Lab Safety Officer Orientation Packet

Welcome to the Lab Safety Committee!

As a lab safety officer (LSO) you are a part of your lab's quality team. Your role is to improve the lab's safety culture using education, training, and coaching to prevent incidents and injuries in the lab.

As an LSO you are required to:

- Attend all lab safety committee meetings or send a representative if you are unavailable.
- Serve as a liaison between the safety committee and your lab.

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- Laboratory Safety Orientation Checklist
- Online Lab Safety Tools
- Online Safety Training
- Harvard Training Portal User Reference
- Assessment & Inspection Management System (AIMS) User Reference
- Certify Open Corrective Actions
- Complete PPE Assessments
- LabPoint Door Placard Sample
- Hazard Communication Container Labeling Guide
- Employee Accident Reporting Online Instructions
- Chemical Waste SAA Inspection

ADDITIONAL RESOURCES:

- **EH&S Staff Directory** - Please visit this page [https://www.ehs.harvard.edu/node/8626](https://www.ehs.harvard.edu/node/8626) for an up-to-date list of Lab Safety Advisors and Biosafety Officers by Harvard schools/units. If needed, you can print out a copy of the webpage for your EH&S contacts.
- Biological Sharps Disposal Guide
- Non-Biological Sharps Disposal Guide
- Chemical Waste SAA Posting
- DRW – Disposal Restricted Waste
- Lab Chemical Storage Guide
- Lab Common Items Disposal Guide
- Lab Ergonomics Tri-Fold
Laboratory Safety Orientation Checklist

Laboratory Safety Training Review by Lab Training Manager (PI or Designee)

NOTE: The PI may authorize another person to operationally fulfill the role, but it remains the Principal Investigator’s responsibility to ensure that all personnel in the lab have the necessary skills (through training and experience), maturity and supervision to work safely in a lab with hazardous processes or substances. Consider the varying maturity and experience levels when orientating a person to the lab and when determining the appropriate assignments and supervision and training required. When considering personnel under the age of 18, see the University’s Minors on Campus Policy http://youthprotection.harvard.edu/minors-labs-policy.

☐ Add researcher to lab roster in PeopleSoft https://hrapps.cadm.harvard.edu/psftprd/signon.html
Review the individual’s research program, identify core and specialized training requirements. Show researcher how to access training in the Harvard Training Portal: https://trainingportal.harvard.edu
☐ Exception: those who will work in a lab for less than a week under direct supervision or others who will not be working with or adjacent to hazardous materials, processes or equipment.

☐ Review laboratory-specific safety training/SOPs
For highly hazardous materials, equipment, or processes that pertain to the individual’s research program (may include COMS protocols, radiation registration, etc. in addition to internal lab documents on carcinogens, etc.)

Laboratory Orientation

Review the following safety features:

☐ Lab Emergency Response Guide and location of Emergency Numbers
☐ Emergency evacuation route and meeting area
☐ Location of fire extinguishers and closest fire alarm pull station
☐ Location and proper use of safety showers and eyewash stations
☐ Location of Safety Data Sheets in lab or online (ehs.harvard.edu/safety-data-sheets-sds)
☐ Location of Chemical Hygiene Plan in lab or online (EH&S Safe Chemical Work Practices web page)
☐ Location of accident report filing process (ehs.harvard.edu/programs/accident-reporting-investigation)
☐ PPE policy, lab’s PPE assessment report and location of required PPE (gloves, safety glasses, lab coats, etc.)

