

NC STATE UNIVERSITY

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Date: October 10, 2014

To: Principal Investigators

From: Warwick Arden, Provost
Terri Lomax, Vice Chancellor for Research
Charles Leffler, Vice Chancellor for Finance and Business

Subject: Important Safety Update

On March 23, 2012 we provided you with a letter ([attached](#)) summarizing important university safety practices, backed by federal and state law, that are intended to minimize risk of injury to faculty, students, staff, and visitors and associated liability for you and the University.

We would like to thank you for your efforts to implement these practices on a consistent basis in your laboratories and encourage you to review the March 23 letter to gauge your present level of compliance with these key safety procedures.

Unfortunately, we have been made aware of some inconsistent practice that has resulted in recent student injuries and ask you to focus attention on several key items as you move ahead into the next academic year and beyond. Please assure the following:

- Adequate safety orientation is provided to all new students and staff according to university guidelines
- Appropriate hazard reviews are conducted prior to conducting new experiments or when changes are made to existing experiments
- Appropriate personal protective equipment is utilized when entering laboratories where hazardous materials or equipment is housed. Details on requirements for use of personal protective equipment, recently updated, can be found at <http://www.ncsu.edu/ehs/www99/right/handsMan/worker/ppe/index.html>.

Please review these requirements and implement them consistently in your work areas, and don't hesitate to contact the EH&S Director, Ken Kretchman, with your ideas for improving laboratory safety on campus.

Thank you.

Cc: Safety Committee Chairs
Eileen Goldgeier
Randy Woodson
David Rainer
Ken Kretchman
Deans
Charles Leffler
Research Associate Deans
Instructors
Teaching Staff
Lab Support Staff

March 23, 2012

MEMORANDUM

TO: Principal Investigators

FROM: Terri Lomax, Vice Chancellor for Research
Charles Leffler, Vice Chancellor Finance and Business
Warwick Arden, Provost and Executive Vice Chancellor

SUBJECT: Important Safety Update

We are writing to make you aware of recent developments at UCLA that have important implications for all researchers, and to remind you of your safety responsibilities and the resources the University has in place to help you meet those responsibilities.

On December 30, 2008, a research assistant at UCLA splashed herself with a pyrophoric chemical during an experiment, igniting her clothing and resulting in her death 18 days later. She was not wearing a lab coat at the time. Regulatory agencies fined UCLA for failure to correct unsafe workplace conditions and procedures in a timely manner, failure to require work-appropriate clothing and personal protective equipment, and failure to provide chemical safety training to employees. Last month the Los Angeles County District Attorney's Office filed felony criminal charges for willful violations of occupational safety standards against the University of California and the UCLA chemistry professor of the laboratory in which the research assistant worked. A news account of the case can be found at <http://cen.acs.org/articles/90/i33/California-Deal-Tightens-Lab-Safety.html>

We are asking faculty and supervisors in charge of NC State laboratories to review key University safety requirements, backed by federal and state law, to ensure that safe and compliant practices are followed by faculty, students, staff, and visitors who work in those laboratories.

Safety Leadership. Your leadership is critical in establishing and maintaining a strong safety culture in your laboratory and at NC State. Talk about safety with your students and laboratory personnel. Discuss risks and your own experiences. Ask senior scientists to mentor others and be models of safety awareness and practice. Educate all members of your laboratory about their safety responsibilities. Assure equipment is in good condition. "Experimenting with Danger," a 25 minute video presentation by the U.S. Chemical Safety Board which reviews this accident as well as a recent laboratory accident at Texas Tech and the 1996 fatal exposure of a Dartmouth professor to dimethylmercury is an excellent resource for safety awareness.

http://www.youtube.com/watch?v=ALBWxGik64A&list=UUXIkrOSRTnZ04_lapZozvCCA&index=3&feature=plcp.

