

# Kansas State University

## College of Agriculture

### LABORATORY SAFETY INSPECTION PROGRAM OVERVIEW

The Environmental Health and Safety Quality Office (EH&S) strives to support the core laboratory research and teaching mission of the Kansas State University, College of Agriculture. EH&S conducts a comprehensive laboratory inspection program to ensure that work within laboratories is occurring safely and in compliance with applicable laws, guidelines and University procedures. All laboratories at the College of Agriculture are inspected a scheduled basis, including new investigators at the College.

In addition to a formal annual EH&S inspection, lab staff and/or Principal investigators (PI) shall support practices that provide for self-inspection of laboratories on a periodic basis during those months that classes are in session and/or when research is in process. This proactive approach is necessary to assure the safety of lab operations for all users. It is the responsibility of lab users to maintain a safe and healthy work environment. They are in the best position to know the hazards inherent in their work and implement appropriate controls.

Principal investigators are the key to research safety programs. PIs are responsible to train and supervise lab workers, and to ensure that the conduct of workers and research is compliant with all safety and health standards. The lab safety inspection program aids the investigator in providing education and advice.

The inspection focuses on verifying:

- All workers are aware of the risks associated with the work in the lab, including animal hazards, physical hazards, biological hazards and chemical hazards.
- All workers are trained on how to mitigate those risks, through facility design, engineering controls, safe work practices and protective equipment.
- Workers are complying with regulatory requirements, such as potential exposure to bloodborne pathogens or other infectious materials, and storage, handling and disposal of hazardous chemicals.

Specifically, the lab inspection covers the following items:

- Laboratory security
- Personnel training and documentation records
- Laboratory safety design
- Hygiene and personal protective equipment
- Laboratory practices
- Sharps safety
- Chemical storage, handling, and disposal
- Spill and infection control
- Biological safety cabinets, fume hoods and other containment equipment
- Biological and chemical decontamination and waste disposal
- Animal experiments
- Emergency Preparedness (what to do in the event of an incident)

The lab inspection process begins when the lab inspector contacts the PI to schedule the inspection. It is recommended, but not required, that the PI responsible for the laboratories accompany EH&S on the inspection. If the PI is not available, the individual accompanying EH&S on the inspection should be

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familiar with all of the work occurring in the laboratories. If available, the departmental safety coordinator is encouraged to participate in the inspection. To prepare for the inspection, the EH&S laboratory inspector reviews the PI's Institutional Animal Care and Use (IACUC) protocols, IBC protocols, and EH&S registration workbooks to better understand the research occurring in the lab.

EH&S utilizes a standardized laboratory inspection checklist during the inspection, which is found immediately following these guidelines. The lab inspector visits all of the labs used by the PI, including shared laboratories, such as shared cell culture rooms. The lab inspector communicates all recommendations verbally during the inspection. Concerns that require follow-up may be handled by the lab inspector or forwarded to other qualified EH&S staff.

A written inspection report is sent to the PI and the lab contact shortly after the inspection. As necessary, copies of the reports are forwarded to the department chairperson, departmental manager and the departmental safety coordinator. The report includes a summary of the work that is occurring in the PI's labs and on the PI's research protocols. The report includes a summary of the recommendations for improved lab safety. "Critical action items" generally include items related to regulatory requirements such as biological and hazardous chemical waste disposal, safe handling of biohazards, work with animals and handling of safety equipment. "Opportunities for improvement" include other items that may not be an immediate safety concern, but warrant further examination by the PI. The report includes a completed copy of the inspection checklist.

On occasion, extremely critical safety hazards are identified on laboratory inspections. In such cases, EH&S will perform a prompt follow-up, and seek or oversee corrective action. If a condition is identified as posing a severe imminent hazard to safety or health, the operation can be suspended by EH&S and the University's administration after consultation and approval by the College of Agriculture Dean.

After the inspection, the lab inspector may return to the laboratory to verify that recommendations have been implemented and also provide additional follow-up for special projects, such as the introduction of acutely hazardous materials. If the scope of the laboratory work changes significantly as a result of new chemicals, EH&S will conduct another inspection.