

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 7 11201 Renner Boulevard Lenexa, Kansas 66219

## **ACTION MEMORANDUM**

SUBJECT: Request for Removal Action and 12-month Consistency Exemption at the Newton County Mine Tailings Site, Granby, Newton County, Missouri

FROM: Todd Campbell, On-Scene Coordinator Response and Removal North Section **THRU:** Dave Williams, Chief Response and Removal N TO:

TO: Mary P. Peterson, Director Superfund Division

Site ID#: 07RZ

### I. PURPOSE

The purpose of this Action Memorandum is to document the decision to initiate the response action described herein for the Newton County Mine Tailings Site, or Site, located within Newton County, Missouri. The general objective of this action will be to provide alternate water at affected residences where sampling has revealed contaminated drinking water in respective private wells. This Action Memorandum also requests an exemption to the 12-month statutory time limit for removal actions. The contaminants of concern are lead and cadmium which are present at concentrations exceeding established levels of concern.

## II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#:	MOD981507585
SSID#	07RZ
REMOVAL CATEGORY:	Time-Critical
NATIONALLY SIGNIFICANT:	No

## A. <u>Site Description</u>

### 1. Removal site evaluation

In June of 2018, U.S. Environmental Protection Agency contractors sampled private drinking water wells that had been reported as suspect by the Newton County Health Department, or NCHD. The results of the water samples analysis revealed elevated levels of heavy metal contaminants in the well water. The samples contained levels of cadmium and lead that exceed the



maximum contaminant level or action level for these contaminants established under the Safe Drinking Water Act. (See the administrative record for individual data results.) Additional data reported by the NCHD going back to 2003 has also indicated heavy metal contaminants in the well water at residences within the Newton County Site boundaries. There are eight properties that have been identified as having drinking water wells with concentrations of lead and cadmium that exceed established health-based levels of concern. Ongoing assessment efforts on the part of the NCHD and the EPA will likely identify additional residential properties where residents are being exposed to heavy metals in their drinking water as a result of contaminated groundwater.

## 2. Physical location

The Site is located in extreme southwest Missouri within the northern half of Newton County (see attached map). The Site is part of the Tri-State Mining District which encompasses approximately 2,500 square miles of Missouri, Kansas, and Oklahoma.

## **3.** Site Characteristics

The EPA placed the Newton County portion of the Tri-State Mining District on the National Priorities List, or NPL, on September 29, 2003. The Site includes wastes in and around 14 mining camps located within approximately 300 square miles of Newton County. These locations have been grouped into five subdistricts: Spring City/Spurgeon, Diamond, Granby, Stark City, and Wentworth. The Site was split into two operable units, or OUs, for tracking purposes of responsibleparty-led activities and EPA-lead activities. OU 01 was designated as the responsible party portion of the Site and was centered around the Spring City/Spurgeon and Granby subdistricts. OU 02 represents the EPA-lead activities for the remainder of the Site. An Environmental Justice Screening Report has been requested and will be included in the Administrative Record for this Site.

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

Hazardous substances, as defined in section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA, 42 U.S.C. § 9601(14), have been released from the Site, and there remains a threat of additional releases due to the continued presence of mining and milling wastes remaining on the ground surface throughout the county. The wastes constitute a significant source of heavy metals contamination with potential for exposure to people and environmental receptors. Past mining and milling practices have also resulted in the contamination of surface soil, sediments, surface water and groundwater in the shallow aquifer. The primary hazardous substances are lead, cadmium, and zinc.

## 5. National Priority List (NPL) status

The EPA placed the Newton County portion of the Tri-State Mining District on the NPL on September 29, 2003.

### 6. Maps, pictures and other graphic representations

A map of the Site is included as Attachment 1.

