

# MAINE STATE LEGISLATURE

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## Mercury Products Advisory Committee 2004 Report to the Legislature

### 1.0 Introduction and Background

In the spring of 2000, the 119<sup>th</sup> Legislature passed *An Act to Reduce the Release of Mercury into the Environment from Consumer Products*, (P.L. 1999, c.779).

The law defines mercury-added products to include thermostats, thermometers, electrical switches, relays or other electrical devices, scientific and medical devices, and lamps if mercury is added during manufacture of the product. Batteries are not currently included in the statutory definition.

The law established a Mercury Products Advisory Committee (Committee) to advise the Department of Environmental Protection (DEP), the State Planning Office (SPO) and the Legislature on actions needed to prevent and reduce the environmental releases of mercury from consumer products. It required the Committee, starting in 2002, to report annually to the joint standing committee of the Legislature having jurisdiction over natural resources. (See Appendix A for a list of Committee members.)

Over the past four years the Committee has been instrumental in shaping state policy and legislation to address the complex issues surrounding mercury in products. Because of the Committee's leadership, ideas and input, Maine has the most comprehensive mercury product legislation in the country and is considered a national leader. Key statutory and regulatory provisions include:

- *Product notification.* The sale of a mercury-added product is prohibited in Maine after January 1, 2002 unless the manufacturer or representative has notified the Department of Environmental Protection as to the amount and purpose of the mercury. See 38 MRSA § 1661-A.
- *Product labeling.* Mercury-added products sold in Maine after January 1, 2002 must have an identifying label; lamps are exempted from labeling. See 38 MRSA § 1662(1) and chapter 870 of the Department of Environmental Protection rules.
- *Sales bans:*
  - *Fever thermometers and dairy-barn manometers* banned in Maine since January 1, 2002. See 38 MRSA § 1661-C (1) and (2).
  - *Thermostats.* The sale of mercury-added thermostats is prohibited effective January 1, 2006. See 38 MRSA § 1661-C (5).
  - *Switches, relays and measuring devices.* With some exceptions, the sale of mercury switches, relays, and measuring devices is banned as of July 1, 2006. Measuring devices include barometers, flow meters,

hydrometers, manometers, sphygmomanometers, and thermometers.

See 38 MRSA § 1661-C (6), (7) and (8).

- *Schools.* Bulk elemental mercury or mercury compounds may not be sold for use in primary or secondary classrooms in the State. See 38 MRSA § 1661-C (3).

- *Disposal bans:*

- *Mercury-added products.* The incineration and landfill disposal of mercury-added products is prohibited as of July 15, 2002 for business waste and as of January 1, 2005 for household waste.

- *Cathode ray tubes.* The incineration and landfill disposal of cathode ray tubes is prohibited after January 1, 2006, in part due to the mercury in these products. Manufacturers are required to pay the costs of handling and recycling computer monitors and TVs. See 38 MRSA §§ 1306(4) and 1609.

- *Mercury components in motor vehicles.* Maine law: 1) prohibits the sale of a motor vehicle assembled after January 1, 2003 if it contains a mercury switch; 2) requires mercury switches and mercury headlamps to be removed from end-of-life vehicles before the vehicles are flattened or crushed; and 3) requires automobile manufacturers to establish a statewide system to consolidate and recycle the switches. Automakers must pay a \$1 bounty for each switch returned to them for recycling. See 38 MRSA § 1665-A.

Maine's mercury product laws are codified in Title 38, Chapter 16-B of the Maine Revised Statutes Annotated. Please see Appendix B for a copy of the current mercury legislation, as amended.

This report delineates the State's progress to date in fulfilling the legislative mandates and includes the development of public and private collection infrastructure, product specific collection systems, information on mercury-added product recycling, and data collection. It also contains information on future actions planned by the DEP and SPO to help achieve the legislative mandates and goals.

## **2.0 Mercury-added Product Recycling**

In addition to legislation and policy development, the Committee has been actively involved in helping the SPO and DEP shape the recycling infrastructure development program. This program has been very successful, with approximately 75% of Maine citizens having access to mercury-added product recycling before the effective date of the legislative mandate (January 1, 2005).

**Public Infrastructure Development:** An important directive of Title 38 §1661 et seq. requires DEP and SPO to develop and implement a capital investment grant program. The program goal is to enable municipalities to develop the

infrastructure needed to collect mercury-added products and other universal wastes for recycling. The DEP's legislative implementation plan included the development of the universal waste (UW) rules to facilitate the handling of mercury, lead, and polychlorinated biphenyl (PCB) containing products, and a multifaceted education and outreach program. The rules, adopted by the Board of Environmental Protection in January 2001 and amended in 2002, require that all generators of universal wastes send these wastes to appropriate recycling facilities. The rules also include provisions that allow licensed solid waste facilities and recycling centers to collect UW. With the 2002 amendments, all mercury-added products can be managed as universal wastes.

The SPO's role has been to develop a grant program to fund municipal and regional collection infrastructure within the solid waste and recycling framework. To date, the SPO has awarded grant funds to 62 public entities to aid in the construction of central accumulation facilities for mercury-added products and other universal wastes. In addition, the SPO has awarded prefabricated storage sheds to 43 public programs for the storage of mercury-added products only. The SPO estimates that more than 75% of Maine's population now has access to ongoing universal waste collection through their local municipal program. Also, in 2004 there were 22 one-day collections with 117 communities participating. The SPO awarded grant funds to many of these programs to conduct the one time collection event.

All towns are required to provide for the collection of mercury-added products by January 1, 2005 when a disposal ban on mercury-added products was extended to Maine households. Collection may occur at their local solid waste facility or recycling center, through contracted services with a private company, or through one-day collection events.

### Private Infrastructure Development

The number of private sector consolidators and recyclers is growing to meet the increasing recycling demand, as shown by the table below.

Table One: Number of Consolidators and Recyclers

|               | 2002<br>instate | 2002<br>out-of-state | 2003<br>instate | 2003<br>out-of-state | 2004<br>instate | 2004<br>out-of-state |
|---------------|-----------------|----------------------|-----------------|----------------------|-----------------|----------------------|
| Consolidators | 12              | 7                    | 12              | 6                    | 15              | 8                    |
| Recyclers     | 0               | 10                   | 0               | 15                   | 0               | 19                   |

It is anticipated that the number of consolidators and recyclers will continue to increase as the demand for recycling grows.

## Product Specific Collection Systems and Recycling Data

Mercury thermostats: The Thermostat Recycling Corporation (TRC), founded by a consortium of thermostat manufacturers (Honeywell, White-Rodgers and General Electric), utilizes the existing heating, ventilation and air conditioning (HVAC) wholesaler network to collect unwanted mercury thermostats for recycling. TRC sells a collection container to participating locations in which contractors and, depending on location, homeowners, may deposit out-of-service mercury thermostats. Full containers are shipped to TRC for recycling, free-of-charge. Any name-brand mercury switch thermostat is accepted.

The TRC program started in Maine in 2001. Six wholesalers voluntarily participated in the program in 2001 and eleven in 2002. In 2003 no additional wholesale businesses signed on. Since the TRC program collected a very small percent of mercury thermostats estimated to have come out of service during the year, the legislature passed a bill requiring all wholesalers selling thermostats to participate in the TRC collection program, effective in July 2004. The department identified approximately 70 wholesalers that are effected by the new law. The department purchased the bins from TRC for distribution but, due to delays in receiving the bins, the wholesalers will start collection in January 2005.

There has been a slow but upward trend of mercury thermostat collection both through the TRC program and a slight downward trend through the universal waste collection system. The shift to the TRC system, which is free, is expected as more heating companies learn about the program. The numbers collected are still too low, representing approximately 5% of mercury thermostats which are believed to be discarded every year in Maine. (It is estimated that between 20,000 and 30,000 are removed annually in Maine.)

Table 2: Number of Thermostats Collected

|               | 2001 | 2002 | 2003 | 2004  |
|---------------|------|------|------|-------|
| TRC Program   | 233  | 280  | 482  | 588*  |
| UW collection | 253  | 856  | 780  | 443** |

\* Represents collection from Jan 04 - June 04.

\*\*Represents collection from Jan 04 – Oct.04.

