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**GUIDELINES FOR MERCURY-CONTAINING PRODUCTS REDUCTION  
AND MANAGEMENT**

**INTRODUCTION**

**Purpose of Guidelines**

The goals of the guidelines for mercury-containing products reduction and management are to:

- 1) Work towards the virtual elimination of mercury from controllable sources that may affect urban runoff due to agency operations, and;
- 2) Establish proper recycling and disposal methods for products that cannot be eliminated due to technological, safety, or economic factors.

The Mercury Pollution Prevention Plan (the Mercury Plan) was submitted to the Regional Board on March 1, 2002, as part of the Program's FY 02-03 Work Plan, to address Provision C.9.c. of the SCVURPPP reissued NPDES permit. Permit Provision C.9.c. requires a mercury pollution prevention plan that includes:

- i. Development and adoption of policies, procedures, and/or ordinances calling for:
  - ◆ The virtual elimination of mercury from controllable sources in urban runoff, including the identification of mercury-containing products used by the Dischargers and a schedule for their timely phase out.

Co-permittee Annual Work Plans should include deliverables and schedule for completion and/or ongoing implementation of the guidelines or equivalent tasks. The Mercury Plan includes the task for municipalities to implement guidelines developed (Mercury Plan Action I.F.) beginning FY 03/04.

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### **GUIDELINES**

- Determine whether your agency has a policy, ordinance, or procedures requiring the virtual<sup>1</sup> elimination of mercury from controllable sources that may affect urban runoff due to agency operations. Determine the actions necessary to develop, revise or formalize the policy/ordinance/procedures as needed, to effectively minimize the use of mercury-containing products and then properly recycle or when appropriate, dispose of as hazardous waste.
- Determine which high priority mercury-containing products to focus efforts upon in your agency. Prioritization should be based on the potential for the product to be a source of mercury to urban runoff, likelihood of municipal use, and controllability. For example, the SCVURPPP Mercury Pollution Prevention Ad Hoc Task Group (Mercury AHTG) recommends fluorescent lamps be the highest priority for initial municipal surveys. Suggested priorities can be found in the general list of mercury containing products developed by the Mercury AHTG in September 2002 according to possible municipal use, controllability and potential for being a source of mercury to urban runoff. This list can be found in the September transmittal package from the Mercury AHTG to the Management Committee<sup>2</sup>, as Attachment 2, and in this document in the Additional Information for Implementation of Guidelines section. Agency prioritization may or may not be different from the priorities established in that document.
- Identify management options available to your agency<sup>3</sup> for virtual elimination of high priority mercury-containing products from the hierarchy of alternatives available. For example:
  - Replace mercury-containing product with an alternative product when the product is identified, if an alternative exists
  - Replace mercury-containing product upon failure, with an alternative product if an alternative exists
  - Reduce the use of mercury-containing products where possible
  - Recycle mercury-containing products no longer in use or, when appropriate, dispose of as hazardous waste
- Include in your Annual Work Plans steps for mercury-containing product reduction and management to minimize the use of mercury-containing products and then properly recycle or when appropriate, dispose of as hazardous waste, and minimize the amount of mercury in storm water runoff, in accordance with the Mercury Plan.

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<sup>1</sup> The word virtual acknowledges that total elimination of mercury-containing products may be impossible due to technological or economic factors.

<sup>2</sup> Attachment 2 “List of Mercury-Containing Products” of transmittal memorandum from Mercury AHTG to Management Committee on September 30, 2002.

<sup>3</sup> Other management alternatives for virtual elimination will be addressed at the Program level, e.g. encouraging the reduction or elimination of mercury in manufactured products.

