



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

APR 29 2009

## ACTION MEMORANDUM AMENDMENT

**SUBJECT:** Request for \$2,000,000 Exemption, Project Ceiling Increase, and Clarification of Soil Treatment and Disposal Procedures for the Removal Action at the Southwest Jefferson County Mining Site OU 00, Jefferson County, Missouri.

**FROM:** *for* James O. Silver *JS*  
On-Scene Coordinator

**THRU:** Scott Hayes, Chief *SH*  
Emergency Response and Removal South Branch

**TO:** Cecilia Tapia, Director  
Superfund Division

CERCLIS ID#	MON000705443
Site ID#	A7D2
Category of Removal	Time Critical
Nationally Significant/Precedent Setting:	No

### I. PURPOSE

The purpose of this Action Memorandum Amendment is to request and document approval of a \$2,000,000 exemption and funding increase and to clarify the soil treatment and disposal procedures for the ongoing removal action described herein for the Southwest Jefferson County Mining Site OU 00 (site). This Action Memorandum Amendment seeks to increase the funding ceiling so the response action can continue at the site. Ongoing sampling of residential properties has identified 72 properties with lead levels greater than 1,200 parts per million, with more properties expected to be found. This funding increase will allow for the excavation of these properties.

The primary objective of this action is to eliminate or reduce potential ingestion exposure due to the presence of lead and other heavy metals in the drinking water and in the soils. This project ceiling increase satisfies the criteria for removal actions under section 300.415(b)(2) of the National Contingency Plan (NCP). This request meets the emergency criteria for exemption

of section 104(c)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 U.S.C. § 9604(c)(1) from the statutory limits of removal actions. The proposed actions are necessary to complete the excavation of lead-contaminated residential soils and to eliminate or reduce potential exposure to lead-contaminated drinking water.

## **II. EXEMPTION FROM STATUTORY LIMITS**

See previously approved Action Memorandum.

## **III. SITE CONDITIONS AND BACKGROUND**

### **A. Site Description**

#### **1. Removal site evaluation**

See previously approved Action Memorandum.

#### **2. Physical location and site characteristics**

See previously approved Action Memorandum.

#### **3. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant**

See previously approved Action Memorandum.

#### **4. NPL (National Priorities List) status**

The site is being considered for proposal on the NPL.

#### **5. Maps, pictures, and other graphic representations**

A map depicting the Southwest Jefferson County Mining Site is attached.

### **B. Other Actions to Date**

To date, 72 properties have been identified as time-critical removals. Of those properties, 27 have been excavated and backfilled with clean soil.

### **C. State and Local Authorities' Roles**

See previously approved Action Memorandum.

## **IV. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES**

## **V. ENDANGERMENT DETERMINATION**

The actual release of a hazardous substance at this site, if not addressed by implementing the response action selected in this Action Memorandum Amendment, presents an imminent and substantial endangerment to the health of the public that comes in contact with the site, and to public welfare and the environment.

## **VI. PROPOSED ACTIONS AND ESTIMATED COST**

### **A. Proposed Actions**

#### **1. Proposed action description**

#### **PROVISION OF ALTERNATIVE DRINKING WATER**

An EPA site specific analysis by the Regional Toxicologist (attached to previously approved Action Memorandum) has determined that the site represents an area of widespread lead contamination where young children are exposed to multiple sources of lead. In areas where this determination has been made and EPA suspects that the contaminated drinking water is the result of contaminated groundwater, the drinking water Time-Critical Removal Action Levels (RALs) for lead, cadmium, and arsenic are 15 parts per billion (ppb), 5 ppb, and 10 ppb, respectively. Any residence where purged unfiltered tap water data exceeds the RALs, an alternate source of drinking water should be provided as long as the sampling results indicate that the contamination is not from plumbing (CERCLA section 104[a][3][C]) or natural sources (CERCLA section 104[a][3][A]). Both first-run and purged unfiltered tap water and groundwater should be sampled and analyzed in making the determination (Superfund Lead-Contaminated Residential Sites Handbook, [Office of Solid Waste and Emergency Response (OSWER) 9285.7-50, August 2003]). Should the results demonstrate that the groundwater is potentially contaminated, but the tap water is below the RALs, the EPA will notify the local health officials or other appropriate authority for further monitoring and action in accordance with section 300.415(e)(9) of the NCP.

