

File: Spill Response Plan for Hazard Chemicals and Mercury Spills

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Review Date: March 2010**

**OSHA: 1910.120
EPA: 40CFR 112.7**

Messiah College
**Spill Response
Policy and Procedure**

This plan, if placed into action, could require a safety alert or a timely notice. Vice President for Operations must be notified immediately.

Policy: It is the policy of Messiah College to respond safely and appropriately to an accidental release or spill of hazardous materials. To provide guidance to employees and define their responsibilities in case of a spill or release of hazardous chemicals.
A copy of this policy is to be posted in each laboratory by the Program Manager.

DEFINITIONS:

Haz-mat: Incidents involving hazardous chemical materials or waste. A general term used to define any activity related to hazardous materials and waste.

Minor (incident) Spill: Any spill that can be cleaned up by the people involved, using the training and personal protection they have at hand or immediately available. Minor spills include most spills and clean up of a routine nature. The training and personal protection would be the same used with that chemical in normal use.

Conditional Incidental Spill: Conditional incidental spills include those of mercury, and other chemicals for which employees are trained in clean up, and have specific spill kits. The limiting factor is that these spills are predictable in volume and hazard, and employees are specifically trained in handling these spills. It is essential that the appropriate Personal Protective Equipment is used for this type of spill and that the appropriate spill containment kits are available.

Major Spill: Spills that are beyond the training, and personal protective equipment available to the college employees. These include larger amounts of chemicals and other hazardous materials that represent an immediate danger to anyone in the area, because of physical or health effects.

Objectives: To provide guidance to employees so that appropriate action can be taken if a hazardous spill should occur.

Equipment: Personal Protective Equipment adequate for proper response based on the chemical MSDS information. Spill containment kits will be available at Kline/Jordon Room K301, the Campus Events Office, the Facility Services Office and the Department of Safety Office.

Attachment A, Annual Educational Outline.

Procedure:

A haz-mat spill response is divided into several phases:

- Discovery, identification and decision making
- Response to spill
- Clean up operations

Discovery, identification and decision-making:

When a HAZ-MAT spill (a spill of hazardous or unknown chemical or infectious waste) is discovered, it should be classified: **Minor Spill, Conditional Incidental Spill, or Major Spill.**

1. **Response to a Minor Spill:** the person discovering it without any special equipment beyond what they normally use can clean up a minor spill. These types of spills should be cleaned up promptly; and no further action is needed.

EXAMPLE: A few drops of normally used chemical.

- A. **Personal Protection:** The personal protection indicated is that normally used for handling of these materials or waste. (e.g., Gloves, Apron, Eye Protection, etc) The personal protective equipment used is that normally available for general use in that area of the facility, or normally used by the person who handles such materials.
- B. **Spill Kits:** Where spill kits are available, and employees are trained to use them, the kit may be used.
- C. **Incident Report:** If a spill kit is used, or if there is a potential risk to students, employees, or visitors, the Department of Safety is to be notified to complete an incident report.

2. Response to a Conditionally Incidental Spill:

- A. Isolate the area to prevent tracking and disturbing the spill Contact Dispatch at 6005 to report the incident.
- B. Contact Facility Services to isolate the ventilation system to prevent air contamination.
- C. Contact Environmental Hazards Consultants at 1-800-338-3424 or Cocciardi Associates at 717-766-4500 for proper clean up.
- D. The Department of Safety will complete an incident report that will be reviewed by Safety Committee.
- E. Public Safety will monitor entry and restrict access to the affected area.

3. Response to a Major Spill:

A major spill is a significant spill that is greater in quantity or risk than the staff has been trained to contain and clean up: or a spill that exceeds the limits of the personal protective equipment that is available.