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- Identify high priority mercury containing products and time schedule for addressing the high priority products that have the greater potential to enter stormwater.
- Assess current operating procedures for consistency with your mercury-containing products reduction and management policy/ordinance/procedures.
- Include a timeline for periodic updates of the Municipal Mercury-containing Product Survey<sup>4</sup> to either update the inventory of high priority products or add additional high priority products.
- Ensure that municipal employees receive the appropriate mercury-containing product reduction and management outreach. For example:
  - Provide information on the appropriate portions of the agency's mercury-containing product reduction and management policy/ordinance/procedures, to employees responsible for the purchase, maintenance, recycling, or when appropriate, disposal as hazardous waste, of mercury-containing products. This information may include the latest reduced-mercury and/or mercury-free product alternatives, appropriate regulations and appropriate management practices.
  - Provide periodic outreach to staff that are not responsible for the purchase, maintenance, recycling, or when appropriate, disposal as hazardous waste of mercury-containing products regarding the proper management options for mercury-containing products. This outreach could be done in the form of an informational item in an employee newsletter.
- Develop and implement a process for tracking, reviewing, and reporting the effectiveness of the mercury-containing products reduction and management practices in achieving the goals of the Mercury Plan.
  - FY 02/ 03
    - Report the municipal survey results in the annual report.
    - Include a status report on the development of your Mercury Virtual Elimination Policy or Ordinance.
  - FY 03/ 04
    - Begin annually reporting the types of high priority mercury-containing products your agency will focus on, how they will be addressed, and progress towards meeting the identified management option goals. An example reporting format is found in Table 2.
  - Annual workplans there after:
    - Identify “continuous improvement” actions to continue progress in meeting virtual elimination policy goals.

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<sup>4</sup> Attachment 1 of transmittal memorandum from Mercury AHTG to Management Committee on September 30, 2002.

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- Coordinate with Local Agencies:
  - Coordinate with Household Hazardous Waste (HHW) collection agencies to support, and help publicize programs for proper mercury-containing product recycling and when appropriate, disposal as hazardous waste of mercury-containing products.
  - Coordinate with the Program's, County HHW, and local public education, outreach and participation programs to outreach to residential, commercial, and industrial users on sources of mercury-containing products or emissions.

### ADDITIONAL INFORMATION FOR IMPLEMENTATION OF GUIDELINES

A successful virtual elimination strategy for mercury will require a new approach to mercury management. This approach must be based on knowledge of the environmental impacts of chemicals and wastes after a product is created, and a willingness to take responsibility to reduce mercury releases. This new approach needs to be applied over the entire lifecycle of mercury-containing products, including the supply, design, manufacture, purchase and use, and disposal of products. Elements of the mercury-containing product lifecycle relevant to most municipalities are the purchase, use and disposal of mercury-containing products.

The following additional information is to support development of management decisions in the areas of purchase, use, recycling, disposal and reporting.

#### **Regulations Effecting the Use, Recycling and Disposal of Mercury-containing Products**

In addition to the regulations discussed below, specific information on mercury waste, universal waste and hazardous waste is available online at the Department of Toxic Substances Control (DTSC) website <http://www.dtsc.ca.gov/>.

##### Universal Waste Regulations

In March 2000, the DTSC adopted emergency regulations regarding the collection, transportation, recycling and disposal of "universal wastes". The emergency regulations designated several commonly used materials as "universal wastes" when they were disposed. The emergency regulations closely mirror the federal Universal Waste Rule that became effective on January 6, 2000. The Universal Waste Rule does not identify any new materials as hazardous, but it establishes streamlined standards for collection and transportation of these wastestreams. Prior to the emergency regulations, universal wastes were subject to the full hazardous waste requirements.

Permanent regulations were approved by the Office of Administrative Law (OAL) and adopted on February 20, 2003, to effectively replace the emergency regulations established in 2000. The permanent regulations are found in Title 22, California Code of Regulations (CCR), Division 4.5.

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Universal wastes are lower risk hazardous wastes that are generated by a wide variety of people rather than the industrial businesses, which primarily generate other hazardous wastes. The federal government has designated wastes as “universal wastes” in regulations adopted by the United States Environmental Protection Agency. In the State of California, wastes became universal wastes when DTSC defined them in the State’s regulations as a “universal waste”. The wastes designated by DTSC’s universal wastes include hazardous waste thermostats, batteries and lamps. Households and Conditionally Exempt Small Quantity {Universal Waste} Generators (CESQGs) are **temporarily** exempt from these universal waste regulations for these wastes.

Municipal agencies must follow the rules for either large quantity handlers of universal waste or for small quantity handlers of universal waste. A large quantity handler of universal waste is one who has more than 5,000 kilograms (5.5 tons) of universal waste onsite (at any one place of business) at any one time, making them subject to more stringent standards for handling their universal waste.