Yes N/A

☐ □ Location and review of Exposure Control Plan (EH&S Bloodborne Pathogens web page)
  If yes, complete Hepatitis B Vaccination Offer form
  ☐ □ Waste management (see ehs.harvard.edu/programs/lab-waste-management) (check all that apply):

☐ □ Location and proper use of highly hazardous materials, equipment, or processes
☐ □ Location and proper use of chemical fume hoods or biosafety cabinets or both
☐ □ Location and use of building spill cabinets or lab spill kits or both

Trainee Information & Signatures

☐ Undergraduate ☐ Post Doctoral Fellow ☐ Intern ☐ Visitor
☐ Graduate Student ☐ Staff ☐ Core Customer ☐ Vendor

Trainee Name:_________________________Signature:_________________________

Orientation given by (PI/designee):_________________________Signature:_________________________

Laboratory/Core Name:_________________________Date:_________________________

cc: Principal Investigator: A copy of this form must be kept on file by the laboratory.
cc: Laboratory Director/Executive Director/Research Operations Manager: A copy of this form must be kept on file by the Department.
# Online Lab Safety Tools

http://ehs.harvard.edu/tools

## INSPECTIONS

<table>
<thead>
<tr>
<th>Inspection Type</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Inspection (if applicable)</td>
<td>Annual</td>
</tr>
<tr>
<td>EH&amp;S Inspection</td>
<td>Annual</td>
</tr>
<tr>
<td>EH&amp;S Biosafety Inspection (COMS-registered labs)</td>
<td>Annual, may coincide with EHS Inspection</td>
</tr>
<tr>
<td>Laser Equipment Certification</td>
<td>Every two years</td>
</tr>
<tr>
<td>Fume Hood/Biosafety Cabinet Certification</td>
<td>Annual</td>
</tr>
<tr>
<td>Eye Wash Stations</td>
<td>Weekly</td>
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<tr>
<td>Emergency Showers</td>
<td>Annual</td>
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</tbody>
</table>

## HAZARDOUS WASTE

<table>
<thead>
<tr>
<th>Inspection Type</th>
<th>Frequency</th>
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</thead>
<tbody>
<tr>
<td>Safety Officer SAA Inspection</td>
<td>Weekly</td>
</tr>
<tr>
<td>EH&amp;S Quarterly SAA Inspection</td>
<td>Quarterly</td>
</tr>
<tr>
<td>EH&amp;S 98% SAA Inspection</td>
<td>Monthly</td>
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</table>

## EHS RESOURCES

<table>
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<th>Resource Name</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>Chemical Hygiene Plan</td>
<td>ehs.harvard.edu/programs/safe-chemical-work-practices</td>
</tr>
<tr>
<td>Standard Operating Procedures (Templates)</td>
<td>ehs.harvard.edu/programs/safe-chemical-work-practices</td>
</tr>
<tr>
<td>Laboratory Chemical Safety Guidelines</td>
<td>ehs.harvard.edu/programs/safe-chemical-work-practices</td>
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## ONLINE TOOLS

<table>
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<tr>
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<td>Requirements: Annual or when work performed in lab changes Lab Roster: New researcher arrival or departure</td>
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<tr>
<td>Assessment &amp; Inspection Management System (AIMS)</td>
<td>PPE Assessment: Annual or when work performed in lab changes</td>
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<tr>
<td>LabPoint Door Placards &amp; Inventory</td>
<td>Annual or when contacts or work performed in lab changes</td>
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</table>

## MORE TOOLS

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<th>Location</th>
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<tbody>
<tr>
<td>Laboratory Labels &amp; Stickers Library</td>
<td>ehs.harvard.edu/laboratory-labels-stickers</td>
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<tr>
<td>Chemical Waste Pickup &amp; Supplies Request</td>
<td>ehs.harvard.edu/Chemical-Waste-Pickup-Form</td>
</tr>
<tr>
<td>Safety Data Sheets</td>
<td>ehs.harvard.edu/safety-data-sheets-sds</td>
</tr>
<tr>
<td>Chemical Waste Labeling Tool</td>
<td>ehs.harvard.edu/chemical-waste-labeling-tool</td>
</tr>
<tr>
<td>Training Requirement</td>
<td>Course</td>
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<td>-------------------------------</td>
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<tr>
<td>Chemicals</td>
<td>Lab Safety</td>
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<td></td>
<td>LAB100</td>
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<td>Biological materials</td>
<td>Biosafety</td>
</tr>
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<td>Radioactive materials</td>
<td>Radiation</td>
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<td></td>
<td>RPO101</td>
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<tr>
<td>Lasers</td>
<td>Laser Safety</td>
</tr>
<tr>
<td>New Laser Instruments</td>
<td>RPO102/RP0104-1</td>
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</table>
Managing Lab Rosters in PeopleSoft

