Mercury Cleanup and Disposal

Keene State College Policies and Procedures

Mercury Cleanup and Disposal

Section Menu

Purpose

Elemental mercury (quicksilver) is a toxin that can be found in a variety of items, such as thermometers, thermostats, blood pressure cuffs, fluorescent bulbs and even some toys or jewelry. When mercury is spilled, it evaporates and gives off invisible, odorless vapors. Breathing mercury vapors can have serious negative health effects because mercury can impact the way your brain and nervous system function. The purpose of this procedure is to educate affected employees on how to safely and effectively clean up any mercury spillage, such as from broken thermometers, or fluorescent bulbs. Science Building lab supervisors are responsible for maintaining appropriate mercury spill kits on site in their areas.

General Cleanup Safety

1. Don’t touch the mercury
2. Keep people out of the area
3. Block any drains, cracks or crevices
4. Turn off heating and ventilation systems to prevent vapor spread
5. Remove all jewelry, as mercury adheres to gold and silver
6. Put on nitrile rubber gloves
7. Keep your hands away from your face
8. Put any item that was touched by mercury in a plastic bag
9. If the spill is on carpet, cut out the contaminated section

10. If the spill is in a drain, remove sink trap and pour contents in a plastic bag
11. Ordinary vacuum cleaners MUST NOT be used to clean up mercury spills. Mercury should be swept up and placed in a zip lock bag.
12. Because of mercury’s reflective properties, a flash light can be used to detect its location
13. When finished remove gloves, place them in a plastic bag, and tightly seal the bag
14. Wash your hands thoroughly

Cleanup Procedure

Small Spills

Liquid:

In the event of a small Mercury spill, as with a broken thermometer or a small spill from a manometer:

1. Put on nitrile rubber gloves, respirator, and safety glasses
2. Spray the area with water
3. Consolidate Mercury into one or more puddles
4. Pick up broken debris
5. Use adsorbent sponge from Mercury Spill Kit to pick up elemental mercury
6. Sprinkle adsorbent powder over the area (this will turn the liquid into an amalgam)
7. Spray the area with water again
8. Clean up the area with a dustpan and brush
9. Sprinkle indicator powder over the area (leave overnight)
10. Place all debris (including dust pan and brush) in a plastic bag, and contaminated articles, seal with duct tape, and bring to the hazardous waste satellite accumulation area. This material will be disposed of in the universal waste stream.

11. Come back 24 hours later to check the indicator powder, if it is white then the cleanup was a success, if it is brown, you need to repeat the above steps.

Fluorescent Bulbs:

In the event of one or two bulbs breaking:

1. Leave the immediate area for at least 30 seconds. After this time, air monitoring tests performed by EHS have indicated any mercury will have settled into the dust. Ensure no one walks over or into the spill area.
2. Put on tyvec booties, a dust mask or ½ mask air purifying respirator with HEPA filter, and nitrile rubber gloves
3. Spray the area with water for dust control
4. Sprinkle adsorbent powder over the area
5. Spray the area with water again
6. Clean up the area with a dustpan and brush
7. Sprinkle indicator powder over the area (leave overnight)
8. Place all debris (including dust pan and brush) in a plastic bag, and contaminated articles, seal with duct tape, and bring to the hazardous waste satellite accumulation area
9. Come back 24 hours later to check the indicator powder, if it is white then the cleanup was a success, if it is brown, you need to repeat the above steps.

Cleanup supplies for a small mercury spill are available in the hazardous waste storage shed.

Large Spills

A large spill of mercury would be anything over two tablespoons of liquid or over two fluorescent bulbs, and should be reported to Environment Health and Safety at x2879. To expedite the cleanup, close the door to the affected area, alert people in the area, post area with a “Do not Enter” sign, and evacuate. If there are any questions regarding this procedure, contact your supervisor, or

the safety department at x8 2879.