear explanation of the EPA's Preferred Alternative for addressing mine and mill waste at OU-2. The Proposed Plan provides background information, identifies the preferred alternative for cleanup and the rationale for the preferred alternative, solicits public review and comment on the alternative described, and provides information on how the public can be involved in the remedy selection process.

The public is encouraged to review and comment on the proposed plan. The public is also encouraged to review and comment on the supporting documents in the Administrative Record (AR). The AR is a collection of all the documents and information the EPA relied on in developing the Proposed Plan.

A 30-day review and comment period opens on 3/23/2007, and will close on 4/22/2007. A public meeting will be held at the Southern Iron County Community Center on 4/05/2007. This Proposed Plan and supporting documents in the AR are available for review during normal business hours at the following locations:

City Hall
204 School Street
Annapolis, Missouri

EPA Region 7
Records Center
901 N. 5th Street
Kansas City, KS.

After the public comment period is over, the EPA will review all comments and make a final decision for cleanup of the mine waste. It is important to the remedy selection process to receive public input on all alternatives and on the rationale for the preferred alternative. The EPA's final decision will be explained in a document called the Record of Decision (ROD). Included in the ROD will be a responsiveness summary that responds in writing to significant comments the EPA received from the public during the comment period.

C. Site Background Information

The ALM site is located approximately .75 miles north of Big Creek. The source area was a lead mine that operated between the years of 1919 and 1940. Mining activities at the site included the excavation of ore bodies, the crushing and concentrating of ore and storage of the concentrated metals prior to offsite shipment for smelting. The crushing and concentrating wastes (tailings) were disposed of on the surface of the property within a ravine that is a tributary of Sutton Branch Creek. The resulting pile of tailings has been stabilized under an engineered cap and occupies approximately ten acres of the site. Tailings residue is present in the substrate of Sutton Branch Creek for approximately .75 mile downstream of the site, where it merges with Big Creek. It has been estimated that 1,173,000 tons of tailings were deposited in the tailings pile area during the period of mining operations. The tailing piles and resultant eroded deposits were the subject of the removal action which installed the cap prior to the Remedial Investigation for OU-2. The OU-1 removal action resulted in the consolidation and covering of the tailings piles as well as the return of some of the outwash material to the pile prior to installation of the cap.

The former mine and impacted area is located approximately one mile east northeast of Annapolis, Missouri. Runoff from the former mine operation entered Sutton Branch Creek which flows downstream into Big Creek. The area affected by the mining wastes is considered rural/residential. OU-1 is defined as the Sutton Branch Creek floodplain from the Probable Point of Entry (PPE) to the confluence with Big Creek, as well as the historic tailings pile and mine area and is approximately 200 acres in size. OU-2 is defined as Big Creek from the mouth of Sutton Branch Creek downstream to the confluence with the St. Francois River, which is a total of approximately 20 miles of stream. OU-3 is defined as the town of Annapolis. OU-2 is the focus area of this Proposed Plan.

Big Creek originates in Iron County south of Taum Sauk Mountain. It flows south and then east in Iron County, then it enters Wayne County where it turns south again to join the St. Francois River. Big Creek is 32.5 miles long and its watershed is approximately 194 square miles. State Highway 49 runs along most of the length of Big Creek in Iron County, starting at Des Arc and heading upstream. Sam A. Baker State Park is located on the lower section of Big Creek. It encompasses 5,324 acres and includes approximately 5 miles of Big Creek. This five mile reach has been designated as a Missouri State Outstanding Water Resource. This reach is the last five miles of Big Creek before joining the St. Francois River.

D. Scope and Role of the Cleanup Action

This Proposed Plan addresses OU-2, which includes the nature and extent of contamination in Big Creek.

A Screening Site Inspection for OU-1 was conducted June 1996, collecting data primarily on background information, waste and source sampling, groundwater exposure pathways, surface water exposure pathways, soil exposure pathways, and air exposure pathways. Results of this report were documented in the Removal Assessment (June 1998). The Remedial Investigation (RI) for OU-1, with expanded sections on surface water, sediments, and soil was completed in August 2005. The purpose of the RI was to determine the nature and extent of contamination. A Hydrology and Flood Plain Report was conducted to evaluate the existing conditions and behavior of the Sutton Branch Creek flood plain.

A Feasibility Study (FS) for OU-1 was completed in August 2005. The FS combined the information about the nature and extent of contamination in and around the Site described in the RI. The FS developed alternatives for remedial action for OU-1. Additional studies have been conducted by EPA, MDNR, the United States Fish and Wildlife Service, and others to assist in developing and supporting the alternatives in the FS.

A RI/FS was completed for OU-2 in March 2007. The RI/FS consisted of collecting 49 overbank and deep pool samples in Big Creek. Samples were taken from the mouth of Sutton Branch Creek downstream to the confluence with the St. Francois River. One sample taken at the mouth of Sutton Branch Creek was above levels of concern. All other samples were below levels of concern.

As stated in the previous section, EPA initiated and completed a Time Critical Removal Action to address the majority of the human health and ecological risks at the OU-1 source area. This Proposed Plan evaluates whether a remedial response action is necessary to mitigate the principal threat for the ALM, which is the residual risk to human health and the environment from exposures to hazardous substances in soils, sediments, and surface water. The RI/FS has shown that no action in Big Creek (OU-2) is necessary.

E. Summary of Site Risks

Ecological Risk

It has been determined by the sampling results that there is no ecological risk associated with OU-2 of the Annapolis Lead Mine Site.

Human Health

It has been determined by the sampling results that there is no human health risk associated with OU-2 of the Annapolis Lead Mine Site.

F. Remedial Action Objectives

Since there is no significant contamination at the site, there are no corresponding Remedial Action Objectives.

G. Summary of Remedial Alternatives Evaluated

Since there was no significant contamination at the site, the only remedial alternative evaluated was the no action alternative.

H. Preferred Alternative

The preferred approach for addressing the Annapolis Lead Mine Site OU-2 is No Action. This alternative is appropriate because the RI showed no significant mine waste contamination in Big Creek, therefore, no remedial response actions are required or needed.

I. Community Participation

The public is encouraged to review this Proposed Plan and the supporting documents contained within the RI/FS Report and administrative record file. In order to provide the community with an opportunity to submit written or oral comments, EPA has established a 30-day public comment period from March 23 to April, 22, 2007. A public meeting will be held on April, 5, 2007, at 7:00 pm at the Southern Iron County Community Center (located at the intersection of Second and Center Street in Annapolis) to present the Proposed Plan, accept written and oral comments, and to answer any questions concerning the proposed remedy.

The Proposed Plan and supporting administrative record file are available for public review during normal business hours at the following locations:

City Hall
204 School Street
Annapolis, Missouri

EPA Region 7
Records Center
901 N. 5th Street
Kansas City, KS.

The public may submit written or oral comments at the public meeting or anytime during the 30-day comment period by the following means:

Mail: Ms. Belinda Young
US Environmental Protection Agency R7
Office of External Programs
901 N. 5th Street
Kansas City, KS 66101

E-Mail: young.belinda@epa.gov
Telephone: 1-800-223-0425 (toll free)