

Basis of Design

The purpose of this section is to provide the guidelines for the development of specifications for safe cleanup and proper disposal of mercury-contaminated materials.

Overview

Mercury was commonly used in laboratories in equipment like thermometers, sphygmomanometers, manometers, etc and can be found on floors and in drains, thus all current and former laboratory areas should be surveyed for mercury contamination before construction.

Buildings like Chemistry, Bagley, Health Sciences, Denny Hall, UWMC/HMC medical and treatment rooms, the Power Plant, Raitt Hall, Kincaid Hall, Harris Hydraulics, Old Oceanography Building, and the Quaternary Research Center already have a history of mercury contamination.

A hazardous materials cleanup contractor can conduct surveys and the necessary cleanup before demolition or construction begins.

Where to look for mercury contamination

Look for mercury contamination in floor or equipment crevices, within drawers and cabinets, under and behind benches and furniture, under and behind fume hoods, along baseboards, under sinks, in and near floor drains, and in P-traps.

Mercury monitoring

Hire a hazmat consultant to conduct monitoring and a visual survey of the areas. EH&S can provide a list of consultants on contract to do this work. Get bids and choose the preferred contractor.

The consultant's scope of work should include multiple measurements at multiple suspect contaminated surfaces and objects. Monitor 1-3 inches above surfaces /objects and within the breathing zone. The monitoring results should be recorded and shared so it's clear where contamination lies. All debris and removable objects with mercury concentrations above 1 ug/ m³ should be disposed as a hazardous waste. Contaminated smooth surfaces like linoleum should be decontaminated, while non-smooth surfaces like carpeting may require demolition. The resultant breathing zone concentration of mercury should be below 3 ug/m³. The decontamination of the area needs to be done by a hazmat contractor prior to the start of construction.

All waste from the cleanup/decontamination will be managed by EH&S Environmental Programs (EP) as hazardous waste.

Mercury waste

Use the following procedure for disposal of liquids in drains and other mercury-contaminated debris:

- Call EP at 206.685.2849 prior to the start of work to obtain appropriate waste containers for liquids (within drains) and solids (contaminated debris and traps).
- Put on nitrile gloves. Empty drain traps into a liquid waste container, and place the trap in a solid waste container. Place other solids contaminated with mercury into the solid waste container.
- Analyze liquid waste using EPA SW-846 methods, unless there is visible metallic mercury in the liquids.
- Send analytical results to EP. EP will review the results and determines the appropriate disposal method for all materials. The project is recharged for disposal costs.