UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

OCT 15 2007

ACTION MEMORANDUM AMENDMENT #4

SUBJECT: Request for Ceiling Increase Greater than $6 Million and Exemption from the Statutory Limits Based on Consistency with the Remedial Action for the Washington County Lead District – Potosi Area Site in Washington County, Missouri

FROM: Jeffrey G. Weatherford, P.E.
On-Scene Coordinator

THRU: Scott Hayes, Chief
Emergency Response & Removal Branch

TO: Cecilia Tapia, Director
Superfund Division

CERCLIS ID#:	MON000705023
Site ID#:	A78D
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 ceiling increase for the ongoing removal action described herein for the Washington County Lead District – Potosi Area Site (site). This Action Memorandum amendment seeks to increase the funding ceiling to greater than $6 million so the response action can continue at the site. This proposed action continues to satisfy the criteria for removal actions under section 300.415(b)(2) of the National Contingency Plan (NCP) and meets the consistency criteria for exemption of section 104(c)(1) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C.§ 9604(c)(1) from the statutory limits of removal actions.

In the previous Action Memorandum Amendments, EPA proposed to address contaminated drinking water and residential properties or other areas conducive to attracting children when the soil contains lead concentrations equal to or greater than 1,200 milligrams per kilograms (mg/kg) or greater than 400 mg/kg where a child resides that is less than 72 months of age and has an Elevated Blood Lead (EBL) of 10 micrograms per deciliter (µg/dl) or higher. The Environmental Protection Agency (EPA) has also continued to sample additional properties within the current boundaries of the site. This additional sampling has generated more properties where the soil and water contamination exceed the action levels.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

1. Removal site evaluation

See previously approved Action Memorandum for a full description of the removal site.

In October 2005, EPA began sampling in the Potosi area to support the removal action. Currently, EPA has sampled approximately 1,571 residential properties with the following results:

Properties with lead levels less than 400 parts per million (ppm):	872
Properties with lead levels 400 to 1,199 ppm:	539
Properties with lead levels greater than 1,200 ppm:	158
Wells where drinking water exceeded removal action levels:	138

One of the properties requiring excavation is a 33-unit, government-subsidized housing project where many of the yards and children's play areas are contaminated with lead at greater than 1,200 ppm.

2. Physical location and site characteristics

See previously approved Action Memorandum.

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

See previously approved Action Memorandum.

4. National Priorities List (NPL) Status

The site was proposed for the NPL and announced in the Federal Register on September 19, 2007.

5. Maps, pictures, and other graphic representations

See previously approved Action Memorandum

B. Other Actions to Date

1. Previous actions

A total of 158 properties requiring a time-critical removal has been identified through sampling. Excavation and backfilling of 69 properties have been

completed and work is in progress on an additional 89 properties. Furnishing of bottled water to residences continues where lead in the drinking water exceeds the 15 parts per billion (ppb) limit or cadmium exceeds the 5 ppb limit. To date, 120 homes are receiving bottled water.

2. Current actions

EPA continues to sample additional properties within the current boundaries of the site. Additional time-critical removals are expected to be found, and more residences will require bottled water to be provided. EPA expects that additional contaminated properties will be discovered, and a ceiling increase and additional funding will be necessary to remove the threat of exposure to lead contamination to children under 72 months of age.

C. State and Local Authorities' Roles

See previously approved Action Memorandum

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

See previously approved Action Memorandum

IV. 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 who comes in contact with the site and to public welfare and the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Continued response actions are otherwise appropriate and consistent with the remedial action to be taken. Similar NPL lead mining sites are ongoing throughout the region and excavation of contaminated soil has been the preferred alternative. Excavation of contaminated soils above 1,200 ppm is consistent with other lead mining remedial actions and will not interfere with likely remedial alternatives for addressing lead-contaminated soil. In addition, the provision of bottled water as an interim measure will not interfere with remedial actions for providing alternative water.