Most universal waste handlers will be small quantity handlers of universal waste. The rules for small quantity handlers are found in Title 22, CCR, division 4.5, chapter 23, sections 66273.10 through 66273.20. A summary of the requirements is found below:

- The small quantity handler of universal waste may not dispose of universal waste but they may send universal waste to a person who is authorized to dispose of universal waste.
- A small quantity handler of universal waste may accumulate less than 5,000 kilograms of universal waste at any one time.
- A small quantity handler of universal waste must label universal wastes with the date that they are generated (section 66273.14).
- A small quantity handler of universal waste must clean up any releases such as leaking batteries or broken fluorescent tubes and manage the clean up wastes as hazardous wastes (if they are identified as hazardous waste under the law (sections 66273.13 and 66273.17).
- A small quantity handler of universal waste must train employees in proper management of universal waste. This training must cover how to properly handle, package, store and label the universal waste as well as how to respond to releases (section 66273.16).
- A small quantity handler of universal waste must prepare proper shipping papers. These papers may be a bill of lading. A Uniform Hazardous Waste Manifest is not needed for universal waste shipments.

### Department of Toxic Substance Control Regulations of Mercury-containing Waste

In September 2002, the DTSC issued regulatory proposals to the California Office of Administrative Law (OAL), which will affect disposal requirements for certain mercury-containing products. On February 20, 2003 the proposed Universal Waste Regulations for mercury-containing wastes passed a legal review by the California OAL and were adopted as permanent regulations by the DTSC. These newly adopted Mercury Waste Classification and

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Management Regulations become effective on March 15, 2003 and are available online at <http://www.dtsc.ca.gov/>. A summary of the newly adopted mercury regulations follows below.

- DTSC is planning to “list” certain mercury-containing wastes as hazardous, unless they are recycled under the universal waste rules (which are typically more relaxed requirements for storage, collection and transportation of products than the hazardous waste rules). To provide adequate time for public agencies to develop the necessary infrastructure and/or phased implementation procedures to handle future disposal and recycling requirements, these proposed requirements includes several years of exemption status before full implementation would begin. Below follows a list of waste products that currently carry temporary Universal Waste status according to the DTSC:
  - Effective January 1, 2005, vehicles that contain mercury switches will be listed as hazardous at the time that anyone intends to crush, bale, shred, or shear the vehicle. All mercury switches will need to be removed from the vehicle to avoid hazardous waste management regulations.
  - Effective February 9, 2006, all other products (non-automotive) that contain mercury switches will be listed as hazardous until the mercury switches are removed.
  - Effective February 9, 2004, all mercury-containing lamps will be listed as hazardous waste, regardless if they exhibit a hazardous characteristic and there will be a limit imposed on Conditionally Exempt Small Quantity Generators (CESQGs) of no more than 30 lamps/month. Compact fluorescent bulbs would need to be recycled or managed as universal waste after this date. This listing will not apply to liquid crystal displays (LCDs) with mercury back lighting, or products that contain such LCDs.
  - Effective January 1, 2004, all mercury novelty items will be listed as hazardous waste. This could include items containing liquid mercury, mercury switches, button-cell or other mercury-containing batteries, mercury-containing lamps, and novelties with mercury containing paint.
- Most wastes in the new listings would not be classified as hazardous waste for mercury under the toxicity characteristic. Non-hazardous waste management of these products would contribute significant amounts of mercury to the environment.

Specific universal wastes have temporary disposal exemptions to allow for development of infrastructure and management programs.

- Through February 8, 2006, universal waste batteries, universal waste lamps, universal waste thermostats, and universal waste consumer electronic devices produced by households may be managed as non-hazardous solid waste.
- Through February 8, 2004, Conditionally Exempt Small Quantity Generators (CESQGs) may manage up to a total of 220 pounds of universal waste batteries, universal waste thermostats, and universal waste lamps as non-hazardous solid waste.
- From February 9, 2004 to February 8, 2006, CESQGs may manage as non-hazardous solid waste:
  - No more than 30 universal waste lamps in any calendar month,
  - No more than 20 pounds of universal waste batteries in any calendar month, and
  - No universal waste thermostats.

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- Through February 8, 2006, CESQGs may manage universal waste consumer electronic devices as non-hazardous solid waste.