#### **SOIL/WASTE EXCAVATION, REMOVAL, AND REPLACEMENT**

EPA will not intentionally address naturally occurring lead ores in their undisturbed state as part of this action. Although the site has been heavily mined in the past, it may be possible to encounter naturally occurring lead ores during residential property excavation. Section 104(a)(3)(A) of CERCLA states that removal or remedial actions shall not be provided in response to a release or threat of release of a naturally occurring substance in its unaltered form or altered solely through natural processes in a location where it is naturally found. Naturally occurring lead ores could be found at the bedrock interface and in undisturbed clay soils near the surface. Another indicator of the presence of naturally occurring lead ores could be a high density of galena crystals in soils or unusually high concentrations of lead in



unaltered form or altered solely through natural processes in a location where it is naturally found. Naturally occurring lead ores could be found at the bedrock interface and in undisturbed clay soils near the surface. Another indicator of the presence of naturally occurring lead ores could be a high density of galena crystals in soils or unusually high concentrations of lead in

excavated soils. When these conditions are encountered, they will be documented, excavation will stop, and backfill initiated.

EPA will excavate and remove all soils and/or wastes from properties where a composite sample exceeds a concentration of 400 ppm lead and the area is a high-use area for children 72 months of age or younger with an elevated blood lead level greater than 10 micrograms per deciliter ( $\mu\text{g/dl}$ ).

Properties with soil concentrations of lead exceeding the action level of 1,200 ppm will be excavated, in site predetermined lifts until levels are below 400 ppm or until 12 inches of soil has been excavated. At 12 inches, and if levels are not below 1,200 ppm, a barrier may be placed to alert homeowners of the existence of high levels of lead. In the case of a garden area, excavation shall continue until 24 inches are excavated if it can be determined that 1,200 ppm can be achieved at that depth. If EPA determines that excavation to 24 inches will not achieve this goal, then excavation will stop at 12 inches, a warning barrier will be placed, and the property owner will be advised of this situation.

After removing the soils from the affected area or areas and placing the warning barriers where required, the excavated soils will be replaced with clean soils. Clean soils are soils that (1) have been analyzed for lead and other heavy metals; (2) the results indicate that the lead concentration is below 240 ppm; and (3) all other hazardous substances, pollutants, or contaminants are below residential soil screening levels determined by EPA or by referring to the Region 9 Preliminary Remediation Goal tables found at <http://www.epa.gov/Region9/waste/sfund/prg/index.htm>.

### **SOIL TREATMENT AND DISPOSAL**

EPA shall collect soil samples from the excavated soils to conduct the Toxicity Characteristic Leaching Procedure (TCLP) analysis according to the requirements of SW-846-Chapter 9 (representative sampling for waste piles). Soils that exceed TCLP limits for lead and other metals must be properly treated with an appropriate stabilization chemical and resampled until the levels are below the TCLP limits.

Soil-specific Land Disposal Restrictions (LDR) treatment standards were promulgated in the LDR Phase IV final rule on May 26, 1998. The purpose of the soil-specific LDRs is to provide alternative treatment standard options for contaminated soils. The following two soil treatment standards are set forth in 40 CFR § 268.49: (1) hazardous constituents must be reduced by at least 90 percent through treatment so that no more than 10 percent of their initial concentration remains or comparable reductions in mobility for metals, or (2) hazardous constituents must not exceed 10 times the Universal Treatment Standard (UTS) at 40 CFR §

meet the UTS criteria for Land Disposal Restriction requirements, i.e., less than 10 times the UTS prior to treatment.

Transportation, treatment, storage, and disposal of the excavated material shall be in accordance with all applicable local, state, or federal requirements.