Once the new TRC bins are in place around the State, it is anticipated that collection rates will increase significantly. TRC has also indicated that it is willing to allow contractors in rural areas or those employing more than seven technicians to have bins at their place of business. Several of the large heating and fuel companies have indicated interest in the program.

In addition, the department will be notifying 9000 licensed propane and oil technicians through direct mail about the current and new locations participating in the TRC program.

One final note on thermostats. In May 2004, the Board of Environmental Protection unanimously upheld a department decision denying an application for exemption from the Maine law banning sale of mercury thermostats. The prohibition will take effect January 1, 2006. Thermostat manufacturers Honeywell, GE and White Rodgers were unable to sustain their argument that mercury thermostats generally are more energy efficient than available non-mercury thermostats, and that a ban on the sale mercury thermostats will lead to an increase in energy usage in Maine.

Mercury switches and devices: With the heightened awareness about mercury, several communities began collecting mercury switches and devices in 2001 (some examples are mercury thermometers, barometers and blood pressure cuffs). Mercury switches were broken out as a separate category in 2003.

Table 3 Number of Mercury Switches and Devices Recycled

|          | 2001 | 2002 | 2003 | 2004 |
|----------|------|------|------|------|
| Switches |      |      | 6118 | 810* |
| Devices  | 3770 | 8342 | 3130 | 4758 |

\* Does not include auto switches collected but not yet shipped for recycling.

The department will commence rulemaking in early 2005 in anticipation of the July 1, 2006 effective date of Maine's first-in the-nation ban on the sale of mercury switches, relays and measuring devices. The rule will, among other things, set forth the procedure for seeking an exemption from the sales ban. The law allows the commissioner to grant exemptions under limited circumstances.

Lamps: Lamps, like most mercury-added products, have traditionally been co-mingled in the solid or hazardous waste streams. It is assumed that there has been minimal recycling due to a lack of infrastructure and legal or regulatory requirements. The universal waste rules adopted in January 2001 required recycling of mercury-added lamps generated by businesses and exhibiting the hazardous waste toxicity characteristic. Starting in July 2002 all mercury-containing lamps were subject to the universal waste provisions, not just those exhibiting hazardous waste toxicity characteristics.

There has been a steady upward trend in lamp recycling since the universal waste rules were adopted. The National Electronic Manufacturers Association (NEMA) estimates that 2.5 million lamps are sold in Maine each year. Using this as a baseline, the DEP estimates 15 % of lamps were recycled in 2002, 23% in 2003 and a projected 34% in 2004.

Table 4 Maine Lamp Recycling

|                 | 2002    | 2003    | 2004     |
|-----------------|---------|---------|----------|
| Number of Lamps | 384,242 | 624,826 | 750,215* |

\*Represents lamps shipped Jan. – October 04. Projected number for the year is 857,389 lamps recycled.

This increase can be attributed to the education and outreach program discussed below, and the continuing development of municipal and private universal waste collection options. State collection rates are now well above the national level (which is 23%. See Appendix C). It is anticipated that lamp recycling will continue to grow as more businesses, schools and government offices become aware of the universal waste requirements and the public is required to participate in the recycling effort. The State has set a target goal of 70% lamp recycling.

Motor Vehicle Switches: Maine auto dismantlers and salvage yards have collected nearly 17,000 mercury switches since January 1, 2003, the effective date of Maine's first in the nation law requiring the removal of these switches when motor vehicles are junked. Automakers have selected the consolidation facilities to receive the auto switches from end-of-life vehicle (ELV) handlers; thus the infrastructure necessary for this program was established during 2004.

Assuming conservatively that each switch contains 1 gram of mercury, the program has netted about 35 pounds of mercury so far, a significant amount but only about 30% of what is thought to be available for collection. The department has introduced legislation to increase the bounty that automakers pay for each switch from \$1 to \$3. It is anticipated that a higher bounty, by more fairly compensating dismantlers and salvage yard operators for their efforts, will lead to a higher switch capture rate.

Button Batteries: Three types of button batteries contain mercury and are classified as universal waste. To date there has not been a state sponsored effort to encourage the recycling of button batteries and no known collections have occurred. Last session the legislature required the department to conduct a study on button batteries. The Maine DEP commissioned the Lowell Center for Sustainable Production (LCSP) of the University of Massachusetts Lowell for the study, the objectives of which were to:

- Investigate miniature battery product information available in the public domain;
- Estimate the total amount of mercury used annually in the manufacture of button batteries;
- Identify non-mercury alternatives for miniature batteries;
- Conduct a qualitative evaluation of viable alternatives; and

- Investigate miniature battery recycling programs in the United States and Europe.

The study reported that U.S. battery manufacturers used over 5000 pounds of mercury in button cells sold in the U.S. in 2002, about 1000 pounds more than reported for 2001. It is unknown how much mercury enters U.S. commerce in foreign-made button batteries, but the total could be much higher given the large number of imported products that contain button batteries. Based on the Lowell study, the department is preparing its own report on mercury use in button batteries for consideration in the upcoming session of the Legislature. The report will include recommendations to reduce mercury emissions from this source either by banning the sale of batteries that contain mercury or by requiring that they be collected for recycling. The department report will be delivered to the legislature on January 15, 2005.

#### **4.0 Education and Outreach**

The DEP developed and initiated an aggressive education and outreach (E&O) program to inform Maine citizens and businesses about the disposal bans and proper waste management techniques. The E&O program includes universal waste training and the development and distribution of educational materials for all sectors.

- ▶ Educational training for public entities: To assist municipal and school personnel in managing mercury-added products and UW, the DEP conducted 12, half-day training sessions during 2004. Over 300 people attended the training. request.
- ▶ School Mercury Program: In 2004 the DEP successfully continued a school education and outreach program focusing on mercury and hazardous waste issues. Schools were invited to attend one of five, day-long trainings on chemical management and to sign up to have the mercury cleaned out of their schools. One hundred and sixty science teachers and administrators attended the workshops in 2004 and over 80 schools and school districts have signed up for the mercury/chemical clean-out project since its inception.

Since 2002 the department has removed over 700 pounds of mercury from schools. At the same time 6500 pounds and over 1000 gallons of hazardous wastes were also removed. As more schools hear about the program, requests to participate keep growing. Although the amounts of mercury removed and number of spills reported indicate that schools are a significant source of mercury, the removal program has been curtailed due to a lack of funding.

- ▶ Appliance education: As part of the universal waste program and existing statute, mercury components are required to be removed from household



appliances for recycling. The department spent significant time in researching and developing a manual that explains how to remove the mercury components from various types of appliances. Copies of the manual were distributed to all solid waste facilities and town offices, as well as to the stores that sell and service the appliances. The department anticipates holding 'hands-on' training sessions for mercury component removal in the spring of 2005. Training will be offered to both the public sector solid waste personnel and to the private sector who may want to offer mercury component removal from appliances as part of their business services.

- ▶ Public educational materials: The department developed a universal waste recycling handout (see next page) for distribution to the public. This was distributed to all towns for dissemination at the town office, public meetings and at the solid waste facility.
- ▶ Department web site: In 2003 the department established a web site for mercury and universal waste, which includes general information and reports on mercury in the environment, links to the Bureau of Health fish consumption advisories, and the other mercury related information. The web site is continually updated as new information becomes available.

DEP also conducted substantial education and outreach (E&O) activities for the business community. In 2004 DEP completed the following to help the private sector properly manage mercury-added products:

- ▶ Updated the Universal Waste Handbook.
- ▶ Conducted over a dozen training sessions on managing mercury-added products and universal wastes. Over three hundred people attended.
- ▶ Visited 5 junkyards to provide technical assistance on auto switch removal.

Future Education and Outreach: The DEP will initiate additional education and outreach activities in 2005. For the general public and schools some planned activities are:

- Expand the DEP mercury web site.
- Support other mercury collections and infrastructure development through funding and education and outreach activities, within available resources.
- Conduct additional training sessions for schools and municipalities. Seven training sessions are already scheduled for January and February and more, such as the appliance training, will follow.

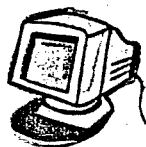
The DEP will also continue to help generators, consolidators and recyclers in 2005 by offering additional universal waste training.

