



Subject: Laboratory Inspection Process

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PURPOSE

The purpose of this guideline is to provide a brief overview of the laboratory inspection process that can be anticipated when EHS inspects departmental laboratories. This includes the general process, flow of the documentation, anticipated follow-up for items identified to be corrected, and escalation of items that are not corrected. This document also discusses departments' self-audits of their own laboratories and shops.

The goals of the inspection program are to:

- Maintain laboratory facilities and equipment in a safe, code-compliant operating condition.
- Provide a comfortable and safe working environment for all personnel and the public.
- Ensure that all laboratory activities are conducted in a manner to prevent employee exposure to hazardous chemicals.
- Ensure that trained laboratory personnel follow the CHP.

GENERAL EHS INSPECTION PROCESS

1. EHS notifies the department lab supervisor or other individual who is responsible for the labs to schedule inspections. Alternatively, the lab could notify EHS to schedule a lab inspection. The frequency of the inspections is based on the current lab safety hazard ranking for the laboratory. PI's and other faculty that are responsible for the labs are notified of the date and are welcome to be present during the inspection process.
2. UM-Flint uses the inspection checklists that are based on those used by UM Ann Arbor EHS, but tailored/modified for the potential hazards present in the individual departmental laboratories (e.g. Biology, Chemistry, etc.). This modified form is streamlined to address the primary potential hazards present in those laboratories thus eliminating the review of items that are always not applicable for these labs.
3. EHS asks that laboratories ensure that their lab manual, SOPs, training and inspection records are readily available at the time of the inspection stored in the Lab Safety Binder, this includes but not limited to list of employees working in the lab(s), and proof of training.
4. On the date of the scheduled inspection, EHS meets with the department lab supervisor and/or other laboratory representatives. EHS and the lab supervisor go through the checklist line by line discussing the items as needed for each individual lab space/room. The checklist as well as observations made during the inspections often drives other questions which are discussed such as new or existing equipment and lab activities etc.
5. Any imminent hazards must be corrected **within 2 days** or possibly could require that certain lab processes or procedures may be restricted until the item(s) can be corrected. If needed, the hazardous condition may need to be brought to the attention of the department chair and/or the Lab



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Safety Committee to resolve. If needed, the issue or hazard can be elevated to the Campus Laboratory Safety Leadership Group.

6. Items that are unsatisfactory or need minor changes are corrected at the time of inspection. If the shortfall can't be corrected at the time of inspection, then the department is responsible for correcting the item **within 10 days** or other reasonable time period.
7. Upon completion of the inspection checklists, a copy of the **WRITTEN DRAFT** can be shared at the time of inspection with the department lab supervisor.
8. Within 10 days, EHS will provide a **TYPED DRAFT** version or copy for the department to review. Following their review, the **DRAFT** is finalized and signed by the department representatives and EHS. Copies of the **FINAL** inspection report are provided to the Laboratory Supervisor, Department Chair, Laboratory Director/PI, and the IBC where applicable. In some cases, if circumstances seem appropriate copies are also provided to the Dean.
9. Overview of notable inspection observations are to be included in the Summary of Lab Hazard Rankings spreadsheet kept for EHS records. Hard copies of the written drafts, typed drafts, and final inspection sheets are kept in the EHS inspection files and scanned versions are stored on the EHS department drive. Once a year EHS will send a report to the Dean of each school that details any deficiencies that were not documented as corrected.

RECOMMENDED SELF-INSPECTIONS

Departmental Routine Self-Inspections (CHP Section 8.0)

Each Laboratory Director/Supervisor is required to conduct an annual self-inspection of their lab space. The self-inspection should be conducted by knowledgeable and trained laboratory personnel with Laboratory Director/Supervisor oversight. The focus is on the facility, equipment, operating procedures, training and documentation. This is an excellent opportunity to promote a culture of safety. The supervisor should take a close look at the facilities and operations. They can discuss with workers issues of interest or concern that may fall outside the scope of the actual inspection. More information on self-inspections follows in Section 8.2, below.