Some of the universal wastes do not have an exemption or phase-in period and must be properly recycled now in order to have Universal Waste status (please note that not all of these products will be applicable for all municipal facilities):

- Pressure or vacuum gauges
- Mercury-added novelties
- Mercury counterweights and dampers
- Mercury thermometers
- Mercury Dilators and Weighted Tubing
- Mercury containing rubber flooring
- Mercury gas flow regulators
- Waste cathode ray tube materials
- Dental amalgam wastes

Requirements of California’s Mercury Reduction Act of 2001 (SB633)

The California Mercury Reduction Act of 2001 (Senate Bill 633) was signed into law by Governor Gray Davis on October 9, 2001. Introduced by Senator Byron Sher, the bill addresses several approaches to reducing mercury in California. SB 633 supports the objectives to reduce mercury releases to the environment by restricting certain consumer products that contain mercury. This bill prohibits the sale of mercury fever thermometers and novelty items, restricts school purchases of mercury items, and requires special handling of mercury switches from discarded vehicles. Table 1 below describes each of these requirements of the California Mercury Reduction Act.

Table 1. Requirements Of California's Mercury Reduction Act Of 2001 – SB 633

<b>Mercury Source</b>	<b>Requirement</b>	<b>Effective Date</b>
Schools K-12	Prohibits any school from purchasing devices and materials containing mercury for use in classrooms and labs, except measuring devices when no adequate alternative exists.	January 1, 2002
Vehicles	Encourages removal and recovery of switches containing mercury, i.e., convenience lights under the hood or in the trunk, from vehicles before disposal or recycling of the vehicle.	January 1, 2002
Thermometers	Bans the sale or distribution of fever thermometers containing mercury without a prescription from a doctor, dentist, veterinarian or podiatrist.	July 1, 2002
Novelty Items	Prohibits the manufacture, sale, or distribution of mercury-added novelty items in California. Mercury-added novelties are products intended for personal or household enjoyment or adornment, such as jewelry, games, maze toys, or toys that light up or make noise. Manufacturers of novelties must notify retailers of this	January 1, 2003

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	requirement and explain how to dispose of remaining inventory.	
Vehicles	Bans the sale of vehicles manufactured on or after January 1, 2005, if they have light switches containing mercury.	January 1, 2005

Please refer to Senate Bill 633 (Sher)- California Mercury Reduction Act of 2001 at <http://www.epa.gov/glnpo/bnsdocs/gh/therfaq.html> (link not working) for information on alternative products for each of the mercury sources affected by SB 633.

**Suggested Additional Management Practices**

The following section includes tips and control measures to protect water quality during the use, recycling and disposal as hazardous waste when appropriate, of mercury-containing products.

Mercury-Containing Product Purchasing and Use

- Through a mercury-containing product management process, evaluate opportunities to substitute mercury-containing products for reduced mercury and/or mercury-free product alternatives, whenever possible. For example, spirit-filled or digital thermometers are available alternatives and they are as accurate as mercury thermometers for most applications. Mercury-free thermostats are also available. Electronic thermostats, for example, provide many of the same features as mercury thermostats and help reduce fuel costs.
- Educate or train municipal staff about mercury-containing products and processes so that they can make informed decisions regarding the proper use, response to mercury spills, recycling, and disposal options for mercury-containing products.
- To minimize quantities of mercury-containing products stored, purchase only what is needed for use in the near future, thus leaving opportunity for the purchase of reduced mercury and/or mercury-free product alternatives in the future.

Mercury-Containing Product Storage and Maintenance

- Identify appropriate locations for and provide mercury spill kits, store the kits near the stored mercury-containing products, and educate employees to use these spill response kits. Mercury spill kits are available from safety equipment supply companies for large mercury spills.
- If storing fragile mercury-containing products, i.e. lamp bulbs or switches removed from appliances or vehicles, store them in an area and in a way that will prevent them from breaking, such as in boxes the products came in or boxes supplied by specific mercury-containing product recyclers. Clearly mark the boxes and storage area. If stored products are accidentally broken, store them in a sealed container. Pick up spilled powder and add it to the sealed container. Take mercury-containing products to a consolidation site or arrange with a transporter to pick them up. Contact your county or state environmental office or solid waste office for services available in your area.