This will help Principal Investigators (PIs) and Lab Roster Managers perform the following tasks:

- Access PeopleSoft Lab Roster Management
- Manage Lab Rosters
- Manage Lab Training Requirements
- View and Maintain the list of Roster Managers and Personnel Associated with a Lab

Accessing PeopleSoft Lab Roster Management

1. Before accessing PeopleSoft Lab Roster Management, you must know your Harvard University ID number and have an active HarvardKey. For information on claiming your Harvard Key, visit http://reference.iam.harvard.edu/.
2. Only Principal Investigators and their Roster Managers can log into this portion of PeopleSoft. To log into the Lab Roster Application, visit https://hrapps.cadm.harvard.edu/psftprd/signon.html and log in.
3. From the Main Menu:
   - Select Self Service under the left navigation menu.
   - Locate the Labs Roster folder and select the Manage Roster link.
4. The labs are listed by PI and Department. Click on the link for the lab roster you want to manage. If you manage training for a lab and do not see the Labs Roster folder or the lab listed, please work with your PI to gain access to the system as a Roster Manager.

*Note: The PI for the lab is listed at the top of the Lab Roster screen. (In the Harvard Training Portal, the PI will be listed as “Alternate Manager”.)
Managing Lab Rosters in PeopleSoft

Adding Trainees to a Lab Roster
1. Select the **Lab Roster** tab
   - Click on any plus sign “+” in the left column of the lab **Roster** to add a new row to the roster. Click on the search icon. A pop-up window will open allowing you to search by HUID, first name, last name, or other data. Fill out one or more of the search fields and click on the **Look Up** button. Select the trainee from the search list, and they will be added to the new row in the roster. After you have added all new roster members, click on the **Save** button.

Deleting Trainees from a Lab Roster
1. Select the **Lab Roster** tab
   - Click on the minus sign “-” at the end of the row listing the person you want to remove from the lab roster. The entire row with the person information should no longer appear on the lab roster.
   - Click on the **Save** button.

*To download your roster, click on the spreadsheet icon in the upper right corner of the Lab Roster screen. You will be given the option to save or open your roster as an Excel worksheet.

Managing Training Requirements
1. Click on the **Training Areas** tab for the selected lab roster.
   - The training area lists four core trainings mandatory for many staff members in Harvard labs.
2. Select a course from the drop down under **Training Area**.
   - To add or remove training for the **entire roster**, and click on the plus “+” or minus “-” at the end of the row. Every person listed on the **Lab Roster** (first tab) will be assigned the courses you add to the Training Area. Trainees will be able to view and manage training in the Harvard Training Portal including: launching web-based training modules, registering for instructor-led training classes, accessing training history, and printing certificates for completed trainings. Managers can assign additional trainings to roster members in the Harvard Training Portal.
Adding Associated People

There are 4 “Types” of Associated People; Lab Director, Lab Safety Officer, Non-Laboratory Staff and Proxy. Click on the Associated People tab.

1. Associated People are connected to the lab, but will not fall under its training requirements. Associated People data will stay in PeopleSoft and will not move over to the Harvard Training Portal. To add an associated person to the Roster Manager list, click on the “+” sign, select the appropriate Type from the drop down list, click on the search icon to open the pop-up window. Enter the search information, click on the Look Up button, and select the person you want to add to the list.

2. If you add a person as a Lab Director, Lab Safety Officer or Proxy, they will be granted Lab Roster access. This is not immediate, but the names you enter under Associated People with these roles will show on the Roster Manager list within 24 hours.

3. Non-Laboratory Staff can be used for people who are associated with the lab but do not require safety training. They will not be added as Roster Managers, will not appear in the Harvard Training Portal, and are only tracked in PeopleSoft.