# What we all need to know about Universal Wastes

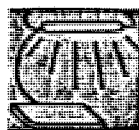
## What are universal wastes?

Universal wastes are wastes that contain hazardous materials such as mercury, lead and other heavy metals, and are commonly found in homes, businesses and schools.

The list of universal wastes includes:



- **CRTs** — Cathode ray tubes in computer monitors and TVs.
- **Batteries** — Metal hydride, nickel-cadmium (Ni-Cad), small sealed lead acid, lithium and mercuric and silver oxide button batteries.
- **Mercury switches and devices** — Mercury devices include fever and cooking thermometers, thermostats, weather barometers and blood pressure cuffs. Mercury switches can be found in sump pumps, old chest freezers, and some gas appliances.
- **Lamps** — Fluorescent, neon, mercury vapor, metal halide, high intensity discharge, and high pressure sodium lamps. Basically all light bulbs except an old-fashioned incandescent!
- **PCB ballasts** — Usually found in old fluorescent lighting fixtures.



## Why should we care?

Universal wastes contain heavy metals, such as mercury and lead, that are harmful to our health and the environment. Maine has fish consumption advisories due to mercury pollution. CRTs are the largest source of lead in the waste stream today. PCBs are known to cause cancer in humans. Proper management protects all of us, our wildlife and our environment.

For more information call Maine DEP, Solid Waste Program at 1-800-452-1942.



## What are your responsibilities for universal waste?

The Maine legislature has passed laws that require homeowners to recycle most universal wastes, rather than dispose of them. Mercury-added products from households must be recycled starting 1/1/05, and CRTs must be recycled starting 1/1/06. PCB ballasts should also be collected separately from other household trash so that they can be destroyed at high heat in a special hazardous waste incinerator.



## How do you properly recycle your universal wastes?

Each town is responsible for ensuring there is a place for residents to recycle their universal wastes. Many towns already accept homeowner universal wastes at their solid waste facility or recycling center. Other towns contract with a business to collect homeowner universal wastes at their business location or at the resident's curbside.

If you have universal waste keep it separate from other trash and call your town office, solid waste facility or recycling center for more information on their universal waste program. Be sure to ask :

- Where can I take my universal wastes for recycling?
- When is that facility open for universal waste drop-offs?
- Is there a fee? If so, how much?

## If you have curbside pick-up:

You should speak with your town office or waste hauler to make sure that he or she will accept your universal waste and will transport it, unbroken, for recycling.

Town Phone: \_\_\_\_\_

Hauler's Phone: \_\_\_\_\_

UW acceptance times: \_\_\_\_\_

## 5.0 Conclusions on Effectiveness of Established Programs

- **Public Infrastructure Development:** The development of public infrastructure to recycle mercury-added products has been a success. Still, some towns have waited until the last moment to establish their universal waste programs, resulting in some gaps in coverage around the State. The SPO and the department will continue to work with those towns or townships to make sure that all Maine people have access to universal waste recycling. The grant program for infrastructure development is expected to wind down over 2005.
- **Private Infrastructure Development:** The private sector has responded appropriately to the new demand for services and the developing markets for materials. The DEP has taken effective steps to work with the private sector through rulemaking activities, licensing activities and education and outreach.
- **Schools:** Children are most at risk if exposed to mercury. Although Maine schools can no longer purchase elemental mercury or mercury compounds, they still may have significant quantities on hand as well as mercury-containing scientific devices. DEP is continuing to explore and pursue funding sources to help schools to remove existing mercury stockpiles.
- **Education and Outreach:** E&O activities appear to be successful as evidenced by the increasing number of mercury items that are being recycled. The department will continue a strong outreach program through 2005 as towns adjust to the new recycling requirements for homeowners.
- **Mercury Thermostats:** The TRC program has been in operation in Maine for over three years. The collection rate through both TRC and the universal waste system is quite low, approximately 5%. It is too early to evaluate the effectiveness of increased wholesaler participation, required by law, in the TRC program.
- **Mercury Switches and Devices:** Most Maine citizens are able to recycle their mercury switches and devices at the local transfer station or solid waste facility. It is expected that recycling numbers will continue to increase as towns begin to remove mercury switches and relays from appliances. The number of mercury switches and devices recycled by businesses is also expected to increase with continuing education and outreach.
- **Lamps:** The number of lamps recycled during 2004 continued to climb dramatically. It is projected that the State has now attained a 34% recycling rate, which is well beyond the national average.

The infrastructure is in place for businesses to recycle lamps, but there is a continuing need to educate the business community about their responsibilities. More education and outreach is needed with the business

community, the haulers, and the waste facilities in order to reach the State lamp recycling goal of 70%.

- **Motor Vehicle Switches:** The number of switches that have been turned in to the consolidation facilities has been low, but the survey indicates that a good number have collected from vehicles. The salvage yards have three years in which to turn the switches in for a cash refund. Some yards have indicated that it is not worth the \$1 bounty to do the work. The department concurs that the bounty is too low, due to the requirement of recording the Vehicle Identification Number (VIN), and has proposed legislation to increase the bounty to \$3. The DEP will continue to evaluate the salvage industry's concerns and the recovery numbers during the next year.
- **Batteries:** At the present time the State does not have a button battery collection program. Although some types of batteries are considered universal waste due to their mercury content, they are not defined as a mercury-added product under the law. Therefore the 1/1/2005 disposal ban for homeowners does not apply to these batteries. The department has done a battery study and may propose either a ban on the sale of mercury containing button batteries, a recycling program, or both, during this legislative session.



## Appendix A

### The Mercury Products Advisory Committee



**Mercury Products Advisory Committee**  
December 2004

| Vacant: Representative of the House  |  |
|--|--|
| Vacant: Representative of a municipality:  | Vacant: Representative of the public   |
| <p>Senator John Martin<br/>Church St.<br/>P.O. Box 250<br/>Eagle Lake, ME 04739</p> <p>Appointed: 9/2000</p> <p>Phone: 287-1500<br/>Email: <a href="mailto:JLMartin@maine.edu">JLMartin@maine.edu</a></p>                                    | <p>Representative Robert A. Daigle<br/>15 Talbot Drive<br/>Arundel, ME 04046</p> <p>Appointed: 9/2000</p> <p>Phone: 985-0115<br/>Fax: 985-1802<br/>Email: <a href="mailto:Rdaigle@zwi.net">Rdaigle@zwi.net</a></p>                       |
| <p>Mr. Gerry Mirabile<br/>358 Jones Hill Rd.<br/>Appleton, ME 04862</p> <p>Appointed: 9/2000</p> <p>Phone: 626-9557<br/>Email: <a href="mailto:gerry.mirabile@cmpco.com">gerry.mirabile@cmpco.com</a></p>                                    | <p>Mr. Robert W. Phelps<br/>Conservation Lighting<br/>84D Warren Ave.<br/>Westbrook, ME 04092</p> <p>Appointed: 9/2000</p> <p>Phone: 878-5050<br/>Email: <a href="mailto:clighti@aol.com">clighti@aol.com</a></p>                        |
| <p>Mr. Dana Peck (home)<br/>Downing Rd<br/>Kennebunkport ME 04046</p> <p>Appointed: 9/2000</p> <p>Phone: 985-5151<br/>Email: <a href="mailto:dpeck@husseyseating.com">dpeck@husseyseating.com</a></p>  | <p>Mr. Kim Vandermeulen<br/>Route 5, Box 1800<br/>Augusta, ME 04330</p> <p>Appointed: 6/2002</p> <p>Phone: 621-6318 (home)<br/>377-9377 ext. 221<br/>Email: <a href="mailto:kvandermeulen@altmfg.com">kvandermeulen@altmfg.com</a></p>   |
| <p>Mr. Jennifer Burns<br/>Maine Audubon Society<br/>20 Gilsland Farm Rd.<br/>Falmouth, Me 04105</p> <p>Appointed: 9/2000</p> <p>Phone: 781-6180 ext. 224<br/>Email: <a href="mailto:jburns@maineaudubon.org">jburns@maineaudubon.org</a></p> | <p>Dr. Sydney R. Sewall<br/>Box 229<br/>Hallowell, ME 04347</p> <p>Appointed: 9/2000</p> <p>Phone: 623-5013<br/>Email: <a href="mailto:syd.doc@verizon.net">syd.doc@verizon.net</a></p>  |
| <p>Mr. Fergus Lea<br/>AVCOG<br/>125 Manley Rd.<br/>Auburn, ME 04210</p> <p>Appointed: 9/2000</p> <p>Phone: 783-9186<br/>Email: <a href="mailto:flea@avcog.org">flea@avcog.org</a></p>  | <p>Senator Scott Cowger<br/>2 State House Station<br/>Augusta, ME 04333</p> <p>11 Inn Rd<br/>Hallowell, ME 04347</p> <p>Appointed: 9/2000</p> <p>Phone: 622-0655<br/>Email: <a href="mailto:Scott@maplebb.com">Scott@maplebb.com</a></p> |





