



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 7**

11201 Renner Boulevard  
Lenexa, Kansas 66219

**ACTION MEMORANDUM**

**SUBJECT:** Request for an Emergency Removal Action at the Oronogo-Duenweg Mining Belt Site, Jasper and Newton Counties, Missouri

**FROM:** Sharon Kennedy, On-Scene Coordinator  
Response, Removal and Oil Planning Section

**THRU:** Daniel O'Connor, Supervisor  
Response, Removal and Oil Planning Section

**TO:** Adam Ruiz, Manager  
Assessment, Emergency Response and Removal Branch

**I. PURPOSE**

The purpose of this Action Memorandum is to document the decision to initiate an Emergency Removal Action as described herein for the Oronogo-Duenweg Mining Belt Site located in Jasper and Newton Counties, Missouri, pursuant to the On-Scene Coordinator's delegated authority under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 104, 42 U.S.C. § 9604. The primary objective of this Removal Action is to protect and/or mitigate any potential threats to human health and the environment presented by elevated levels of lead and/or cadmium in drinking water at the Site.

**II. SITE CONDITIONS AND BACKGROUND**

Site Name:	Oronogo-Duenweg Mining Belt Site
SSID #:	0736
CERCLA ID:	MOD980686281
Category of Removal:	Emergency
NPL Status:	Final on NPL
Site Location:	Jasper and Newton Counties, MO
Lat/Long:	37.083971, -94.513537
Nationally Significant:	No

**A. Site Description**

**1. Removal site evaluation**

This proposed Removal Action is administratively within Operable Unit (OU) 4 of the Site. The U.S. Environmental Protection Agency signed a Record of Decision in 1998 for remedial action for impacted private domestic drinking water wells. Actions ceased in 2007, after identified contaminated private domestic drinking water wells were



addressed. During remedial assessment and county health department activities performed in 2022-2023, additional properties were identified with impacted private domestic drinking water wells. The Remediation Branch referred these properties to the Assessment, Emergency Response and Removal Branch for action.

## **2. Physical location**

The site is located near Joplin, Missouri, in Jasper and Newton Counties.

The EPA has conducted an environmental justice (EJ) review of the community where the site is located using EJScreen, the EPA's EJ mapping and screening tool. EJScreen provides a nationally consistent dataset and approach for combining environmental and demographic indicators. The EPA uses EJScreen to evaluate a community where a superfund site is located to determine whether additional consideration, analysis, or outreach is appropriate, as determined by the site team, as the EPA plans for, and conducts, response actions in the community. According to the EJSCREEN, the data does not indicate potential socioeconomic areas of EJ concern.

## **3. Site characteristics**

The site is divided into five OUs for cleanup activities. OU-4 addresses groundwater.

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

Lead and cadmium concentrations exceeding the Maximum Contaminant Levels (MCLs) have been identified at seven properties within site boundaries. Lead and cadmium are hazardous substances under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and Section 302.4 of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. § 302.4.

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

## **A. Nature of Actual or Threatened Release of Hazardous Substances or Pollutants or Contaminants**

Former mining and smelting operations contaminated soil, groundwater, surface water, and sediments with lead and other heavy metals at the site. Over 10 million tons of surface mining wastes contaminated about 11,000 acres of the site.

For this Removal Action, the primary contaminants of concern are lead and/or cadmium in private domestic drinking water wells. Lead and cadmium are classified by the EPA as probable human carcinogens and are cumulative toxicants. The early effects of lead poisoning are nonspecific and difficult to distinguish from the symptoms of minor seasonal illnesses. Children are more vulnerable to lead poisoning than adults. For children, low levels of lead are harmful and are associated with decreased intelligence, impaired neurobehavioral development, decreased stature and growth, and even damage to the central nervous system, kidneys, and reproductive system. At higher levels, lead poisoning can cause comas, convulsions and death. Chronic inhalation and oral exposure of humans to cadmium results in a build-up of cadmium in

the kidneys that can cause kidney disease, including proteinuria, a decrease in glomerular filtration rate, and an increased frequency of kidney stone formation.

The EPA Remedial Program confirmed lead and cadmium concentrations exceeding MCLs in private domestic drinking water wells at seven residential properties. Additional properties are being assessed for impacts.

