

## Mercury Discovered During Component Disassembly

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April 8, 2008

2008-RL-HNF-0006

Tracking No: 918

**Summary:** On February 13, 2008 while dismantling an old fire deluge valve for disposal during a D&D activity, two vials of mercury were discovered within the valve trip mechanism. Had the valve not been size reduced for waste packaging the mercury would not have been discovered leading to an uncontrolled release of the mercury. When deactivating or repairing older systems and components, individual component assembly drawings and specifications should be reviewed to determine if any hazards/hazardous materials are located within the components.

**Discussion of Activities:** Maintenance/Operations personnel were removing a deactivated deluge fire system as part of a work package. During the work planning a known mercury source, contained in an instrument airline mercury check assembly, was properly planned for, handled, and dispositioned. However, while dismantling a Grinnell Multitrol-Deluge Valve for disposal, two vials containing mercury were discovered deep within the assembly.

**Analysis:** A work package was written to deactivate and remove a building's deluge fire system and components. Part of the work involved size reducing the valve because it had to be carried up two flights of stairs to a designated waste box. Mercury was identified as a hazard and waste stream for the airline check assembly in the system, but not for the Grinnell Multitrol-Deluge Valve internals. The individual components of the system were not researched during the planning process. Mercury was found during valve disassembly after the main cover, an inner actuator cover, and then a cover under that which contained the mechanical trip components were removed. After the fact, the vendor information on the valve was reviewed and found to be cryptic. It is very possible the mercury components may still have been missed due to the unclear technical information.

### Recommended Actions:

1. Provide this information to Work Planners and System Engineers for incorporation into future work packages with older systems undergoing repairs or D&D activities.
2. Other "Grinnell Multitrol-Deluge Valve" and similar units should be reviewed and labeled as "Potentially Contains Mercury" or similar labeling, if appropriate.
3. If new hazards or hazardous materials are identified during a work activity or during work planning ensure personnel are properly trained and prepared to deal with the new hazard.

**Work Function:** D&D

**Hazards:** Mercury

**ISM Core Functions:** Analyze hazards

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**References:** PFP Work Package 2Z-07-02111, *Isolate Fire Riser 291-Z from Sanitary Water*

PFP-LL-08-001