### B. Other Actions to Date

#### 1. Previous actions

In 1986, the EPA conducted a preliminary assessment in the Granby area revealing elevated levels of lead, cadmium, and zinc significantly above background concentrations in soil and groundwater. In 1989, the Missouri Department of Natural Resources, or MDNR, reconfirmed elevated lead levels in surface water and soil. In 1995, the EPA conducted an expanded site investigation around Granby, Wentworth, and Stark City that focused on determining heavy metals concentrations in mining and milling wastes, surface soils, surface water, and stream sediments. The discovery of an elevated blood lead level in a child living in the Spring City area in 1995 resulted in further assessment of residential yard soil and private drinking water wells in and around Spring City. As a result of these assessments, the EPA expanded its investigations of private water wells and residential yard soil in known mining areas throughout the county.

Due to the large number of private residential drinking water wells identified with high levels of lead and cadmium throughout the Site, the EPA began providing bottled water to residents in 1998. In March 1998, EPA Region 7 issued an Action Memorandum supported by an Engineering Evaluation and Cost Analysis Report. The EPA determined that a non-time-critical removal action was necessary to address risks to human health. This action served as a temporary response action while public water supply systems were designed and constructed as part of a removal action to replace the contaminated wells. The 1998 Action Memorandum was amended several times to continue response actions beyond the statutory limits (12-months, \$2 million).

In 2003, the EPA began construction of the public water supplies, which were completed in 2012. In total, over 100 miles of new public water supply mains were installed throughout the Site to serve areas with contaminated residential wells. Additionally, approximately 100 individual deep-aquifer drinking water wells were installed by the EPA and responsible parties for homes where it was not feasible to install public water supply mains.

The Site was placed on the NPL on September 29, 2003. In 2010, a Record of Decision, or ROD, was issued that determined the provision of alternate water supplies via new public water supply systems and hookups were within the scope of the cleanup actions for the Site (See Section 5.0, Scope and Role of the Cleanup Action of the ROD). The 2012 Final Pollution Report, or POLREP, for the non-time-critical removal action indicates that all private water drinking wells had been addressed. However, new information reveals that additional wells need to be addressed. (See subsection 2. Current Actions, below.)

In 1999, the EPA began a removal action for lead-contaminated residential yard soil at approximately 100 properties in the OU 02 portion of the Site. Meanwhile, the responsible parties removed lead-contaminated residential yard soil at approximately 300 properties in the OU 01 portion of the Site, mostly in the city of Granby, under an Administrative Order on Consent with the EPA.

The removal actions for contaminated residential yard soil and the installation of public water supplies to replace the private residential water wells have been mostly completed. The remaining risks to the environment and potential human exposure at the Site result from the presence of the mining and milling wastes located throughout the county, as well as a few additional contaminated drinking water wells that are identified over time.

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In 2008, the EPA conducted a remedial investigation, or RI, that focused on remaining mine wastes and associated soil. After completion of the RI, the EPA conducted a Feasibility Study, or FS, which was completed in September 2009. The FS assessed the information about the nature and extent of the contamination in the subdistricts and developed alternatives for the remedial action for the entire Site. The remedial alternatives developed and evaluated in the FS formed the basis for the EPA's 2010 ROD. The EPA has undertaken the remedial actions for both OUs 01/02.

Following completion of removal activities, the EPA entered into a settlement agreement with the responsible parties for the OU01 portion of the 2010 ROD. (See Confidential Enforcement Addendum.)

### 2. Current actions

In 2018, the EPA obtained new information from the NCHD and a request that the agency conduct investigations of private drinking water well contamination. The EPA found at least eight additional residential drinking water wells where water sample results exceeded actionable levels. These drinking water wells are a risk to human health and will be addressed under this removal action.

This removal action will utilize similar response activities to those implemented and described above in the 1998 Action Memorandum, as amended. This new Action Memorandum is necessary because the 2012 Final POLREP ended the previous removal response. The EPA has identified at least eight additional residences requiring alternate water supplies due to the heavy metals found in the water samples from these private drinking water wells. As described above, the results show that water in these samples exceeds action levels established under the Safe Drinking Water Act. It is likely that the EPA will discover additional residences requiring alternate water supplies during the implementation of the selected remedial action, which is expected to continue for several years.

