



UPDATE

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Thoughts from the Director

By Terry Alexander

The University is embarking on a fast track program to meet compliance with a new Department of Homeland Security (DHS) rule on Chemical Security. The rule, originally designed to upgrade security at chemical plants and processing facilities had the unexpected consequence of pulling in colleges and universities. There are three main components to the rule that are very important and we are currently working on the first step. We need to do an inventory of all chemicals used and stored on campus that may fall into a category the DHS calls 'chemicals of concern' – a list of nearly 300 chemicals.

This is a daunting task when you consider not only the 2,000 plus laboratories on campus but also all of the operational activities that keep this place humming along. What we are trying to do centrally through OSEH is to minimize the impact on the individuals in the laboratories by asking each of the PIs and lab managers to send us a copy of their chemical inventory so we can compare against the list. Once we have identified which chemicals hit the list – and that includes chemicals of concern in mixtures of chemicals – we will be visiting each area to get a handle on the volume. This leads us to the second component of the rule – submitting a report to the DHS.

OSEH will be submitting what the DHS calls a 'top screen' document that identifies quantities

of chemicals of concern within buildings on campus. The data is quite detailed on location and quantity and will be used by the DHS to determine a risk category for the University. The risk category we have assigned will determine the third component of the rule which is to perform any necessary upgrades to security, prepare formal security plans, and perform additional training of staff.

We have basically 60 calendar days (January 20th) to perform the inventory and submit the top screen document to the DHS. We are asking for your support in meeting this important compliance matter for the University. I fully realize we are in the middle of end of semester activities and getting ready to move into winter break, and am hoping it is a simple matter to have you send us the inventory sheets by December 17th. These can be e-mailed to Danielle Sheen at drsheen@umich.edu or faxed to her at 763-1185. Many of you have already helped out on this matter and I thank you for the quick response. For everyone else, thank you in advance for helping us through this task.

Have a happy holiday!

ALL HAZARDS APPROACH TO EMERGENCY PLANNING

It is the responsibility of each unit to be prepared to deal with emergencies. Since emergencies can strike quickly and without warning it is important to plan and take precautions against the types of disasters that could affect a local community. These disasters may include severe weather, fire, civil unrest or terrorist events. Instead of having a separate plan for each separate event, the University of Michigan is adopting a basic plan, or an all hazards approach, which means that one flexible plan covers all emergencies – even unforeseen events.

A functional all hazards plan will help to alleviate fears, make actual disaster situations less stressful and save precious time.

The first step in the all hazards emergency planning process is the hazards analysis which determines the following:

- What can occur
- How often it is likely to occur
- The damage it is likely to cause
- How it is likely to affect the community
- How vulnerable the community is to the hazard

Help in identifying a hazard can be found by looking at historical data. The types of emergency events that have occurred in the past and how often, can help predict future occurrences.

Profiling the hazard will address the intensity, duration, and onset of the event. The availability of warnings to the community will also become a crucial part of the hazard profile.

By looking at the risk factor involved in any profiled hazard it is possible to predict the impact that hazard will have on the people, services and facilities in a community.

Knowing the impact helps in setting priorities (life safety first and then protecting property) for responding to and handling the emergency.

While we are never certain what type of situation may occur, the first step to emergency planning within a building is to implement a Building Emergency Action Plan. Each building should develop their own custom plan to ensure prompt notification and efficient evacuation or “shelter in place” of building occupants during fire or other emergencies.

A guideline is available on our website at:

<http://www.oseh.umich.edu/guideep.pdf>

that gives information on planning for emergencies as well as a model plan that can be used to develop our emergency action plan. This plan has recently been enhanced to include information on how to incorporate evacuation of persons with disabilities into your building specific plan.

If you are a building occupant, you should be familiar with this plan as well as your building emergency evacuation diagrams which should contain pertinent information such as shelter locations, fire extinguishers, areas of rescue assistance, etc. Contact your facility manager to find more out about the plan for your building.

If you need any assistance in developing emergency action plans or have questions regarding your specific plan, refer to our website or contact OSEH at 647-1143.

Accessing Roofs with Potentially Hazardous Exhaust

There are approximately 80 University buildings on campus with chemical fume hoods which are exhausted at the roof level. This potentially hazardous exhaust creates difficulties for persons who must access these roofs for maintenance and renovation including repairing roof leaks, air conditioners, and other building components. Protecting roof top workers is the focus of a new OSEH guideline which updates the previous OSEH/Plant Operations Protocol and describes procedures for safely accessing a roof with potentially hazardous exhaust points. http://www.oseh.umich.edu/Roof_access_guideline.pdf

The guideline requires Building or Department Contacts to work with the Plant Operations Shutdown Coordinator and with the maintenance group conducting the work to notify users and plan the work. Failure to comply with procedures in the guideline may expose laboratory and maintenance personnel to hazardous materials, cause possible delays in research, prevent the work from being completed as planned and will result in a report to the appropriate dean, director, or department head.

