NorthShore University HealthSystem Safety Manual: SA99-19310-4422

Area Affected: Organization-Wide Effective Date: 2015

# **Mercury-Containing Device and Product Management Program**

#### I. POLICY:

It is the policy of NorthShore to prohibit all unnecessary acquisition of mercury-added products in its facilities; and to ensure that all mercury containing equipment and waste is managed and disposed in a manner that is safe, protective of the environment, and compliant with all applicable regulations. The policy establishes guidelines for the procurement, use, and disposal of items and materials containing elemental mercury and mercury compounds. This policy restricts the procurement of mercury-added products; prohibits the use of mercury and its compounds at all NorthShore facilities where an acceptable substitute is available; requires the inventory and planned elimination of existing mercury-containing devices; and provides exceptions and procedures for obtaining exceptions for necessary uses of mercury. Department-specific written procedures for the procurement, safe transport, storage, preparation, administration, removal during construction/renovation, and disposal of these products shall be established in accordance with provisions of this policy.

### II. SCOPE:

Personnel purchasing, using or disposing of devices or products potentially containing mercury or mercury compounds.

#### III. PURPOSE:

The purpose is to ensure that personnel, patients, vistors and the environment are protected from potential hazards associated with mercury-containing devices and products.

### IV. <u>DEFINITIONS:</u>

EH&S: Environment Health & Safety Department.

**Mercury Hazard:** Mercury and its compounds are neurotoxic, bioaccumulative and persistent in the environment. Handling elemental mercury may expose personnel to toxic vapor when released if released indoors. Handling products containing mercury compounds may contaminate hands or work surfaces, causing subsequent exposure by ingestion or skin absorption.

**Mercury-Added Product:** A product that contains mercury and which is intentionally added in order to provide a specific characteristic, appearance, or quality or to perform a specific function.

**Mercury-Contaminated Product:** A product that contains mercury at a concentration greater than 100 parts per billion, by weight, as an unintended contaminant arising from the manufacturing process.

**Mercury-Contaminated Waste:** All liquid and solid wastes generated at NorthShore facilities that contain a mercury concentration greater than 50 parts per billion, by weight, and shall be managed and disposed of as hazardous chemical waste.

**Personnel:** Includes, but is not limited to, all employees, medical staff, allied health professional staff, students, volunteers, and others engaged in any activities at the hospital, <u>excluding</u> patients and visitors.

**SDS**: Safety Data Sheet available on Pulse or by Fax-back service (800-451-8346).

Special Exception: Authorization to procure or use mercury-added products and/or mercury-contaminated products.

Standing Exception: Mercury-added products and/or mercury-contaminated products that may be procured or used without prior approval.

**Thimerosal:** Ethyl (2-mercaptobenzoato-(2-)O,S) mercurate (1-) sodium, a preservative and antimicrobial used in multi-dose vaccines and some biological reagents.

V. <u>PROCEDURE:</u> <u>Responsibility</u>

#### Action

### A. <u>Identification</u>

 Review Safety Data Sheets and Product Literature to identify mercury-added and mercury-contaminated products:

a. in current inventories.

b. and new procurement requests.

 Promote awareness of mercury hazards and identify non-mercury or reduced mercury alternatives.

 Notify EH&S to remove identified mercury-added and mercury-contaminated products from department inventory for disposal/recycling by qualified vendor.

B. Procurement

- Avoid procurement of mercury-added and mercury-contaminated products except as allowed by the policy in this section.
- Procure products with the lowest available mercury content when other technical factors are equivalent.
- Charts listing examples of mercury-containing equipment, reagents and procedures, and low or mercury-free alternatives are available at the following website: <a href="http://orf.od.nih.gov/EnvironmentalProtection/MercuryFree/Pages/Alternatives.aspx">http://orf.od.nih.gov/EnvironmentalProtection/MercuryFree/Pages/Alternatives.aspx</a>
- 4. **Special Exceptions:** Exceptions to the prohibition on procurement and use may be granted for limited scientific and medical uses of mercury or mercury compounds for which there are no acceptable alternatives.
- 5. <u>Application for Special Exception</u>: Personnel seeking to use mercury-added products or mercury-contaminated products shall submit a written application for a *Special Exception* to EH&S and the Purchasing Department Heads for review and approval. The application shall contain the following information:
  - a. Name, department, location and email address of applicant
  - b. Product name and number, manufacturer, quantity and container size
  - c. Name of instrument or equipment containing the product, if applicable
  - d. Intended use
  - e. Justification
  - f. Handling and storage precautions

6. <u>Standing Exceptions</u>: The items and materials listed below may be procured and used without applying for a *Special Exception*. However, the requirements for disposition of excepted equipment and waste containing mercury remain applicable.