Continued response actions are also necessary to avoid a foreseeable threat to Potosi area residents. If the current response action ceased, excavation of contaminated soil could not continue and bottled water would no longer be furnished to residents. In addition, further sampling of potentially contaminated yards and wells would not continue and residents would face uncertainty about the level of lead contamination in their drinking water and soil. Without continued response activities by EPA, residents in the Potosi area would risk exposure to high

lead concentrations that could lead to the adverse health effects described in the previous Action Memorandum Amendments.

VI. PROPOSED ACTIONS AND ESTIMATED COST

See previously approved Action Memorandum and Amendments.

A. Proposed Actions

1. Proposed Action Description

Approximately 89 properties require soil/waste excavation, removal, and replacement. One of these 89 properties is a 33-unit housing complex where much of the soil exceeds 1,200 ppm. In addition, 120 homes are currently being provided bottled water. It is expected that through additional sampling, additional properties meeting the removal criteria specified below will be discovered. The following are the actions for which the increase in the ceiling and additional funding in excess of $6 million will be used. Without the proposed increase and additional funding, these actions cannot continue:

PROVISION OF ALTERNATIVE DRINKING WATER

Any residence where the drinking water exceeds 15 ppb for lead or 5 ppb for cadmium will be provided an alternative source of drinking water if, through sampling and analysis, EPA suspects contaminated water was the result of mining activity.

SOIL/WASTE EXCAVATION, REMOVAL, AND REPLACEMENT

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 EBL greater than 10 µg/dl.

EPA will also excavate and remove all soils and/or wastes from properties where a composite sample exceeds a concentration of 1,200 mg/kg lead. In order to avoid unnecessary mobilization and demobilization and being intrusive to the residents, EPA will excavate all soils exceeding 400 mg/kg in yards where at least one quadrant, cell, or zone exceeds 1,200 mg/kg.

The excavation will be conducted with excavating machinery such as skid loaders, dozers, excavators, backhoes, and hand tools. Excavation will be conducted in lifts until the soil concentrations fall below 400 mg/kg at less than 12 inches or below 1,200 mg/kg at 12 inches or greater. If soils at a depth of 24 inches exceed 1,200 mg/kg and it appears unlikely that the levels will reduce without significant excavation of material, EPA may choose to place a warning barrier after excavating to a depth of 12 inches. The purpose of this warning barrier is to alert homeowners of the existence of high levels of lead.

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 have been analyzed for lead and results indicate that the lead concentration is below 240 mg/kg and 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 sample soil for conducting the Toxicity Characteristic Leaching Procedure (TCLP) according to the requirements of SW-846-Chapter 9 (representative sampling for waste piles). Soils that exceed the TCLP limits for lead must be properly treated with an appropriate lead stabilization chemical and resampled until the levels are below the TCLP limits for lead. Treatment of soils will not be conducted at the residence.

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

Currently soils are being treated and staged at the St. Joe Minerals Indian Creek Mine tailings pile. This site is an inactive mine tailings pile that has not been properly reclaimed. EPA, in partnership with The Doe Run Company (current Indian Creek Mine property owner), applied for and received a Remedial Action Permit (RAP) from EPA's Resource Conservation and Recovery Act (RCRA) program. The RAP allows any mining-related soils in Washington County to be treated and stored on the tailings pile. The yard soils will then be used to establish vegetative cover over the tailings pile. This will help reduce or eliminate the off-site migration of tailings from the site.

POST REMOVAL SITE CONTROL

It is EPA's 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 or 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

The removal actions proposed in this Action Memorandum Amendment should not impede any future remedial plans or other response. This is consistent with any long-term remedy in that it fully addresses the direct-contact threat posed by lead contamination at this site.

