Duke Occupational & Environmental Safety Office

Lab Safety Startup Procedures

Below are instructions containing detailed information about how to start a lab at Duke and how to be compliant with the Occupational & Environmental Safety Office (OESO) Lab Safety Program. The last page has a checklist of items required to complete the startup process.

Initial Startup Actions

1. Fill out and submit the Notice of Lab Occupancy Qualtrics survey. Once submitted, the Lab Startup Coordinator will reach out to you and others as indicated on the notice. In the meantime, any questions can be emailed to labsafety@duke.edu.
    a. This survey requests the type of work the lab will be doing. None of the sections about hazards needs to be exact at this stage. The information given is to help the Lab Startup Coordinator determine which resources to provide.
2. Register your recombinant DNA work with the Institutional Biosafety Committee (IBC) by completing the Recombinant DNA (rDNA) Registration Form.
    a. If you are unsure if your work needs to be registered, the IBC has developed a 5-minute web-based rDNA survey that will help determine if your work must be registered or not. This survey is developed to ensure that all investigators understand their responsibilities for registering any covered rDNA research.

Documentation Requirements

The items below are not required to complete before your startup meeting, but it is recommended that you begin the process. The documents can be emailed to the Lab Startup Coordinator or via labsafety@duke.edu as they are completed.

1) Complete your Online Training. All Principal Investigators (PIs), lab staff, unpaid lab workers, and students need to take the courses. Let the Lab Startup Coordinator know if anyone is missing training from their profile.
    a. Fire/Life Safety – *required for all*
    b. Lab Safety General – *required for all*
    c. Hazard Communication for Lab Personnel Orientation (or Hazard Communication for Lab Personnel Update if they have already taken the orientation) – *required for all*
    d. Biosafety Level 2 and BBP for Lab Workers – *Required if working with human blood, tissue, or cell lines (even immortal lines) or working with other biological materials at BSL-2.*
    e. Shipping Biological Materials – *Required for anyone who prepares shipments (and/or their documentation) for packages containing biological materials or dry ice.*

2) For working with **chemicals,** you will need to fill out a Lab-specific Chemical Hygiene Plan that includes:
    a. A *chemical inventory,* or at least a list of chemicals in your lab that are particularly hazardous or high risk. OESO has created a GHS Lookup Tool, which helps identify the hazards associated with chemicals. Instructions on how to use this tool can be found on OESO's Particularly Hazardous Substances webpage.
    b. *Lab-specific Standard Operating Procedures (SOPs)* for all chemicals requiring lab-specific SOPs.
        i. The GHS Lookup Tool should be used to identify which chemicals require a lab-specific SOP. Enter the CAS numbers for each chemical in the lab into the tab named "Multiple CAS Lookup". Then, use the "Sort-by-Action" button to bring the Action A and B chemicals that require lab-specific SOPs to the top of the sheet (see the "Action" column).
        ii. OESO has developed many pre-filled, customizable Guidelines (SOPs) for commonly used lab chemicals on the Chemical SOPs and Guidelines webpage. If a pre-filled Guideline isn't available from OESO, use the SOP Creation Guidelines and SOP template to create your own lab-specific SOP. The hazard information from the GHS Lookup Tool and supplier's SDS can be helpful references.
    c. *Chemical High-Risk Procedures*
    d. *Emergency Response* instructions
3) If **chemical waste** will be produced, carefully review the Chemical Waste Policy, information on how to properly dispose of chemical waste, and New User Training Videos for Chemical Waste Disposal.
4) For working with **biological materials**, if you are ONLY using Human Tissues/Products, use the standard Guideline – Human Specimens (blood, body fluids, cell lines). For all other biological materials that require working at BSL-2 or higher, use the Biosafety SOP template. The completed document should be emailed to biosafety@duke.edu for approval.
    a. OESO has created a Biological Materials Reporting System (BMRS) as a means for laboratories to determine which biological materials require SOPs approved by the Biological Safety Division.
5) Review the Lab Safety Evaluation Checklist. This document details the different questions that the evaluator will ask during a typical Lab Safety Evaluation.
6) Complete any outstanding requirements from Employee and Occupational Health and Wellness (EOHW) such as documenting Hepatitis B vaccine compliance (if working with human specimens), or completing the Animal Handler Health Review (if working with animals).
    a. These items should be listed under Online Training for each individual.
7) Contact OESO Radiation Safety for any questions regarding the use of **radiation** and to complete an Application for Radioactive Material Authorization or Laser Registration form for Class 3b or 4 lasers.

