



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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Ref: 8SEM-EMR

**ACTION MEMORANDUM AMENDMENT #2**

**SUBJECT:** Request for a Change in Scope and Ceiling Increase for the Time Critical Removal Action at the Boston and Colorado (B&C) Smelter Site, Alma, Park County, Colorado

**FROM:** Pete Stevenson  
Federal On-Scene Coordinator *A. Navel for Pete Stevenson*

**THRU:** Laura Williams, Chief Response Section *Laura Williams 12/12/19*  
Deirdre Rothery, Chief Emergency Management Division *Deirdre Rothery*

**TO:** Betsy Smidinger, Director  
Superfund and Emergency Management Division

Site ID# A8H4

**I. PURPOSE**

The purpose of this Action Memorandum Amendment is to modify the scope to include the London Mine as part of the time-critical removal action and request a ceiling increase due to increased volume of slag described later in this document. In addition, new information obtained from a more thorough review of historic geological information has resulted in a revised determination that the slag on site is Bevill-exempt.

This time-critical removal action (TCRA) as outlined in the June 24, 2019, Action Memorandum (AM) (copy attached) originally involved the in-situ treatment, loading, and transport to an off-site disposal facility of three slag piles and contaminated soils associated with the former smelter site in the town of Alma adjacent to the town playground (Attachment 1). Since that time, slag has been discovered buried up to ten feet deep on-site, tripling or quadrupling the original volume estimate. The expanded scope involves excavating the substantially increased volume of slag for treatment at the London Mine and beneficial use in the Mine's on-site, engineered repository. Therefore, an increase in the cost ceiling is requested from \$770,000 to \$1,065,000. The conditions existing at the Site continue to present an endangerment to human health and the environment and meet the criteria for initiating a removal action under 40 CFR 300.415(b)(2) of the National Contingency Plan (NCP).

This removal action involves no nationally-significant or precedent-setting issues. This removal action will not establish any precedent for future response actions and will not commit the U.S. Environmental Protection Agency (EPA) to a course of action that could have a significant impact on future responses or resources.

## II. SITE CONDITIONS AND BACKGROUND

Site Name:	B&C Smelter Site
Superfund Site ID (SSID):	A8H4
NRC Case Number:	
CERCLIS Number:	
Site Location:	Alma, Park County, CO, 80420
Lat/Long:	39.284669/ -106.063242
Potentially Responsible Party:	
NPL Status	Non NPL
Removal Start Date	November 12, 2019

### A. Site Description

#### 1. Removal Site Evaluation

New information obtained from a thorough review of historic geological information has resulted in a revised determination that the slag on site is Bevill-exempt. This new determination is based upon a more definitive history of the B&C Smelter recently obtained and documentation that ore processed at the Smelter was predominantly lead and copper (14 times the weight of silver). Therefore, in accordance with 40 CFR §261.4(b)(7), the resulting B&C Smelter slag meets the definition of Bevill-exempt waste as (A) “slag from primary copper processing” or (B) “slag from primary lead processing.”

Excavations during initial removal activities have found slag buried up to ten-feet deep, tripling or quadrupling the initial volume estimate of 1,900 cubic yards. In addition to increased excavation costs, there are associated increases in transportation, fees, and backfill requirements necessary to complete the removal action. All other conditions detailed in the initial AM dated June 24, 2019, remain the same.

#### 2. Physical Location

See the AM dated June 24, 2019.

#### 3. Site Characteristics

Additional historic information that pre-dates the information provided in the initial AM is provided for completeness. The history of mining in Park County, Colorado begins with the Spanish, and includes gold mining in the 1860s. When the gold mines became unprofitable, mining almost ceased. In the early 1870s, major ore discoveries on Mounts Lincoln and Bross resulted in numerous mines. The ore was described as primarily galena, a lead sulfide. These mines were the primary source of ore that was processed at the B&C Smelter in Alma, Colorado when it was constructed in 1873. Production in Park County that year totaled 111,400 pounds (1,782,400 ounces) of lead and 169,493 pounds

(2,711,888 ounces) of copper versus 307,633 ounces of silver, a ratio of 6:1 lead to silver and 8:1 copper to silver (14:1 ratio overall). See the AM dated June 24, 2019 for history after 1873.

**4. Release or Threatened Release into the Environment of a Hazardous Substance, Pollutant, or Contaminant**

See the AM dated June 24, 2019.

**5. NPL Status**

This Site is neither on nor currently being considered for inclusion on the NPL.

**6. Maps, Pictures, Other Geographic Representations**

See the AM dated June 24, 2019.

**B. Other Actions to Date**

**1. Previous Actions**

See the AM dated June 24, 2019.

**2. Current Actions**

The Removal action was initiated on November 12, 2019, and all buried slag has been excavated and staged on site to facilitate loading and transportation.