## Appendix B

### Mercury Products Legislation



**Chapter 16-B: MERCURY-ADDED PRODUCTS AND SERVICES (HEADING:  
PL 1999, c. 779, @2 (new))**

**§1661. Definitions**

For the purposes of this chapter, unless the context otherwise indicates, the following terms have the following meanings. [2001, c. 656, §1 (new).]

**1. Mercury-added product.** "Mercury-added product" means any of the following items if it contains mercury added during manufacture: [2001, c. 656, §1 (rpr).]

A. A thermostat or thermometer;

[2001, c. 656, §1 (rpr).]

B. A switch or other device, individually or as part of another product, used to measure, control or regulate gas, other fluids or electricity;

[2001, c. 656, §1 (rpr).]

C. A medical or scientific instrument;

[2001, c. 656, §1 (rpr).]

D. An electric relay or other electrical device; and

[2001, c. 656, §1 (rpr).]

E. A lamp.

[2001, c. 656, §1 (rpr).]

**1-A. Amalgam separator system.** "Amalgam separator system" means a device that removes dental amalgam from the waste stream prior to its discharge into either the local public wastewater system or a private septic system located at the dental facility and that meets a minimum removal efficiency of 95% if installed prior to March 20, 2003 or 98% if installed on or after March 20, 2003, as determined through testing in accordance with standards contained in "ISO 11143, Dental Equipment - Amalgam Separators," published by the International Organization for Standardization, in effect on the date the system is installed. [2003, c. 301, §1 (new).]

**1-B. Dental amalgam.** "Dental amalgam" means a mixture of silver and mercury used to restore dental integrity. [2003, c. 301, §1 (new).]

**2. Mercury headlamp.** "Mercury headlamp" is a mercury-added lamp that is mounted on the front of a motor vehicle to illuminate the roadway. [2001, c. 656, §1 (new).]

**3. Mercury light switch.** "Mercury light switch" means a mercury switch used for the purpose of turning a light bulb or lamp on and off. [2001, c. 656, §1 (new).]

**3-A. Mercury relay.** "Mercury relay" means a mercury-added product or device that opens or closes electrical contacts to effect the operation of other devices in the same or another electrical circuit. "Mercury relay" includes mercury displacement relays, mercury wetted reed relays and mercury contact relays. [2003, c. 221, §1 (new).]

**4. Mercury switch.** "Mercury switch" means a mercury-added product or device that opens or closes an electrical circuit or gas valve. "Mercury switch" includes mercury float switches actuated by rising or falling liquid levels, mercury tilt switches actuated by a change in the switch position, mercury pressure switches actuated by a change in pressure, mercury temperature switches actuated by a change in temperature and mercury flame sensors. "Mercury switch" does not include a mercury-added thermostat. [2003, c. 221, §2 (rpr).]

**5. Motor vehicle component.** "Motor vehicle component" means a mercury-added product that is a component in a motor vehicle. "Motor vehicle component" includes, but is not limited to, a mercury headlamp, a mercury light switch and a mercury switch in antilock braking systems. [2001, c. 656, §1 (new).]

**§1661-A. Notification**

**1. Prior written notice required.** Effective January 1, 2002, a product to which mercury is intentionally added during formulation or manufacture, or a product containing one or more components to which mercury is intentionally added during formulation or manufacture, may not be offered for final sale or use or distributed for promotional purposes in the State unless the manufacturer of the product or product component or a trade association representing manufacturers of the product or component has provided written notice to the department in accordance with this section. The requirements of this section do not apply to drugs approved by the United States Food and Drug Administration. The notice must include the following information on a form provided by the department or the clearinghouse under section 1671: [2001, c. 373, §3 (new).]

A. A brief description of the product or product component;

[2001, c. 373, §3 (new).]

B. The purpose for which mercury is used in the product or product component;

[2001, c. 373, §3 (new).]

C. The amount of mercury in each unit of the product or product component, reported as an exact number, as an average per product or component with an upper or lower limit or as falling within a range approved by the department;

[2001, c. 373, §3 (new).]

D. The total amount of mercury in all units of the product or product components sold in the United States during the most recent calendar year for which sales figures are available, reported either for the units or components sold by the manufacturer or as aggregated by a manufacturer trade association for all units of the product or components made by the industry; and

[2001, c. 373, §3 (new).]

E. The name and address of the manufacturer, and the name, address and phone number of a contact person for the manufacturer.

[2001, c. 373, §3 (new).]

**2. Exemption.** A mercury-added product or product component for which federal law governs notice in a manner that preempts state authority is exempt from the requirements of this section. [2001, c. 373, §3 (new).]

**3. Product category information.** With the approval of the department, the manufacturer may supply the information required in subsection 1 for a product category rather than an individual product. The manufacturer shall update and revise the information in the notification whenever there is significant change in the information or when requested by the department. The information required under subsection 1, paragraph D must be updated and provided to the department every 3 years. [2001, c. 373, §3 (new).]

**4. Confidentiality.** Information submitted to the department pursuant to this section may be kept confidential as provided under sections 1310-B and 1671. [2001, c. 373, §3 (new).]

**5. Product components.** Notwithstanding subsection 1, paragraph C, the manufacturer of a product containing one or more mercury-added components is not required to include information on the amount of mercury in the component in the notice to the department if the component manufacturer has provided that information to the department and the manufacturer of the product that contains the component identifies the component and component manufacturer in the notice. [2001, c. 626, §20 (amd).]

An importer of the product or product component from a foreign country may not sell, use or distribute the product or product component in the State unless the manufacturer of the product or product component is in compliance with this section, except that this prohibition does not apply to retailers for whom importing is not a primary business. [2001, c. 373, §3 (new).]

### **§1661-B. Disclosure for mercury-containing products used in hospitals**

Effective January 1, 2002, the manufacturer of a formulated product that contains mercury or a mercury compound from any source or cause, whether intended or unintended, and that is offered for sale or use to a hospital in the State must provide, upon request of the hospital, a certificate of analysis documenting the mercury content of the product unless the concentration is less than 200 parts per

1,000,000,000,000. The certificate must be based on representative samples of the product as determined in consultation with the hospital and, at a minimum, an annual analysis of the product. The hospital shall provide a copy of the certificate to the department upon request. For the purpose of this section, a "formulated product" means a consistent mixture of chemicals, including, but not limited to, acids, alkalis, laboratory chemicals, bleach and other products used for cleaning or disinfection, pharmaceuticals, stains, reagents, preservatives, fixatives, buffers and dyes. [2001, c. 373, §3 (new).]

The requirements of this section do not apply to drugs approved by the United States Food and Drug Administration. [2001, c. 373, §3 (new).]

### **§1661-C. Restrictions on sale and use of mercury**

**1. Fever thermometers.** Effective January 1, 2002, a person may not sell or supply a mercury fever thermometer to consumers and patients, except by prescription. With each mercury fever thermometer sold by prescription, the manufacturer shall supply clear instructions on the careful handling of the thermometer to avoid breakage and on proper cleanup should breakage occur. For purposes of this subsection, a "mercury fever thermometer" means a thermometer that contains mercury for the purpose of measuring body temperature, but does not include a thermometer containing mercury solely within a button-cell battery. [2001, c. 373, §3 (new).]

