

US EPA ARCHIVE DOCUMENT

RCRA: Mercury Waste and Commodity Mercury

Commodity-Grade Mercury
Stakeholder Meeting

June 14, 2007

Jim Berlow, Director, OSW/HWMMD

Overview

- Background on RCRA Regulatory Issues Relating to Mercury Wastes
- Results of EPA Research on Treatment and Disposal of Mercury Wastes
- Issues Related to Long Term Storage

Background on RCRA Regulatory Issues Relating to Mercury Wastes

- Mercury wastes can be listed (U or P wastes) or characteristic (D009)
- Land Disposal Restrictions
 - Requirements for treatment of wastes before they can be land disposed (including storage on the land as a form of disposal)
 - If characteristic, can be low-Hg, high-Hg (also organic and radioactive)
 - High-Hg waste required to be retorted, low mercury wastes allowed to be stabilized

Background on RCRA Regulatory Issues Relating to Mercury Wastes

- Universal Waste Rule
 - EPA's universal waste regulations streamline hazardous waste management standards for federally designated "universal wastes," which include mercury-containing equipment and lamps.
 - Governs the collection and management of these widely generated wastes, thus facilitating environmentally sound collection and proper recycling or treatment
 - Ensure that the wastes subject to this system will go to appropriate treatment or recycling facilities pursuant to the full hazardous waste regulatory controls by allowing initial consolidator to be the "generator" for manifest purposes
 - States can modify the universal waste rule and add additional universal waste(s) in individual state regulations

Background on RCRA Regulatory Issues Relating to Mercury Wastes

- “Bevill” exempt mining wastes are not subject to hazardous waste system
 - Extraction and beneficiation only; not mineral processing
 - Exception: RCRA Section 7003 allows actions to protect against imminent and substantial endangerment
 - Exempt wastes (waste rock and tailings) are not expected to contribute significantly to elemental mercury stockpiles; most are low concentration/high volume likely to remain at site of generation
- States can be more stringent than Federal RCRA rules
 - Many states have enacted legislation and written regulations with the goal of reducing mercury emissions to air, land and water.
 - These actions cover a range of topics, including banning the sale of certain mercury-containing products, enacting product-labeling legislation, establishing disposal bans and establishing education and collection programs for mercury and mercury-containing products.

Results of EPA Research on Treatment and Disposal of Mercury Wastes

- DOE/ EPA conducted treatability studies on high-mercury containing wastes and elemental mercury (report issued 2002) to assess treatment and disposal alternatives to the current mercury retorting requirement
- For elemental mercury, the stability of mercury in the treated waste forms varied widely with pH, and was highly dependent on the disposal conditions
- Concerns over pH, amounts of reagents, stability over time, disposal conditions and cost led DOD's DLA to consider long-term storage as the best option for its stockpile in 2004
- EPA concluded from the studies that a change in the LDR treatment standard for mercury was not warranted
- EPA published a Notice of Data Availability to make public the results of the treatment studies and to provide information on how to submit a petition for a site-specific variance from the treatment standards in the current LDR regulations
- Landfills present challenges for high concentration mercury disposal:
 - Containment in a building likely to be more protective
 - Operational maintenance easier in a building versus a landfill

Issues Related to Long-Term Storage of Commodity-Grade Mercury

- Commodity-grade mercury: product, not a waste, as long as there is a market for the material and potential exists for future sale or use
- Wastes containing mercury cannot be stored for recycling beyond “speculative accumulation” limits or beyond LDR time limits (to facilitate proper recovery, treatment or disposal)
- Placement of commodity-grade mercury in a storage facility designated for disposal only would trigger the need for a permit
- Any commodity grade mercury being disposed already complies with the LDR standard of “retorting”
- BMPs exist for long term storage, which could be used by the permitting agency in issuing a storage permit
- Storage permits would be issued by authorized States