- A. Immediately evacuate the area, and close all of the doors as you go. This will help to contain the vapors and odors. Call Dispatch at 6005 and 911 if necessary. Contact the 3E Company at 1-800-451-8346 for spill containment instructions and MSDS information.
- B. Contact Facility Services (6011) to shut down recirculating ventilation of the affected area.
- C. Notify Public Safety to assist to secure the area.
- D. During regular business hours contact the Natural Sciences Laboratory Program Manager at extension (2079) to evaluate the situation. The Director of Safety (7272), the Director of Facility Services (3500), the Environmental Health and Safety Manager (3560), the Facility Maintenance Service Manager (7151) and the Campus Events Manager (2940) should also be notified.
- E. During other hours, or if the above employees cannot be reached contact The Director of Facility Services 717-303-8257, the Environmental Health and Safety Manager 717-653-9352, the Facility Maintenance Service Manager 717-265-6566, the Campus Events Manager at 717-364-7445, or the VP of Operations at 717-979-2538.
- F. Notify Environmental Hazards Consultants at phone number 1-800-338-3424 (emergency cell phone number 717-278-8398) or Cocciardi Associates at 717-766-4500 for clean up and disposal of waste. Contact 3E Company at 1-800-451-8346 for containment direction and MSDS.
- G. Public Safety will evacuate anyone in the affected area to a nearby triage

area for medical attention and decontamination (if necessary). Persons who have had a chemical exposure should be monitored according to the guidelines of the Chemical Hygiene Plan located on the Safety Committee Channel on MC Square.

- H. When Environmental Hazard Consultants, or Cocciardi Associates arrives provide them with MSDS information for the chemical that was spilled. Facility Services should have the floor plans available to show access points to the contaminated space.
- I. Messiah College employees must not try to clean up spills for which they have not been trained, or are not equipped. Campus Events, Facility Services and Department of Safety employees are not trained to control or clean up a major spill. For that reason it is essential that Environmental Hazard Consultants be contacted at 1-800-338-3424 (emergency cell phone number 717-278-8398), or Cocciardi Associates at 717-766-4500 for spill response.
- J. DEP Emergency Spill Reporting: (Any person who signs approval of this policy may contact the DEP as deemed appropriate).

717-705-4741 (regular business hours)
877-333-1904 (after hours)
1-800-541-2050 (emergency state hotline)

4. Post Recovery

Once the affected area has been declared “safe” by Environmental Hazard Consultants, or Cocciardi Associates, Campus Events employees can enter the area to clean up the remainder of the incident. This process may involve spent neutralizer, absorbent, packaging, and other materials. The Environmental Contractors Employees will instruct Campus Events employees on what may be discarded as ordinary trash, and what will need to be removed as hazardous waste.

The area should not be reoccupied for normal use until the Department of Safety, Director of Facility Services, Facility Maintenance Service Manager, or the Vice President of Operations determines that there are no remaining hazards from the clean up process.

All significant chemical incidents should be documented by narrative and completed by The Department of Safety of what is known to have happen. All significant incidents are to be reported to the Safety Committee, and evaluated for the potential for improving the process.

EMERGENCY PROCEDURE FOR MERCURY SPILLS

Policy: It is the policy of Messiah College to respond to spills of materials posing a threat to health or the environment in ways to protect employees, students and visitors.

Objective: To comply with all laws and regulations regarding proper clean up and disposal of any spilled hazardous waste.

Definitions:

Mercury: a silver metallic liquid, which is easily vaporized under normal room temperatures. It is toxic by contact, and by inhalation, and should be handled with great care. Spills should never be handled with bare hands or with latex gloves, as they offer minimal protection to mercury's effects.

Small Mercury Spill: A small spill (less than 5ml about the amount of mercury in a small thermometer) in an area with hard surfaces, which will allow the mercury to be accessed by an aspirator. Cleaned up by trained faculty or other staff.

Large Mercury Spill: A spill of more than 5ml, or a spill, which occurs on a soft surface, such as carpet, furniture, than cannot be completely cleaned.

PROCEDURE:

Employees that are trained to work with the materials can only handle Mercury spills. All spills should be reported to the Department of Safety/ Dispatch (x6005) and Campus Events (X7145). When possible mercury spills should be covered with water, either in a puddle, or by wet towels and sheets, to minimize vaporization. (Mercury will evaporate much faster than water when exposed to air).

Handling of Mercury Spills and Leaks: Small mercury spills that happen in Kline are cleaned up by on-site faculty or staff.