**C. State and Local Authorities' Role**

**1. State and Local Actions to Date**

See the AM dated June 24, 2019.

**2. Potential for Continued State/Local Response**

See the AM dated June 24, 2019.

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

See the AM dated June 24, 2019.

## IV. PROPOSED ACTIONS AND ESTIMATED COSTS

### A. Proposed Actions

#### 1. Proposed Action Description

All contaminated soil and slag with lead concentrations of greater than 400 mg/kg will be addressed during this removal action as Bevill-exempt solid waste. The locations are identified in Figure 2 of the June 24, 2019, AM and comprise an area of approximately two acres, including the slag piles. The original estimate of 1,900 cubic yards is now estimated at 6,000 - 8,000 cubic yards due to the discovery of buried slag on-site. Engineering controls and best management practices will be implemented to ensure that the removal action will have no impact on the middle fork of the South Platte River. The disturbed ground will be backfilled with 12 inches of clean fill and 6 inches of topsoil, then graded and seeded to revegetate the area. The EPA contractor will utilize a water truck with a spray nozzle to keep work areas and any piles moist to minimize dust.

The waste will be loaded into trucks and hauled as non-hazardous, Bevill-exempt, solid waste for treatment at the London Mine and beneficial use in the Mine's engineered repository. The slag is to be mixed with tailings, residuals from the London Mine water treatment plant, and lime which will initiate a pozzolanic reaction to stabilize and solidify the wastes. The result, as pilot-tested, is a solidified aggregate material with reduced leachability of the heavy metals. Any long-term maintenance of the solidified material and the engineered repository will be conducted by the owner of the London Mine.

In a December 2016, directive, Mathy Stanislaus, EPA Assistant Administrator of the Office of Land and Emergency Management, wrote that the Agency's risk reduction goal is "...to limit exposure to soil lead levels such that a typical (or hypothetical) child or group of similarly exposed children would have an estimated risk of no more than 5% of exceeding a 10ug/dL blood lead level." (December 22, 2016, OLEM Lead Directive).

To meet this risk reduction goal, in a May 11, 2017, Removal Action Assessment of Health Risks at B&C Smelter, EPA Senior Toxicologist, Susan Griffin, PhD, DABT, provided an assessment of the human health risks associated with the Site and wrote, "A preliminary remediation goal of 400 ppm for lead in soil would allow no more than a 5% probability that a child would exceed a blood lead level of 10 ug/dL and would be protective for this Site." (See full text as Attachment #3 in the June 24, 2019, AM).

#### 2. Contribution to Remedial Performance

The actions will, to the extent practicable, contribute to the efficient performance of any long-term remedial action at the Site. However, no further federal action is anticipated at this time because no waste will be left in place.

#### 3. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA is not required for a time-critical removal action.

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

See the AM dated June 24, 2019. The Bevill-exempt slag piles will be disposed of on-site at the London Mine.

#### 5. Project Schedule

This removal action started on November 12, 2019 and will last approximately 7 weeks.

#### B. Estimated Costs\*

<b>Tasks</b>	<b>Current Ceiling</b>	<b>Proposed Increase</b>	<b>Proposed Ceiling</b>
START	\$40,000	\$0	\$ 40,000
ESAT	\$0	\$0	\$ 0
ERRS	\$660,000	\$271,000	\$931,000
Subtotal	\$700,000	\$271,000	\$971,000
Contingency costs (10% of subtotal)	\$70,000	\$24,000	\$ 94,000
<b>Total Removal Project Ceiling</b>	<b>\$770,000</b>	<b>\$295,000</b>	<b>\$1,065,000</b>

\*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

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

A delay in action or no action at this Site would increase the actual or potential threats to public health and/or the environment. Should this ceiling increase not be approved, the slag and contaminated soils will continue to weather and migrate and pose an ongoing threat to the public health, welfare and environment.

#### VI. OUTSTANDING POLICY ISSUES

None.

#### VII. ENFORCEMENT

A separate Enforcement Addendum was previously prepared providing a confidential summary of current and potential future enforcement actions.

#### VIII. RECOMMENDATIONS

This decision document represents the selected removal action for the B&C Smelter Site in Alma, Park County, Colorado, 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 the NCP section 300.415(b) criteria for a removal action and I recommend your approval of the proposed increase of \$295,000 from the previously approved project ceiling of \$770,000. The total project ceiling, if approved, will be \$1,065,000; this amount will be funded from the Regional removal allowance.

Approve: Betsy Smidinger  
Betsy Smidinger, Director  
Superfund and Emergency Management Division

Date: 12/13/19

Disapprove: \_\_\_\_\_  
Betsy Smidinger, Director  
Superfund and Emergency Management Division

Date: \_\_\_\_\_

Attachment: June 24, 2019 Action Memorandum