**2. Manometers.** Effective January 1, 2002, a mercury-containing manometer of the type used in milking machines on dairy farms may not be sold or offered for sale, or distributed for promotional purposes in the State. Manufacturers of such manometers shall notify wholesalers and retailers about this ban and shall instruct them on how to properly dispose of the remaining inventory. The department, in consultation with the Department of Agriculture, Food and Rural Resources, shall conduct a program to collect and replace mercury-containing manometers already in use on dairy farms in the State. [2001, c. 373, §3 (new).]

**3. Schools.** Effective January 1, 2002, bulk elemental or chemical mercury or mercury compounds may not be sold for use in a primary or secondary classroom in the State. Manufacturers of such materials shall notify wholesalers and retailers about this ban and shall instruct them on how to properly dispose of the remaining inventory. Mercury-added products used by schools are not subject to this ban. [2001, c. 373, §3 (new).]

**4. Elemental mercury.** Effective January 1, 2002, a person may not sell or provide elemental mercury to another person except for manufacturing or recycling purposes without providing that person with a material safety data sheet, as defined in 42 United States Code, Section 11049, and without requiring the purchaser or recipient to sign a statement that the purchaser or recipient: [2003, c. 551, §18 (amd).]

A. Will use the mercury only for medical, dental amalgam dispose-caps or research purposes;

[2003, c. 551, §18 (amd).]

B. Understands that mercury is toxic and that the purchaser will store and use it appropriately so that no person is exposed to the mercury; and

[2001, c. 373, §3 (new).]

C. Will not place or allow anyone under the purchaser's control to place or cause to be placed the mercury in solid waste for disposal or in a wastewater treatment and disposal system.

[2001, c. 373, §3 (new).]

**5. Mercury-added thermostats.** After January 1, 2006, a person may not sell or offer to sell or distribute for promotional purposes a mercury-added thermostat except for a thermostat used by a blind or visually impaired person. A manufacturer of mercury-added thermostats may apply to the commissioner prior to January 1, 2003 for an exemption from the provisions of this subsection for one or more specific uses of a mercury-added thermostat. The Commissioner of Environmental Protection may grant an exemption with or without conditions upon finding that: [2003, c. 221, §3 (amd).]

A. The manufacturer has demonstrated that a system exists for the proper collection, transportation and processing of the mercury-added thermostat at the end of its life; and

[2001, c. 620, §1 (new).]

B. The specific use or uses of the mercury-added thermostat provide a net benefit to the environment, public health or public safety when compared to available nonmercury alternatives.

[2001, c. 620, §1 (new).]

For the purposes of this subsection, a "mercury-added thermostat" means a product or device that uses a mercury switch to sense and control room temperature through communication with heating, ventilating or air-conditioning equipment. "Mercury-added thermostat" includes thermostats used to sense and control room temperature in residential, commercial, industrial and other buildings but does not include a thermostat used to sense and control temperature as part of a manufacturing process. [2003, c. 221, §3 (amd).]

**6. Instruments and measuring devices.** Effective July 1, 2006, a person may not sell or offer to sell or distribute the following mercury-added products: [2003, c. 221, §4 (new).]

A. A barometer;

[2003, c. 221, §4 (new).]

B. An esophageal dilator, bougie tube or gastrointestinal tube;

[2003, c. 221, §4 (new).]

C. A flow meter;

[2003, c. 221, §4 (new).]

D. A hydrometer;

[2003, c. 221, §4 (new).]

E. A hygrometer or psychrometer;

[2003, c. 221, §4 (new).]

F. A manometer other than a manometer prohibited from sale under subsection 2;

[2003, c. 221, §4 (new).]

G. A pyrometer;

[2003, c. 221, §4 (new).]

H. A sphygmomanometer; or

[2003, c. 221, §4 (new).]

I. A thermometer other than a thermometer prohibited from sale under subsection 1.

[2003, c. 221, §4 (new).]

This subsection does not apply to the sale of a mercury-added product listed in paragraphs A to I if use of the product is a federal requirement or if the only mercury-added component in the product is a button cell battery. [2003, c. 221, §4 (new).]

**7. Mercury switches and relays.** Effective July 1, 2006, a person may not sell or offer to sell or distribute a mercury switch or mercury relay individually or as a product component. This prohibition does not apply if the switch or relay is used to replace a switch or relay that is a component in a larger product in use prior to July 1, 2006 and one of the following applies: [2003, c. 221, §4 (new).]

A. The larger product is used in manufacturing; or

[2003, c. 221, §4 (new).]

B. The switch or relay is integrated and not physically separate from other components of the larger product.

[2003, c. 221, §4 (new).]

This subsection does not apply to the sale of a mercury switch or mercury relay if use of the switch or relay is a federal requirement. [2003, c. 221, §4 (new).]

**8. Exemptions.** Subsections 6 and 7 do not apply to the sale of a mercury-added product for which an exemption is obtained under this subsection. The manufacturer or user of the product may apply for an exemption by filing a written petition with the commissioner. The commissioner may grant an exemption

with or without conditions upon finding that: [2003, c. 221, §4 (new).]

A. The exemption is requested because the mercury-added product is required to meet specific advanced technology product specifications identified by the customer or end user of the product; or [2003, c. 221, §4 (new).]

B. The mercury-added product is reasonable and appropriate for a specific use. In this situation, the petitioner must demonstrate that:

(1) A system exists for the proper collection, transportation and processing of the product at the end of its life; and

(2) One of the following applies:

(a) Use of the product provides a net benefit to the environment, public health or public safety when compared to available nonmercury alternatives; or

(b) Technically feasible nonmercury alternatives are not available at comparable cost.

[2003, c. 221, §4 (new).]

Prior to approving an exemption, the commissioner may consult with neighboring states, by means of the interstate clearinghouse under section 1671 or otherwise, to promote consistency in the way in which mercury-added products are regulated. The commissioner may request individuals receiving an exemption to maintain records and provide reasonable reports to the department that characterize mercury use. Exemptions may be granted for a term not to exceed 5 years and may be renewed upon written application if the commissioner finds that the mercury-added product continues to meet the criteria of this subsection and the manufacturer or other persons comply with the conditions of its original approval. The board shall adopt rules for processing exemption applications that provide for public participation, taking into account the role of the interstate clearinghouse. Rules adopted under this subsection are routine technical rules pursuant to Title 5, chapter 375, subchapter 2-A. [2003, c. 221, §4 (new).]

## **§1662. Labeling and consumer information**

**1. Labeling required for certain products.** Effective January 1, 2002, a manufacturer may not sell at retail in this State or to a retailer in this State, and a retailer may not knowingly sell, a mercury-added product unless the item is labeled pursuant to this subsection. The label must clearly inform the purchaser or consumer that mercury is present in the item and that the item may not be disposed of or placed in a waste stream destined for disposal until the mercury is removed and reused, recycled or otherwise managed to ensure that it does not become part of solid waste or wastewater. Manufacturers shall affix to mercury-added products labels that conform to the requirements of this subsection. [1999, c. 779, §2 (new).]

The board shall adopt rules to establish standards for affixing labels to the product and product package. The rules must strive for consistency with labeling programs in other states and provide for approval of alternative compliance plans by the department. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter II-A. [1999, c. 779, §2 (new).]

This subsection does not apply to mercury-added lamps. [1999, c. 779, §2 (new).]

**2. Mercury-added lamps; large use applications.** A person who sells mercury-added lamps to the owner or manager of an industrial, commercial or office building or to any person who replaces or removes from service outdoor lamps that contain mercury shall clearly inform the purchaser in writing on the invoice for the lamps or in a separate document that the lamps contain mercury, a hazardous substance that is regulated by federal and state law, and that they may not be placed in solid waste destined for disposal. Retail establishments that incidentally sell mercury-added lamps to the specified purchasers are exempt from the requirements of this subsection. [1999, c. 779, §2 (new).]

A person who contracts with the owner or manager of an industrial, commercial or office building or with a person responsible for outdoor lighting to remove from service mercury-added lamps shall clearly inform in writing the person for whom the work is being done that the lamps being removed from service contain mercury and what the contractor's arrangements are for the management of the mercury in the removed lamps. [1999, c. 779, §2 (new).]



