



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATIONS STATUS CHANGE

SUMMARY

Report:	Texas Tech University Chemistry Lab Explosion
Recommendation Number(s):	2010-5-I-TX-R3
Date Issued:	September 30, 2011 (released October 19, 2011)
Recipient:	Texas Tech University
New Status:	Closed – Acceptable Action
Date of Status Change:	June 1, 2015

Recommendation Text(s):

Revise and expand the university chemical hygiene plan (CHP) to ensure that physical safety hazards are addressed and controlled, and develop a verification program that ensures that the safety provisions of the CHP are communicated, followed, and enforced at all levels within the university.

Board Status Change Decision:

A. Rationale for Recommendation

On January 7, 2010, a graduate student within the Chemistry and Biochemistry Department at Texas Tech University (TTU) was severely injured after the chemical he was working with unexpectedly detonated. The CSB investigated this incident and found systemic deficiencies within TTU that contributed to the incident. Specifically, the physical hazard risks inherent in the student's research were not effectively assessed, planned for, or mitigated; the university lacked safety management accountability and oversight; and previous incidents with preventative lessons were not documented, tracked, and formally communicated.

As a result of these findings, the CSB issued a recommendation to revise the university chemical hygiene plan (CHP) to ensure it includes physical hazards. In addition, the CSB recommended that the CHP be communicated to all levels of the university.

B. Response to the Recommendation

Following the recommendations, TTU retained the Laboratory Safety Institute (LSI)¹ to consult with them on improving their culture of safety at TTU. TTU also formed the Institutional Laboratory Safety Committee (ILSC) to advise and develop policies and protocols for high risk chemicals. In addition to the CSB recommendations, TTU created seven self-imposed recommendations as a result of their internal investigation.

In January 2013, TTU released its revised CHP. Section 10.0 of the 2013 CHP addresses physical hazards as well as potentially energetic materials. TTU requires that all those working in laboratories, studios, or units with large equipment complete the CHP training and assessment. TTU procedures permit that the CHP be updated further to incorporate lessons learned from incidents and near-misses. In April of 2015, TTU released another update of the CHP, demonstrating the continuous improvement of safety policies at TTU.

¹ The Laboratory Safety Institute is a non-profit organization that promotes safety in science education. Their website (www.labsafetyinstitute.org) indicates that they have trained "over 100,000 professionals from secondary schools, universities, colleges, government, industry and more."

C. Board Analysis and Decision

Based on the updated CHP provided by TTU and the accompanying training program, the Board voted to change the status of CSB Recommendation No. 2010-5-I-TX-R3 to: “**Closed – Acceptable Action.**”