4. When you are done adding Associated People, click on the Save button.

Removing Roster Managers

1. Click on the Associated People tab.
   - Click on the minus sign “-” at the end of the row listing the Associated Person to be removed.
   - When you are done, click on the Save button.

Viewing Roster Managers

1. Click on the Roster Manager tab for the selected lab roster. Anyone who can manage the roster in addition to the PI will be listed here. To add other Roster Managers, follow the instructions for “Adding Associated People”.
   - The PeopleSoft security data is updated daily. Please allow 24 hours for Associated People to be added or removed from the Roster Manager tab.
   - In the Harvard Training Portal, Roster Managers will have the designation “Authorized User.”
   - If you cannot remove a Roster Manager, please email TrainingPortalHelp@harvard.edu
Managing Corrective Actions: A User’s Guide

This guide describes how to manage and respond to corrective actions in the Assessment & Inspection Management System (AIMS). Other topics described include user designations, email notifications and viewing Inspection reports.

User Designations

Inspection reports and corrective actions can be accessed and managed at any time by registered users by clicking Corrective Actions under the Findings & Reports section of the left side menu.

Your User Designation can be found at the top, right corner of your login homepage, next to your name.

- **General User** can only access and manage those corrective actions assigned directly to them in result of an inspection.
- **Area Managers** can view and manage all corrective actions that have been assigned to anyone within their “areas” designated by their user permissions. An “area” can be designated as a group, school, department, or facility. To modify Area Manager permissions, contact lab_safety@harvard.edu.
- **Inspectors** conduct inspections and can view and manage all corrective actions as an Area Manager.
Email Notifications of Completed Inspections

Email notification will be similar to that featured below:

Upon inspection, inspector will assign a responsible person within each required role category (EHS, Facilities, or Lab/Core).

If a corrective action results from an inspection, the responsible person for the assigned category will receive an automatic inspection notification email. This email will contain one link to Inspection Reports and another link view/respond to Corrective Actions.

Individuals who have been designated to receive automatic inspection notifications, but have not been assigned responsibility for corrective actions, will only be provided with a link to inspection reports.

Corrective Actions Homepage Overview

Corrective Actions homepage is located under the Findings & Reports section on left side menu
- Select Show: Mine to display corrective actions assigned to you
- Select Show: All to display all corrective actions in area (option not available to general users)
- To generate an Excel report of all correction actions, select Export Action Report button
- To generate an Excel report of all correction actions displayed on screen, select Excel button
To Respond to or Manage Corrective Actions

1. Go to Findings & Reports > Corrective Actions > Select orange “Manage” icon next to listed Corrective Action

2. At pop-up window, review details and select an action button to respond to your Corrective Action

Available are the following 5 response/action buttons:
- **Comment** – to leave any comments
- **Photo** – to post any photos relevant to the corrective action
- **Reassign** – to reassign corrective action to another responsible party
- **Extend** – to request a deadline extension
- **Complete** – To certify/complete

AIMS Helpdesk: lab_safety@Harvard.edu

To View Short Inspection Reports

1. Go to Findings & Reports > Corrective Actions > Select “Report” icon

2. To view full report, select “View Full” action button

3. To export report into a PDF, select “Export” action button

**Short Report Features:**
1. Access to view previous reports
2. Toggle to view full report
3. Ability to generate report in a PDF
4. View lab roster and personnel role assignments
5. View Inspector notes
6. View corrective action assignments, notes
7. View corrective action due and completion dates
To View Full Inspection Reports

### Full Report Features:
(for each finding)
1. Each finding (set of question, response and corrective actions) is separated by alternating background colors.
2. Inspector notes (if applicable).
3. Assigned role and corrective action statement (if applicable).
4. Assigned person and due date for corrective action.
5. Person who completed action, completion date, and any related notes.
6. Any files uploaded by inspector (e.g. photos).
7. Additional Question Resources, if applicable.