## **§1663. Disposal ban**

After July 15, 2002, a person may not knowingly place a mercury-added product in solid waste for disposal in a solid waste disposal facility. This section may not be construed to affect existing laws, rules or regulations governing disposal of mercury-added products prior to July 15, 2002. [1999, c. 779, §2 (new).]

## **§1664. Source separation**

**1. Removal from service; products containing mercury.** When a mercury-added product is removed from service, the mercury in the item must be reused, recycled or otherwise managed to ensure compliance with section 1663. [1999, c. 779, §2 (new).]

A person who is in the business of replacing or repairing a mercury-added product in households shall ensure, or deliver the item to a facility that will ensure, that the mercury contained in an item that is replaced or repaired is reused, recycled or otherwise managed in compliance with section 1663. [1999, c. 779, §2 (new).]

**2. Thermostats.** The following provisions apply to thermostats that contain mercury. [2003, c. 640, §1 (rpr).]

A. A manufacturer of thermostats that contain mercury or a manufacturer of thermostats that may replace thermostats that contain mercury shall, in addition to meeting the requirements under section 1662, provide incentives and sufficient information to purchasers and consumers of the thermostats for the purchasers or consumers to ensure that mercury in thermostats being removed from service is reused, recycled or otherwise managed in compliance with section 1663. A manufacturer that has complied with this subsection is not liable for improper disposal by purchasers or consumers of thermostats. Manufacturer collection programs conducted in accordance with universal waste rules adopted by the department meet the requirements of this subsection.

[2003, c. 640, §1 (new).]

B. A wholesaler may not sell a thermostat in the State unless the wholesaler acts as a collection site for thermostats that contain mercury.

(1) A wholesaler may meet the requirements of this paragraph by participating as a collection site in a manufacturer collection program as described under paragraph A or by collecting thermostats that contain mercury and disposing of the collected thermostats in accordance with universal waste rules adopted by the department.

(2) For purposes of this paragraph, "wholesaler" means a business that the department determines is primarily engaged in the distribution and wholesale selling of large quantities of heating, ventilation and air conditioning components to contractors who install heating, ventilation and air conditioning components.

[2003, c. 640, §1 (new).]

## **§1665. Automobile component parts (REPEALED)**

### **§1665-A. Motor vehicle components**

Notwithstanding sections 1663 and 1664, this section applies to a mercury-added product that is a motor vehicle component. [2001, c. 656, §3 (new).]

**1. Prohibition on sale of new motor vehicles with mercury switches.** A person may not sell a motor vehicle manufactured on or after January 1, 2003 if it contains a mercury switch. A motor vehicle manufacturer may apply to the commissioner for an exemption from this prohibition. The commissioner may grant an exemption upon finding that: [2001, c. 656, §3 (new).]

A. The manufacturer has provided assurance that a system exists for the proper removal and recycling of the mercury switch; and

[2001, c. 656, §3 (new).]

B. Either of the following applies:

(1) Use of the mercury switch is necessary to protect public health or safety; or

(2) There are no technically feasible alternatives to the mercury switch at comparable cost.

[2001, c. 656, §3 (new).]

**2. Prohibition on replacement mercury light switches.** Effective January 1, 2003, a person may not sell or distribute a mercury light switch for installation in a motor vehicle. [2001, c. 656, §3 (new).]

**3. Removal of certain mercury components when vehicle use ends.** Effective January 1, 2003, a person may not send a motor vehicle to a scrap recycling facility without first removing any mercury switch or mercury headlamp that is a component of the motor vehicle, except that a scrap recycling facility may agree to accept a motor vehicle that has not been flattened, crushed or baled knowing it contains a mercury switch or mercury headlamp, in which case the scrap recycling facility is responsible for removing that component. Upon removal, the components must be collected, stored, transported and otherwise handled in accordance with the universal waste rules adopted by the board under subsection 8. [2001, c. 656, §3 (new).]

**4. Voluntary removal of mercury light switches prior to end of vehicle use.** A motor vehicle dealer or any person engaged in motor vehicle repair or maintenance may participate in the mercury light switch removal and collection effort pursuant to subsection 5, as long as the person notifies the department before commencing removal and receives such training as may be required by the department. Any person who removes a mercury light switch from a motor vehicle before the motor vehicle is removed from service shall affix an official sticker to the motor vehicle to indicate that the switch has been removed. The stickers may be obtained from the department and must be affixed to the doorpost or other location specified by the department. A person may not install a mercury light switch into a motor vehicle to which the sticker is affixed. [2001, c. 656, §3 (new).]

**5. Motor vehicle manufacturer responsibility.** Manufacturers of motor vehicles sold in this State that contain mercury switches or mercury headlamps shall, individually or collectively, do the following: [2001, c. 656, §3 (new).]

A. By January 1, 2003, establish and maintain consolidation facilities geographically located to serve all areas of the State to which mercury switches removed pursuant to this section may be transported by the persons performing the removal. A consolidation facility may not be a facility that is licensed in the State as a new or used automobile dealership;

[2001, c. 656, §3 (new).]

B. Pay a minimum of \$1 for each mercury switch brought to the consolidation facilities as partial compensation for the removal, storage and transport of the switches;

[2001, c. 656, §3 (new).]

C. Ensure that mercury switches redeemed at the consolidation centers are managed in accordance with the universal waste rules adopted by the board under subsection 8; and

[2001, c. 656, §3 (new).]

D. Provide the department and persons who remove motor vehicle components under this section with information, training and other technical assistance required to facilitate removal and recycling of the components in accordance with the universal waste rules adopted by the board under subsection 8, including, but not limited to, information identifying the motor vehicle models that contain or may contain mercury switches or mercury headlamps.

[2001, c. 656, §3 (new).]

The goal of this collection and recycling effort is to collect and recycle at least 90 pounds of mercury per year from mercury switches removed from motor vehicles. By September 30, 2002, motor vehicle manufacturers shall provide the department with a plan as to how they intend to comply with the requirements of this subsection. [2001, c. 656, §3 (new).]

In complying with the requirements of this subsection, manufacturers of motor vehicles shall establish a system that does not require a person who removes a mercury switch to segregate switches separately according to each manufacturer of motor vehicles from which the switches are removed. [2001, c. 656, §3 (new).]

**6. Department responsibility.** The department shall: [2001, c. 656, §3 (new) .]

A. Assist those subject to the source separation requirements of this section by providing training on the universal waste rules adopted by the board under subsection 8 and by taking other steps as determined appropriate to provide for the safe removal and proper handling of motor vehicle components;

[2001, c. 656, §3 (new) .]

B. Design and distribute the stickers required under subsection 4; and

[2001, c. 656, §3 (new) .]

C. Make available to the public information concerning services to remove mercury light switches in motor vehicles.

[2001, c. 656, §3 (new) .]

**7. Labeling.** Effective July 15, 2002, the labeling requirements of section 1662 apply to motor vehicle components. In approving an alternative compliance plan for labeling for motor vehicles under section 1662, the commissioner shall require a motor vehicle manufacturer to apply a doorpost label listing the mercury-added products that may be components in the motor vehicle. The commissioner may not require a manufacturer to affix a label to each mercury-added component. [2001, c. 656, §3 (new) .]

**8. Rulemaking.** The board shall revise the universal waste rules adopted pursuant to section 1319-O, subsection 1, paragraph F as necessary to establish standards by which mercury switches in motor vehicles may be handled as universal waste. [2001, c. 656, §3 (new) .]

**9. Reporting.** Before January 1, 2003 and annually thereafter, motor vehicle manufacturers doing business in the State shall report to the joint standing committee of the Legislature having jurisdiction over natural resources matters on any fee or other charge collected on the sale of new motor vehicles for the purpose of paying the cost of carrying out the manufacturer responsibilities under subsection 5. The report must specify the amount of the fee or charge collected and how the amount of the fee or charge was determined. Before July 1, 2004 and annually thereafter, motor vehicle manufacturers shall report in writing to the department on the results of the source separation required under this section. The report must include, at a minimum, the number of mercury switches removed and recycled from motor vehicles during the previous calendar year; the estimated total amount of mercury contained in the components; and any recommendations to improve the future collection and recycling of motor vehicle components. Before January 1, 2004 and annually thereafter, the department shall report to the Mercury Products Advisory Committee on the effectiveness of the source separation required under this section, whether the partial reimbursement payment under subsection 5, paragraph B should be adjusted to increase the number of switches brought to consolidation facilities, whether other motor vehicle components should be added to the source separation efforts and whether the program should be terminated and, if so, when. [2003, c. 6, §1 (amd) .]

