Lab Safety Officer Meeting  
April 26, 2016  
9:00-11:00 am  
Silver Maple Ballroom, Davis Center  

AGENDA

- Presentation of Lab Safety Partners Awards  
- Managing Lab Safety from an LSO Perspective (Melissa Bainbridge, Jana Kraft Lab)  
- Introduction of Compliance Services and the Audit Department (Tessa Lucey, Compliance Services, and Bill Harrison, Audit Department)  
- Campus Inspection Recap (Tom Kellogg, Risk Management & Safety)  
- Minors in Laboratories (Mary Dewey, Risk Management & Safety)  
- ChemSource and the Life Sciences Stockroom (Jeff Rogers, Risk Management & Safety, and Susan Fuller, Lab & Life Sciences Stockroom)  
- Perspective from a Chemical Bulker (Jeff Rogers, UVM Risk Management & Safety)  
- Updates and Reminders (Elayna Mellas-Hulett, UVM Risk Management & Safety)  
- Q&A

SAVE THE DATE: Fall LSO Meeting – October 4, 2016 – 1:00 – 3:00 pm

Training Reminders  (http://www.uvm.edu/safety/lab/safetytraining)

- 2016 Annual Refresher training is online. Please take before the end of the calendar year.  
  - What do researchers think of this year’s training?

  - The following trainings are required to be completed annually if they apply to your lab:  
    - **Bloodborne Pathogen Training:** lab workers at risk for contact with human blood, tissues, primary cell lines or other potentially infectious material (OPIM)  
    - **Formaldehyde Training:** lab workers handling 0.1% or greater solution of formaldehyde in the lab  
    - **Respirator Training:** lab workers who are required to wear a respirator (per risk assessment). Voluntary use of a respirator only requires the training upon initial use.

- Summer Fire Extinguisher Training Schedule  
  - Lab ONLY Session: June 7 from 10:30-11:30, Stafford Loading dock (between Jeffords and Stafford Greenhouse)  (http://www.uvm.edu/~esf/class_signup/index.php)  
  - Not posted online yet. Training dates/times: 7/14, 8/25, and 9/23, 10:00-11:00 am. Meet in Billings 165.  (http://www.uvm.edu/develop/)
## Laboratory Related Injuries and Incidents

### Lab-Related Injuries

<table>
<thead>
<tr>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>10/5/15</td>
</tr>
<tr>
<td>11/30/15</td>
</tr>
<tr>
<td>12/07/15</td>
</tr>
<tr>
<td>1/29/16</td>
</tr>
<tr>
<td>2/14/16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>10/22/15</td>
</tr>
<tr>
<td>11/16/15</td>
</tr>
<tr>
<td>3/15/16</td>
</tr>
<tr>
<td>4/19/16</td>
</tr>
</tbody>
</table>

### Lab-Related Incidents

<table>
<thead>
<tr>
<th>Date</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/02/15</td>
<td>Small spill of radioactive material. Survey meter contaminated during spill. Radiation Safety responded and assisted lab in cleanup.</td>
</tr>
<tr>
<td>1/26/16</td>
<td>While bulkling chemical waste, safety staff noticed large beads of mercury pouring into the drum-top funnel. Lab staff failed to properly notify RM&amp;S of additional hazard. RM&amp;S will incur additional cost of disposal due to contaminated flammable waste drum.</td>
</tr>
<tr>
<td>2/17/16</td>
<td>Lab noticed sulfur-like odor in lab in the afternoons, causing health symptoms in some workers. Later determined the cause to be a slipping fan belt on the air supply.</td>
</tr>
<tr>
<td>3/18/16</td>
<td>Unknown crystalline substance found in two small piles on the railing of the stairs. RM&amp;S responded and collected as unknown chemical.</td>
</tr>
<tr>
<td>4/14/16</td>
<td>Student-made prototype device left charging and on. A UVM staff member found it and attempted to turn off before the end of the workday. When disconnecting cord from computer, device started to operate. Emergency shut off was installed but not labeled on the prototype.</td>
</tr>
</tbody>
</table>
Lab Safety Officer Meeting  
April 26, 2016  
9:00-11:00 am  
Silver Maple Ballroom, Davis Center

