

Mercury Cleanup Guidelines
Mercury Program
Land Protection Division
Oklahoma DEQ

1.0 Introduction

The Oklahoma Department of Environmental Quality (DEQ) Land Protection Division has a mercury program, which provides a service of collecting, storing, and recycling household mercury and mercury containing items. Mercury-containing devices in households can include thermometers, thermostats, barometers, switches, irons, pressure-sensing devices, and sphygmomanometers (blood pressure measuring device). Also, some people keep liquid (elemental) mercury in bottles and other containers.

The purpose of these Guidelines is to provide information to Environmental Complaints & Local Services (ECLS) and Land Protection employees on what procedures to take when a mercury spill occurs at a DEQ facility or vehicle. If the spill occurs in the State Environmental Laboratory (SEL), the SEL has its own procedures to manage and clean up spills.

If the spill is more than two tablespoons (one pound – the reportable quantity for mercury) or more, it is mandatory to call the National Response Center (NRC). Clean up as much as the spill as possible and contact Jon Reid of the Land Protection Department at 405-702-5121. If Jon Reid is not available call Steven Gunnels at 405-702-5173 or the front desk at 405-702-5100. The NRC hotline is (800) 424-8802. The NRC hotline operates 24 hours a day, 7 days a week. The Coast Guard mans the telephone and will ask a series of questions about the spill. They will fill out a form and send it to EPA Region 6.

It is important to note that the longer a mercury spill sits, the more time it has to contaminate the area. This is due to the mercury vaporizing and the vapors absorbing into building material and other porous surfaces. Spills should be cleaned up immediately. Do not try to clean up a spill that has sat for several days; only specialized environmental cleanup contractors should attempt such a cleanup.

There are separate guidelines for packaging, transporting, and storing mercury containing waste. If the guidelines are followed properly the likelihood of additional spills will be diminished.

2.0 Equipment and Supplies in Cleaning up Mercury Spills

Before cleaning up a mercury spill, below is a list of suggested equipment and supplies for a mercury spill clean-up:

- Rubber or latex gloves
- Goggles or safety glasses
- Zip-lock-type bags
- Wide-mouth plastic 5- gallon container (buckets or pales) with screw-on lid

- Rigid container with lids such as an old paint can or coffee can
- Kitty litter
- Plastic trash bags (2 to 6 mm thick)
- Tape – duct tape or electrical works best
- Index cards, playing cards, or other rigid paper
- Damp paper towels
- Flashlight
- Carpenter’s knife
- Plastic dust pan
- Hg absorbent
- Mercury Vacuum (Contact Jon Reid)
- Lumex Air Monitoring Device (Contact Jon Reid)
- Air Purifying Respirator (APR) with cartridges specifically designed for mercury (Hg) vapors (consult with Jon Reid)

3.0 Cleanup Instructions

If a spill occurs in the ECLS offices or in the DEQ main building the following procedures should be taken. **It should be noted that procedures are different for different surfaces (i.e. hard, porous, carpet).** The different kinds of surfaces are highlighted in **bold** below.

1. If the spill occurs in the DEQ main building contact Jon Reid or Steven Gunnels to clean up the mercury waste. If Jon or Steven is not present, perform cleanup following the instructions below. Equipment is located in the Laboratory Waste Storage Room on the first floor. Keys to the storage room are located on the 5th floor at Jon Reid’s cubical.
2. Pregnant women and children in the room should leave the area.
3. Use a flashlight to look all around in the areas of the spill. The light will reflect off the shiny mercury beads and make it easier to see them.
4. Put on disposable rubber or latex gloves (i.e., do not use bare hands).
5. If spilled **on a hard surface**, use a piece of stiff paper or cardboard to push the beads together into a larger bead. Push the large bead onto another piece of paper being careful not to drop it and place it into a container that has a tight fitting lid (coffee can, glass jar or plastic container). Place the container, paper or other items that came in contact with the mercury into a zip-lock plastic bag and place in a sealed container (5-gallon bucket with screw-on lid).
6. Other options: electrical or duct tape, and Hg absorbent powder. Hg absorbent will amalgamate (clump together) any small amounts of mercury which remain.
7. If mercury is entrapped through cracks on a hard surface, which would require a mercury vacuum, please contact Jon Reid.
8. If the spill is **over a drain**, remove the ‘j’ or ‘s’ traps – put a sheet of plastic or a plastic tray under the work area to catch any mercury that might fall. Mercury is not soluble in water. Therefore, if water is involved it will not be contaminated with mercury.

9. If the spill is **on carpet**, cut out and remove any contaminated carpet and padding using a carpenter's knife. Immediately place the contaminated piece into a trash bag. Keep the bag upright, so mercury cannot run out the opening. Tape the opening shut. If a spill occurs on carpet, rugs, curtains, upholstery or other absorbent surfaces, cut and remove the affected portion of the contaminated material for disposal.
10. Move contaminated furniture, clothing, and other porous materials that came in contact with the mercury outside to air out.
11. Check your clothing and the bottom of your shoes for visible mercury. Remove any droplets, and place these items outside to air out.
12. Place all mercury waste including cleanup material (latex gloves, tape cards, and etc. in a 5-gallon sealed bucket.
13. After the spill is cleaned up contact Jon Reid to analyze any vapors still present using the Lumex vapor analyzer.

If a spill occurs in a vehicle the following procedures should be taken.

1. Park the vehicle outside and roll down all the windows for the mercury vapors to ventilate.
2. Contact Jon Reid and stay out of the vehicle.

4.0 What Never to Do with a Mercury Spill

- NEVER use an ordinary vacuum or shop vacuum to clean up mercury. The vacuum will blow vapors into the area, thereby increasing the likelihood of human exposure, and will contaminate the vacuum cleaner.
- NEVER use mops, brooms or brushes to clean up mercury. It will break the mercury into smaller beads and further scatter the mercury.
- NEVER use custodial cleaning products, especially those containing chlorine or ammonia, because they may react violently with the mercury and release toxic gases.
- NEVER wash mercury-contaminated items in a washing machine.
- NEVER walk around if your shoes might be contaminated with mercury. Contaminated clothing can also spread mercury around.
- NEVER pour mercury down a drain. It may lodge in the plumbing and cause future problems during plumbing repairs. If discharged, it can cause pollution of the septic tank or sewage treatment plant.