**Items Provided** and general **Files** attached to report appear at end of Full Inspection Report.

To View Summary Reports

1. **Open Summary Reports**
2. **Number of total open corrective**
3. **Group by Facility**
4. **Filter reports by Template.**
5. **Select the facility**
6. **To view details of report.**

When all corrective actions are finalized, the inspection is closed and its report saved under the **Summary Reports** section.

**TO ACCESS A REPORT**
1. Go to Findings & Reports > Summary Reports
2. View details, select magnifying glass next to appropriate inspection date.

**NOTE:** Take remaining steps to filter list of reports if necessary.

3. **Group by Facility.** Report list will automatically sort by facility in alphabetical order.
4. **Filter reports by Template** (e.g. filter by General Lab, etc.).
5. **Select facility name from dropdown menu**
6. **Look under Actions column for number of total corrective actions.**
Assessment and Inspection Management System (AIMS)

Online Safety Tool

Conducting Laboratory PPE Assessments: A User’s Guide

In accordance with Lab PPE Policy issued by University Provost and Executive Vice President, a PPE assessment is required to be conducted annually, or sooner whenever new, unique, or higher-risk activities or equipment are introduced to the laboratory.

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Access AIMS

- To log into AIMS, go to https://labcliq.com/harvard.cfm
- Enter your HarvardKey credentials (username and password)

-ATTENTION-

- Successful login depends on HarvardKey (email) credentials, and therefore the AIMS user profile must have the user's current HarvardKey.
- If you change your Harvard Key, please notify lab_safety@harvard.edu.
- To troubleshoot or request changes to your Harvard Key, please contact HUIT at 617-495-7777 / ithelp@Harvard.edu.

Start/Update Assessment

1. Select Start/Update PPE Assessment tab from PPE section on left-side menu.
2. By default, your research lab group will be displayed. If you work with multiple groups, select the intended group for this assessment from dropdown menu or by typing group name in search field.
3. Select Begin Assessment.

If need to add/delete rooms in your group, contact AIMS Helpdesk at lab_safety@harvard.edu
**Start/Update Assessment (continued)**

4. Select **Continue** to update an open (in-progress) assessment.
5. Select **Copy** to use a previous (completed) assessment as a basis for your update (to view previous assessment, select PDF icon).
6. Select **Start New Assessment Without Copying** to start a completely new assessment from the very beginning.

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**Conduct Assessment**

1. Select a **Category** to narrow down activities list.
2. Check appropriate box(es) to identify activity(ies) performed by your research group.
3. For each activity you selected:
   a) Uncheck/check **locations** (rooms) where activity occurs
   b) Add any standard **PPE** based on policy specific to your lab (or department or facility) from dropdown menu
   c) Use comment box to add non-standard PPE or explain any modifications to minimum university-wide PPE
4. Select **Save Category** to add or update other category activities.
5. Select **Save All Categories** to save entire assessment and proceed to upload attachments (e.g., protocols), add notes, or review assessment.
Submit Assessment for Review/Approval

1. Select Review Assessment tab on far right, top navigation bar
   - confirm locations, activities and PPE identified during assessment
2. Select Submit for Review tab to notify your PI that assessment is ready for approval
   - This action cannot be reversed once completed. Please review your assessment carefully before submitting.

The following action buttons are also available
- Cancel Assessment - to delete the assessment or redundant draft
- View/Print Draft - to generate a PDF of assessment (e.g., to show your PI)

If your PI has delegated you to approve assessments online and you have captured your PI’s signature on the printed assessment copy, follow approval instructions listed on page 9.

Continue Assessment

1. Select Continue PPE Assessments tab from left-side or top navigation bars
2. Check Status
   - “Open” means that an assessment already exists in a draft format
   - “Pending Approval” means an assessment has been conducted and submitted to PI (or designee) for approval
3. Select appropriate response action icon / button
   - For Open status [for draft assessments], response options are Continue (green arrow), Cancel (red X), or Print (PDF image)
   - For Pending Approval status assessments, response options are Review (blue clipboard) and Print (PDF image)

If your PI has delegated you to approve assessments online and you have captured your PI’s signature on the printed assessment copy, select Review and follow approval instructions on page 9.
**Approve / Finalize Assessment**

