MBIB Safety Committee Meeting

6/21/18
**HIM SALE**

- Still contacting 2-1901 for an emergency
- You will remain under HMS for EH&S
- Contact the new facilities contact for any work orders

***I will update you with any new information***

<table>
<thead>
<tr>
<th>Custodial Biological Solid Waste Pickup (grey bio bins)</th>
<th>New facilities contact for HIM <a href="mailto:fourblackfanfacilities@cwservices.com">fourblackfanfacilities@cwservices.com</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio Sharps Containers (red containers)</td>
<td>Chris Roy with Stericycle <a href="mailto:CRoy@STERICYCLE.com">CRoy@STERICYCLE.com</a></td>
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<tr>
<td>Facilities Related Issues (work orders)</td>
<td>New facilities contact for HIM <a href="mailto:fourblackfanfacilities@cwservices.com">fourblackfanfacilities@cwservices.com</a></td>
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<tr>
<td>Chemical Hazardous Waste</td>
<td>HMS online pickup system through EH&amp;S <a href="https://www.ehs.harvard.edu/Chemical-Waste-Pickup-Form">https://www.ehs.harvard.edu/Chemical-Waste-Pickup-Form</a></td>
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</tbody>
</table>
2 Per Floor

- One near the service elevator
- One near the Stairwell
Spill Kit Contents

- Rubber gloves
- Broom and pick-up pan
- Safety goggles
- Disposable bags
- Scraper
- Grey absorbent pads
- pH test papers
- Spill Treatment Guide
- Spill response instructions
- 6 Spill-X agents in shaker bottles:
  - (2) Spill-X-A
  - (2) Spill-X-C
  - (2) Spill-X-S
Spill-X Agent Neutralizers

- **Spill-X-A for ACIDS**: Sulfuric, hydrochloric, nitric, perchloric, formic, acetic

- **Spill-X-C for CAUSTICS**: Sodium hydroxide, potassium hydroxide, ammonium hydroxide

- **Spill-X-S for SOLVENTS**: Toluene, xylenes, methanol, chloroform, acetone, isopropanol
Spill-X Agent Neutralizers

- **Spill-X-A for ACIDS:** Renders neutral salt. Magnesium oxide and additive blend. Will generate moderate heat when used and mild reaction. Properly treated spill will have paste-like appearance.

- **Spill-X-C for CAUSTICS:** Renders neutral salt. Citric and fumaric acid and additive blend. Will generate moderate heat when used and mild reaction. Properly treated spill will have paste-like appearance.

Incidental Spill vs. Major Chemical Spill

**Major Spill:** Having the potential of causing illness, injuries, or deaths; disruption to University operations, or physical / environmental damage that requires IMMEDIATE service from EH&S. Requires respiratory protection and is not contained in a fume hood.

**Incidental Spill:** A small scale spill that can be absorbed, neutralized or otherwise controlled at the time of the incident by personnel. No release to the environment or public spaces. Does not pose a significant safety or health hazard to employees in the immediate vicinity or to the employee cleaning it up, nor does it have the potential to become an emergency within a short time frame.

**Basic steps to determine whether a spill is incidental or major:**

1. Evaluating the spill's risks
2. Evaluating quantities
3. Evaluating the spill's potential impact on health, safety or environment
4. Evaluating your comfort level. Are you comfortable handling the spill???
Responding to a Major Chemical Spill

1. **Evacuate** area or lab, as needed.
2. **Call Operations Center** (2-1901 HMS)
3. **If safe** to do so:
   - Remove ignition sources (e.g. open flames, heat guns and turn off hot plate)
   - Increase ventilation (emergency button on fume hood, open sashes)
4. **Characterize the chemical** (Refer to SDS or container label)
5. Wait for EH&S, facilities, etc. Remain on site to assist.
Responding to an Incidental Chemical Spill

1. Evaluate your own exposure
2. Notify people in lab (ask someone to post signage, if needed)
3. If appropriate
   - Increase ventilation in fume hoods
   - Remove ignition sources (e.g. open flames, heat guns and turn off hot plate)
4. Characterize the chemical (Refer to SDS or container label)
5. Gather supplies together—What absorbent? Which neutralizing agent?
6. Don PPE (Personal protective equipment—lab coat, gloves, goggles, etc.)
7. Use tongs, scraper or dustpan to collect any broken glass and dispose of properly (contact EH&S for assistance).
Question: Is the spill contained? Does it have potential to be released into environment (e.g. sinks or floor drains)?

Question: Is the chemical an acid, base or flammable solvent? If so, grab the appropriate Spill-X neutralizing agent from the spill kit.

- If there is excessive amounts of liquid, place absorbent grey mats around the perimeter of spill so it does not spread.
Question: Is the spill contained? Does it have potential to be released into environment (e.g. sinks, floor drains or windows)?

Question: Does the powder react with water?

- If **YES**, call EH&S
- If **NO**, place paper towel over the spill and dampen with water.
Absorbents

**Grey mats** — Solvents, buffers, acids, bases

**Paper towels** — Oils, toxins, biologicals, buffers
Cleaning an Incidental Chemical Spill

1. **Don PPE & Call EH&S.**
2. **For Spill-X neutralizing agents,** encircle spill perimeter then fully cover the spill.
3. **Mix the Spill-X agent thoroughly** into spill and wait about 5 minutes until any reaction stops and mixture cools.
4. **For absorbents,** simply apply enough material to absorb all liquid.

*If spill was acid or base, check spill residue pH and add more agent if necessary.*
*If spill was solvent, make sure spill is fully adsorbed into a dry powder.*

4. Collect spill residue with scraper and dustpan and place into disposable bag.
5. Clean any residue from surface with paper towels, soap & water. Collect these materials in the same disposable bag.
6. Place a completed hazardous waste label and date.
7. Place in SAA and request a waste pickup.
What to Expect from EH&S

• We can walk you through the cleanup of incidental spills, if you are comfortable handling the spill.

• We can call a vendor to clean the spill, if you are not comfortable or if it is not safe for you to do so. We will meet the vendor on site and manage the cleanup process.

• We can provide additional spill cleanup materials or PPE.
**Scenario #1**

**Question:** 2L Methanol breaks and spills on benchtop, next to sink, flowing into sink. What do you do?

A. Clean up the spill yourself  
B. Call EH&S  
C. Not sure
Scenario #2

**Question:** 500mL bottle of Phenol accidentally slips out of your hand and shatters in a cold room, what do you do?

A. Clean up the spill yourself
B. Call EH&S
C. Not sure
Scenario #3

**Question:** You accidentally knock a 500mL bottle of ammonium hydroxide off the benchtop. What do you do?

A. Clean up the spill yourself
B. Call EH&S
C. Not sure
Safety First