Utilities & Plant Engineering (UPE) in conjunction with OSEH, generate roof safety plans which designate each exhaust point as potentially hazardous or not. The actual exhaust points are color coded on the roof and a sign at the roof access contains the legend. When a crew needs to perform work on a roof, the supervisor will check the roof safety plans to determine if the worksite has potentially hazardous exhaust points and which fume hoods or other exhaust systems must be shut down for the work to continue.

Work that is greater than 20 feet from a potentially hazardous exhaust system and does not require workers to pass through a 20 foot radius of one, may proceed with proper notification after the supervisor cautions workers to avoid potentially

hazardous areas. Potentially hazardous exhaust systems within 20 feet of the work area must be shut down.

The shutdown of any building system must be coordinated with the Plant Operations Shutdown Coordinator using the on-line Shutdown Request form in the guideline. The Shutdown Coordinator will work with the Supervisor and the Building or Department Contacts to determine the least disruptive and most efficient shutdown schedule.

Once scheduled, the Building or Department Contact will notify all affected users of the exhaust system scheduled for shutdown via email, telephone or in person. The Building contact must also post a "Warning! Do Not Use This Hood" sign on all affected exhaust hoods, fume hoods, and ducted BSCs.

During a shutdown, laboratory personnel and users of the shut down exhaust hoods must:

- Stop all research operations or experiments in the affected hoods.
- Remove, cap, or cover all chemicals in affected hoods.
- Turn off all equipment in the hood, such as hotplates and stirrers.

For further information please contact the Biological and Laboratory Safety program at 763-6973.

Proper Selection of Hazardous Waste Containers

There are specific regulations governing selection and use of hazardous waste containers. OSEH provides a variety of containers from small bottles to large drums for the collection of chemical, biological and radioactive wastes. When deciding on which container to order, consider the following:

Container Size- All hazardous waste generated at the University of Michigan must be removed from campus within 90 days from the day that waste is first placed in the container. Waste generators are required to call for a waste collection within 60 days of starting to fill the container to provide adequate time for OSEH to collect and ship the material. Therefore, it is impractical to order a container too large to fill within 60 days. Available containers range in size from 1 liter to 55 gallons.

Container Material- Regulations governing waste management and transportation require generators to select a container that is compatible with your waste. Consult a Material Safety Data Sheet (MSDS) to find specific information about chemical properties and compatibility. OSEH provides containers made of plastic, glass and steel.

Container Type- Some containers are specifically designed to collect solids, while others are designed to collect liquids. Containers that have a "Wide Mouth" are typically used to collect solids. All pails and "Open Head" drums are used to collect solids. Containers that have a "Narrow Mouth" are typically used to collect liquids. All "Closed Head" drums and carboys are used to collect liquids.

Waste Type- The type of waste generated may also affect the waste container choice. Sharps waste should only be collected in a sharps container. Additionally, specific containers are required for the collection of radioactive wastes.

When generating hazardous waste, label and date the container at the time you "FIRST" begin using it. Keep your waste container closed unless actively adding waste. Use proper segregation for incompatibles and secondary containment to catch spills. Arrange for waste collection within 60 days to ensure that your waste is collected and shipped for disposal within 90 days.

The hazardous waste containers available through OSEH meet the needs of most waste generators on campus. Contact OSEH at 763-4568 for additional information or visit our website at:

<http://www.oseh.umich.edu/OSEHSupplies.pdf>

Dry Ice Shipments

For shipping purposes, dry ice is a hazardous material and is regulated by both the U.S. Department of Transportation (DOT) and the International Air Transport Association (IATA). Specific procedures are required for handling, packaging and shipping even non-hazardous materials refrigerated with dry ice and this training must be documented.

Anyone wishing to ship with dry ice must receive training. The Department of Occupational Safety and Environmental Health (OSEH) offers appropriate training online which may be accessed through the OSEH website.

<http://www.oseh.umich.edu/>

[Shipping Materials with Dry Ice.pdf](#)

This training is intended for anyone who packages dry ice for shipment which includes *no other hazardous materials other than dry ice* or signs any type of shipping documentation (such as a FedEx Airbill) for a dry ice shipment.

If you are not sure if the material you are sending is considered hazardous, contact OSEH at 763-6973. **PLEASE NOTE:** Shipping regulations change frequently, so it is necessary to receive refresher training **every two years**.

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