- Biological products containing thimerosal and other regulated mercury-based additives
- b. Dental amalgam
- c. Fluorescent and ultraviolet lamps
- d. Equipment containing mercury lamps
- e. Prescription drugs regulated by FDA

7. <u>Review of Exceptions:</u> Annually review existing mercury-containing devices, Special Exceptions and Standing Exceptions for condition, relevance and possible replacement or elimination. Include the review annual Hazardous Materials and Waste Management report to the Safety Administrative Counsel.

Affected Department Heads

EH&S and Purchasing Department Heads

Affected Department Heads

Affected Department Heads

Purchasing Department Head

> Affected Personnel Purchasing and EH&S Department Heads

Affected Personnel

EH&S

Department Head

#### C. Usage Practices

#### 1. Usage of existing products and devices

- Affected Personnel
- Caution shall be exercised when handling or manipulating all mercury-containing devices and products, in accordance with manufacturer's instructions, SDS precautions, NorthShore policies.
- b. Mercury-containing devices and products must not be handled or stored in the immediate vicinity where food and drink are consumed.
- c. All mercury spills must be reported and treated immediately utilizing the protocols outlined in organizational Emergency Preparedness Policy and Procedure Manual, EP07-19310-2104, <u>Code Orange Hazardous Material Response Plan.</u>
- Elemental mercury in unserviceable facility, medical and scientific equipment or other
  property designated for disposal shall be removed and disposed following NorthShore waste
  management requirements. Refer to organizational Safety Policy and Procedure Manual,
  SA99-19310-4508, <u>Hazardous Materials and Waste Management Program.</u>
- Mercury-contaminated waste shall be removed and disposed following NorthShore hazardous chemical waste management requirements. Refer to organizational Safety Policy and Procedure Manual, SA99-19310-4507, <u>Hazardous Waste Disposal Program.</u>

Affected Department Heads

EH&S and Affected Department Heads

### C. Education and Training

- Provide personnel education and training <u>prior</u> to handling mercury-added or mercury-contaminated products. Refer to Organizational Safety Policy and Procedure Manual, Policy SA99-19310-5301, <u>Personnel Safety Orientation and Continuing Education and Training</u>. Elements to be included are:
  - a. identification of mercury-added or mercury-contaminated products in the dept.
  - b. review the SDS and hazard warning phrases and labeling on such products
  - c. proper personal protective equipment for handling such products
  - d. procedure for handling mercury spills
- Provide personnel education as new hazards are introduced or processes are changed.
   Include information and training regarding specific products within their work areas.
- 3. Include hazardous drug uncontrolled spills procedures in accordance with organizational Emergency Preparedness Policy and Procedure Manual, EP07-19310-2104, <u>Code Orange</u>

   Hazardous Material Response Plan.

### D. <u>Uncontrolled Release</u>

- 1. Immediately medically assess and treat personnel involved in an uncontrolled release.
- Refer to Organizational Emergency Preparedness Policy and Procedure Manual, Policy EP07-19310-2104, <u>Code Orange – Hazardous Material Response Plan.</u> All spills of mercury and mercury compounds must be reported and treated immediately utilizing the protocol. A Code Orange should be called in instances where:
  - Individuals are not trained to respond to a mercury spill.
  - Spill has caused or has the potential to cause injury/acute exposure symptoms.
  - Appropriate spill/PPE supplies are not available.
  - Spill cannot be safely contained or cleaned up by department individuals.
  - Spill quantity exceeds 5 ml for mercury-containing devices or 1 liter for mercury-added solutions or products.
- 3. Complete an organizational Occurrence Report. Refer to the organizational

Affected Department Head

Employee Health Emergency Department

Affected Personnel

Affected
Department Head

### Administrative Directives policy, AD8051, Event Management and Reporting Program.

Affected
Department Head

# E. Accountability

- Comply with the provisions of the <u>Mercury-Containing Device and Product Management Program Policy</u>.
- Handle non-compliance issues in accordance with Human Resource Department protocols.

# VI. <u>ATTACHMENT:</u>

N/A

### VII. <u>DISTRIBUTION:</u>

Organizational Safety Policy and Procedure Manual

### VII. POLICY RESPONSIBILITY:

In Coordination With:

Director, Environmental Health & Safety

Safety Administrative Council

# VIII. REFERENCES

<u>Internal</u> <u>External</u>

SA99-19310-5301, Personnel Safety Orientation and Continuing

Education and Training

AD8051, Event Management and Reporting Program
EP07-19310-2104, Code Orange – Hazardous Material Response Plan
SA99-19310-4508, Hazardous Materials and Waste Management Program

SA99-19310-4507, Hazardous Waste Disposal Program