### **POST REMOVAL SITE CONTROL**

It is EPA policy that Post Removal Site Control (PRSC) shall be the responsibility of the state, the potentially responsible party, or the remedial program. At this time it is uncertain what, if any, PRSC will be needed. When that determination is made, the On-Scene Coordinator, working through regional management, will attempt to obtain PRSC agreements as appropriate.

**2. Contribution to remedial performance**

See previously approved Action Memorandum.

**3. Action/cleanup level**

See previously approved Action Memorandum.

**4. Applicable relevant and appropriate requirements (ARARs)**

See previously approved Action Memorandum.

**5. Project schedule**

Response activities are anticipated to continue with the additional funding made available by the signing of this Action Memorandum Amendment. It is expected that soil excavation will take up to two years to complete.

While providing a source of clean drinking water will be relatively quick, it is expected that the water will be provided for a lengthy period of time until an alternate source, treatment system, or engineering control is provided, or EPA determines that the contamination to the drinking water source was naturally occurring, at which point EPA would discontinue supplying the alternate drinking water source.

Soil and drinking water sampling will continue in selected locations throughout this area for an undetermined period of time to address other potentially impacted residences.

**B. Estimated Costs**

The costs associated with this removal action are estimated as follows:

## Extramural Costs:

	Current Ceiling	Proposed Increase	Proposed Ceiling
Removal Costs	\$1,249,824	\$2,182,498	\$3,432,322
20% Contingency	<u>249,964</u>	<u>436,499</u>	<u>686,463</u>
Removal Ceiling	\$1,499,788	\$2,618,997	\$4,118,785

The EPA direct and indirect costs, although cost recoverable, do not count toward the total removal project ceiling for this removal action.

## **VII. ENFORCEMENT**

See attached Confidential Enforcement Addendum for this site. For NCP consistency purposes, it is not a part of this Action Memorandum Amendment.

The total EPA costs for this removal action based on full cost-accounting practices are estimated to be \$4,118,785.

Direct Extramural Costs	\$4,118,785
Direct Intramural Costs	80,000
EPA Indirect (38.57% of all costs)	<u>1,619,471</u>
Total Project Costs	\$5,818,256

Direct costs include direct extramural and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost-accounting methodology effective October 2, 2000. These estimates do not include prejudgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

## **VIII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN**

Delayed action will continue to potentially expose residents, particularly children, to the contaminated soils and drinking water exceeding the federal action levels.

## **IX. OUTSTANDING POLICY ISSUES**

None.

## **X. RECOMMENDATION**

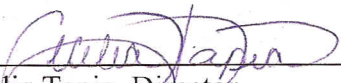
This decision document represents the selected removal action for the contaminated soils and drinking water at the site. The removal action was developed in accordance with CERCLA,



as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the site.

