

HOW MERCURY THERMOSTAT WASTE IS HANDLED

WASTE MERCURY-ADDED THERMOSTAT MANAGEMENT THROUGH VEOLIA ES TECHNICAL SOLUTIONS, LLC.

Beginning December 19, 2016, bins with waste mercury-switch thermostats were received at a new fulfillment/inventory center in Port Washington, Wisconsin (WIR000130591). The facility is owned and operated by Veolia ES Technical Solutions, L.L.C. (Veolia) under contract with TRC.

All recycling containers, including pails and bins are received at the loading dock and sent to the TRC inventory area. The bin and plastic liner are opened and the contents are identified, sorted, and tallied. The following data is recorded for each bin returned and processed: bin number, business name (location name), city, state, zip code, date returned, number of thermostats and mercury switches by manufacturer and any non-conforming material.

The containers are returned to the location that sent it in with a new prepaid address label within 72 hours of receipt. The thermostats are stored and staged in a plastic lined carton in a storage area for final processing. The containers are dated and processed in order received, first in-first out.

The thermostats and any loose bulb collected from the bins are consolidated into a special 55-gallon drum which is labeled and dated according to regulations. The drum is sealed with a band and is only opened when contents are being added to it. Special negative pressure venting assures any fumes are captured and vented when the drum is opened.

The 55-gallon drum is then shipped to Veolia's mercury recovery facility (WID988566543) for final processing of the mercury ampoules (switches) Veolia Environmental Services meets or exceeds all local, state, federal and EPA regulations for the management of the product.

The containers are returned from the storage area to the mercury recovery processing area to have the mercury bulbs removed from the plastic housing. Universal Waste Regulations require the recycling and disposal of waste within 12 months of acceptance at the processing facility.

Small quantities of thermostats are removed from the container, which is then closed again, a spillage. The bulbs are removed from the thermostats and placed into processing vessel at the work station. Once the processing vessel is full, the vessel is loaded into the mercury recovery retort oven.

If a bulb breaks and the mercury spills, the work area is designed to contain the spillage and the operators are trained in the clean-up and disposal of mercury. The TRC inventory and processing areas are equipped with special mercury vacuum cleaners and the work area is vacuumed at the end of the work day to assure that any spillage is cleaned up and not left to evaporate.

Veolia meets or exceeds all local, state, federal and EPA regulations for the management of the product. The mercury recovery facility and process are permitted by the Wisconsin Department of Natural Resources. Veolia's approvals for mercury recovery/recycling include:

- EPA - identification WID988566543
- Hazardous Waste Storage License #6008
- Hazardous Waste Treatment License (Mercury Recovery Operations) #4585
- Air Operation Permit #246076050-S01
- Storm Water General Permit #WI-S067857-4

In addition to the regulatory permits, both Veolia Port Washington facilities have developed and maintains management systems in accordance with ISO 14001-2004, OHSAS 18001-2007, and Responsible Recycling (R2:2013) Practice. All persons who handle mercury thermostats as part of the TRC operation receive training in the handling of Hazardous Waste and Universal Waste.

The mercury containing ampules are retorted at Veolia's Port Washington Mineral Springs facility. The mercury is removed during the retort process. The post retort debris consists of broken glass ampules. The debris is tested for residual mercury to document the removal of the mercury to levels below the US EPA Land Disposal Restriction (LDR) levels. The debris is then disposal of as a non-hazardous solid waste at Advanced Disposal Glacier Ridge Landfill, LLC in Horicon, Wisconsin.

A site evaluation of the Veolia Processing Center in Port Washington, WI was conducted by TRC staffer, Danielle Myers, in early October 2017. From this audit, a new design flow for processing bins was discovered, as well as more efficient ways to return bins back to participating facilities and contractors. Updates to packaging instructions were also a result, and will include new marketing collateral, incentives, and small pails.