1. Select **Continue PPE Assessments** tab
2. Select **Review** icon/action button
3. Select **Finalize Assessment** to approve assessment

Also available are the following response action buttons:
- **Reopen Assessment** - to perform further changes to assessment, which changes the status from “Pending Approval” to “Open” (or draft)
- **Discard Assessment** - to delete assessment
- **Cancel** - to return to previous screen

**Respond to Pending (due or overdue) Assessment**

1. Select **Pending PPE Assessments** tabs from left menu or top navigation bars

   ![Screen capture](image)

   **Note:** Assessments will show as pending starting 30 days before annual due date

2. Select **Begin** action/icon button to pull up a list of upcoming due or overdue assessments for you to update by annual due date.

   ![Screen capture](image)
View or Print Completed Assessment Reports

1. Select **View Past Assessments** tabs from left-side menu or top navigation bars
   - Default view displays assessments completed within past year
2. To customize **date range**, type in start and end date search fields
3. To sort list, select the up/down arrows icon listed in the desired column heading
4. To view assessment, select green **"View"** action/icon button
5. To generate a **PDF**, select **"Print"** PDF action/icon button
6. To view more search options (e.g. assessor, department, group, PI), select yellow funnel **"Filters"** button
Test/Sandbox Building, Rm: 001

Emergency: Contact University Operation Center
617-495-5560

Room Contacts:
Name                        Phone (Day)  Phone (Night)
• Jackie Kerr (PI)          (617) 432-5270  (617) 631-2514
• Joana de Sousa (LSC)      (617) 432-1720  Call Emergency # Above
• Chiu-Oan Ngooi            (617) 384-8264  Call Emergency # Above

Room Use: Laboratory - Research

Caution
X-Ray Equipment

Caution
Radioactive Materials

BL 3

rev date: 10/05/2018
HAZARD COMMUNICATION CONTAINER LABELING GUIDE

A label identifying the contents and providing a hazard warning will be affixed to all containers of hazardous chemicals which could pose a physical or health hazard to exposed employees in the workplace.

At a minimum, the information on a container label must include (if applicable):

- A brief description of the substance
- The main ingredients of the substance
- The kind of personal protective equipment you should wear while handling the substance
- A description of each major hazard associated with the chemical (See Below).
- Directions on how to use the substance safely
- First aid information
- The procedure for storing the substance safely
- The manufacturer’s name and address
- The procedure for disposing of the container

NFPA 704 LABEL

The National Fire Protection Association (NFPA) has developed a numerical system for the identification of fire hazards posed by various materials. These diamonds can be found on certain labels.

GHS PICTOGRAMS AND HAZARDS

Common major hazard classifications for chemicals. These are required on labels to alert users of potential exposures.
1. Open any Internet browser and type www.pmacompanies.com on the URL address line.

2. Arrive at the PMA Companies’ Home Page. Click “Report a Claim” on the upper left side of the page.

3. Once on the Claim Landing page, click “REPORT A CLAIM”.

As of January 1, 2017
4. Type your **User Name** and your **Password** (listed at the top of Page 1 of this document) in the spaces provided on the Log In Screen (pictured below). Click “**OK**”.

After a few seconds, you will see the New Claim Entry main screen.

5. Choose your accident state.

6. Enter the employee’s Harvard University ID (HUID).

7. Click on the employee’s name.

8. Enter the claim information in the boxes provided. Move between sections by clicking the blue headings. **Required fields are blue.** You must complete all required fields before you can submit the claim.

   Dates: Use the format mm/dd/yyyy, for example 06/20/2016. Telephone numbers: Do not type the dashes.
9. On the last page, check the Record Only box only when the claim is for informational purposes. For Workers’ Compensation, this means an injured worker who will not be seeking medical treatment.

10. Type any additional information about the claim into the Comments box. Stick to the facts of the case only.

11. Click the “Send Email Copy” and type your email address in order to receive a copy the information you entered after you submit the claim. Add additional recipients to the list by typing a comma and then adding the next email address.