### C. State and Local Authorities' Roles

### 1. State and local actions to date

MDNR has appointed a Project Manager from the state to coordinate and assist with site specific issues as well as participate in the full implementation of the remedial process as it relates to the Site. MDNR has conducted previous site assessment activities and facilitated the Site's listing on the NPL.

### 2. Potential for continued state/local response

State and local authorities continue to have a role in Site activities. The state has agreed, in a State Superfund Contract, to meet statutory obligations to accept long-term operation and maintenance of the Site. See CERCLA § 104(c), 42 U.S.C. § 9604(c).

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

#### A. Threats to Public Health or Welfare

Where the EPA makes a determination, based on the factors set forth in 40 C.F.R. § 300.415(b)(2), that there is a threat to public health or welfare or the environment, it may take any appropriate removal action to abate, prevent, minimize, stabilize, mitigate, or eliminate the release or threat of release. The factors in 40 C.F.R. § 300.415(b)(2) that apply to this Site are:

# 300.415(b)(2)(i) – Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

In 1986, the EPA conducted a preliminary assessment in the Granby area revealing elevated levels of lead, cadmium, and zinc significantly above background concentrations in soil and groundwater. In 1989, MDNR reconfirmed elevated lead levels in surface water and soil. In 1995, the EPA conducted an expanded site investigation around Granby, Wentworth, and Stark City that focused on determining heavy metals concentrations in mining and milling wastes, surface soils, surface water, and stream sediments. The discovery of an elevated blood lead level in a child living in the Spring City area in 1995 resulted in further assessment of residential yard soil and private drinking water wells in and around Spring City. As a result of these assessments, the EPA expanded its investigations of private water wells and residential yard soil in known mining areas throughout the county.

# 300.415(b)(2)(ii) – Actual or potential contamination of drinking water supplies or sensitive ecosystems.

Due to the large number of private residential drinking water wells with high levels of lead and cadmium throughout the Site identified during EPA and state assessments, the EPA began providing bottled water to residents in 1998. This action served as a temporary response action while public water supply systems were designed and constructed as part of a removal action to replace the contaminated wells. In 2003, the EPA began construction of the public water supplies which were completed in 2012. In total, over 100 miles of new public water supply mains were installed throughout the Site to serve areas with contaminated residential wells. Additionally, approximately 100 individual deep-aquifer drinking water wells were installed by the EPA and responsible parties for homes where it was not feasible to install public water supply mains.

Recently the EPA was notified of additional drinking water wells that were thought to be possibly contaminated. EPA contractors performed additional drinking water well assessments and identified six additional wells of concern, while the NCHD identified a seventh and eighth which were confirmed by the MDNR lab in Jefferson City.

# **300.415**(b)(2)(vii) – The availability of other appropriate federal or state response mechanisms to respond to the release.

State personnel work closely with EPA Project Managers to conduct remedial actions; however, the Site is listed on the NPL, which by default leaves the EPA as the lead agency responsible for Site activities.

# IV. ENDANGERMENT DETERMINATION

The actual or substantial threat of release of hazardous substances at and from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

# V. EXEMPTION FROM STATUTORY LIMIT

An exemption from the statutory limit is necessary for this action in accordance with CERCLA § 104(c)(1)(C), 42 U.S.C. § 9604(c)(1)(C). This action may exceed 12 months in duration. The threat constitutes an immediate risk to public health or welfare, and a continued response action exceeding the 12-month statutory limit is otherwise appropriate and consistent with the remedial action to be taken at this Site.

The removal actions detailed in this memorandum are consistent with ongoing remedial activities and will not interfere or adversely affect planned or ongoing remedial activities. The provision of alternate water supplies at this NPL site has been an ongoing effort for 20 years. In addition, the provision of alternate water supplies is an essential component of the overall cleanup strategy for this Site. (See Scope and Role of the Cleanup in the 2010 Record of Decision.)

