



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8**

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Ref: 8SEMD-EMB

**ACTION MEMORANDUM**

**SUBJECT:** Approval and Funding for an Emergency Response Action at the South Jordan Mercury Spill Site in Salt Lake County, Utah, pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104

**FROM:** Megan Schuette  
Federal On-Scene Coordinator

**THRU:** Kerry Guy, Supervisor  
Emergency Response Section

Deirdre Rothery, Manager  
Emergency Response Branch

**TO:** Ben Bielenberg, Acting Director  
Superfund and Emergency Management Division

Site ID# B8F3

**I. PURPOSE**

The purpose of this Action Memorandum is to document the decision to initiate emergency response actions described herein for the South Jordan Mercury Spill site (Site) located in South Jordan, Salt Lake County, Utah, pursuant to the On-Scene Coordinator's delegated authority under CERCLA Section 104. This emergency removal action involved the collection and disposal of elemental mercury at a residence. Conditions existing at the Site presented a threat to public health or welfare or 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 US 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:	South Jordan Mercury Spill
Superfund Site ID (SSID):	B8F3
NRC Case Number:	1351375
CERCLIS Number:	UTN000821201
Site Location:	South Jordan, Salt Lake County, Utah
Lat/Long:	40.537970 / -111.963724
Potentially Responsible Party (PRP):	
NPL Status:	Non NPL
Removal Start Date:	10/31/2022

### A. Site Description

#### 1. Removal Site Evaluation

A homeowner was going through the belongings of an ill family member when they discovered a small jar of mercury. The homeowner moved the jar to his garage in South Jordan (a suburb of Salt Lake City, Utah) and placed it atop a tall sturdy cabinet until he could identify a proper hazardous waste facility. On approximately October 23, 2022, children playing in the garage dislodged and broke the container spreading tiny beads of mercury throughout the garage. The playtime incident was not discovered by their parents until approximately one week later.

On October 31, 2022, the local fire department responded to the residence, secured a pool of mercury at the immediate spill location, and collected indoor air readings as high as 10,000 ng/m<sup>3</sup> (nanograms per cubic meter) in the residence and 29,000 ng/m<sup>3</sup> in the garage.

The Salt Lake County Health Department requested assistance from the EPA and an EPA Response Team mobilized to the home on November 1, 2022.

#### 2. Physical Location

The Site consists of one residential property in South Jordan, Salt Lake County, Utah. The property, the location of the spill, is an occupied residence with an attached garage at the intersection of S Kings Crossing Way and Rock Creek Drive. The South Jordan Fire Department will be used to store site waste pending test results and final disposal. The fire department is located at 10758 1700 W, South Jordan, Utah 84095.

In 2020, South Jordan, Utah had a population of 73,695 people with a median age of 33.1 (source: Data USA website, <https://datausa.io/profile/geo/south-jordan-ut>). South Jordan is roughly 22.3 square miles and mostly residential, so

the OSC estimates that approximately 3,000-4,000 people live within a one-mile radius of the Site.

### **3. Site Characteristics**

The residential property with attached garage is in a residential neighborhood and owned by the residents that live in it. Children live at the residence and there are often visitors at the residence (including children). Additionally, the OSC observed several children playing outside and walking around the neighborhood. Using the EPA's EJScreen tool there does not appear to be any Environmental Justice concerns in the one-mile radius of the Site.

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

Based on EPA's initial assessment, mercury beads and elevated mercury vapors were detected garage and home. Mercury vapors were also detected on some of the residents' personal items. Due to the extreme mobility and persistency of liquid mercury, this Site posed a substantial threat of a release of mercury into the environment.

Mercury is listed as a hazardous substance in 40 CFR §302.4 and Section 101(14) of CERCLA. Mercury is the only metal that is liquid at room temperature. In its pure form (often called metallic or elemental), mercury is a shiny, silver-white, odorless liquid. At room temperature, mercury vaporizes into a toxic, colorless, odorless gas.<sup>1</sup> In its vapor form, mercury is easily inhaled and extremely toxic. For elemental mercury, the most important route of absorption is through inhalation. Because of the chemical nature of elemental mercury vapor, deposition and retention in the lungs are quite high (on the order of 80 percent in humans).<sup>2</sup> Exposure to elemental mercury can adversely affect the nervous system (i.e., mercury is a neurotoxin).