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Mercury-Containing Product Recycling

- Recycle unused, used and worn-out, and broken mercury-containing products in accordance with applicable regulations from DTSC.
- Remove mercury-containing component parts from appliances or vehicles (e.g. thermostat probes and switches) and store in a covered container marked to clearly indicate contents. DO NOT remove switches from your thermostats. Instead contact your heating, ventilating, and air-conditioning (HVAC) wholesaler and request special containers and instructions for recycling.
- Contact your mercury-containing product wholesalers and ask if they offer a free take-back program (usually either a reverse distribution system or a recycle-by-mail system) to collect used and worn-out or broken mercury-containing products.
- Save the invoices that track the recycling of your mercury-containing products and operate in accordance with DTSC regulations.

Mercury-Containing Product Disposal

- Dispose of unused, used or worn-out, and broken mercury-containing products when appropriate, as hazardous waste, in accordance with applicable regulations from DTSC.
- Save the invoices that track the disposal of your mercury-containing products and operate in accordance with DTSC regulations.

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**References and Sources for Mercury-Containing Product Reduction Options**

Senate Bill 633 (Sher)- California Mercury Reduction Act of 2001

<http://www.epa.gov/glnpo/bnsdocs/gh/therfaq.html>

Mercury Sources and Prevention and Reduction Options Matrices; Pollution Prevention Workgroup of the Mercury Council, Draft August 12, 1999.

Developing a Virtual Elimination Strategy for Mercury; USEPA,

<http://www.epa.gov/grtlakes/bnsdocs/options/index.html>

Mercury Containing Thermostats, Switches and Relays, USEPA,

<http://www.epa.gov/grtlakes/p2/mercpam.html>

Attachment 2 “List of Mercury-Containing Products” of transmittal memorandum from Mercury AHTG to Management Committee on September 30, 2002.

Proposed Regulation of Mercury-containing Waste, DTSC PowerPoint presentation, November 19, 2001, <http://www.dtsc.ca.gov/HazardousWaste/Mercury/index.html>

**References and Sources for Information on Mercury-Containing Products**

<http://www.epa.gov/mercury/index.html>

General Information on Mercury in Products

<http://www.twua.org/p2/pollutants/mercury.html>

<http://www.epa.gov/glnpo/p2/mercury.html>

<http://www.aerc-mti.com/mercury/html>

Mercury and Mercury Containing Devices

<http://www.uvlamp.com/TechArt/shortarc.htm>

Compact Source, a.k.a. Short-Arc Lamps

<http://www.fda.gov/cdrh/radh1th/mercury-vapor.html>

Mercury Vapor Lamps

<http://www.gilway.com/coldcathodelamps.html>

Cold Cathode Lamps

<http://www.state.in.us/idem/ctap/mercury/switches.html>

Tilt Switches and Relays

<http://www.gbmsd.org/programs/merc-switches.shtml>

Tilt Switches and Relays

<http://www.p2pays.org/mercury/tryon/art5.pdf>

Temperature Control Products

<http://www.gbmsd.org/programs/merc-thermprobes.shtml>

Thermostat Probes

<http://www.epa.gov/region02/health/mercury.htm>

Flame Sensors or Gas Safety Valves

<http://www.epa.gov/grtlakes/p2/mercpam.html>

Flame Sensors or Gas Safety Valves

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**Table 2: Example Reporting Format for Annual Report**

An Example Reporting Format for inclusion in Annual Reports

	<b>Management Option (MO) for Mercury-Containing Product</b>				
<b>HIGH PRIORITY MERCURY-CONTAINING PRODUCTS</b> (not listed in any particular priority)	MO #1: Replace with an alternative product when the product is identified, if an alternative exists	MO #2: Replace upon failure, with an alternative product if an alternative exists.	MO #3: Reduce the use where possible.	MO #4: Recycle when no longer in use	MO #5: When appropriate, dispose of as hazardous waste
<b>LAMPS:</b>					
Compact Source Lamp				ID	
Spectral Lamp					B
Fluorescent Lamp				I	
Metal halide Lamp	No Action				
High pressure sodium Lamp	NF				
Mercury Vapor Lamps					
Cold Cathode Lamp					
Neon Lamp					
<b>THERMOSTAT PROBES (ALSO KNOWN AS FLAME SENSORS OR GAS SAFETY VALVES):</b>					
Furnaces					
Water heaters					
Ranges, ovens					
Space heaters					
<b>Other mercury-containing products in use that you may know of:</b>					
E.g. Mercury lab thermometers					