# VI. PROPOSED ACTIONS AND ESTIMATED COSTS

# A. Proposed Actions

# 1. Proposed Action Description

The proposed removal action will include a temporary mitigation such as pointof- use water filtration systems or bottled water. In addition, a longer-term solution will be evaluated, including the drilling of new, deeper drinking water wells or public water supply line installation/ extension.

# 2. Contribution to Remedial Performance

The proposed actions will, to the extent practicable, contribute to the efficient performance of any long-term remedial action at the Site.

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

Removal actions conducted under CERCLA are required to attain applicable or relevant and appropriate requirements, or ARARs, to the extent practicable. In determining whether compliance with ARARs is practicable, the EPA On-Scene Coordinator may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted.

ARARs for the Site were requested from MDNR, and were listed and addressed as part of the ROD for ongoing remedial actions at the Site. The following ARARS have been identified as potentially applicable to this removal action.

# **Federal and State ARARs**

FEDERAL	Safe Drinking Water Act	40 CFR Parts 141 and 143	Establishes primary maximum contaminant levels, or MCLs, and MCL goals. or MCLGs, that are health-based standards for public drinking water systems, as well as secondary MCLs and MCLGs that are standards for constituents that effect aesthetic qualities of drinking water only.
STATE	Missouri Well Drillers' Law	RSMo 256.600- 640 i0CSR23	Sets fees and standards to be followed in installing, maintaining, and abandoning water wells and monitoring wells. Also covers well plugging and proper isolation of possible sources of contamination from existing wells to protect the quality of groundwater aquifers that provide safe drinking water.

## 4. **Project schedule**

The removal actions described in this Action Memorandum are expected to begin within two to three weeks of the signing of the Action Memorandum and be completed within the next six to twelve months, dependent upon the weather, availability of subcontractors, and other factors. There is, however, a significant possibility of this action extending beyond the 12-month maximum time limit, depending upon the nature and extent of the contaminants in the groundwater and the results of ongoing water well assessment efforts.

## **B.** Estimated Costs

The estimated costs associated with this removal action include the provision of temporary alternate water at ten homes (approximately \$15,000), and the provision of a more permanent solution at ten homes (approximately \$300,000).

Extramural Costs	\$ 316,902
Contingency	63,380
Removal Ceiling	\$ 380,282

EPA direct and indirect costs, although cost recoverable, do not count toward the Removal Ceiling for this removal action. Refer to the enforcement section for a breakout of these costs.

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

Delayed action will result in a continued threat to public health or welfare or the environment.

## **VIII. OUTSTANDING POLICY ISSUES**

None.

## IX. ENFORCEMENT

A potentially responsible party search for this Site has been conducted per the remedial process, and all PRPs have been identified and pursued as appropriate. The government has entered into settlement agreements with the known PRPs. There are no additional known PRPs for this action. (See the Confidential Enforcement Addendum.)

The total EPA costs for this removal action, based on full-cost accounting practices, are estimated to be:

Direct Extramural Costs	\$ 380,282
Direct Intramural Costs	20,000
EPA Indirect (40.93 percent)	\$ 163,835
Total Costs	\$ 564,117

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.

### X. RECOMMENDATION

This decision document represents the selected removal action for addressing the hazardous substances, pollutants or contaminants present at the Site. The removal action was developed in accordance with CERCLA, as amended, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan, or NCP. This decision is based on the Administrative Record for the Site.

The conditions at the Site meet NCP, 40 C.F.R. § 300.415(b) criteria for a removal action. I recommend your approval of the proposed removal action. The removal action ceiling will be \$380,282. These funds will come from the Regional Removal Advice of Allowance and/or available special account funds.

Approved:

Man P. Peterson

Mary P. Peterson, Director Superfund Division

Attachment 1 - Site Location Map

10/17/2018



# Attachment 1 – Newton County Mine Tailings Site Map