When spilled or tracked into a small or poorly ventilated room, mercury can pose significant health threats. Small amounts of mercury, released into an enclosed space (such as a home or classroom), can raise air concentrations to harmful levels. Metallic mercury is extremely difficult to remove from shoes, clothes, furniture, carpet, and other porous items. It is easily tracked and transferred. If these items are not properly disposed or cleaned, the mercury can linger for months or years and continue to pose a health threat.<sup>3</sup>

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<sup>1</sup> United States of America, Agency for Toxic Substances and Disease Registry, Division of Toxicology and Environmental Medicine Prevention, Response and Medical Support Branch Emergency Response Team. (2012, March 22). Action Levels for Elemental Mercury Spills.

<sup>2</sup> Arch Environ Health, 1976 Nov-Dec; 31(6):302-9. Clearance of mercury (HG-197, HG-203) vapor inhaled by human subjects.

<sup>3</sup> <http://www.epa.gov/mercury/exposure.htm>

## **5. NPL Status**

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

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

A map of the Site is available in Attachment 1.

### **B. Other Actions to Date**

#### **1. Previous Actions**

The local fire department responded to the residence on October 31, 2022, secured a pool of mercury at the immediate spill location, and collected elevated indoor air readings in the residence and in the garage. The Salt Lake County Health Department and the State of Utah requested EPA assistance.

#### **2. Current Actions**

There are no current activities on the Site.

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

#### **1. State and Local Actions to date**

The Salt Lake County Health Department and the local fire department initially responded to the spill. The local fire department extended parking area will be used to store site waste pending Toxicity Characteristic Leading Procedure (TCLP) results and prior to final disposal at a CERCLA-approved landfill.

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

State and local entities do not have the resources or authority to conduct this removal action and requested EPA's assistance.

## **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:”

EPA's initial assessment indicated that mercury from the spill was visible in the attached garage where the spill occurred. EPA's data shows that this mercury had been tracked into the attached residence.

A family with children lives in the residence and often have visitors (including children). EPA's initial readings of mercury vapor in the breathing zone were roughly 29,000 ng/m<sup>3</sup> in the garage and 10,000 ng/m<sup>3</sup> in the residence. Continued exposure to levels this high is potentially hazardous to human health.

Should the mercury contamination not be contained and removed, the material could be tracked further around the neighborhood and to other residences and vehicles.

“(viii) The availability of other appropriate federal or state mechanisms to respond to the release:”

Local and state governments did not have the capability to conduct the action in a timely manner. The EPA's assistance was requested by the local Health Department and the State.

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

##### **A. Planned Actions**

###### **1. Planned Action Description**

1. Collect all mercury that can be identified in the garage and residence.
2. Use mercury cleaning agents to reduce any trace of mercury from hard living surfaces.
3. Clean drain traps and remove carpeting throughout the residence.
4. Screen vehicles, clothing, and personal belongings. Ventilate belongings in a heated environment as necessary and to the extent practical. Document and dispose of personal belongings that cannot be cleared for future use.
5. Initiate heating and venting cycles in the garage, residence, and HVAC system to reduce mercury vapors to below 300 ng/m<sup>3</sup> in the breathing zone to the extent practicable.
6. Conduct 8-hour clearance monitoring with a goal of 300 ng/m<sup>3</sup> in the residence and garage.
7. Remove and properly dispose of mercury and non-hazardous waste generated from the cleanup. Note: all free mercury will be transported separately to an appropriate disposal facility.

###### **2. Contribution to Remedial Performance**

This effort will, to the extent practical, contribute to any future remedial effort at the Site. However, no further federal action is anticipated at this time.

**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)**

This Action Memorandum addresses the proposed emergency response removal action at the South Jordan Mercury Spill Site. Mercury is the principal contaminant of concern. 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.

No ARARs were identified by the OSC during this emergency response. While the CERCLA off-site rule is not an ARAR, RCRA requirements concerning waste analysis, manifesting, packaging, and transporting were adhered to for off-site shipments of hazardous wastes.

**5. Project Schedule**

This emergency removal action started on October 31, 2022. EPA demobilized its response resources on November 13, 2022 and expects to complete its response action in December 2022.

