



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

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Ref: 8EPR-ER

DEC 11 2017

ACTION MEMORANDUM

SUBJECT: Approval and Funding for an Emergency Removal Action at the Big Seven Mine Abandoned Chemicals Site, part of the Carpenter-Snow Creek Mining District NPL Site, near the Town of Neihart in Cascade County, Montana, pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104

FROM: Craig Myers
Federal On-Scene Coordinator

THRU: Laura Williams, Unit Leader
Emergency Response Program

David Ostrander, Director
Emergency Response & Preparedness Program

TO: Betsy Smidinger
Assistant Regional Administrator
Office of Ecosystems Protection and Remediation

Site ID #: 089X-OU2

I. PURPOSE

The purpose of this memorandum is to document the decision to initiate emergency response actions described herein for the Big Seven Mine Abandoned Chemicals Site (Site) located near the Town of Neihart in Cascade County, Montana. This emergency removal action involved the removal of numerous hazardous substances from a former mining site. Conditions existing at the Site presented a threat to public health and the environment and met the criteria for initiating a removal action under 40 CFR §300.415(b)(2) of the National Contingency Plan (NCP).

This removal action involved no nationally-significant or precedent-setting issues. This emergency removal action will not establish any precedent for how future response actions will be taken and will not commit the United States 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: Big Seven Mine Abandoned Chemicals, part of the
Carpenter-Snow Creek Mining District NPL Site
Superfund Site ID (SSID): 089X-OU2
CERCLIS Number: MT0001096353
Site Location: Cascade County, Montana
Lat/Long: 46.948667/-110.705691
Potentially Responsible Party (PRP):
NPL Status : Carpenter-Snow Creek NPL, OU 2
Removal Start Date : 09/08/2017

A. Site Description

1. Removal Site Evaluation

The Site is the Big Seven Mine which is located within operable unit (OU) 2 of the Carpenter-Snow Creek National Priority List (NPL) Site (see Attachment 1 for Site location). This former mining site contains the remains of 17 man-made structures in various states of degradation.

On August 17, 2017, the EPA On-Scene Coordinator (OSC) mobilized a Superfund Technical Assessment and Response Team (START) to conduct a removal site evaluation of the structures at the Site. All of these structures were unsecured and visible signs of trespassers (i.e., empty beer cans, empty soda cans, bullet holes, tire tracks, vandalism and graffiti) and wildlife disturbance (i.e., rodent droppings and nests) were observed. During the evaluation, chemical containers were found in four of the structures: the lower maintenance building, the upper core house, the mill building and the chemical assay laboratory. None of the remaining structures housed any chemical containers. A second Site visit on August 31, 2017, conducted with the Cascade County Sheriff's Office revealed dynamite remnants in a previously unknown magazine building located in a heavily wooded area approximately 30 yards off one of the mine roads. Site photographs are presented in Attachment 2.

All suspect small containers were moved into the chemical assay laboratory. A list of the containers found and their corresponding Department of Transportation (DOT) hazard classifications are presented in Attachment 3. Seventeen of these containers contained chemicals that were either characteristically hazardous for corrosivity (D002) or were spent halogenated solvents (assumed F listed wastes). A number of additional amber jars observed in the chemical assay laboratory contained substances that had crystallized. The label remnants on two of these jars (i.e., ether-based chemicals) indicated that they were reactive wastes (D003). The remaining unlabeled jars contained dehydrated, crystallized material which must be assumed to be reactive as well as there is no way to safely sample and analyze them given the documented presence of ether in the chemical assay laboratory.

The magazine building was partially collapsed and overgrown with vegetation. The

majority of the entrance to the structure was buried from the collapse. Degraded sticks of dynamite could be observed in and around the entrance. Any contents within the structure were buried. It is unknown how much dynamite is contained in this structure, but the Chief of the Neihart Volunteer Fire Department informed the OSC that he observed five boxes of dynamite in the magazine building approximately two years ago before the structure collapsed. Considering the age and weathering that has occurred, the dynamite at the Site is likely unstable and represents a reactive hazardous waste (D003).

Lastly, two electrical transformers were observed lying on their side by the chemical assay laboratory and two transformers were observed on the ground next to the upper core house. Based on the age of the Site, it was suspected that these transformers contained polychlorinated biphenyls (PCBs). Furthermore, none of them were labeled "PCB Free" or "Non-PCB." Upon further inspection, one of the transformers by the chemical assay laboratory was completely empty while the other contained a mixture of rainwater and oil. One of the transformers by the upper core house was lying on its side at the top of a slope but was completely empty. The other transformer contained oil. The two transformers from the Site that contained fluids were assumed to contain PCBs.