Major Incidents on Other Campuses

University Wisconsin – Madison Cited by FAA
- 2015 - Graduate Student on related travel
  - 1.89 L of ethyl alcohol and 120 mL of epoxy hardener in checked baggage
  - Proposed fine of $70,050
- 2016 FAA issued $56,000 citation plus training  

OSU cited by EPA
- 2013 inspection of Oregon State University campuses identified containers of chemicals that were not properly identified, managed and/or stored.
- 2016 OSU agreed to $275,000 fine and developing a comprehensive training program.  
  [https://yosemite.epa.gov/opa/admpress.nsf/0/9300cb10aebd5e5085257f7600575492](https://yosemite.epa.gov/opa/admpress.nsf/0/9300cb10aebd5e5085257f7600575492)

Dr. Harran & AAAS
- 2008 – Lab accident in Dr. Harran’s lab leads to death of researcher, Sheri Sangji
- 2012 – Felony charges filed against Dr. Harran and UCLA Board of Regents
- 2014 – Dr. Harran reaches settlement with DA
- December 9, 2015 – Dr. Harran elected as fellow by American Association for the Advancement of Science.
- Dec 23 – AAAS rescinded its election of Dr. Harran citing “Members of the nominating committee recently became aware of a 2008 case involving the death of a technician.
  
  Dr. Harran, the lab supervisor who faced felony charges following the death of Sheri Sangji in a lab accident, was elected on December 9, 2015 as a fellow by the American Association for the Advancement of Science. On December 23 AAAS rescinded that election citing “Members of the nominating committee recently became aware of a 2008 case involving the death of a technician.
  

University of Hawaii - Manoa Researcher Loses an Arm in Lab Explosion
- March 16 – Thea Ekins-Coward, a 29-year old visiting research fellow lost her arm and received other severe injuries in lab explosion while carrying out “extremely common procedure” of transferring, hydrogen, oxygen, and CO2.
- Entire building closed for 2 days for structural analysis.
- “The injured researcher had received general and lab-specific safety training, [EHS] Director Roy Takekawa said.”
- “The lab was last inspected in January and passed all requirements, Takekawa said.”
- “Although the injured researcher was alone in the lab at the time of the incident, others were nearby.”
- March 28 - University of California Center for Laboratory Safety called in to investigate. HIOSH is also investigating.
- April 18 – Fire Department releases investigation report. Cause of explosion due to a digital pressure gauge, used to check tank pressure, was not rated or designed to be in a flammable gaseous atmosphere. Lab mixed hydrogen, carbon dioxide, and oxygen into a lower pressure tank designed/built by injured researcher.
- Injured researcher indicated that earlier in the week, while using a smaller set-up, there was a small internal explosion with evidence of soot and smoke stains. Lab supervisors told her not to worry about it.
- Researcher is receiving workers' compensation benefits  
  [http://cen.acs.org/articles/94/web/2016/04/Spark-pressure-gauge-caused-University.html](http://cen.acs.org/articles/94/web/2016/04/Spark-pressure-gauge-caused-University.html)  
Texas Tech Researcher Injured in Lab Explosion

- March 10 – An undergraduate researcher was injured when a vial exploded.
- “The Student and others in the lab were all wearing appropriate personal protective equipment, and the student suffered only superficial injuries.”
- The cause of the accident is believed to be an omission of [step during a] reaction taken from literature [allowing] the unintentional formation of a diazonium salt that exploded [when collected with a metal spatula].

Summary of Recent Campus Inspections by Outside Agencies

AAALAC Inspection, campus wide

- AAALAC = Association for Assessment and Accreditation of Laboratory Animal Care International
- AAALAC inspections follow the standards that are listed in the "Guide for the Care & Use of Laboratory Animals", 8th ed. (NRC, 2011).

Federal Environmental Protection Agency (EPA) Inspection at Environmental Safety Facility

- Inspector requested documentation about EVERY drum stored in UVM’s hazardous waste facility as well as a list of the tagged waste containers stored inside every drum.
- Lessons Learned: Detailed documentation matters. Don’t question the Inspector’s requests; just answer their questions.
- If a federal or State EPA inspector shows up in your lab, call 656-2560, and have Safety staff paged. We are supposed to escort them through campus labs.

