



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

ACTION MEMORANDUM

SUBJECT: Approval and Funding for a Removal Action at the Durango Detox Mercury Spill Site in Durango, La Plata County, Colorado, pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104.

FROM: Joyce Ackerman
Federal On-Scene Coordinator

THRU: Laura Williams, Unit Chief
Emergency Response

TO: David Ostrander, Director
Emergency Response and Preparedness Program

Laura Williams
David Ostrander

Site ID# A8C6

I. Purpose

The purpose of this memorandum is to document the decision to initiate response actions described herein for the Durango Detox Mercury Spill (Site) located in Durango, La Plata County, Colorado, pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104. This classic emergency removal action involves the investigation and cleanup of spilled elemental mercury at a number of public buildings in the city of Durango. 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 involves no nationally-significant or precedent-setting issues. This emergency response removal action will not establish any precedent for how future response actions will be taken 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:	Durango Detox Mercury Spill Site
Superfund Site ID (SSID):	A8C6
NRC Case Number:	1067089
CERCLIS Number:	
Site Location:	Durango, La Plata County, CO, 81301
Lat/Long:	37.235104 ⁰ , -107.824791 ⁰
Potentially Responsible Party (PRP):	Homeless person
NPL Status:	Not on the NPL
Removal Start Date:	11/29/2013
Removal Category:	Emergency Response Removal Action

A. Site Description

1. Removal Site Evaluation

On November 29, 2013, the EPA Emergency Response Program received a notification and request for assistance from the Durango Fire and Rescue Authority regarding a mercury spill at the La Plata County Detox Center. The Fire Authority reported that a homeless man had a glass jar of elemental mercury which broke inside his backpack. The release of mercury was discovered inside the Detox Center. The Detox Center was evacuated. On Friday, November 29, 2013, On-Scene Coordinator (OSC) Joyce Ackerman mobilized to the Site with a START contractor and ERRS contractors. When the OSC and START contractor arrived in Durango on Friday evening, the Fire Authority reported that the man had visited ten or more public buildings with the potentially leaking backpack.

The homeless man had reportedly worked temporarily for a man in the area who was demolishing a building. The man demolishing the building had a large glass jar of mercury approximately eight inches tall and asked the homeless man if he would like to take it, which he did. The homeless man carried the jar around with him for approximately five months. He visited the Manna Soup Kitchen in Durango on Wednesday, November 27, 2013, the day before the Thanksgiving holiday, and the jar broke inside his backpack. He reportedly used two empty pill bottles to try to collect mercury which had spilled on the floor. He apparently disposed of the broken glass jar because it was never found during the emergency response. The total quantity of mercury released was never determined, but based on the size of the glass jar, it was likely several fluid ounces.

In addition to the Soup Kitchen, the man visited or was transported to the following locations, not necessarily in this order:

- Homeless Shelter
- City Market Supermarket
- Laundromat
- Liquor Store
- Library
- U.S. Post Office
- Senior Citizen Apartment Complex
- Federal Building Social Security Office
- Fire Marshal's Building (aka "The Farm")
- Transit Center (bus station)
- Detox Center
- Booking Center (City jail)

2. Physical Location

The Site comprised several public buildings in the city of Durango.

3. Site Characteristics

Fire Authority officials investigated several of the public buildings and identified visible

beads of mercury inside the Soup Kitchen, outside the Homeless Shelter, outside the Transit Center, and inside the Detox Center. These facilities were evacuated.

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

The contaminant of concern at the Site is elemental mercury. Mercury is a hazardous substance as defined by Section 101(14) of CERCLA. Local officials who interviewed the homeless man report that the original glass jar containing mercury was approximately 8 inches tall, which could have contained several fluid ounces of mercury.

The elemental mercury was released both inside and outside several public buildings in the city of Durango. EPA's assessment showed that mercury was tracked via foot traffic and the use of mops and other cleaning activities on the floors at the various buildings.

For elemental mercury, the most important route of absorption is through inhalation. Mercury vapors are colorless and odorless. According to the federal Agency for Toxic Substances and Disease Registry (ATSDR) 1999 Toxicological Profile for Mercury, the major target organs of elemental mercury-induced toxicity are the kidneys and the central nervous system. The toxicological profile also states metallic mercury and its vapors are extremely difficult to remove from clothes, furniture, carpet, floors, walls, and other such items. If these items are not properly cleaned, the mercury can remain for months or years, and continue to be a source of exposure.

