

Memorandum of Understanding: A memorandum of understanding (MOU) was signed in June 1998 between the EPA and the American Hospital Association (AHA) that called for two specific goals:

- Virtual elimination of mercury waste from the health care industry by the year 2005 and
- Total waste volume reduction, including both regulated and nonregulated waste, by 50% by 2010.

More information on this MOU may be found at the following EPA Web site:
<http://www.epa.gov/glnpo/toxteam/ahamou.htm>.

Why Worry About Mercury? Mercury is an extremely toxic substance and is used in many products and activities. In the past, mercury was used for everything from thermometers to paint to hair bleach. It has been well documented that elemental mercury is persistent in the environment and bioaccumulates in the food chain. Therefore, the presence of elemental mercury in the environment always raises a concern. Mercury is still used in a variety of products today although in many cases there are mercury-free alternatives. When it is necessary to use mercury or is already present in a product, it must be handled properly.

Health Impacts of Mercury Exposure: All forms of mercury are toxic to humans, but the various forms of organic and inorganic mercury have different toxicity. Generally, organic forms are much more toxic than inorganic forms. Exposure to mercury occurs from breathing contaminated air, ingesting contaminated water and food, and having dental and medical treatments. Mercury, at high levels, may damage the brain, kidneys, and developing fetus.

Mercury in Medical Facilities: The following lists show some of the common uses of mercury that may be found in hospitals or clinics: [Attachment A](#) is a more extensive list of mercury containing products found in laboratories. [Attachment B](#) is a more extensive list of mercury containing products found in hospital settings.

Medical Uses:

- Thermometers
- Sphygmomanometers (blood pressure monitors)
- Esophageal dilators (also called bougie tubes)
- Cantor tubes and Miller tubes (used to clear intestinal obstructions)
- Feeding tubes
- Dental amalgam (very small amounts)

Laboratory chemicals (fixatives, stains, reagents, preservatives)
Medical instrument batteries

Non-Medical Uses Common in Medical Settings:

Cleaning solutions with caustic soda or chlorine that were contaminated with mercury during the production process
Batteries
Fluorescent lamps and high-intensity lamps
Non-electric thermostats
Pressure gauges
Some electrical switches for lights and appliances

Mercury Pollution Prevention: Concerns about the health impacts of mercury such as accumulation in the brain and kidneys and threats to aquatic wildlife have led to mercury P2 programs at the federal, state and local levels. The highest priority of any P2 program is source reduction, which means not purchasing products that contain mercury in the first place. Attachment A lists some alternatives for products commonly found in a laboratory. Attachment B provides alternatives for products found throughout a hospital setting. Some states have even banned the sale of certain mercury containing products. To find out if your state has any bans in place, contact your supporting installation Environmental Office or the regional EPA responsible for your state. Telephone numbers, e-mail addresses and mailing addresses of regional offices are found at the following EPA Web site: <http://www.epa.gov/epahome/postal.htm>.

When adequate mercury alternatives are not available and mercury must be used, it may be possible to recycle it. Recycling is the second priority of mercury pollution prevention. Disposal of mercury should be the last resort. Your installation Environmental Office can provide you with more information about recycling efforts.

Working Safely with Mercury: Mercury is corrosive to many metals and forms amalgams with some metals, like gold (jewelry) for example. Employees should be educated on items they work with that contain mercury. Employees should also be educated on spill response and disposal procedures in case an accident or spill should occur. Mercury thermometers must never be placed into a sharps container or red bag for disposal. Mercury volatilizes easily. When a mercury thermometer is incinerated or autoclaved, the mercury becomes a vapor and is easily dispersed into the air. Contact your Installation Environmental Office or the Environmental Science Officer for any disposal questions.

Dental amalgam used in dental clinics contains very small amounts of mercury. Dentists use pre-mixed capsules, which reduce the chance for mercury spills. Many dental chairs also have traps and vacuum filters that prevent any amalgam from entering the sewer system. Follow manufactures direction for changing the chair-side traps. Never rinse scrap amalgam down the drain and never place scrap amalgam in the medical waste bag or general trash bag. Amalgam should be collected, stored dry, and turned into the post Environmental Office or DRMO as a hazardous waste. If a building is very old, pure bulk mercury from past practices may have settled in sink

traps. The mercury is gradually released into the wastewater for many years after the use of bulk mercury has been discontinued.

Mercury containing fluorescent light tubes may be found throughout a facility. Caution must be taken when replacing a burned out tube not to break the glass. Many states consider the fluorescent light tubes to be a "Universal Waste" which means that they may be recycled. Again, check with the installation Environmental Office or the Environmental Science Officer to find out how to properly dispose of the light tubes.

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