

EPA Emergency Response Situation Report

Mercury Spill in Lead, SD

December 15, 2022

Safety Message

Levels of mercury in the private residence are hazardous. Do not enter the property without appropriate personal protective equipment. Do not track mercury outside the home.

The City of Lead and most of South Dakota is experiencing a historic blizzard. Travel in Lawrence County and South Dakota is hazardous and access within Lead and Deadwood is limited. Workers will experience harsh winter conditions.

[Images and Additional Information](#)

Incident Description

A school district nurse contacted the City of Lead's Volunteer Fire Department (VFD) regarding a student who had brought a bottle of mercury to the High School. The student admitted to playing with the mercury for 3 days. Lead VFD requested assistance from Rapid City Fire HazMat who responded to the residence of the student. HazMat reported that an unknown amount of elemental mercury from three bottles had spilled in a bedroom. HazMat identified multiple beads of mercury ranging in size from "pinhead to dime".

The State of South Dakota requested assistance from EPA on December 13, 2022. On December 15, EPA's Response Team discovered detectable levels of mercury in several areas at the High School. The Team also monitored mercury levels at the student's residence that are hazardous to human health. The family voluntarily agreed to leave their home during a blizzard and the Response Team helped secure and moved them to alternate lodging.

Additional EPA response personnel are en route but critical equipment is delayed due to weather. EPA's On-Scene Coordinator is working with the School District, Property Owner and stakeholders to scope response operations at the High School and the private residence.

Response Objectives

- Safety of the public and response personnel is top priority.
- Stabilize source areas to prevent the mercury from being spread.
- Minimize or, if possible, eliminate threats to human health posed by the mercury.
- Provide timely and accurate communication of response information to the public and affected stakeholders.

Operations Period 01 December 15, 2022

Period Objectives

The objective of the Operations Period (01 December 15, 2022) was to:

1. Conduct initial entries and reconnaissance of the High School and private residence.

Period Accomplishments

EPA's Response Team entered the High School with a School District representative at 0700 on December 15, 2022. Beads of mercury were discovered in the Art Room and Chemistry Lab and EPA's air monitoring equipment identified mercury vapor in other hallways, rooms and the principal's office.

The Response Team entered the private residence at 0930 on December 15, 2022. The Team monitored readings of mercury vapor in the breathing zone that consistently exceeded 20,000 nanograms per cubic meter. Readings of some household items exceeded 100,000 nanograms per cubic meter. EPA assisted the family of 2 adults, 3 juveniles and dog in finding alternate lodging.

Next Steps

EPA's Response Team will be coordinating with the School District and Property Owner on December 16, 2022, to establish an Operations Plan to minimize or, if possible, eliminate the threats posed by the mercury to human health. Response Operations will be initiated on December 16 depending on the blizzard and arrival of critical equipment and response personnel.