12. Click “Submit” to submit the claim. You will receive a claim number immediately. Keep this claim number for your records.
13. Attach reports, photos or other documents with the “Attach File(s)” button. Select files on your computer and then click “Upload File(s)”. Common file formats like .pdf, .doc, .xls, .mov, .mpg can be added, in sizes up to 50 megabytes each. Examples include doctor’s notes, job descriptions, photos, etc.

14. To enter another claim, choose “New Claim” from the bottom of the screen. When you are finished entering claims, choose “Exit” from the menu. Click “Yes” to close PMA New Claim Entry.
CHEMICAL WASTE SATELLITE ACCUMULATION AREA INSPECTION

This inspection is designed to assist University personnel (i.e. laboratory facilities maintenance, engineering & other operations personnel) with their weekly inspections of hazardous waste storage areas. This sheet delineates the essential inspection criteria and supplements compliance information on the green Satellite Accumulation Area sign posted throughout the University at hazardous waste storage areas. At least once a week, a representative should evaluate each hazardous waste container in their area using the criteria listed below. This required weekly inspection will help to ensure that storage practices are safe and in compliance with regulations.

1. **Are containers correctly labeled?** Ensure that all containers storing hazardous waste are affixed with a hazardous waste label (shown below) as soon as the first drop of hazardous waste is added.

2. **Do containers have a hazard box checked?** Check the content of the label to ensure that it is completely filled-in as described below.

3. **Is the correct hazard box checked?** Consult the labeling tool for guidance:

   ![Label Diagram]

   - One (or more) hazard boxes must be checked to indicate the associated hazard(s) of the waste.
   - Ignitable=flashpoint less than 140°F. Corrosive=pH less than 2 or greater than 12.5
   - Reactive=typically unstable capable of detonating at STP; reactively with water (emits toxic vapors, etc.); cyanide or sulfur-bearing
   - Toxic=contains substances which pose threat to personnel/environment if mishandled
   - Infectious=contains blood & blood products, pathological, infectious agents, etc.

   Fill out the date when the container becomes FILLED or otherwise ready for removal. Waste must be removed from Satellite area within 3 days of this date - contact EH&S for removal.
Choose an ergonomically designed chair with adjustable height and back support. It may be necessary to raise or lower the microtome to minimize wrist flexion (upward motion) and shoulder abduction (forward thrust).

For further information, please contact:
Christopher Tran
Lab Safety Advisor
Christopher_tran@harvard.edu
(617) 495-6645

www.ehs.harvard.edu

Use height adjustable lab tables and chairs to minimize neck and shoulder strain from thrusting head and neck upward and forward.

Use an ergonomically designed manual or electronic pipette to allow more neutral thumb motion and less static force and pressure on the hand.
Apart from the potential risk of working daily with hazardous substances, laboratory personnel also have the potential to be exposed to many ergonomic risk factors due to the nature of their work (i.e. work benches) and the research they conduct (i.e. long hours).

Ergonomic risk factors associated to laboratories are not any different from those found in the office and general industry. They consist of awkward and static postures, high repetition, excessive force, contact stresses, vibration, and pinch grip among others.

The purpose of this guide is to disseminate information to laboratory personnel about how they can control laboratory ergonomics risk factors, improve their level of comfort while performing their job, and reduce the risk of acquiring occupational injuries.

Because of this rigid configuration, the cryostat leaves little room for adjustment. The best solution is to limit the time at this station and take breaks. Raise the flow cytometer to minimize extended reaches and severe neck flexion during specimen processing (and other computer controlled equipment). Store frequently used items within reach. Support your feet. Store all work materials within reach. Place a fully adjustable lab chair with back support and a footrest. Arms should be parallel to the floor and legs should be at right angles. Sit with back and knees parallel to the floor. Use a stool if necessary.