The ATSDR has provided suggested action levels for indoor air concentrations of mercury based on data available in its Toxicological Profile for Mercury (1999) or in the Hazardous Substance Databank of the Toxicology Data Network at the National Library of Medicine. See Attachment E "ATSDR Suggested Action Levels" contained in the U.S. EPA Region 5 Mercury Response Guidebook. These suggested action levels are cited elsewhere in this Action Memo.

5. NPL Status

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

6. Maps, Pictures, Other Geographic Representation

Photos are provided as Attachment 1.

B. Other Actions to Date

1. Previous Actions

There are no previous actions at the Site.

2. Current Actions

EPA considers remediation at the affected facilities to be complete. There are no current or ongoing actions.

C. State and Local Authorities' Role

1. State and Local Actions to Date

The EPA OSC and START contractor arrived in Durango Friday evening, November 29, 2013, and met with the Fire Authority officials and Fire Marshal at Station 1. The officials had prepared a priority list of which facilities should be investigated first for public safety and decisions on further closures. Local officials had already conducted visual inspections at the public buildings, had identified visible beads of mercury at several buildings, and conducted evacuations. An official from the Fire Authority and the Fire Marshal accompanied the OSC and START contractor to several facilities on Friday evening and Saturday, and arranged for EPA access to conduct investigations. Law enforcement officials conducted interviews with the homeless man to determine his activities during the time he carried the broken jar of mercury in his backpack.

2. Potential for Continued State/Local Response

The state of Colorado did not have resources or authorities to conduct this action. Fire Authority officials conducted visual inspections and evacuations but did not have the specialized instrumentation and funding to conduct the cleanup.

III. Threats to Public Health Welfare or the Environment

Conditions 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 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;”*

The contaminant of concern at the Site is elemental mercury. Mercury vapor concentrations inside the affected public buildings exceeded the long term indoor air suggested action levels recommended by EPA and ATSDR of 300 to 1,000 nanograms/m³ (residential) and 3,000 nanograms/m³ (commercial/occupational). For elemental mercury, the most important route of absorption is through inhalation. Spills occurred at various public buildings, both indoors and outdoors, and mercury was tracked by foot traffic and cleaning activities at these locations.

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

As discussed above, there were no state resources available to effect this removal. There are also no other federal agencies or federal resources available.

IV. Selected Removal Action and Estimated Costs

A. Situation and Removal Activities to Date

1. Current Situation

EPA considers the remediation complete. All wastes were packaged and properly disposed.

2. Removal Activities to Date

The OSC and START contractor used a Lumex mercury vapor analyzer to screen the air in each potentially affected structure. A detailed description of the investigation is provided in the OSC's initial/final pollution report (polrep). Four of the structures were determined to require cleanup, as described below:

Transit Center, 250 W. 8th Street – Officials had roped off an area on the sidewalk outside the front door of the transit center where visible beads of mercury could be seen. When the ERRS contractors arrived at the Site Friday night, the OSC directed them to begin cleanup in this area. The ERRS contractor used a mercury vacuum to remove the beads of mercury, followed by cleaning with a mercurorb wet wash, which binds any remaining mercury and prevents it from vaporizing. The START contractor took readings with the Lumex inside the transit center and determined that vapor levels were elevated along the floor from the front door to the ticket counter and a nearby seating area. The ERRS contractor was directed to use the mercury vacuum on the cracks in the floor in this area and to wash the floor with mercurorb afterward. Upon examination the following morning, there were still a few small beads of mercury in cracks of the sidewalk, and the ERRS contractor performed additional vacuuming and mercurorb washing. On November 30, 2013, the Lumex readings inside the building near the floor were in the range of 120 – 250 nanograms per cubic meter, well below action levels. On December 1, 2013, readings on the sidewalk were in the range of 125 nanograms per cubic meter, well below action levels.

Manna Soup Kitchen, 1100 Avenida Del Sol. – The Soup Kitchen is reportedly where the releases of mercury began on Wednesday, November 27, 2013. The homeless man set down his backpack in the dining area of the Soup Kitchen, and the glass jar containing mercury broke inside his backpack. Persons saw him attempting to clean up the spilled mercury by scooping it up with empty pill bottles, although no one realized the significance of the event at the time. Once the releases of mercury became known, local officials evacuated the Soup Kitchen. The Lumex instrument showed elevated readings on the floor where the backpack had been sitting and in the mop room where mops and brooms were located that had been used to clean the floor. The ERRS contractor was directed to vacuum the visible beads of mercury and conduct mercurorb washing in the affected areas and to bag the contaminated mops, brooms, and a shop-vac in preparation for disposal. Following cleaning, Lumex readings in affected areas were in the range of 42 nanograms per cubic meter, well below action levels.