Identification of New Personnel and Proper Safety Orientation — All new personnel, regardless whether employee or visitor/volunteer, regardless of duration of stay at the University, requires a proper safety orientation. All persons who will be conducting work should be identified to a department administration contact point and then receive the proper safety orientation from their supervisor. The NC State Manager's Safety Orientation Checklist can be used for this purpose. <http://www.ncsu.edu/ehs/2010/managercklst.html>

Safety Training - In addition to a proper safety orientation, certain tasks require subject matter specific training prior to commencement. The following tool, which compiles a training plan based on tasks, should be reviewed for existing employees as well as those just starting employment. This is also contained in the Manager's Checklist <http://www.ncsu.edu/ehs/2010/managercklst.html>

Pre-Experiment Hazard Assessment — Before new experiments begin, potential hazards associate with the research should be identified and appropriate procedures reviewed. Principal Investigators should remain aware of lab conditions as experimentation progresses and review proposed changes to existing experiments before they occur. Your involvement, involvement from your peers, and/or involvement from EHS should be utilized as necessary. The BOCCE process (Before Operations Commence or Change) can be used for this process. <http://www.ncsu.edu/ehs/2010/BOCCE/>

Chemical Hygiene Plan. Any laboratory occupants who work with chemicals must review the University's Chemical Hygiene Plan <http://www.ncsu.edu/ehs/CHP/CHP.html>. This plan, which is required by the Occupational Safety and Health Administration, describes safe procedures relating to laboratory hazards, as well as your responsibilities for implementing specific procedures. It also provides some general lab safety training.

Laboratory Attire and Personal Protective Equipment. Appropriate work attire and personal protective equipment (PPE) vary by the hazardous materials in use and the work being performed. Basic, hazard-specific University PPE requirements can be found at: <http://www.ncsu.edu/ehs/www99/right/handsMan/worker/ppe/index.html>. Special attention should be given to assure that appropriate lab coats are utilized in labs where hazardous materials are in use. Other standard protective equipment includes solid close toed shoes, safety glasses or goggles, appropriate gloves, and clothing that cover the legs and ankles. It is important that faculty and senior staff provide an example by wearing the appropriate PPE and insist it be used by everyone.

Laboratory Inspections and Self Assessments - EHS inspects campus laboratories and persons with safety plans are also required to perform an annual self assessment. If unsafe workplace conditions or procedures are identified through either mechanism, it is important to correct them—immediately, if possible. When complicated or long term changes are needed, develop a plan, including interim safety measures, in consultation with EHS, and track progress on your open issues until resolution is obtained.

Emergency Information – This information, contained in the Managers Checklist for new employees, should also be reviewed by existing employees. Be sure that you are aware of what to do in an emergency. <http://www.ncsu.edu/emergency-information/>. Also, any injuries or near misses should be promptly reported to supervisors as well as EHS.
<http://www.ncsu.edu/ehs/accidents/accinv1.htm>

Although the forgoing discussion focused on chemical safety, additional requirements pertain to the use of radioactive materials, recombinant DNA, human pathogens, and other potentially hazardous materials and equipment. The EHS Website and staff can acquaint you with these requirements and help you maintain a safe laboratory. EHS staff can also assist you in a variety of other ways, including performing specialized exposure or risk assessments, providing detailed advice on PPE and engineering controls, testing safety critical equipment, and arranging specialized training.

For the past few years, the University Occupational Safety and Health Council have been focusing on bringing department attention to key safety practices. We need your help and commitment for consistent implementation of these practices an integral part of the laboratory culture for all our faculty, students, staff, and visitors.

Please review this information and key practices with your laboratory group, and don't hesitate to contact the EH&S Director, Ken Kretchman (kwkretch@ncsu.edu) or David Rainer (darainer@ncsu.edu), Associate Vice Chancellor Environmental Health and Public Safety, with your ideas for improving laboratory safety on campus.

Thank you. TLL/CDL/WAA/mh

cc: Safety Committee Chairs
Eileen Goldgeier
Randy Woodson
David Rainer
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