

Standard Operating Procedure

Laboratory Chemical Safety Audit (LCSA)

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Environmental Health and Radiation Safety (EHRS) has a comprehensive chemical safety compliance program to assist laboratories that use, handle, or store hazardous chemicals to maintain a safe work environment. This program helps to ensure compliance with regulations and to fulfill Temple University (TU) commitment to protecting the health and safety of the campus community.

LABORATORY CHEMICAL SAFETY AUDITS (LCSA)

As part of the Chemical Hygiene Program (CHP), EHRS conducts annual audits of laboratories with hazardous chemicals to ensure the laboratory is operating in a safe manner and to ensure compliance with federal, state, and university requirements. The primary goal of audits is to identify both existing and potential accident-causing hazards, actions, faulty operations, and procedures that can be corrected **before** an accident occurs. The University through the Environmental Health and Safety-Safety Committee (EHSSC) explicitly authorizes EHRS to order the cessation of any activity that is “Immediately Dangerous to Life and Health” (IDLH) until that hazardous condition or activity is abated.

The LCSA is comprehensive in nature and investigates all key aspects of working with hazardous chemicals. While audits are a snapshot in time and cannot identify every accident-causing mistake, they do provide important information on the overall operation of a particular laboratory. They can also help identify weakness that may require more systematic action across a broader spectrum of laboratories, and strengths that should be fostered in other laboratories.

EHRS utilizes a web based comprehensive safety management system (EHSA) which includes the LCSA checklist to guide the auditor in conducting the audit. Specific audit compliance categories include:

- Documentation & Training
- Chemical Hygiene (ex, chemical storage, review of SOPs, chemical waste, etc.)

- Emergency and Safety Information
- Lab Facilities & Engineering Controls (ex. Chemical Fume Hoods)
- Housekeeping
- PPE
- Signage

PROCEDURES

1. The Principal Investigator (PI) and the Laboratory Safety Contact (LSC), if applicable will be notified via email two weeks in advance of an upcoming audit. The EHRS auditor will include audit preparation information in the e-mail. Appointments for the audit can be made directly with the EHRS auditor as necessary.
2. EHRS will conduct the audit on the scheduled day and time. The EHRS auditor will confirm laboratory specific information with the PI and/or LSC prior to conducting the audit. It is recommended that the PI and/or the LSC walk around with the EHRS auditor during the audit.
3. The EHRS auditor will review any identified findings with the PI and/or LSC once the audit is completed. The PI and/or LSC will have an opportunity to clarify and/or correct any identified deficiencies at the time of the audit.
4. EHRS will issue a LCSA report to the PI and/or LSC e-mail once the audit is completed. The report identifies findings in the laboratory, both “*Violations*” and “*Items of Concern and Informational Items.*” The report will list a date for when a corrective action response is due. All violations must be corrected within the time allocated on the report. Any finding that requires a Facilities management work request for completions must be submitted by the PI and/or LSC. Include in the request that this is a health and safety issue so that it is prioritized by Facilities Management. Once the request has been submitted contact the EHRS auditor so that the EHSA database can be updated.
5. The Principal Investigator (PI) and the Laboratory Safety Contact (LSC) must review the LCSA report along with implemented corrective actions with all laboratory personnel.
6. A copy of the most recent LCSA report should be maintained as part of the laboratory safety records.
7. EHRS encourages laboratories and LSC to conduct their own audits and inspections.

NOTIFICATION AND ACCOUNTABILITY

The compliance program requires that PIs and other responsible parties take appropriate and effective corrective action upon receipt of written notification of audit findings. All findings must be corrected by the due date listed on the LCSA report. Failure to take corrective action within the required timeframe will be subjected to the LCSA escalation process. Refer to the [Laboratory Chemical Safety Audit \(LCSA\) Flow Chart](#) for specific details and information. Depending on the severity of the finding, the EHRS Director and/or Institutional CHO, in consultation with the Environmental Health and Safety-Safety Committee (EHSSC) and the Vice Provost for Research may temporarily suspend laboratory activities until the findings are corrected. In some cases, the PI may be required to provide a corrective action plan to the EHSSC prior to resumption of laboratory activities.