Volunteers of America Homeless Shelter, 1055 Avenida Del Sol – The homeless man reportedly visited the homeless shelter but stayed outdoors and did not enter the facility or spend the night during the time frame the mercury releases were occurring. Visible beads of mercury were identified by the Fire Authority outdoors on a second floor landing, and the

facility was evacuated. When the OSC and START contractor arrived, they also saw beads of mercury outdoors on the ground level underneath the second floor landing. Lumex readings were taken in every room inside the homeless shelter, including a bed the man with the backpack had slept in prior to breaking the jar of mercury. All readings were well below action levels. The ERRS contractor was directed to clean up the affected areas outdoors. Following cleanup, Lumex readings taken outdoors in the affected areas were in the range of 20-110 nanograms per cubic meter, well below action levels. The outdoor dumpster of the homeless shelter was checked with the Lumex, but the dumpster was empty and readings were low.

La Plata County Detox Center, 1125 Three Springs Boulevard – The homeless man had reportedly been picked up at the homeless shelter by law enforcement officials and transported to the Detox Center. It was there that Detox Center personnel discovered the release of mercury. They secured the backpack in a biohazard bag but not before mercury had been spilled and tracked across part of the facility. The Detox Center was evacuated, and personnel and patients left their shoes there. Fire Authority officials discovered beads of mercury in the carpeted office of the Detox Center and the adolescent dorm where the backpack had been stored in the biohazard bag.

The Detox Center consisted of a large day room with hard surface flooring, an office with carpet, and several rooms connected to the day room such as men's dorm, women's dorm, one-patient rooms (e.g., Q1, Q2), laundry room and cleaning supply storage, dining area, bathrooms, etc. Beyond the Detox portion of the facility was an in-patient mental health area, separated from the Detox Center by the interconnecting rooms and hallways. All rooms which were determined to be contaminated had hard surface flooring except for the office area which was carpeted.

The assessment with the Lumex instrument showed that the dayroom and office of the Detox Center were contaminated with mercury, along with some of the connected rooms, such as the one-patient room where the homeless man had initially been confined, a portion of the dining area, the adolescent dorm where the biohazard bag containing the backpack had been stored, and the room used to store cleaning supplies. The Lumex monitoring showed that the mental health area and other portions of the building separated from the Detox Center by the interconnecting rooms and hallways had low levels of mercury vapors, well below action levels.

The ERRS contractor began cleanup by vacuuming visible beads of mercury from the office carpet and hard floor in the adolescent dorm. The carpet was removed and bagged for disposal. All floors in affected areas were washed with mercsorb. A negative air machine was used to vent the office air outdoors during cleaning, so as not to let it circulate through the entire building by the HVAC system. All property determined to be contaminated was bagged in preparation for disposal, including all shoes, cleaning supplies such as mops, the mattress and blanket in the one-patient room, etc. The biohazard bag containing the backpack was segregated for hazardous waste disposal. The backpack contained several tablespoons of free mercury in some of its pockets and two pill bottles containing mercury.

After initial cleaning, mercury vapor levels in the office remained high. The carpet had been glued directly to the floor. The ERRS contractor purchased a solvent-type adhesive remover and applied it to the floor. The adhesive was scraped off the floor, and cracks in the floor

were carefully scraped and vacuumed with the mercury vacuum. Additional washing was performed with mercurisorb. The floor of the office was heated, with the return air duct of the office taped off with plastic to prevent circulating mercury vapors throughout the building.

Cleaning of the Detox Center began on Saturday, November 30, and continued on Sunday, December 1, 2013. When cleaning was believed to be complete, the HVAC system settings were returned to normal temperatures in the 68-72 F range, and the building was allowed to equilibrate for a few hours. Readings were taken Sunday night with the Lumex and were below action levels. The building was allowed to continue to equilibrate overnight and readings taken again Monday morning with the Lumex throughout the entire facility. Concentrations were in the low hundreds of nanograms per cubic meter, well below action levels. The affected floors were washed with water to remove some of the white residue left behind by the mercurisorb. All bagged mercury-contaminated debris was removed from the building for disposal at appropriate facilities.

