

Mercury-Added Product Work Plan

As a result of the 2007 Policy Leaders Mercury Workshop, the Quicksilver Caucus (QSC) is working to address the reduction and management of mercury-added thermostats, lamps, and dental amalgam. Although representatives from 13 states have already engaged in this effort, the QSC Products Group realized that it cannot effectively pursue all three product areas at once so it has set priorities and plans to leverage the work conducted by other stewardship groups. Additionally, there are areas where QSC is encouraging some immediate US Environmental Protection Agency (US EPA) actions.

The overall plan addressing these three product areas is to:

- Pursue work related to dental amalgam immediately;
- Track, contribute to, and support the work of other organizations on thermostats; and
- Postpone work on lamps until the results of several research studies and pilot projects are available.

In addition to this new work on these three mercury-added product areas, the QSC continues to address removal of mercury switches from vehicles through involvement in the National Vehicle Mercury Switch Recovery Program (NVMSRP).

Dental Amalgam

According to data reported to the Interstate Mercury Education and Reduction Clearinghouse (IMERC) by dental amalgam capsule manufacturers, more than 30 tons of mercury in dental amalgam was sold in the U.S. in 2004. As other sectors discharging mercury have implemented mercury pollution prevention measures, dentists have become one of the largest common sources of mercury entering Publicly Owned Treatment Works.

To begin to address the dental sector, the QSC is currently developing a white paper on successful state and local amalgam separator requirements, amalgam alternatives, and innovative approaches to reducing mercury amalgam releases. The publication of this white paper, which is anticipated in Winter 2007-2008, will be followed by one or more web-based seminars on this topic to help further states' understanding of their options. The goal of the paper and seminars is to leverage individual successes so states can gain momentum in addressing mercury releases related to dental amalgam. The QSC will also encourage states to collaborate with US EPA and the American Dental Association on the establishment of a national agreement on best management practices for tooth restorative processes, and on the development and implementation of the "Gray Bag" dental amalgam recycling program.

Thermostats

Thermostats containing mercury switches are a significant source of mercury use and exposure through solid waste processing. The major manufacturers of mercury-containing thermostats reported to IMERC-member states that more than 14 tons of mercury was used in thermostats sold in the U.S. in 2001.

The Product Stewardship Institute (PSI) has taken the lead on mercury-switch thermostats and has been exploring product stewardship approaches with a multi-stakeholder group, which includes the three manufacturers that own the Thermostat Recycling Corporation, contractors, retailers, an environmental group and government officials. PSI's goals include increasing awareness of the need to manage mercury thermostats, expanding the availability of recycling opportunities, providing incentives to increase recycling, and increasing the use of non-mercury alternatives.

The QSC will track this work through members who are involved with the PSI effort and will offer support as necessary.

Lamps

Mercury is used in a variety of lamps including fluorescent tubes and bulbs, which are generally more energy efficient and long-lasting than other equivalent forms of lighting. For this reason, states and US EPA have aggressively promoted their use which has created a strong market for mercury-added lamps that is likely to continue to grow in the future. As a result of this growing demand and the phasing out of mercury in other products, mercury management issues related to mercury-added lamps is gaining prominence.

The QSC has identified three topics to address related to mercury-added lamps:

- Collection of used lamps;
- Communication with public about how to clean up broken lamps; and
- Best management practices for drumtop crushers.

To address these areas, the QSC plans to host a series of web-based seminars, in which states can share their knowledge and experiences in these areas with one another. Given that there are several research studies and pilot projects currently underway QSC will not begin work on lamps until Winter 2007-2008. In the interim, QSC will communicate with US EPA to strongly encourage the agency to initiate talks with retailers on a national level.

Mercury Switches in Vehicles

There has been an increasing awareness that one way to reduce mercury releases to the environment is to remove mercury switches from end-of-life vehicles prior to crushing, shredding, and melting to recycle steel.

In August of 2006, nine organizations partnered to launch a voluntary program to increase the recovery of mercury switches from end-of-life vehicles. Working with existing state switch recovery efforts, the NVMSRP has the potential to recover 80 to 90 percent of available mercury switches, leading to commensurate reductions in air emissions caused by vehicle switches. The program is a cooperative effort by auto manufacturers, steelmakers, vehicle dismantlers, vehicle shredders, environmental organizations, the Environmental Council of the States, and US EPA.

In the first year of implementation the primary goal of enlisting the states to participate in the NVMSRP was accomplished ahead of schedule. As of August 2007, mercury switch removal programs were operational in all 50 states. The NVMSRP also developed the methodology for measuring the switch capture rate which will be used to measure the success of the program in future years. Early results show progress in increasing the number of participants and number of switches recovered. Since August 2006, more than 635,000 mercury switches have been collected by approximately 5,900 participants.

The second year of the program will shift from roll-out to ramping up participation and collection rates. The NVMSRP will be in a position to better assess progress once all the state programs have been in place for at least a year. In the interim, the NVMSRP will monitor state-by-state progress and fine-tune our efforts anywhere that results are not matching our expectations.

Other Mercury-Added Products

While currently focused on these four product areas, the QSC will continue to monitor and, as resources permit, have involvement in other mercury-added product areas. These include thermometers, and non-vehicle switches, relays, and flame sensors which were identified as priority product sectors in the November 2006 *Mercury-Added Product White Paper*. Additionally, work in sectors such as health care and schools will be monitored, and manometers, novelty items, and button cell batteries will be considered as products for future action.

The Quicksilver Caucus (QSC) is a coalition of State associations formed to address and resolve health and environmental problems resulting from the release of mercury to the environment. The membership of the QSC includes the Environmental Council of the States, The Association of State and Territorial Solid Waste Management Officials, The National Association of Clean Air Agencies, The Association of State and Interstate Water Pollution Control Administrators, The Association of State Drinking Water Administrators, and the National Pollution Prevention Roundtable.

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