Burlington Fire Dept (BFD) Inspections in the following buildings in the last year:

- Delehanty
- Votey
- Perkins
- HSRF

Things that BFD continues to look for during inspections:

1. 36” clearance in front of electrical panels.
2. Multi-plug adapters (surge protector strips) should not be used as a substitute for a permanent hard-wired outlet or receptacle.
3. Surge protectors and/or extension cords should not be “daisy-chained.”
4. Permanent use of extension cords are not permitted.
5. Storage areas must be organized and orderly to provide a clear exit for occupants as well as firefighter access during an emergency.
6. Remove or recycle excess combustibles (cardboard, paper, etc) on a regular basis.
7. Make sure ceiling tiles are in place at all times.
8. Old coil hotplates and toaster ovens can become fire hazards. Dispose.
9. Sprinklers cannot be blocked.

Nuclear Regulatory Commission Inspection of UVM laboratories using radioactive materials

REMINDERS:

- Doors to labs are required to be closed and locked where radioactive materials are used and/or stored when not under constant surveillance.
- Radioactive Materials that are stored in labs with open doors must be secured within the lab (i.e. locks for Refrigerators/freezers or storage areas) to prevent unauthorized use or removal.
Lab Safety Officer Meeting  
April 26, 2016  
9:00-11:00 am  
Silver Maple Ballroom, Davis Center  

Lab Safety Partners Awards  

Kelly Begin, Obstetrics, Gynecology, and Reproductive Sciences  

Kelly recently accepted the role of Laboratory Research Technician for the entire OBGYN Department. One of her many responsibilities includes the role of lead Laboratory Safety Officer for all laboratories under the management of OBGYN. Her main responsibility is supporting the science and safety of the Bonney Lab, where she has made significant contributions in both managing the laboratory operations, with special attention to safety and assistance with both IBC and IACUC related protocol and SOP development. Other specific safety related accomplishments include managing department training requirements, managing chemicals and equipment, and assisting other department LSO’s organize and store their hazardous chemicals. Kelly has historically been a champion for safety and we would like to thank her for all her contributions.

Bech Evans, Pottery Co-op  

Bech is the new Living and Learning Pottery Studio Coordinator. Upon starting his new role at UVM, he invited Risk Management & Safety staff to help him with a massive cleanup and rejuvenation of the Pottery Co-op after the previous coordinator retired after 40 years of service. Bech insisted on cleaning the lab down to the bones, including scraping the floors and radiators of accumulated clay residues, filling a 20-yard dumpster full of garbage, and removing old toxic glaze waste and debris. Instead of putting everything back the way it was, he purchased new metal, movable shelving to replace wooden shelves, re-designed the way glazes are used, labeled, and stored, and re-designed the way glaze waste is collected. He continues to work with Risk Management & Safety on number of projects including disposal of clay water and an online waiver for new co-op embers.

Stephen Keller Lab Group, Plant & Soil Science  

The Keller Lab group has gone above and beyond what has been asked for lab safety. The lab has created their own new lab worker training checklist. They also give a test to each new lab worker to ensure they understand safety issues and lab-specific protocols before commencing research in the lab. All of this is documented in the lab safety notebook. The groups also consistently consults with Risk Management & Safety prior to purchasing any new lab equipment and keeps their Lab Safety Coordinator, Lee Diamond, aware of personnel changes in the lab.
Jana Kraft and Melissa Bainbridge, Animal Science

The Kraft Lab is consistently a model lab. Jana Kraft, the Lab Supervisor, is very involved with lab work and sets a high standard for safety practices to be adhered to by all lab group members. The lab regularly tests their compressed gases for leaks and have purchased the manufacturer recommended gas sampler for their flammable gases. Melissa Bainbridge, the Lab Safety Officer, delegates safety duties to each lab group member; safety is a joint team effort. Safety is a topic addressed at weekly lab group meetings.

Deborah Neher, Plant and Soil Science

Deb is the department chair as well as a lab supervisor in Plant and Soil Science. Deb worked very quickly and closely with Risk Management & Safety to correct life safety issues after the Fire Department inspection of the Jeffords building. She consistently supports a safety culture in Jeffords and has invited Risk Management & Safety to conduct annual building-specific safety trainings. The training consists of 1.5 hours of presentation, a 30-minute practice lab audit, and a 30-minute emergency response training. She even provides a free lunch for everyone who attends the training! Deb routinely consults with Risk Management & Safety regarding safety issues before getting started with new procedures.