

March 6, 2007

Matthew Hale, Director  
Office of Solid Waste  
US EPA Headquarters  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
**Mail Code:** 5301P  
Washington, DC 20460

Dear Mr. Hale:

On behalf of the NEWMOA Board of Directors, I would like to thank EPA for releasing the results of the Mercury Lamp Drum-Top Crusher Study on its website. While we find the information very useful, the study's findings identify critical problems with this technology that warrant our member-states' concerns. The results clearly show significant potential for harmful mercury exposure to the operators of these units and to other individuals in buildings where the drum-top crushers (DTCs) are operated. We therefore urge EPA to more publicly confirm that use of DTCs *under any circumstances* constitutes treatment under RCRA Subtitle C, thereby making it subject to the appropriate regulatory requirements and restrictions.

We agree with EPA's position, outlined in the July 6, 1999 *Federal Register Notice* on the inclusion of hazardous waste lamps as a universal waste, that "the crushing of spent mercury-containing lamps clearly falls within [the] definition" of treatment under RCRA.

We disagree, however, with EPA's allowance of states to demonstrate that their regulatory requirements for lamp crushing are as protective as the federal prohibition standard under the Universal Waste Rule. Given the results of the EPA study, we fail to see how any state could demonstrate that its requirements could control DTC emissions as effectively as the federal treatment prohibition.

We further believe that EPA's continuing uncertainty concerning whether states may allow for management of DTC-crushed lamps as a universal waste undermines the provisions of RCRA Subtitle C. While we believe states should be allowed flexibility in implementing the hazardous waste requirements under RCRA, EPA's current position on DTCs allows states to develop rules that, in our opinion, are *less* stringent than the RCRA Subtitle C requirements.

NEWMOA's member states are so concerned about the problems with DTCs that they have moved ahead of EPA in restricting their use. Vermont and Maine prohibit DTCs outright while Connecticut, Massachusetts, New Hampshire, New

Jersey, New York, and Rhode Island place many restrictive conditions on their use. Furthermore, of NEWMOA's member states, only Massachusetts, New Jersey, and New York exempt CESQGs from the treatment permit requirement. Even so, in our experience CESQGs rarely purchase DTCs because the volume of lamps they generate does not warrant the outlay of some \$3,000.

Attached is a summary of the Northeast states' regulatory restrictions on DTCs, which we ask you to post on EPA's Mercury Lamp Drum-top Crusher Study website. NEWMOA's member-states are aware that DTCs are heavily marketed to municipalities, schools, and other entities, and believe it is important for both DTC manufacturers and potential users to know which states prohibit or restrict their use.

NEWMOA has the following additional concerns about the Mercury Lamp Drum-top Crusher study and about EPA's webpage on the study:

1. The OSHA Permissible Exposure Limit may not be an appropriate reference standard for determining whether DTCs are safe when they are frequently used in hospitals, schools, shopping malls, and multi-unit residential buildings that have more sensitive members of the general population. The ATSDR Action Level of  $1 \mu\text{g}/\text{m}^3$  may be more appropriate in these settings. Furthermore, given that DTCs release mercury when the drum is changed and filters are replaced, no matter how optimally they are operated, we question the wisdom of allowing these units to be used in schools, hospitals, and public buildings.
2. The study used low mercury lamps for the purpose of calculating mass balance, yet crushing of even these "non-hazardous" lamps resulted in significant exposures, causing one DTC unit to be removed from the study. In our opinion, this provides further justification for more stringent regulation of DTCs. In practice, lamp users crush both low-mercury lamps and lamps with higher mercury content, producing even higher exposures than were measured by the study. Furthermore, it calls into question the exemption of TCLP-passing lamps from hazardous waste management requirements.
3. The study showed wide variability in the performance of the four DTCs studied, with regards to mercury emissions. How can states know which particular models are possibly safer to use and which ones are not? Furthermore, how would states be able to evaluate deterioration of the units with time when the study is based upon new units?
4. The EPA study showed that DTCs need to be operated by qualified and trained operators following best management practices to minimize harmful exposure. For example, the study shows that exposures can be reduced if two workers change the drum top, rather than one, and if the filters are regularly maintained. In our field observations in the Regions, however, we have often noted units being used with significant damage, poor or improper maintenance (e.g., failing to properly replace filters), and sloppy management practices (e.g., DTCs being placed on a drum without being properly fastened in place). Mercury emissions would obviously be higher in such cases. We, therefore, believe it is unrealistic to expect DTCs to be operated under optimal conditions.

