



# **Review of Laboratory Safety Training**

**Audit #20-108**

# EXECUTIVE SUMMARY

Laboratory personnel are required to complete “Safety in a Laboratory Environment” training upon initial assignment to a lab, and every three years thereafter. EH&S utilizes its annual inspection process to monitor whether current lab personnel are completing this required training. Principal investigators are responsible for monitoring whether their employees take required training. Given that we were only able to confirm that approximately 70% of lab personnel had taken the required training, increased awareness is needed throughout the research environment to ensure lab safety training is given the priority it is warranted. Additionally, policies related to training require clarification.

Monitoring can be further enhanced with EH&S’ new system, EHS Assistant, that can be used to provide increased transparency and visibility to training compliance rates. Lab personnel training records entered into the system will be visible to Principle Investigators and EHS personnel going forward, allowing them to monitor compliance real-time. Additional best practices have been outlined at page 3 for management’s consideration.

***EHS Assistant will  
add transparency  
to Lab Safety  
Training  
compliance rates***

## **Management Summary Response:**

*Management agrees with the observations and recommendations and has developed action plans to be implemented on or before August 31, 2021.*

This review was performed in accordance with the *International Standards for the Professional Practice of Internal Auditing*. The courtesy and cooperation extended by the Environmental Health and Safety Department, Laboratory personnel, and Human Resources are sincerely appreciated.



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Sherri Magnus, CPA, CIA, CFE, CRMA, CHIAP  
Vice President & Chief Audit Officer  
August 24, 2020

# Best Practices: Lab Safety Training

- Every leader is a proponent of safety and safety education
- Mandatory lab safety training prior to handling chemicals is strictly enforced
- Employees are held accountable for completing safety training in a timely manner
- Guidance is clear regarding who is required to take Lab Safety Training
- Guidance addresses when training must be taken in relation to employee's assignment to the lab
- Policies establish detailed record retention guidelines for employee training



## ***Training is Essential***

*Training is an essential component of any effective safety program. Employee training programs must be designed to ensure that all employees understand and are aware of the hazards to which they may be exposed and the proper methods for avoiding such hazards.*

OSHA.gov

Source: National Research Council's "Prudent Practices in the Laboratory: Handling and Management of Chemical Hazards" and Association of Public & Land-Grant Universities Council on Research Task Force on Laboratory Safety "A guide to implementing Safety Culture in our universities."

## Enhance Monitoring related to Lab Safety Training

**RANKING: MEDIUM**

We could only confirm that 70% of lab personnel had taken the training course “Safety in a Laboratory Environment Training”, as required by policy. The remaining employees either had not taken the course, or their training had expired.

EH&S’ Biosafety Manual and Chemical Hygiene Plan requires “Safety in a Laboratory Environment Training” upon initial assignment to a laboratory work area. This training is required to be renewed every three years thereafter. Employees entering a laboratory environment without training on the hazards to which they may be exposed are at risk of physical harm.

Failure to take this required training, or to renew it when required, may be due to two primary causes:

- Lab personnel are not consistently identified and enrolled in training upon initial hire or assignment to a laboratory work area
- Expired training and recertification is not always monitored

Recommendation: Monitoring of compliance with lab safety training requirements should be enhanced. Specifically, EH&S should leverage EHS Assistant to develop and publish dashboards on training compliance rates. These dashboards should be distributed to the Senior Vice President for Research, departmental leadership and principal investigators on a routine basis. EH&S should then collaborate with Principal Investigators and departmental leadership to identify additional actions necessary to strengthen the culture of safety by ensuring lab safety training requirements are enforced.

Management Action Plan: *EH&S – Laboratory Safety staff will explore the dashboard options with Onsite Systems, EHS Assistant developer, to determine feasibility of implementation. Lab Safety staff will discuss and reinforce lab safety training requirements with principal investigators and departmental leadership during the annual lab inspection period. This recommendation will be completed by August 31, 2021.*

Responsible Executive: Shibu Varghese

Owner: Matt Berkheiser

## Improve EH&S Policies and Procedures

**RANKING: MEDIUM**

EH&S policies and procedures are vague or inconsistent in some instances, resulting in confusion and inconsistent applications of policy. Specifically, the following areas require additional clarification:

- Criteria to identify those employees required to take Lab Safety Training
- Record retention requirements for training, including requirements for terminated employees
- Grace period, if any, to comply with Lab Safety Training requirement, (e.g. prior to exposure to chemicals in the lab, within the first 30 days, etc.)

When the policy is unclear, certain populations of employees, such as students or trainees may not receive training on hazards they may encounter in the laboratory environment. In addition, without clear guidance, training records may not be retained for personnel to evidence that training occurred.

Recommendation: EH&S should enhance published guidance to clarify which employees are required to take Lab Safety Training. Guidance should also outline record retention requirements for training, including requirements for terminated employees. Finally, published guidance, including guidance on the EH&S intranet website should consistently address the grace period to comply with the training requirement.

Management Action Plan: *EH&S – Laboratory Safety staff will update the Chemical Hygiene Plan, Biosafety Manual, intranet site and any applicable documents to provide guidance on the requirements for Safety in the Laboratory Environment Training. The published guidance will be updated by December 31, 2020.*

Responsible Executive: Shibu Varghese

Owner: Matt Berkheiser