**B. Estimated Costs\***

	<b>Estimated Costs</b>
ERRS contractor	\$ 145,000
START contractor	\$ 60,000
SUBTOTAL	\$ 205,000
Contingency costs (20% of subtotal)	\$ 41,000
<b>Total Removal Project Ceiling</b>	<b>\$ 246,000</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 have increased the actual threat to the property owners, their children, and any visitors (including children) to their residence. A delay in action or no action at this Site would have also increased the potential threat to nearby sensitive receptors should the mercury be tracked around the neighborhood.

**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 South Jordan Mercury Spill Site in South Jordan, Salt Lake County, Utah, 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)(2) criteria for a removal action, and, through this document, I am approving the proposed removal action. The total project ceiling is \$246,000; this amount will be funded from the Regional removal allowance.

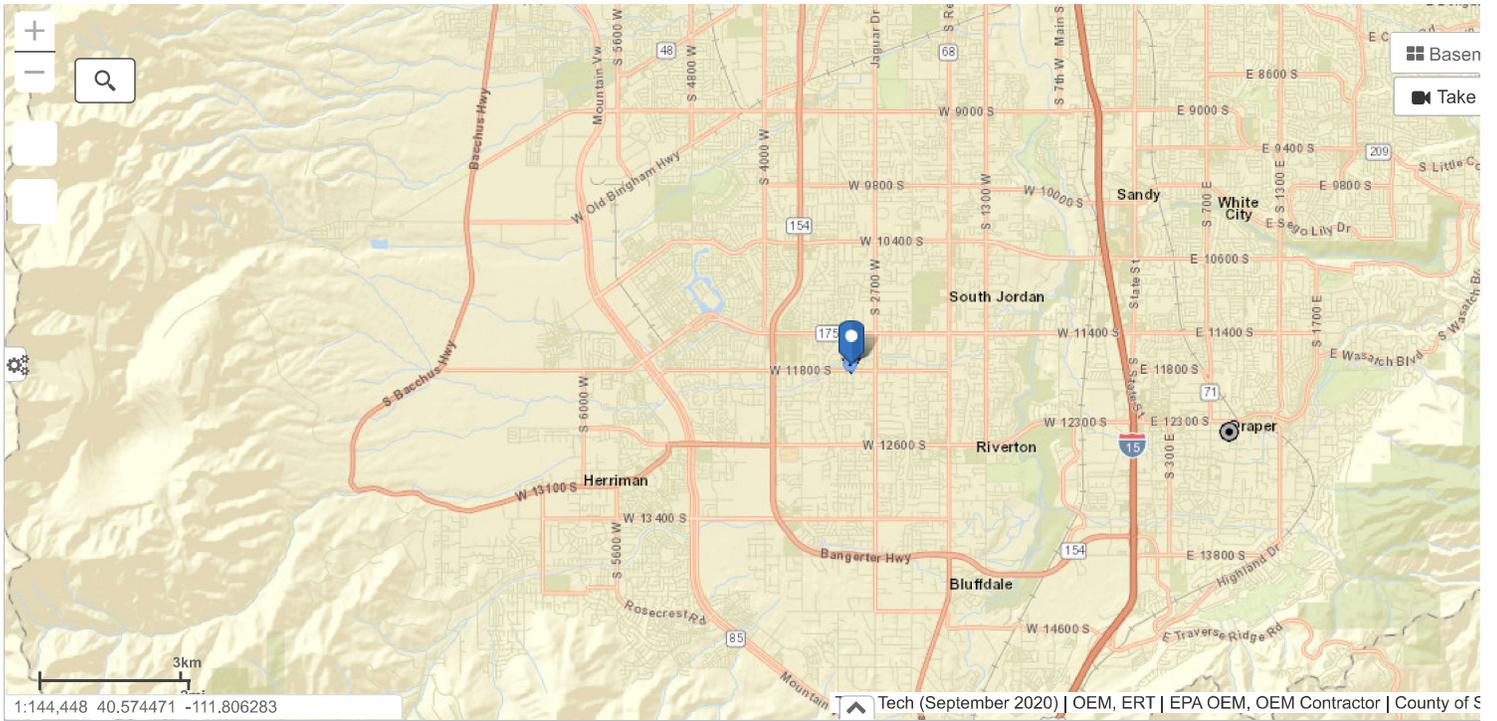
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Megan Schuette  
Federal On-Scene Coordinator

Date

**Attachment:**

Attachment 1: Site Map



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