1. Spill Clean up for Small Quantities (up to 5ml)
 - A. The area should be closed and all occupants should be asked to leave the immediate area. If possible close all room doors to keep vapors within the room. If not in an enclosable room, cover with water soaked cloths, to minimize vapor release. Keep everyone away from the contaminated area. Contact Dispatch at 6005 to help secure the area.
 - B. The spill is to be covered with a wet towel as quickly as possible. If the

spill is contained in a vessel it can be covered with water

- C. A trained Campus Events employee or the Natural Sciences Laboratory Program Manager should bring a Mercury Spill Clean up kit to the area. Clean up of the mercury should be accomplished as directed with the instructions in the Mercury Spill Kit.
- D. The spill site should be cleared, to at least a minimum of a 2-meter containment area.
- E. Any contaminated clothing and or footwear is to be removed. Any leather that the mercury has contacted is contaminated, and cannot be decontaminated. Clothing may be washed and returned to use. Uncleanable clothing is to be collected and disposed of with the mercury waste.
- F. Put on the protective equipment located inside of the spill kit that includes eyewear, gloves, shoe covers and a disposable jump suit.
- G. The effected area is to be sprayed with Mercon spray into the ambient air starting at eye level and working down towards the floor including the visible spill.
- H. Use water to cover the visible mercury beads. CAUTION; after applying the Mercon spray or water, the floor will become very slippery.
- I. Use the Mercury Aspirator that is located in the Mercury Spill Kit to pick up the Mercury beads and deposit those into a closed container partly filled with water. Ensure the tip of the aspirator is below the water in the container. (Note; a syringe with a blunt canula may also be used) Note: The closed container can be reused provided it is less than ½ full.
- J. Wipe down the contaminated area with Mercon Vap, or other liquid or similar wipes to chemically decontaminate the surfaces.
- K. Wipe shoes and other contaminated items with Mercon wipes or disposable towels saturated with Mercon Vap. Dust mercury-indicating powder around the spill area, with special attention to cracks, crevices and other areas where mercury beads may have fallen or been pulled into.
- L. Label all contaminated items after placing them in a Hazardous Waste bag. Contact the Waste and Recycling Coordinator for proper disposal of contaminated items.
- M. Incident report will be completed by The Department of Safety and reviewed by The Safety Committee.

2. Spill Clean up for Large Spills

- A. Any spill of a large amount of metallic mercury (more than 5ml), or any spill on a soft material including carpet, furniture, and similar surface should be handled as and considered a Large Spill.
- B. Isolate the area.
- C. Notify Facility Services (X6011) to turn off all make up air and leave on only exhaust air, with no recirculation. If necessary put an exhaust fan in the room to exhaust air out.

- D. Contact a licensed Chemical Response Company (Environmental Hazard Consultants at 1-800-338-3424 (emergency cell phone number 717-278-8398), Cocciardi Associates at 717-766-4500 or 3E company at 1-800-451-8346 to do the clean up and remediation. (NOTE; if the area is isolated the clean up can be delayed for several days, until arrangements may be made).
- E. Entry to the affected area is prohibited unless the entry employees are wearing mercury vapor respirators. Only appropriate contracted or emergency response personal will be permitted to enter affected areas. Public Safety will monitor entry and restrict access to the affected area.
- F. Notify Facility Services employees to control the ventilation in the area and isolate HVAC Systems. This will minimize the spread of fumes throughout the facility.
- G. If a fire occurs in the affected area notify the responding fire company on arrival, as hazardous materials response may be required.
- H. Campus Events will provide the final cleaning of the area after it is determined to be safe by the licensed Chemical Response Company Environmental Hazard Consultants, or Cocciardi Associates.

3. Disposal of Spilled Materials

- A. All materials involved with the spill will be placed in an appropriate container and sealed. The container will be brought to the Lenhart Building and placed in the CAA. The Waste and Recycling Coordinator will schedule the removal of such waste by a licensed hazardous waste hauler.
- B. The Natural Science Laboratory Program Manager will notify the Waste and Recycling Coordinator to pick up the spilled materials as part of the normal chemical waste removal.
- C. The Natural Science Program Manager (Kline only) is responsible to assure that the Mercury Spill Kit is stocked and available, as well as disposing of the mercury from the aspirator. The container is to be replaced once it becomes ½ full. The Campus Events Manager will monitor all other areas.
- D. Disposal manifest and all related documentation will be filed in the Facility Service Office Resource Room.


