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## Important Dates and Reminders

### REMINDERS

- Use buddy system when working in labs
- Do not leave labs unlocked
- Be aware of your surroundings

# Safety Newsletter

This month's topic describes the recent HAZMAT training that was held at MRL and the lessons learned.

## What is HAZMAT?

HAZMAT is short for hazardous materials. A hazardous material is defined as a material, such as flammable or poisonous material, that would be a danger to life or to the environment if released without precautions.

Emergency HAZMAT response is needed for situations involving leaking of a hazardous substance from a storage tank or container, chemical fires, mechanical breakdown in a chemical process, excavating/trenching buried contaminants or toxins, and site preparation uncovering buried hazardous waste.

## Urbana Fire Department HAZMAT Training

A HAZMAT training or drill is useful for trained professionals to know how to best handle a real life situation. The Urbana Fire Department (UFD) completed their HAZMAT training June 26<sup>th</sup> in the Engineering Science Building (ESB). MRL staff and DRS staff were present during the drill.

The scenario that was scripted out for the MRL actors, was an explosion in a fume hood on the first floor in ESB. Three researchers were involved: One working in the hood where the explosion occurred (A), a second researcher working very close by (B), and a third researcher working on the other side of the room, not directly involved (C).

After the explosion, researcher B drug researcher A to the emergency shower, while researcher C calls 9-1-1. Researcher C explains there was an explosion and occurred in the HF hood but unsure what chemicals were involved. The UFD responds as a HAZMAT and requests DRS to assist with a plan of action.

Researcher C and DRS are able to assist UFD determine the cause of the explosion and how to further respond. Victims (researcher A and researcher B) were treated for HF exposures by using calcium gluconate gel that had to be given to them from the outside because the one in the lab was covered by explosion material.

UFD enters the room in HAZMAT gear to remove the researchers. Researcher A had been in out of consciousness and was carried out on a stretcher board. Once outside both researchers were put through the decontamination stations. All clothing had to be removed but the researchers were in bathing suits for the exercise.

## Useful Contacts

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Once the researchers were through the decontamination stations, the room was neutralized.

After the HAZMAT drill, we had a debriefing session where we discussed lessons learned.



## Lessons Learned

As mentioned before, the drill was a training exercise for the Urbana Fire Department. However, everyone took away lessons learned. Three major lessons are spill kit placement, knowledge of first aid/safety, and use of the buddy system.

Placement of the spill kit in a laboratory is an important thing to consider when constructing the kit. In this scenario, the HF spill kit was kept close to the HF hood. During the incident, the researchers and emergency responders were unable to access the spill kit because it had been contaminated with the chemical and was on the other side of the splash zone. Someone would have had to walk through the spill to get to the kit. It is recommended to have multiple spill kits in the lab. A spill kit for HF in an adjacent lab is also a good idea in case no one can enter the lab where the incident occurred. Spill kit materials should be close enough to the hazard to neutralize/mitigate the hazard quickly, but not in a location where the contents could be compromised during an event.

It is the fire department's protocol to assess the situation before rushing into a lab that can put them in danger. In this scenario, two researchers were exposed to HF. It took the fire department approximately 45 minutes to enter the lab because they needed to make sure more individuals were not exposed once the door was opened. It was important for the researchers to self-administer first aid (calcium gluconate) since they may be the only ones in the lab to do so. It is also important for the researchers to understand that activating the shower is very important in a scenario similar to this since decontamination by the fire department may not be immediate.

Situations like this make it clear how important it is to use the buddy system, having another person in the lab with you. The lab partner can call 9-1-1 and get the injured person to a shower, eyewash, or to the first aid kit.