2. Physical Location

The Site is the Big Seven Mine which is part of the Carpenter-Snow Creek Mining District NPL Site. It is located in the upper drainage of the Snow Creek watershed in the Little Belt Mountains approximately two miles northeast of Neihart in Cascade County, MT (Attachment 1). As of the 2010 census, Neihart had a population of 51, however there are numerous seasonal residents within the area and the Site is prone to trespassers. The Site also includes the Cascade County maintenance yard in Armington, MT, and the roads necessary to transport from the Site.

3. Site Characteristics

The Site contains several abandoned buildings. These buildings are wooden structures that are in various stages of collapse and unsecured. The road to the Site is secured by a gate and the lock has been cut at least once since the OSC secured the Site after the August evaluations. Trespassers have been observed at the Site in the past by EPA and State of Montana personnel.

At the time of the response, this region of Montana was experiencing a drought. Wildfire was a concern because of the extreme dry conditions and the area was under a Stage 1 Fire Ban (i.e., no open burning) when the response started. Additionally, the state was considering placing the area under a Stage 2 Fire Ban (i.e., limits on heavy equipment operation due to a potential ignition source).

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

As outlined above in the removal Site evaluation section, conditions at the Site posed a threat of release of hazardous substances or pollutants or contaminants to the environment. Seventeen of the containers contained chemicals that are either characteristically hazardous for corrosivity (D002) or are spent halogenated solvents (assumed F listed wastes) or both. Corrosive wastes are acids or bases with a pH less than 2 or greater than 12.5 that are capable of seriously damaging skin, lungs, and other tissues either by direct contact or through inhalation. For example, inhalation exposure to nitric acid fumes may cause immediate irritation of the respiratory tract, pain, and dyspnea (difficulty in breathing), followed by a period of recovery that may last several weeks. A relapse may occur resulting in death caused by bronchopneumonia and pulmonary fibrosis. Inhalation exposure to halogenated solvents may adversely affect the central nervous system, upper respiratory tract, kidneys, and liver, while direct contact can cause dermatitis and skin irritation. The reactions from exposure to these compounds are similar in humans and animals.

An additional number of amber jars contained substances that had crystalized and presented reactive hazards (D003). There is degraded dynamite at the Site which is unstable and also presents a reactive hazard (D003). These reactive wastes are shock sensitive and represent an explosive hazard to humans and wildlife upon direct contact.

In addition, there were abandoned electrical transformers assumed to contain PCBs located at the top of the slope draining into Snow Creek. Considered carcinogenic and a listed hazardous substance (40 CFR §302.4), PCBs were first developed in 1929 and used extensively in the United States until production ceased in 1977 due to potential adverse environmental and human health effects. Polychlorinated biphenyls are not naturally occurring and when released into the environment, degrade very slowly. In wildlife, PCBs can bio-accumulate, bio-concentrate through the food web, and cause tumors and birth defects. In fish, PCBs are stored in fat, liver and brain tissue. Humans can absorb PCBs through the skin, lungs or gastrointestinal tract, but exposure is primarily through the consumption of PCB-contaminated food (i.e., fish). Acne-like skin rashes, liver cancer and biliary tract (bile duct) cancer have been associated with exposure to PCBs.

5. NPL Status

This Site is part of OU2 of the Carpenter-Snow Creek NPL Site, which was listed as a Superfund site in September 2001.

6. Maps, Pictures & Other Graphic Representations

A map of the Site's location is available as Attachment 1. Site photographs are presented in Attachment 2. Photographs and maps are also available in the START Removal Assessment Report in the Site file and administrative record for the Site.

B. Other Actions to Date

1. Previous Actions

There are no previous actions at the Site.

2. Current Actions

There are no current or ongoing actions.

C. State, Local and other Federal Authorities' Roles

Montana Department of Environmental Quality is directly assisting the EPA with various portions of the Carpenter-Snow Creek NPL Site and has been involved in planning this removal action. Malmstrom Airforce Base provided an Explosive Ordinance Disposal (EOD) team for on-site thermal detonation of the containers deemed too unstable for transportation for off-site disposal. Cascade County Sheriff's Office assisted in planning the operation and local firefighters from the Neihart and Monarch Volunteer Fire Departments provided fire suppression support for this response.

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

Conditions at the Site present a threat to public health and the environment and meet the criteria for initiating a removal action under 40 CFR §300.415(b)(2) of the NCP.

EPA has considered all the factors described in 40 CFR §300.415(b)(2) of the NCP and determined that the following factors apply at the Site.

