SAFE HOME CARE AND HOSPITALS PROGRAM
Department of Work Environment
University of Massachusetts Lowell

Mercury in Gauges and Switches

This is a reprint of a 2001 factsheet

Many older pieces of hospital, laboratory, and industrial equipment utilize mercury-containing switches and gauges. For example, mercury components may be found in boilers, ovens, and Coulter Counters. When a new piece of equipment is ordered, this is the time to specify that it contain only mercury free components. More commonly, hospitals may be faced with existing equipment that contain fully functional mercury components. What should one do about these?

Replace the mercury device: In some cases, it may be appropriate to replace the mercury device immediately. One hospital experienced a mercury leak in a food warming tray at a patient's bedside. This situation would warrant immediate retrofitting of all trays with non-mercury switches.

Label and monitor: In other cases, monitoring and managing the mercury device may be reasonable. Another hospital reported that their boiler gauge control contains 23 pounds of mercury, and it appears that a comparable non-mercury device is not available. The only way to eliminate mercury here would be to replace the entire boiler system, even though nothing is malfunctioning. This is a case where education, labeling, and monitoring may be a viable alternative until a replacement becomes available or until new equipment is procured.

A greater Boston hospital in this situation chose to set up a log of mercury-containing items and to attach brightly-colored orange labels to each mercury component. The equipment could only be serviced by maintenance staff members who were trained in handling mercury. For a large boiler, a protective fence was placed in front of the mercury device, so that it was still visible for inspection but was protected from getting bumped. Maintenance staff routinely inspected each mercury item to insure its integrity and recorded all maintenance and inspections in the log.

Here are some suggestions for interim management of mercury containing equipment:

1. Contact the vendor or service representative to determine if mercury-free alternatives exist.
2. Clearly label the device as one containing mercury and requiring special care and handling.
3. Train and advise maintenance staff to routinely monitor for leakage and to respond appropriately if a leak occurs
4. Develop a maintenance protocol for when the article needs to be re-calibrated, handled or replaced.
5. When the device needs replacement due to age or efficiency, replace it with a non-mercury alternative.

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The Safe Home Care and Hospitals Program is a research group within the University of Massachusetts Lowell, Department of Work Environment. Please send comments and questions to: SafeHomeCare@uml.edu. For more information, visit our website: www.uml.edu/SafeHC