Booking Center, 742 Turner Street – No cleanup was determined to be necessary at the Booking Center where the homeless man and two other persons were taken following the discovery of mercury at the Detox Center. However, clothing from the three persons had been bagged and stored in the property room at the Booking Center. The bagged clothing of the three persons had relatively high detections of mercury vapor, in the range of 10,000 nanograms per cubic meter. The OSC took custody of the clothing, which was disposed with other mercury contaminated debris.

3. Contribution to Remedial Performance

This action will fully address all threats from this Site, requiring no further remedial actions.

4. Applicable or Relevant and Appropriate Requirements (ARARs)

Removal actions conducted under CERCLA are required to attain ARARs to the extent practicable. In determining whether compliance with ARARs is practicable, the OSC may consider appropriate factors, including the urgency of the situation and the scope of the removal action to be conducted.

No ARARs have been identified for this removal action. RCRA requirements concerning waste analysis, manifesting, packaging, and transporting, while not ARARs, apply to off-site shipments of hazardous wastes.

5. Project Schedule

Removal activities were initiated on November 29, 2013. On-site activities were completed by December 2, 2013.

B. Estimated Costs*

Contractor costs	
ERRS	\$ 45,000
START	\$ 20,000
Other Extramural Costs	
Contingency costs (20% of subtotal)	\$ 13,000
Total Removal Project Ceiling	\$ 78,000

*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 have increased the actual or potential threats to the public health and/or the environment.

VI. Outstanding Policy Issues

None


VII. Enforcement

Potential enforcement actions are being considered. An enforcement addendum, if generated, will be entered in the Site file.

VII. Approvals

This decision document represents the selected removal action for the Durango Detox Mercury Spill Site in Durango, La Plata County, CO, 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 through this document, I am approving the proposed removal actions. The total project ceiling is \$78,000; this amount will be funded from the Regional removal allowance.



Joyce Ackerman
Federal On-Scene Coordinator

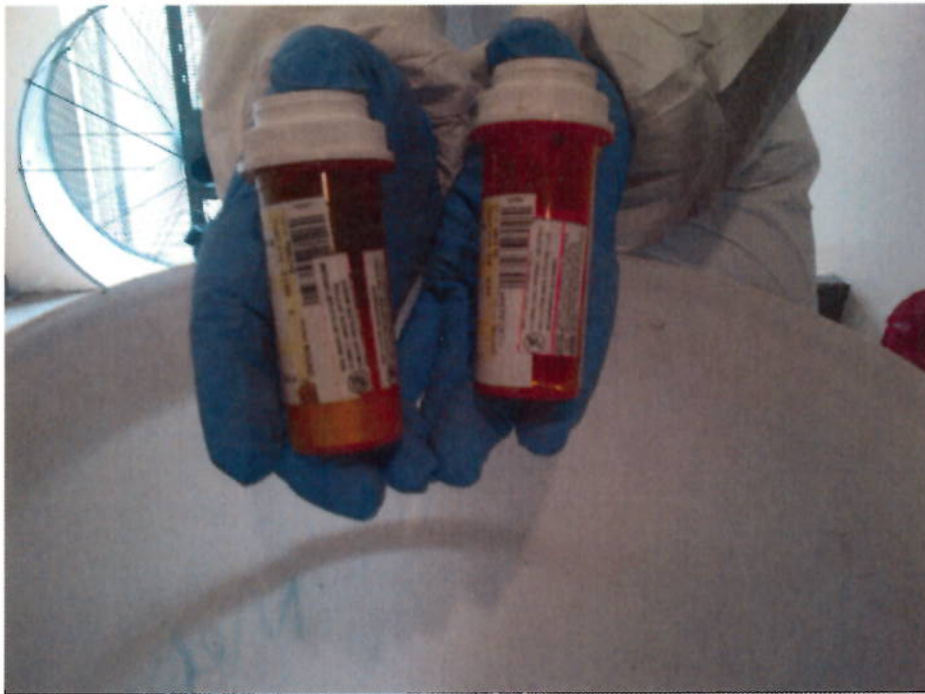
1-14-2014
Date



Attachment 1: Photographs



Attachment 1 Photos



Pill bottles from the backpack used to scoop up spilled mercury at the Soup Kitchen.



Pooled mercury inside one of the compartments of the backpack.

Attachment 1 Photos



ERRS contractors have removed contaminated carpet from the Detox Center Office and are scraping carpet adhesive from the floor of the office.