- (i) *"Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants;"*

As discussed above, the chemicals at the Site were stored haphazardly and are neither secured nor segregated by compatibility to prevent leaking/spilled chemicals from mixing. If an accident was to occur where two or more incompatible chemicals mixed, a chain reaction could result, releasing chemicals into the upper drainage of Snow Creek. In addition, trespassers walking through the Site or animals living in the buildings could cause a fire or explosion by disturbing or breaking the chemical containers.

- (vi) *"Threat of fire or explosion;"*

As discussed above, in addition to the dynamite there are a number of containers of unknown liquids that show evidence of crystallization. Because the content of these bottles dehydrated over time, it is likely that the unknown liquid containers formed peroxide crystals, which are extremely shock sensitive and explosive when disturbed. The mere act of bumping or moving these containers can result in violent decomposition. Consequently, the presence of such crystals precludes opening the containers for obvious safety reasons;

the only prudent action is to assume the worst case – that they do indeed contain a peroxide-crystal-forming chemical, and therefore present a threat of explosion and subsequent fire. Considering the dry conditions around the Site and that the area was already under a fire ban, a fire at the Site could spread rapidly throughout the surrounding countryside and have disastrous effects on the surrounding area.

(vii) *“The availability of other appropriate federal or state response mechanisms to respond to the release.”*

Local and state governments do not have the capability to conduct this action in a timely manner.

IV. SELECTED REMOVAL ACTIONS AND ESTIMATED COSTS

A. Planned Actions

1. Planned Action

On September 13, 2017, the EPA’s Emergency Response and Removal Services (ERRS) contractor lab-packed all stable chemical containers from the Site and stored them at the Cascade County maintenance yard until transportation for disposal to an appropriate facility could be arranged. The ERRS contractor also drained the oils from the transformer casings into a 55-gallon steel drum and stored it at the Cascade County maintenance yard until transportation for disposal to an appropriate facility could be arranged. The empty transformer casings were transported from the Site by the ERRS contractor to an appropriate recycler as allowed under the Toxic Substance Control Act (TSCA).

Containers deemed to be too unstable for transportation and off-site disposal were detonated on-site by Malmstrom Air Force Base EOD. All reasonable efforts were made to have adequate fire suppression capability on Site during this action.

Malmstrom Air Force Base EOD evaluated the magazine building and were unable to conduct a thermal detonation of the unexploded dynamite because they did not have the appropriate equipment (i.e., armored excavation equipment). Consequently, the EPA will bring in un-exploded ordinance specialists to adequately and safely dispose of the dynamite from the Site.

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. Engineering Evaluation/Cost Analysis (EE/CA)

An EE/CA is not required for an emergency removal action.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

Removal actions conducted under CERCLA are required, to the extent practicable considering the exigencies of the situation, to attain ARARs. In determining whether compliance with an ARAR is practicable, the lead agency may consider appropriate factors including the urgency of the situation and the scope of the removal action to be conducted. A table containing potential Site-specific ARARs identified at the time of the response is provided as Attachment 4 to this Action Memorandum.

5. Project Schedule

This emergency removal action was initiated on September 8, 2017. Waste transportation activities are anticipated to be completed by the end of the calendar year 2017, and final disposition of the dynamite/magazine is anticipated to be completed no later than early summer of 2018.

B. Estimated Costs*

Contractor costs	
START	\$35,000.00
ERRS	\$170,000.00
Contingency costs (20% of subtotal)	\$41,000.00
Total Removal Project Ceiling	\$246,000.00

*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 ACTIONS BE DELAYED OR NOT TAKEN

A delay in action or no action at this Site would have increased the actual or potential threats to public health and the environment.

VI. OUTSTANDING POLICY ISSUES

None.

VII. ENFORCEMENT

An investigation to evaluate potential enforcement options will be undertaken. A separate Enforcement Addendum will be prepared if appropriate providing a confidential summary of potential enforcement activities.

VIII. APPROVALS

This decision document represents the selected removal action for the Big Seven Mine Abandoned Chemicals Site near the Town of Neihart, in Cascade County, MT, 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 met 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 \$246,000.00; this amount will be funded from the Regional removal allowance.



