

## **Snapshot of Actions subsequent to January 2010 energetics incident (August 16, 2011)**

### **1. TTU ALERT energetics labs: Overhaul of training and safety procedures and policies**

- a. All lab members received immediate safety training from EH&S. All students, post docs, and visiting researchers are required to do both in person safety training and the online version prior to working in the lab, and all are required to repeat the in-person training by EH&S on yearly basis
- b. All students, whether they work for the lab PI or someone else, sign a contract to work in the lab. The contract states that they understand fully and will follow all lab and university rules governing lab safety.
- c. All students and faculty dealing with energetic materials have external training every 6 months (this training has now occurred 3 times)
- d. Faculty and students rewrote all laboratory procedures, with a focus on safety. All new experiments must have a written protocol on record, signed by the PI and experimentalist, prior to commencement. Protocols are reviewed by EH&S
- e. EH&S conducts random checks of the labs (to date, they have not had a single violation that I am aware of)
- f. All Personal Protective Equipment (PPE) needed for this work was replaced with new equipment.
- g. Any student observed to not follow safety rules will be removed from the lab for a 3 day period for a first infringement and asked to leave the group for a second.
- h. The ALERT project instituted yearly on-site safety reviews; ALERT reviewed TTU in May 2010 and again in August 2011.

### **2. TTU Department of Chemistry & Biochemistry**

- a. Re-activation of departmental safety committee, with new focus on regular peer safety inspections of the department's laboratories to begin August 8, 2011. Committee membership has been expanded to include 5 graduate students, 5 faculty members, 5 department staff members, and 3 members of EH&S. Peer inspections of laboratories began in August 2011.
- b. Added personnel with responsibilities for ensuring chemical safety in the department. One staff member was reclassified to increase his duties in the area of chemical safety, and a new PhD-level staff member was hired to focus on safety in instructional laboratories.
- c. All faculty, staff, and students completed mandated departmental-wide training in chemical and laboratory safety; yearly updates
- d. Increased requirements for protective lab gear worn by all laboratory personnel, including students in instructional laboratories.
- e. Revised procedures for responding to accidents and reporting incidents in the department's instructional laboratories. Similar revisions are underway taken for the department's research laboratories.
- f. Particular focus on synthesis labs: Re-vamped protocols & procedures, codes of conduct, training and enforcement of safe practices by all members of lab. Laboratory renovation for

Fall 2011 hire includes space changes that will ensure student desks are separated from synthesis areas by physical barriers.

- g. Cumulative exams, required of all PhD students, expanded to include an exam focused on responsible conduct of research, including laboratory safety and based on the National Academies Press text, "Prudent Practices in the Laboratory".
- h. OVPR sequestered \$117,000 for purchase and installation of 'hands-free' eye wash stations in all teaching laboratories. As of 29 August, asbestos management is complete and prototype units are on order; the latter will be checked for fit before issuing the final orders. 2011.

### **3. TTU-wide**

- a. Working Group reviewed lab safety policies and training (July 2010 report)
- b. University-Wide Research Safety Committee established.
- c. Fields to report safety and RCR activities have been added to the Digital Measures template for Faculty Annual Reports.
- d. Outside peer review panel commissioned to review safety culture (reported May 2011)
- e. Additional full-time chemical safety officer hired in February 2011 by EH&S, to increase capacity for lab safety surveillance and training. A third chemical safety officer position was hired in August 2011.
- f. As an interim measure, the IBC changed review procedures to address use of energetic materials. Subsequently, the IBC has been divided into two committees. The IBC will return to its focus on biological hazards. The new Chemical Safety Committee (CSC), which begins work in September 2011, will focus on energetic materials and hazardous chemicals; Professor Dimitri Pappas has agreed to serve as chair.
- g. EH&S reporting line changed to your office
- h. EH&S has developed a proposal for a central gateway for receipt and management of chemical purchases and chemical inventories.
- i. Two campus wide safety conferences (one for senior TTU leadership; a second for faculty, staff, and students) scheduled for September 8 and 9, 2011,