3. Action/cleanup level

Yards with soils contaminated with lead above 1,200 mg/kg will be excavated, treated if TCLP analysis fails, and disposed of at an acceptable soil repository. Another suitable option is to dispose of excavated soils that meet the definition of a hazardous waste in a RCRA Subtitle C disposal facility. These levels are consistent with the revised interim guidance for lead-contaminated Superfund sites, Office of Solid Waste and Emergency Response Directive 9355.4-12.

All site-sampling activities for comparison to the action levels will be conducted in accordance with the approved Quality Assurance Project Plan.

4. Applicable relevant and appropriate requirements (ARARs)

Section 300.415(j) of the NCP provides that fund-financed removal actions under section 104 of and removal actions pursuant to CERCLA section 106 shall, to the extent practicable considering the exigencies of the situation, attain ARARs under federal environmental or state environmental facility siting laws. The following specific ARARs have been identified for this action:

- Subtitle D of the RCRA, section 1008, section 4001, et seq.; 42 U.S.C. §6941, et seq.; State or Regional Solid Waste Plans and implementing federal and state regulations.

- Occupational Safety and Health Act, 29 CFR part 1910 will be applicable to all actions.

- Subtitle C of RCRA, 42 U.S.C. section 6901, et seq.; 40 CFR. part 260, et seq.; and implementing federal and state regulations for contaminated soils that exhibit the characteristic of toxicity and are considered RCRA hazardous waste.

Subtitle C of RCRA is potentially applicable for the removal of soils contaminated with heavy metals from spills of lead concentrate, particularly if these soils exceed the TCLP regulatory threshold. However, soils contaminated with heavy metals from extraction, beneficiation, or processing of ores are exempt from the requirements of RCRA, Subtitle C pursuant to the Bevill amendment, section 3001(b)(3)(A) of RCRA, 42 U.S.C. section 6921(b)(3)(A), and implementing regulations, 40 CFR section 261.4(b)(7).

- 40 CFR part 122, section 122.26 (National Pollution Discharge Elimination System storm water discharge regulations) may be relevant and appropriate for management of storm water runoff from the repository.

- 49 CFR prts 107, 171-177 (Department of Transportation hazardous material transportation regulations) may be relevant and appropriate for transportation of the contaminated soils to the repository.

In a letter dated November 30, 2005, EPA requested potential state ARARs. In a letter dated December 15, 2005, EPA received ARARs from the state of Missouri. These ARARs will be evaluated per EPA guidance on consideration of ARARs during removal actions.

Any lead-bearing wastes exceeding the TCLP regulatory threshold will undergo treatment in accordance with the requirements of RCRA.

5. Project Schedule

Soil excavation activities are expected to continue through the construction season. It is expected that this removal action will take several months to complete.

B. Estimated Costs

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

Extramural Costs:

	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
Removal Costs	$4,968,319	$3,709,253	$ 8,677,572
Contingency	904,504	831,010	1,735,514
Removal Ceiling	$5,872,823	$4,540,263	$10,413,086
Intramural Costs:			
EPA Direct	$ 320,000	$ 320,000	$ 640,000
EPA Indirect (52.39% of all costs)	3,244,420	2,546,292	5,790,712
Intramural Costs	$ 3,564,420	$2,866,292	$ 6,430,712
Total Project Costs	$9,437,243	$7,406,555	$16, 843,798

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

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

See previously approved Action Memorandum.

VIII. OUTSTANDING POLICY ISSUES

See previously approved Action Memorandum.

IX. ENFORCEMENT

There is an Enforcement Confidential Addendum for this site. For NCP consistency purposes, it is not a part of the Action Memorandum Amendment #4.

X. RECOMMENDATION

This decision document represents an increase in the project ceiling 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 continue to meet NCP section 300.415(b) criteria for a removal action and the CERCLA section 104(c) consistency exemption, and I recommend your approval of a $4,540,263 ceiling increase to allow the removal response to continue. The total removal ceiling, if approved, will be $10,413,086.

Approved:

Cecilia Tapia, Director
Superfund Division

10/15/07
Date