Laboratory Self Inspections (CHP Section 8.2)

Self-inspections must be conducted by laboratory personnel and/or the department safety committee. When conducting the required annual self-inspection, interacting with the individuals in the laboratory is important. Laboratory personnel can provide a great deal of information and provide feedback for possible improvements to the laboratory safety program.



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Take notes and make comments on the inspection form to be able to recall the details and describe any problems. Point out problems as they are found and show laboratory personnel how to fix them. If the problem is corrected during the inspection, make a note that it was resolved.

For certain types of equipment in constant use, such as gas chromatographs, daily inspections may be appropriate. Other types of equipment may need only weekly or monthly inspection or inspection prior to use if operated infrequently. Keep a record of the inspection attached to the equipment or in a visible area.

Laboratory Inspection checklists are available from EHS or your departmental Laboratory Supervisor. Typically, they are located in the laboratory specific CHP document binder must be completed at least annually. The record must be maintained in your laboratory specific CHP document binder and available for EHS inspectors to review. **More frequent periodic inspections should be required at the Laboratory Director/Laboratory Supervisor's discretion based on the hazards in the lab.** Inspection records should be maintained for 5 years.

EHS Inspections (CHP Section 8.0)

After an inspection, EHS will prepare a report for the PI/Laboratory Director, laboratory supervisor, Department Chair, and others, as appropriate. The report will include observations noted during the inspection, along with the criteria and/or recommendations for addressing them. All critical deficiencies (one that creates an unsafe condition where there is reasonable probability that if allowed to continue will result in serious physical harm, fire, or significant environmental impact) must be abated within 2 business days. Non-critical deficiencies must be corrected within 60 days after which a copy of the inspection report will be sent to the Chair of the department. Once each year EHS will send a either a report or spreadsheet to the Dean of each school that details any notable observations, corrected deficiencies, unresolved conditions and/or deficiencies that were not documented as corrected.

ESCALATION OF SAFETY CONCERN

It takes all of us working together to maintain a culture of safety in our laboratories, classrooms, shops and research areas. If a safety issue or compliance issue is raised and recommendations for corrective action are provided, the person(s) responsible for safety in the specific lab is required to follow up to correct the unsafe condition. This is typically the PI, Laboratory Director or Laboratory Supervisor. If these issue are not corrected in a timely manner, the issue will need to be escalated in the department and further to the Dean and Provost, as it is determined necessary. The UM **Academic Laboratory and Research Safety Policy** identifies and supports this escalation of unresolved safety matters to higher administrative levels. See excerpts from the revised 2017 policy below:

“Performs inspections of research facilities and operations and reports safety and environmental concerns to the appropriate unit for corrective action. Elevates unresolved issues to University administration, appropriate oversight committees, or appropriate school or college administration as necessary.”



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“The concept is to resolve the matter quickly and within the unit most directly affected; however matters may require escalation up to the chair, unit safety committee, facility manager, or up to the dean’s office for assistance. If the issue cannot be resolved by the unit, the dean can raise the issue to the executive officer level for assistance. EHS will report issues or raise questions to the appropriate administrative authority so that action can be taken to prevent or correct safety concerns. They will issue a notice for correction, with a time line, when serious safety non-compliance is identified. EHS will escalate the matter to higher administrative levels when corrections are not accomplished in a timely manner, or when there is repeated failure to correct less serious non-compliance or safety problems.”

REFERENCE DOCUMENTS

1. University of Michigan – Flint Chemical Hygiene Plan (CHP) 2017
<https://www.umflint.edu/ehs/chemical-hygiene-plan-standard-operating-procedures>
2. Sample inspection forms <https://www.umflint.edu/ehs/lab-safety#tab-lab-inspection>
3. UM-Flint Safety Structure document (revised 10/2017)
4. UM Academic Laboratory and Research Safety Policy