**B. Check Applicable Factors (from 40 CFR 300.415) Which Were Considered in Determining the Appropriateness of the Removal Action:**

- Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [40 C.F.R. § 300.415(b)(2)(i)].
- Actual or potential contamination of drinking water supplies or sensitive ecosystems [40 C.F.R. § 300.415(b)(2)(ii)].
- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that pose a threat of release [40 C.F.R. § 300.415(b)(2)(iii)].
- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate [40 C.F.R. § 300.415(b)(2)(iv)].
- Weather conditions that may cause hazardous substances or pollutants to migrate or to be released [40 C.F.R. § 300.415(b)(2)(v)].
- Threat of fire or explosion [40 C.F.R. § 300.415(b)(2)(vi)].
- The availability of other appropriate federal or state response mechanisms to respond to the release [40 C.F.R. § 300.415(b)(2)(vii)].
- Other situations or factors that may pose threats to the public health or welfare of the United States or the environment [40 C.F.R. § 300.415(b)(2)(viii)].

**IV. SELECTED REMOVAL ACTION AND ESTIMATED COSTS**

**A. Situation and Removal Activities to Date**

**1. Current Situation**

Sampling conducted by the remedial branch in 2022-2023, documented that a release of heavy metals from local mining and smelting operations contaminated the private domestic drinking water wells of at least seven properties. The remedial branch has referred these properties to the Assessment, Emergency Response and Removal Branch for follow up and this Action Memorandum documents the planned Emergency Removal Action to address these impacts. Unless a responsible party assumes responsibility for the emergency response action, the remedial branch plans to have a contract in place by first quarter fiscal year 2025 that will allow them to address drinking water impacts at the Site. Assessment of domestic wells is ongoing and if additional impacts are identified, they will be addressed consistent with this Action Memorandum.

**2. Enforcement**

An enforcement addendum will be prepared to accompany this Action Memorandum as soon as possible once the EPA is able to gather more information regarding potential liable and viable parties associated with the site.

**B. Planned Removal Actions**

**1. Proposed action**

This removal action is to provide alternate water to properties with private domestic drinking water wells contaminated with lead and/or cadmium. This Removal Action will apply to the currently known contaminated properties and may include additional properties identified through continued assessment work.

This action may include subsequent water sampling as recommended by the On-Scene Coordinator.

**2. Contribution to remedial performance**

Unless a responsible party assumes responsibility for the emergency response action, it is anticipated that the remedial branch will take over alternate water response actions at the site during the first quarter of fiscal year 2025. It is expected that the response provided for herein will contribute to remedial performance, or not adversely affect any future remedial performance on Site.

**3. Applicable or Relevant and Appropriate Requirements (ARARs)**

Removal actions conducted under CERCLA are required to attain ARARs to the extent practicable. Any identified potential ARARs will be evaluated and complied with to the extent practicable. Federal and state ARARs were not identified or considered prior to removal initiation due to emergency circumstances.

**4. Project schedule**

The response action will be initiated shortly after the Action Memorandum is signed.

**C. Estimated Costs**

The costs associated with the Removal Action are estimated below and assume that there may be further residences that require alternate water.

Contractor Costs (ERRS/START staff, travel, equipment)	\$62,500
Other Extramural Costs (Strike Team, other Federal Agencies)	\$0
Contingency Costs (20% of subtotal)	\$12,500
<b>Total Removal Project Ceiling</b>	<b>\$75,000</b>

The EPA direct and indirect costs, although cost recoverable, do not count toward the removal ceiling for this removal action. Liable parties may be held financially responsible for costs incurred by the EPA as set forth in Section 107 of CERCLA, 42 U.S.C. § 9607.

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

The actions proposed herein for the site should be taken immediately. Should these actions be delayed, the potential threats to human health and the environment will continue and increase.

## **VI. OUTSTANDING POLICY ISSUES**

None.

## **VII. APPROVALS**

This decision document represents the selected removal action for this site, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the site.

Conditions at the site meet the NCP Section 300.415(b) criteria for a removal action and through this document, I am approving the proposed removal actions. The total project ceiling is \$75,000. This amount will be funded from the Removal Advice of Allowance.

Approved:

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Sharon Kennedy  
Federal On-Scene Coordinator

## **VIII. ENDANGERMENT DETERMINATION UNDER CERCLA SECTION 106: HAZARDOUS SUBSTANCES**

Pursuant to Section 106 of CERCLA, I have determined that there may be imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from the site.

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Adam Ruiz, Manager  
Assessment, Emergency Response and Removal Branch