Status key:

No Action: No action identified for implementation

ID: Actions have been identified; implementation has not begun

B: Began process of implementation

I: Management option identified has been fully implemented

NF: product was not found in municipal inventory

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**Reference:**

**“List of Mercury-Containing Products”, Attachment 2 of transmittal memorandum from the Mercury AHTG to the Management Committee on September 30, 2002**

**List of Mercury-Containing Products**

Laboratory Space Products	Large Volume Priority (1=high)	User(s)/Application	Pathway(s)
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Switches and relays	1	Industrial, commercial, households, automobiles, military <ul style="list-style-type: none"> <li>• “silent” wall switches</li> <li>• airflow/fan limit controls</li> <li>• building security systems</li> <li>• temperature control</li> <li>• pressure control</li> <li>• float control (septic tank and sump pumps)</li> <li>• welding</li> <li>• wetted reed relay</li> </ul>	Solid waste Atmospheric
Instruments Barometers Hydrometers Pyrometers Sphygmomanometers Manometers	3	Industrial, commercial, households	Solid waste Atmospheric
Caustic soda and chlorine	4	Industrial, commercial, households	Wastewater

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Office Space; General Maintenance; Vehicle Fleet/Service; Construction and Demolition; Custodial/Janitorial; and Industrial Facilities are being surveyed directly through the municipal departments with involvement in these divisions.

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Office Space Products	Large Volume Priority (1=high)	User(s)/Application	Pathway(s)
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Switches and relays	1	Industrial, commercial, households, automobiles, military <ul style="list-style-type: none"> <li>• “silent” wall switches</li> <li>• airflow/fan limit controls</li> <li>• building security systems</li> <li>• fire alarm box switch</li> <li>• temperature control</li> <li>• wetted reed relay</li> </ul>	Solid waste Atmospheric
Thermostat probes	2	Industrial, commercial, households Commonly found in gas-fired appliances such as: <ul style="list-style-type: none"> <li>• water heaters</li> <li>• furnaces</li> <li>• space heaters</li> </ul>	Solid waste Atmospheric
Thermo-electric devices	2	Commercial, industrial, educational institutions <ul style="list-style-type: none"> <li>• i.e. portable refrigeration units</li> </ul>	Solid waste Atmospheric

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Laboratory Space; General Maintenance; Vehicle Fleet/Service; Construction and Demolition; Custodial/Janitorial; and Industrial Facilities are being surveyed directly through the municipal departments with involvement in these divisions.

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General Maintenance Products	Large Volume Priority (1=high)	User(s)/Application	Pathway(s)
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Switches and relays	1	Industrial, commercial, households, automobiles, military <ul style="list-style-type: none"> <li>• “silent” wall switches</li> <li>• airflow/fan limit controls</li> <li>• building security systems</li> <li>• fire alarm box switch</li> <li>• temperature control</li> <li>• pressure control</li> <li>• float control (septic tank and sump pumps)</li> <li>• welding</li> <li>• wetted reed relay</li> </ul>	Solid waste Atmospheric
Thermostat probes	2	Industrial, commercial, households Commonly found in gas-fired appliances such as: <ul style="list-style-type: none"> <li>• water heaters</li> <li>• furnaces</li> <li>• space heaters</li> </ul>	Solid waste Atmospheric
Thermo-electric devices	2	Commercial, industrial, educational institutions <ul style="list-style-type: none"> <li>• i.e. portable refrigeration units</li> </ul>	Solid waste Atmospheric
*Pesticides (old stockpiles)	3	Households, commercial, farms, parks, golf courses	Solid waste

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Office Space; Laboratory Space; Vehicle Fleet/Service; Construction and Demolition; Custodial/Janitorial; and Industrial Facilities are being surveyed directly through the municipal departments with involvement in these divisions.