5. The answer to question 5, in the FAQs on the EPA website, states that use of DTCs reduces lamp volume...“thereby reducing storage and shipping costs, *and, likely, recycling costs* (on a per-lamp basis);” yet, a cost survey and analysis was not a part of the EPA study. NEWMOA questions how EPA can comment on the relative cost-effectiveness of DTCs when it did not evaluate and formally compare the costs of spent lamp management options. A quick analysis conducted by one of NEWMOA's members demonstrated the opposite result:

Cost of recycling crushed lamps = \$1.25 per pound (Source: Veolia Environmental Services, NH State Recycling Contract)

Cost of recycling intact lamps = \$0.05 per linear foot (Source: Veolia Environmental Services, NH State Recycling Contract)

Weight of 8-foot lamp = 1.0 pounds (MA DEP and US EPA)

Result: One 8-foot lamp crushed = 1.0 pounds x \$1.25 = \$1.25 total recycling cost versus one intact 8-foot lamp x \$0.05 = \$0.40 total recycling cost

Furthermore, a complete analysis of the costs associated with properly using and maintained DTCs should include additional costs for operator training, proper management, separate ventilation systems, personal protective equipment, and health monitoring, which would raise the implementation cost considerably. Without assessing and understanding these costs, NEWMOA believes it is inappropriate to include statements about the cost effectiveness of DTCs at this time. Moreover, the FAQs on the EPA Website should spell out the conditions that are required for safe use of DTCs to balance the space and handling advantages of DTCs.

6. The signed EPA cover letter on the report, posted on the EPA Website, appears to promote DTC use without mentioning that elevated mercury levels were detected in the study, and that one of four devices failed to maintain mercury levels below the OSHA PEL. We believe the letter's message is inconsistent with the study's findings.

Finally, DTC manufacturers often claim that DTCs prevent lamps from being tossed in the dumpster; yet we know of no study that has examined the impact of DTC use on illegal disposal of mercury lamps to warrant this claim. Furthermore, in our experience, it is the generators that are already recycling their lamps, and not the generators that are throwing their lamps in the trash, who are more likely to purchase DTCs. These generators purchase DTCs for logistical reasons, and are frequently unaware of either the RCRA regulations that apply to them, or their pitfalls. Moreover, it is important to point out that crushing in a DTC concentrates mercury emissions indoors where mercury vapors can accumulate, potentially exposing workers, students, residents, and others.

In closing we urge EPA to examine the bigger picture of how DTC use undermines RCRA Subtitle C, and to more publicly confirm that use of them under any circumstance constitutes treatment under RCRA; such confirmation would prohibit states from demonstrating an equivalency that we believe cannot be achieved. If you have any questions about this letter, please contact Terri Goldberg, NEWMOA, (617) 367-8558 x302 or [tgoldberg@newmoa.org](mailto:tgoldberg@newmoa.org). We look forward to working with EPA on this important topic.

Sincerely,

A handwritten signature in black ink, appearing to read "Frank Coolick". The signature is written in a cursive, flowing style.

Frank Coolick  
NEWMOA 2007 Chairperson

NEWMOA is a non-profit, nonpartisan interstate association that has a membership composed of the hazardous waste, solid waste, waste site cleanup, and pollution prevention program directors for the environmental agencies in Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. NEWMOA was established by the Governors of the New England states as an official regional organization to coordinate interstate hazardous and solid waste, and pollution prevention activities and support state waste programs. NEWMOA's mission is to develop and sustain an effective partnership of states to explore, develop, promote, and implement environmentally sound solutions for the reduction and management of materials and waste, and for the remediation of contaminated sites, in order to achieve a clean and healthy environment.

Cc: Hugh Davis, U.S. EPA OSW