4. Illness or Injury


- A. Employees that are concerned about exposure to the vapors should contact the Department of Human Resources or be transported immediately to the hospital as noted on the selected workers compensation panel.
- B. Emergency illness should be reported to 911 and transported to the nearest hospital.

5. Employee Training

- A. Any employee expected to follow this procedure is to be trained annually by their manager or designee.
- B. Training on the use of spill kits will be the responsibility of the appropriate manager or designee. Employees in areas exposed to potential chemical spaces are expected to be trained annually. Training is to be done each year and documentation stating who was trained along with a sign in sheet for the training and is to be filed by the manager in the department.

Approved Reviewed Revised

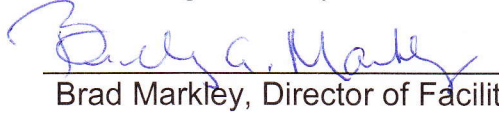

Amanda Coffey, Director of Human Resources

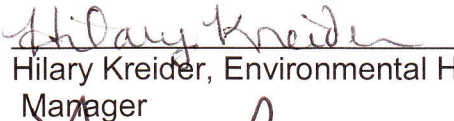

Steve Funck, Natural Science Lab. Program Mgr.



Kathrynne Shafer, Vice President for Operations

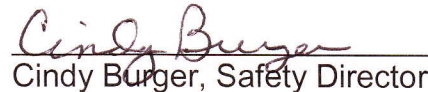

Dan Smith, Facility Maintenance Service Manager

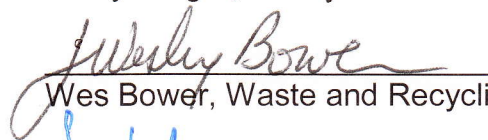

Scott Zeigler, Campus Events Manager


Brad Markley, Director of Facility Services


Hilary Kreider, Environmental Health and Safety
Manager


Norman Benson, Sup. Safety Training


Cindy Burger, Safety Director


Wes Bower, Waste and Recycling Coordinator


Ray Norman, Dean School of MEB, Acting Dean,
School of Health and Natural Sciences

Note - The signed copy of this procedure is filed in the Facility Service Department. By signing this policy you have agreed to enforce the contents and adhere to standards".

Attachment A

Annual Educational Outline for First Responders

- 1. Definition; Minor Spill, Conditional Spill, and Major Spill**
 - A. As outlined in the procedure**
- 2. Minor Spill Clean up Procedure**
 - A. As outlined in the procedure**
- 3. Location of Spill Clean Up Kits and Written Procedure**
 - a. Kline Jordon room K315**
 - b. ECC Campus Events Office**
 - c. Lenhert Facility Services Office**
- 4. PPE Required For Clean Up**
 - a. Small Spill Clean up PPE includes, mask, gloves, apron, and eye protection.**
- 5. Emergency Contractors and When to Call Them**
 - A. Any spill greater than that is easily cleaned up by the students or employees that use them with the PPE that is typically used and is immediately available.**
 - B. Contractor should be notified for any mercury spill on carpet, material, or other soft surface or is greater than 5ml, or any spill that is unpredictable in volume and hazard.**
 - C. Employees to be notified: Dispatch EXT 6005, Jay Bennett EXT 2079, Dan Smith EXT71751, Scott Ziegler EXT 2940, Brad Markley EXT 3500, Kathie Shafer EXT 6003. Home number available at Dispatch for after hours notifications.**
 - D. Contractor Emergency Responders: EHC Associates 1-800-338-3424, Cocciardi Associates 717-766-4500 or 3E Company at 1-800-451-8346.**
- 6. Building Isolation (close doors, turn off ventilation Etc)**
 - A. Notify Facility Services at 6011 to isolate ventilation**
 - B. Request that Facility Services locate and bring building drawings to the location of the spill**
- 7. Incident Reporting**
 - A. Person who caused spill is to write up a narrative explaining what happen and submit it to the Department of Safety with 12 hours of the incident.**