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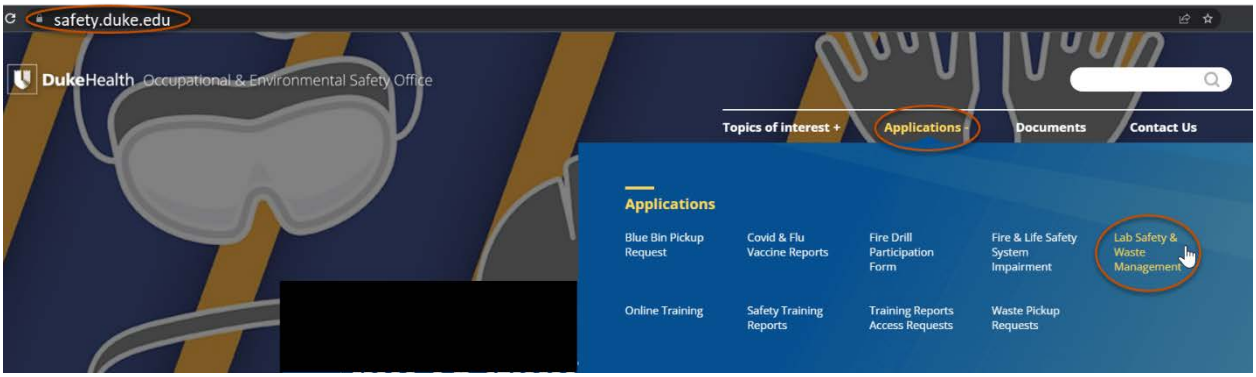
Setting up your profile in Lab Safety & Waste Management

The items below are not required to complete before your startup meeting, but it is recommended that you begin the process.



Log into the Lab Safety & Waste Management System (or access via safety.duke.edu, as shown in the screenshot above). If you do not already have access, send an email to the Lab Startup Coordinator or labsafety@duke.edu.

1) Review your **PI summary**.
2) Select **Lab Contacts** to update the list of Lab Contacts and Lab Personnel.
    a. **Lab Contacts** are people in the lab who will have safety responsibilities such as submitting waste, or serving as the Lab Coordinator or Chemical Hygiene Officer. They will have access to the Lab Safety and Waste Management System.
    b. **Lab Personnel** are those who do not have safety responsibilities, such as undergraduate students, graduate students, post-docs, or research technicians. They will not be able to log in to the Lab Safety and Waste Management System.
    c. Click "View" beside each lab member to view **online training records** for each person in the lab. Report inconsistencies in training requirements to the Lab Startup Coordinator. Remind everyone in the lab to complete their overdue training.
3) Select **Manage Rooms** to "Edit Rooms" (add all of your lab rooms and shared spaces)
4) Select **Chemical Reporting** to submit your inventory of Targeted Chemicals and answer questions related to the Toxic Substances Control Act (TSCA). Targeted Chemicals are chemicals of interest to the Department of Homeland Security and the Environmental Protection Agency.
    a. *Submitting the Targeted Chemical Report is required for every lab, every year, even if no targeted chemicals are used or stored.*
5) Select **Biological Reporting** to submit a report of the biological materials that are used or stored by your lab in our Biological Materials Reporting System (BMRS).
    a. *Submitting the Biological Materials Report is required for every lab, every year, even if no biological materials are used or stored.*

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Checklist

Complete the following items and email any documents as they are completed to the Lab Startup Coordinator or labsafety@duke.edu. Please send Word or Excel versions of the documents to facilitate review.

- ☐ Complete the Notice of Lab Occupancy Qualtrics survey
- ☐ Register your recombinant DNA work with the Institutional Biosafety Committee (IBC) by completing the Recombinant DNA Registration Form
- ☐ Complete your Online Training
- ☐ Fill out your Lab-specific Chemical Hygiene Plan and review the Chemical Waste Policy
- ☐ Compile your lab's Chemical Inventory/GHS Lookup Tool
- ☐ Create Chemical SOPs for Particularly Hazardous/High-Risk substances
- ☐ Create Biosafety SOPs for all biological materials that require working at BSL-2 or higher and are not covered by the Guideline – Human Specimens (blood, body fluids, cell lines)
- ☐ Update your Lab Safety and Waste Management System (LSWMS) profile
  - ☐ Add Lab Contacts and Lab Personnel
  - ☐ Check if everyone is flagged for the correct online training
  - ☐ Add all lab rooms and shared spaces
  - ☐ Submit annual Targeted Chemical Report (LSWMS > Chemical Reporting)
  - ☐ Submit annual Biological Material Report (LSWMS > Biological Reporting)
- ☐ *If applicable,* contact OESO Radiation Safety
- ☐ *If applicable*, complete any requirements from EOHW
- ☐ *Optionally,* review the Ergonomics resources