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# Mercury Spill Response

## Standard Operating Procedure

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Idaho State  
University

Environmental Health,  
Safety, and Sustainability

### Potential Safety Hazards

*Toxicity* – Exposures to elemental mercury occur most often via inhalation when mercury is exposed to air due to a spill or when products containing mercury break releasing mercury. Both acute and chronic health effects can occur from the inhalation of mercury vapor. Health effects include tremors, emotional changes, insomnia, neuromuscular changes, headaches, disturbances in sensation, changes in nerve response, and/or poor mental performance. Very high mercury exposures may result in kidney damage, respiratory failure, and death.

### Risk Assessment

The health risk from mercury vapor ranges from extreme to minor depending on the situation. Larger volume spills, confined locations, poorly ventilated areas, and higher ambient temperatures increase the health risk of exposure to mercury vapor.

### Immediate Response Actions

#### Spills larger than a thermometer

- Evacuate the area.
- Warn others to stay out of the area (e.g. – verbal warning, signage, etc...)
- Promptly contact Environmental Health Safety & Sustainability (EHSS) at 208-282-2310 during normal business hours or Public Safety at 208-282-2515 after normal business hours to request assistance.

#### Thermometer size spills or less

- Avoid walking through spilled mercury.
- Take measures to prevent others from walking through spilled mercury.
- Maximize area ventilation to the extent possible without contaminating other areas.
- Clean the spill in a safe manner as described below.

## Clean up Procedure for Thermometer Size Spills or Less

### *Spill Awareness*

- Recognition of a mercury spill typically involves the visual observation silver droplets.
- If mercury is moved it may combine to form larger shapes or break apart into smaller scattered droplets. Care should be taken to avoid scattering mercury and to avoid stepping on the mercury allowing it to be tracked to other locations.
- Mercury is extremely heavy and can roll under dust and dirt becoming difficult to see.
- Shining a flashlight on the spill area can help identify the location of mercury droplets.

### *Actions to Avoid*

- Never use a vacuum cleaner to clean a mercury spill as this will exhaust mercury vapor and contaminate the vacuum.
- Never use a broom to clean a mercury spill as this will scatter the mercury droplets and contaminate the broom.
- Never place items that may be contaminated with mercury into a normal trash receptacle as even small amounts of mercury contamination will require hazardous waste disposal.
- Do not attempt to clean mercury spills larger than a thermometer. Contact EHSS if the spill is larger than a thermometer.

### *Spill Response*

- Wear appropriate nitrile gloves
- Wear boot covers if there is a risk of stepping on the mercury during the spill response.
- If available, utilize a mercury vacuum hand pump to collect mercury droplets.
- Mercury on smooth surfaces may be collected safely in a manner that does not cause the droplets to scatter by utilizing a disposable plastic dust pan, index cards, business cards, or folded paper to direct mercury into a waste container
- Mercury spilled on rough surfaces and into hard to reach areas can be challenging to collect. Contact EHSS if assistance is needed.
- Utilizing sulfur or commercially available mercury absorbent products can be helpful in some situations. Understand that using these products will make droplets harder to see and that the absorbent will need to be collected and managed as mercury contaminated hazardous waste.

## Waste Material

- Manage mercury metal and potentially contaminated materials (including PPE) as a hazardous waste material and dispose via the Environmental Health & Safety Department (<https://www.isu.edu/ehs/>).