### **§1666. Household hazardous waste exemption**

A person who uses mercury-added products in that person's home is not subject to the provisions of section 1663 or 1664 until January 1, 2005 with respect to those products the person uses in that person's home and is not subject to fines or penalties for noncompliance with the provisions of section 1663 or 1664 with respect to those products the person uses in that person's home. [1999, c. 779, §2 (new) .]

### **§1667. Dental procedures**

**1. Prevention plan.** By July 15, 2002, the department shall work with dentists and other interested parties to develop a pollution prevention plan for mercury from dental procedures that provides for reasonable measures to reduce mercury pollution from dental procedures and related sources. The plan must include options and strategies for implementing source reduction. [2003, c. 301, §2 (new) .]

**2. Dental office defined.** For purposes of this section, "dental office" means any dental clinic, dental office or dental practice, but does not include the practice of oral and maxillofacial surgery. [2003, c. 301, §2 (new) .]

3. **Amalgam separator system required.** No later than December 31, 2004, a dental office that, in the course of treating its patients, adds, removes or modifies dental amalgam must install an amalgam separator system in the wastewater line in accordance with the following: [2003, c. 301, §2 (new).]

A. Wastewater containing dental amalgam particles must pass through the amalgam separator system prior to discharge to either a publicly owned treatment works or a private septic or waste disposal system, and waste containing dental amalgam must be collected from the amalgam separator system and disposed of in a manner satisfactory to the department;

[2003, c. 301, §2 (new).]

B. Once the amalgam separator system has been installed, the dental office must notify the department in writing:

(1) Of the type of system installed;

(2) That the system is certified as meeting the standards required in accordance with section 1661, subsection 1-A;

(3) Of the date upon which the system became operational; and

(4) Of the method of disposing of the material after removal from the separator system.

If the amalgam separator system is connected to a publicly owned treatment works, the dental office shall provide the same notification to the director or chief engineer of that facility;

[2003, c. 301, §2 (new).]

C. Installation, operation and maintenance of an approved amalgam separator system by a dentist in accordance with manufacturer's recommendations must fulfill the requirements of this section. A dentist must demonstrate proper operation and maintenance by maintaining, for a period of 3 years, all shipping records for replacement filters sent to licensed recyclers and written documentation that demonstrates that the system has been properly inspected and maintained; and

[2003, c. 301, §2 (new).]

D. The department, after receiving proper notification of the installation of the amalgam separator system and after being satisfied that it meets the requirements of this section, must provide the dentist or the dental practice with written confirmation of receipt of evidence of compliance with this section in a format suitable for display by the dental office.

[2003, c. 301, §2 (new).]

### **§1668. Education program**

The department and the Executive Department, State Planning Office shall implement an education program relating to mercury-added products no later than January 1, 2001. The program must provide information to the public about labeled mercury-added products, the requirements of the law regarding the source separation of waste mercury-added products and collection programs that are available to the public. [1999, c. 779, §2 (new).]

### **§1669. Technical assistance to municipalities**

The department shall coordinate with the Executive Department, State Planning Office to assist interested municipalities and regional associations in developing collection programs for mercury-added products. [1999, c. 779, §2 (new).]

### **§1670. Mercury Products Advisory Committee (CONTAINS TEXT WITH VARYING EFFECTIVE DATES)**

(WHOLE SECTION TEXT EFFECTIVE UNTIL 8/01/06)

The Mercury Products Advisory Committee, established by Title 5, section 12004-I, subsection 24-A and referred to in this section as the "committee," shall advise the department, the Executive Department, State Planning Office and the Legislature on further actions needed to prevent and reduce environmental releases of mercury from consumer products. [1999, c. 779, §2 (new).]

1. **Appointment; composition.** The committee consists of the following 13 members: [1999,

c. 779, §2 (new).]

A. Two members from the Senate appointed by the President of the Senate. When making the appointments, the President of the Senate shall give preference to members from the joint standing committee of the Legislature having jurisdiction over natural resources matters;

[1999, c. 779, §2 (new).]

B. Two members from the House of Representatives appointed by the Speaker of the House. When making the appointments, the Speaker of the House shall give preference to members from the joint standing committee of the Legislature having jurisdiction over natural resources matters;

[1999, c. 779, §2 (new).]

C. Four members representing the business community, at least one of whom is an owner or represents an owner of a small business, appointed by the Governor;

[1999, c. 779, §2 (new).]

D. Two members representing environmental organizations, appointed by the Governor;

[1999, c. 779, §2 (new).]

E. Two members representing municipalities, appointed by the Governor; and

[1999, c. 779, §2 (new).]

F. One member representing the general public, appointed by the Governor.

[1999, c. 779, §2 (new).]

2. **Terms.** Except for the Legislators, who serve terms coincident with their legislative terms, all members are appointed for 3-year terms. A vacancy must be filled by the same appointing authority that made the original appointment. Appointed members may not serve more than 2, 3-year terms. [1999, c. 779, §2 (new).]

3. **Compensation.** Legislative members are entitled to receive the legislative per diem, as defined in Title 3, section 2, and to reimbursement for expenses according to Title 5, section 12004-I, subsection 24-A. Public members not otherwise compensated by their employers or other entities whom they represent are entitled to reimbursement of necessary expenses incurred for their attendance at authorized meetings of the committee. [1999, c. 779, §2 (new).]

4. **Quorum; actions.** A quorum is a majority of the members of the committee. An affirmative vote of the majority of the members present at a meeting is required for any action. Action may not be considered unless a quorum is present. [1999, c. 779, §2 (new).]

5. **Chairs.** The first-appointed Senate member is the Senate chair of the committee and the first-appointed House of Representatives member is the House chair of the committee. [1999, c. 779, §2 (new).]

6. **Meetings.** The committee shall meet at least 2 times per year and at any time at the call of the chairs or upon written request to the chairs by 4 of the voting members. [2003, c. 551, §19 (amd).]

7. **Staff support.** The commissioner shall provide the committee with staff support. [1999, c. 779, §2 (new).]

8. **Duties; powers.** The committee shall: [2001, c. 373, §5 (amd).]

A. Provide assessment, advice and recommendations on emerging policy concerns or on adjustments to existing programs related to mercury-added products;

[1999, c. 779, §2 (new).]

B. Assess the feasibility of establishing, and foster establishment if possible, of consumer education and collection programs for mercury-added products that would achieve, but not be limited to, the following:

(1) Contracts by waste management firms that would provide comprehensive collection, transportation, storage, record keeping and recycling of mercury-added products used by industrial, commercial, office and other large users;

- (2) Recovery and recycling of at least 70% of the mercury-added lamps in the State;
- (3) Education and outreach programs to promote the use of energy-saving fluorescent lighting, the availability of waste management service contracts for recycling of mercury-added lamps and other mercury-added products and the environmental importance and market availability of low-mercury models of fluorescent lamps; and

- (4) Conversion of at least 70% of the mercury-added lamps in the State to low-mercury models;

[1999, c. 779, §2 (new) .]

C. Report annually beginning January 15, 2002 to the joint standing committee of the Legislature having jurisdiction over natural resources matters on the effectiveness and extent of established programs for the collection, transportation and recycling of mercury-added products and on the performance of such systems in achieving the goals identified in paragraph B;

[1999, c. 779, §2 (new) .]

D. Include in its 2002 annual report an assessment of whether and how mercury switches or other electrical devices, other than those in automobile components, should be added to the universal waste rules adopted by the board; and

[1999, c. 779, §2 (new) .]

D-1. Include in its 2002 or 2003 annual report recommendations as to whether and how manufacturers should be required to reduce or phase out the use of mercury in consumer products;

[2001, c. 373, §5 (new) .]