\*Certain pesticides made before 1995 are known to have contained Mercury. (Draft Mercury Report, Dept. of Toxic Substances Control, Oct. 2001.) If you haven’t already, please review the Final Pest Management Performance Standard (Approved by SCVURPPP Management Committee 2/21/02), for definitions of implementation levels that each municipal agency is expected to achieve in order to demonstrate that its pest management program controls the discharge of pesticides in runoff to the maximum extent practicable.

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<b>Vehicle Fleet/Service Products</b>	<b>Large Volume Priority (1=high)</b>	<b>User(s)/Application</b>	<b>Pathway(s)</b>
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Switches and relays	1	Industrial, commercial, households, automobiles, military <ul style="list-style-type: none"> <li>• lighting switches in automobiles</li> <li>• active ride control in automobiles</li> <li>• anti-lock breaking systems</li> <li>• temperature control</li> <li>• pressure control</li> <li>• welding</li> </ul>	Solid waste Atmospheric
Paints and glues Gold porcelain paint Corrugated cardboard glue High heat orange paint	3	Industrial, commercial, households, automobiles	Solid waste Atmospheric

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Office Space; Laboratory Space; General Maintenance; Construction and Demolition; Custodial/Janitorial; and Industrial Facilities are being surveyed directly through the municipal departments with involvement in these divisions.

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<b>Construction and Demolition Products</b>	<b>Large Volume Priority (1=high)</b>	<b>User(s)/Application</b>	<b>Pathway(s)</b>
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Switches and relays	1	Industrial, commercial, households, automobiles, military <ul style="list-style-type: none"> <li>• “silent” wall switches</li> <li>• airflow/fan limit controls</li> <li>• building security systems</li> <li>• fire alarm box switch</li> <li>• temperature control</li> <li>• pressure control</li> <li>• float control (septic tank and sump pumps)</li> <li>• welding</li> <li>• wetted reed relay</li> </ul>	Solid waste Atmospheric

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Office Space; Laboratory Space; General Maintenance; Vehicle Fleet/Service; Custodial/Janitorial; and Industrial Facilities are being surveyed directly through the municipal departments with involvement in these divisions.

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<b>Custodial/Janitorial Products</b>	<b>Large Volume Priority (1=high)</b>	<b>User(s)/Application</b>	<b>Pathway(s)</b>
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Caustic soda and chlorine	4	Industrial, commercial, households	Wastewater
Clothing dyes and pigment	4	Households, commercial, laundries	Wastewater (e.g. laundry gray water)
Detergents, cleanser and disinfectants	4	Industrial, commercial, households	Wastewater (e.g. laundry gray water)

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Office Space; Laboratory Space; General Maintenance; Vehicle Fleet/Service; Construction and Demolition; and Industrial Facilities are being surveyed directly through the municipal departments with involvement in these divisions.

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Industrial Facilities Products	Large Volume Priority (1=high)	User(s)/Application	Pathway(s)
Lamps Fluorescent Metal halide High pressure sodium	1	Industrial, commercial, households	Solid waste Atmospheric
Switches and relays	1	Industrial, commercial, households, automobiles, military <ul style="list-style-type: none"> <li>• “silent” wall switches</li> <li>• airflow/fan limit controls</li> <li>• building security systems</li> <li>• temperature control</li> <li>• pressure control</li> <li>• float control (septic tank and sump pumps)</li> <li>• welding</li> <li>• wetted reed relay</li> </ul>	Solid waste Atmospheric
Instruments Barometers Hydrometers Pyrometers Sphygmomanometers Manometers	3	Industrial, commercial, households	Solid waste Atmospheric
Thermo-electric devices	2	Commercial, industrial, educational institutions <ul style="list-style-type: none"> <li>• i.e. portable refrigeration units</li> </ul>	Solid waste Atmospheric
Paints and glues Gold porcelain paint Corrugated cardboard glue High heat orange paint	3	Industrial, commercial, households, automobiles	Solid waste Atmospheric

Please note that products used primarily in schools and hospitals, like thermometers, as well as personal electronic appliances such as mobile phones, computers, and cameras have been omitted from this list. These items do contain mercury, but these are being dealt with elsewhere by outreach efforts focused on residential populations and specific public agencies. Also, products specific to the following product-areas: Office Space; Laboratory Space; General Maintenance; Vehicle Fleet/Service; Construction and Demolition; and Custodial/Janitorial are being surveyed directly through the municipal departments with involvement in these divisions.