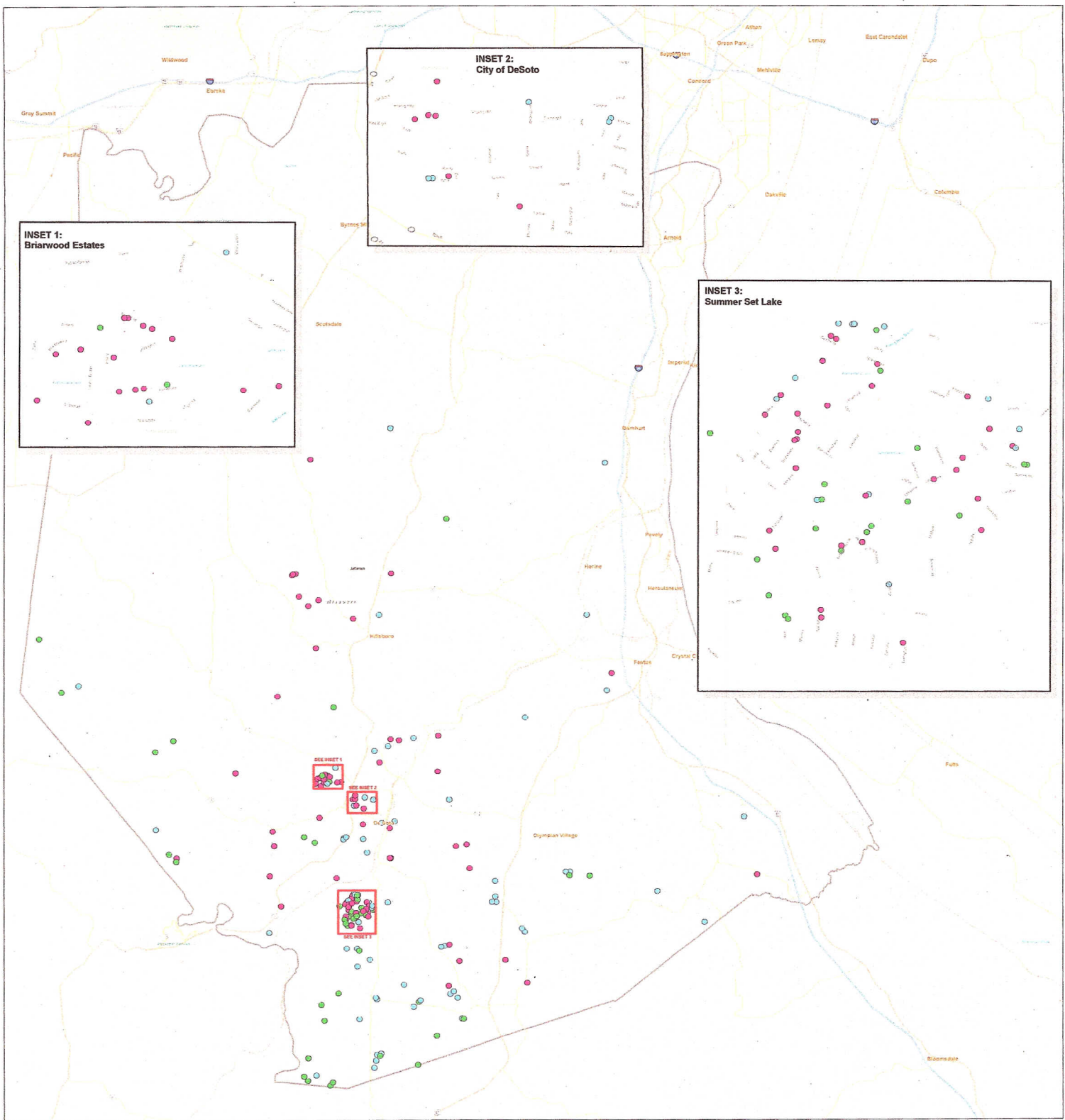
Conditions at the site meet NCP section 300.415(b) criteria for a removal action, and I recommend your approval of this proposed \$2,000,000 exemption and amended removal action. The amended removal ceiling, if approved, will be \$4,118,785. This amount comes from the Regional Removal Allowance.

Approved:

  
\_\_\_\_\_  
Cecilia Tapia, Director  
Superfund Division

4/29/09  
\_\_\_\_\_  
Date

Attachments (2)



U.S. Environmental Protection Agency

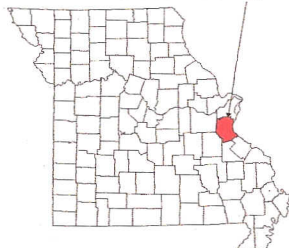
LEAD STUDY  
JEFFERSON COUNTY, MISSOURI  
TASK ORDER: X9004L070062000

RESIDENTIAL LOCATIONS  
LEAD IN SOIL > 1200 PPM



TETRA TECH, INC.

Jefferson County, MO



## LEGEND

- LEAD IN SOIL > 1200 PPM (OU 1)
- LEAD IN SOIL > 1200 PPM (OU 2)
- LEAD IN SOIL > 1200 PPM (OU 3)



0 3 6 9 12 Miles