E. Include in its 2004 annual report an assessment and recommendations relating to collection and recycling programs for mercury-added products, including the following:

- (1) An assessment of how well collection and recycling programs in the State are performing in comparison to programs established in other states with recommendations for improvements;

- (2) An assessment of existing programs and infrastructure, and the costs and feasibility of expanded programs and infrastructure, for the collection and recycling of mercury-added products used by municipalities and households, with recommendations on whether additional municipal and regional solid waste collection facilities should be established to facilitate residential and municipal recycling of mercury-added products; and

- (3) Recommendations on whether manufacturers of mercury-added products should be required to establish programs for collection from users. Any such recommendation should be based on an assessment of the effectiveness of fee-for-service private-sector programs that may have been established for the collection, transportation and recycling of mercury-added products.

[1999, c. 779, §2 (new) .]

**9. Repeal date.** This section is repealed August 1, 2006. [1999, c. 779, §2 (new) .]

38 §01670

Mercury Products Advisory Committee

(WHOLE SECTION TEXT REPEALED 8/01/06 by T. 38, §16709, sub-§9; 1999, c. 779, §2 (new))

### **§1671. Interstate clearinghouse**

The department may participate in the establishment and implementation of a regional, multistate clearinghouse to assist in carrying out the requirements of this chapter and to help coordinate reviews of the manufacturer notifications under section 1661-B, applications for alternative labeling under section 1662, education and outreach activities and any other activities related to the administration of this chapter. Notwithstanding section 1310-B, subsection 2, the department may provide the interstate clearinghouse with product information submitted to the department under section 1661-A and the department and the interstate clearinghouse may compile or publish analyses or summaries of such information provided the analyses or summaries do not identify any manufacturer or reveal any confidential information. [2001, c. 373, §6 (new) .]



## Appendix C

### National Lamp Recycling Summary





# Association of Lighting and Mercury Recyclers

A non-profit organization representing members of the recycling industry.

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## **NATIONAL MERCURY-LAMP RECYCLING RATE and Availability of Lamp Recycling Services in the U.S.**

As a public service the ALMR publishes an annual report estimating the recycling rate and trends in lamp recycling. We collaborate with the National Electrical Manufacturers Association (NEMA) to collect data used in the report from lamp manufacturers and mercury-lighting recyclers. *We emphasize this is not a scientific survey, but it is the only collection of data available.* Lamp manufacturers and recyclers believe it is a reasonable portrayal of the national lamp-recycling rate and it is our best professional judgment of the lamp recycling market.

### **Background on mercury-lamp recycling in the U.S.**

Technologies to reclaim mercury from spent lamps and recycle them in a safe and compliant way (i.e. by commercial recyclers) were developed in the U.S. starting in 1989. Service providers were few, and from 1990 until mid-1999 the recycling rate for mercury-lamps grew to 10-12%. State regulations began to drive the market, recyclers increased, and in July 1999 EPA announced the addition of lamps to the Universal Waste Rule. As more people learned of the rules and marketing increased, lamp recycling increased to about 20% by the end of 2000. Most states adopted the UWR, many with increased stringency, and awareness began to increase. In 2003 EPA granted funds to the ALMR to work with the states, NEMA and the Solid Waste Association of North America to develop educational and outreach information on lamp recycling for the U.S.

### **Lamp Recycling Today**

In the last few years lamp recycling capacity has increased to meet anticipated demand. There are now more facilities and consolidation points, new equipment is being developed and the entire nation can now be served. Capacity still exceeds demand, due to the  $\pm 76\%$  land disposal (non-recycling) rate. In some cases recyclers are operating at 1/3 of their design and permitted capacity. While the UWR has contributed to increased recycling, more outreach, education and resources are needed to change people's disposal behavior. About 22% of all lamp usage is by people who are not and may never be regulated under federal rules (e.g. residential and CESQGs). Therefore, of the 514 million lamps per year that are currently entering the solid waste stream and potentially releasing mercury into the environment, about 142 million are from residential, while 372 million are from businesses, government and institutions.

***70.8% of the mercury-lamps used by business and 98% of the lamps used in homes are not being recycled.*** These lamps can and should be recycled! We have embarked on a national Lamp Recycling Outreach Program to provide information to those who can best influence the "disposal decision." Rules generally relax the regulatory standards for generators or handlers of lamps today, although Destination Facilities remain fully regulated and permits or state approvals are required. With your help we can increase the lamp recycling rate.

## National Mercury-Lamp Recycling Rate

|  | 2001  | 2002   | 2003   | Comments   |
|--|-------|--------|--------|--|
| Total Lamp Recycling facilities  | 41    | 37     | 37     | Recycling facilities are defined here as locations that actually process spent lamps, approved or permitted by states as UWR Destination facilities.   |
| ALMR Member recycling facilities   | 25    | 25     | 25     | ALMR members operate from 60 locations in 27 states.   |
| Other, non-ALMR recycling facilities   | 16    | 12     | 12     |  |
| Total lamps recycled (millions)  | 147.9 | 149.85 | 156.4  | Estimated by recyclers to be 98% from business and 2% from residential (Note 1).   |
| Lamps recycled by ALMR members   | 116.2 | 121.55 | 128.67 | (Note 2)   |
| Lamps recycled by other recyclers  | 31.7  | 28.3   | 27.73  |  |
| ALMR%  | 78.6  | 81     | 82.3   |  |
| Others (%)   | 21.4  | 19     | 17.7   |  |
| Estimated total number of lamps (millions) disposed or recycled in the US                                      | 665   | 670    | 670    | This number includes NEMA member company lamp sales and U.S. Census import data, allowing for time lag between purchase and disposal, using five-year average life (Note 3).   |
| National Recycling Rate (%)  | 22.2  | 22.4   | 23.3   | This rate is a national average for all lamps. There is no way of knowing state-specific rates because spent lamps are freely imported, exported, and are treated as interstate commerce without regulatory reporting. Some states (in particular, FL and MN) may have higher rates due to the success of local programs and multiple recyclers locally. |
| Estimated number of lamps disposed or recycled in the US by Businesses, Government and Institutions (millions) | 525   | 530    | 525    | "Business" lamp includes all lamps that are not residential (both regulated generators and some CESQGs). NEMA estimates that "business" lamps comprise 78% of all lamps used (Note 4).   |
| National Recycling Rate for Business, Government, Institutions (%)   | 27.6  | 27.7   | 29.2   | The "business" recycling rate is higher than the overall recycling rate due to regulations, marketing, awareness and user convenience.   |
| Estimated number of lamps disposed or recycled by residential users (millions)                                 | 140   | 140    | 145    | Except in some states, these lamps are generally exempt from regulation as hazardous waste.  |
| Estimated Residential Recycling Rate (%)   | 2.1   | 2.1    | 2.1    | This is consistent with the overall rate of household participation in locally sponsored collection programs.  |

**Conclusion: Of the 670 million lamps discarded last year, nearly 156 million (23.3%) are being recycled and 76.7% are not being recycled. The business sector recycles 29%, yet only about 2% of residential lamps are recycled.**

**Notes:**

1. There are no government data available on the number of lamps that are recycled. Most lamps are shipped using Bill of Lading, not the HW manifest, so there is no tracking system in place. Most states do not require any reporting by generators or recyclers for Universal Wastes. There is no way of sub-categorizing business lamps by "regulated" or from Conditionally Exempt Small Quantity Generators (CESQGs). Residential lamp sales are tracked separately through distribution channels.
2. ALMR members and other recyclers provide data to the ALMR on a voluntary basis. Where data are not provided volumes are estimated by using general competitive knowledge of recycling markets, public contract awards, etc.
3. The exact number of lamps used and discarded in the country varies from year to year. There are general economic trends that influence the number of lamps sold each year. Variables include lamp life, import volumes, domestic volumes, lamp types, economic conditions, energy conservation measures, etc.
4. The number of lamps recycled today has a relationship to lamps sold in the past. Lamp life varies for a number of reasons. In general, NEMA lamp manufacturers estimate that the average life of mercury-containing lamps is 5 years. On average lamps disposed in any one year were sold 4-6 years earlier. In the last few years the lamp sales have been fairly flat, due to general economic conditions. Use by households is up due to CFL sales, and business sales are down a little due to the systematic replacement of T-12s by T-8s and the longer life they give, reducing turnover.