Craig Myers
Federal On-Scene Coordinator

12/11/17
Date

Attachment 1: Site Location

Attachment 2: Site Photographs

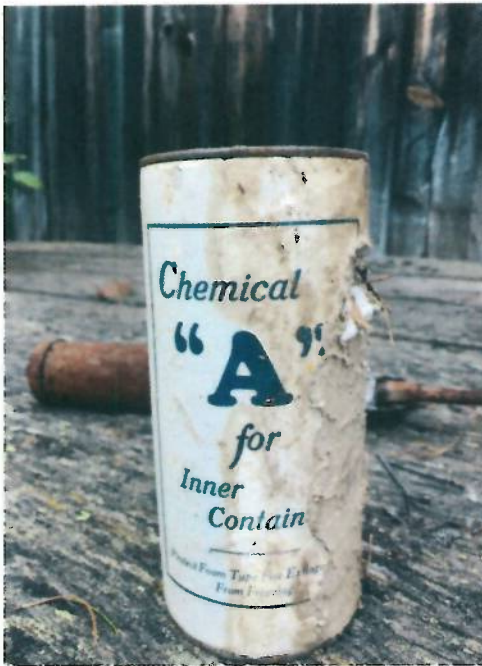
Attachment 3: Hazard Classification List

Attachment 4: Applicable or Relevant and Appropriate Requirements (ARARs)

Attachment 1 – Site Location



Attachment 2 – Site Photographs



Powdered additive for recharging fire extinguishers from lower maintenance building.



Nitric acid and unknown milky substance bottles from the upper core house.



Chemical assay laboratory.



Unlabeled glass bottles in chemical assay laboratory.



Amber bottles that contain crystalized, dehydrated material in chemical assay laboratory.



Mill building.



Metal containers in mill building.



Electrical transformers.



Magazine building.

Attachment 3 – Hazard Classification List

Sample ID	Matrix	Solubility	pH	Oxidizer	Cyanide	Sulfide	Flamibility	Chlorinated
B7-01	Liquid	No	7	N/A	N/A	N/A	No	No
B7-02	Liquid	No	4	N/A	N/A	N/A	No	No
B7-03	Liquid	No	5	N/A	N/A	N/A	No	No
B7-04		Yes	5	No	N/A	N/A	No	No
B7-05		No	6	N/A	N/A	N/A	No	No
B7-06		No	5	N/A	N/A	N/A	No	No
B7-07		No	5	N/A	N/A	N/A	No	No
B7-08	Liquid	Yes	3	No	N/A	N/A	No	No
B7-09	Liquid	Yes	0	No	N/A	N/A	No	Yes
B7-10	Liquid	Yes	0	No	N/A	N/A	No	No
B7-11	Solid	No	3	N/A	N/A	N/A	No	No
B7-12		Yes	6	No	N/A	N/A	No	No
B7-13		Yes	5	No	N/A	N/A	No	No
B7-14		Yes	0	No	N/A	N/A	No	Yes
B7-15		Yes	0	No	N/A	N/A	No	Yes
B7-16	Solid	No	5	N/A	N/A	N/A	No	No
B7-17		Yes	0	No	N/A	N/A	No	No
B7-18	Solid	No	6	N/A	N/A	N/A	No	No
B7-19	Solid	No	5	N/A	N/A	N/A	No	No
B7-20		No	6	N/A	N/A	N/A	No	No
B7-21	Solid	Yes	5	No	N/A	N/A	No	No
B7-22	Not sampled.							
B7-23		No	6	N/A	N/A	N/A	No	No
B7-24		Yes	12	No	No	No	No	No
B7-25	Solid	No	5	N/A	N/A	N/A	No	No
B7-26		No	5	N/A	N/A	N/A	No	No
B7-27	Liquid	Yes	0	Yes	N/A	N/A	No	Yes
B7-28	Liquid	Yes	0	Yes	N/A	N/A	No	No
B7-29	Liquid	Yes	0	No	N/A	N/A	No	No
B7-30		Yes	2	No	N/A	N/A	No	No
B7-31		Yes	5	No	N/A	N/A	No	No
B7-32	Liquid	Yes	4	No	N/A	N/A	No	No
B7-33	Liquid	Yes	3	No	N/A	N/A	No	No
B7-34		Yes	5	No	N/A	N/A	No	No
B7-35	Liquid	Yes	0	Yes	N/A	N/A	No	Yes
B7-36		Yes	10	No	No	No	No	Yes
B7-37		Yes	7	No	N/A	N/A	No	No
B7-38		Yes	4	No	N/A	N/A	No	No
B7-39		Yes	5	No	N/A	N/A	No	No
B7-40		No	4	N/A	N/A	N/A	No	Yes
B7-41	Liquid	No	5	N/A	N/A	N/A	No	No
B7-42		Yes	3	No	N/A	N/A	No	No
B7-43 Fire Retardent		No	4	No	N/A	N/A	No	No
B7-44 Glue		No	7	No	N/A	N/A	No	No

Attachment 4 – ARARs

<u>Subject</u>	<u>Statute</u>	<u>Applicability</u>	<u>Attain/Comply</u>
Managing waste with polychlorinated biphenyls (PCBs)	Toxic Substance Control Act	Applicable	Comply to the Extent Practicable
Quality Assurance	40 CFR 46	Applicable	Comply to the Extent Practicable