Because of this rigid configuration, the cryo-stat leaves little room for adjustment. The best solution is to limit the time at this station and take breaks. Because of this rigid configuration, the cryo-stat leaves little room for adjustment. The best solution is to limit the time at this station and take breaks.
Collect biologically-contaminated physical sharps in a red sharps container

**Physical Sharp** - Any item capable of puncturing or cutting the skin that is biologically-contaminated goes into red sharps containers.

For biological labs, place both biologically contaminated and clean sharps into red sharps containers.

For non-biological labs refer to non-biological sharps disposal guidance.

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**Single-Use Containers**: Close when full and place in Biowaste Bin

**Reusable Containers** *(HMS/HSDM Only)*: Collected and replaced by waste vendor

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Never Overfill. Replace container when 3/4 full.
DO NOT USE:

• 1 gal plastic jar (they are not puncture proof)

• Yellow sharps container (could be confused with radioactive sharps)

NOT RECOMMENDED:

• Red biological sharps bins

SHOULD NOT be used but can be permitted only if the bio symbol is COMPLETELY defaced.

OTHER CONTAINER OPTIONS:

• Green sharps container
• Shatter resistant glass jar
• Small black sharps container
• Biomedical Waste

Non-Biological Sharps

1. Collect non-biological physical sharps in a puncture proof container when the container is ¾ full.

2. Label the container.

3. Request a pickup online when the container is ¾ full.

Non-Biological Physical Sharp - Any item capable of puncturing or cutting the skin.

USE A CHEMICAL HAZARDOUS WASTE LABEL IF:

• Contaminated with mercury or air/water reactives.

USE A DISPOSAL RESTRICTED WASTE (DRW) LABEL IF:

• Empty sharps (chemical residue ok, no liquids.)
• Non-chemical, non-biological, non-radioactive sharps.
• If there is still liquid in a syringe, empy the liquid in to your hazardous waste liquid container in your SAA by depressing the plunger completely.

See www.ews.harvard.edu for more info.

Rev 12-2016
TRAINING:
Environmental regulations require training of individuals who generate or handle chemical waste (Hazardous Waste). Training must take place within six months of date-of-hire, and annually thereafter, and is included in the general lab safety and general facilities safety trainings.

*Training is offered online by the Harvard Environmental Health and Safety (EH&S) Department.*

http://ehs.harvard.edu/training

CHEMICAL WASTE SAA INSTRUCTIONS:
*Each chemical waste container must be properly labeled, closed, and stored in a Satellite Accumulation Area.*

1. **Set Up** – Chemical waste containers must be stored in a designated Satellite Accumulation Area (SAA).
   a. This green sign should be posted near where you are planning to collect chemical waste.
   b. Containers for liquid waste must have secondary containment (containment bin or a spill pallet).
   c. The SAA must be under the control of the individual generating the waste and must be at or near the point of generation.

2. **Labeling** – Each container must be tagged with a Chemical Waste/Hazardous Waste label.
   a. Fill out the label using full chemical names (*NO chemical formulas or abbreviations are permitted*).
   b. Check the correct hazard box; at least one hazard box must be checked off.
   c. Make sure that the label is visible without touching or moving the bottle and not blocked from view.

3. **Storage** – Containers must be closed, in good condition, and segregated from incompatibles.
   a. Containers and lids must be free of rust or breakage.
   b. The lid must be closed so that if it were knocked over the chemicals would not leak out. (*Regulations do not permit open funnels in waste containers. “Eco-funnel” lids must be shut and latched.*)
   c. Stock virgin chemicals must be stored separately from waste chemicals.
   d. Only fill one container of the same type of waste at one time (*NO duplicate waste streams*).

WEEKLY INSPECTIONS:
All persons who generate chemical waste are responsible for visually inspecting their SAAs weekly, looking for leaks and for deterioration (caused by corrosion or other factors) of containers and secondary containment, and ensuring labeling requirements are compliant with the regulations as listed above.

CHEMICAL PICKUP REQUESTS:
When a container is full, write in today’s date and submit a pickup request online or via phone. If the container is not picked up within 3 days, immediately notify EH&S at the phone number below:

**CAMBRIDGE CAMPUS:** 617-496-3322
**LONGWOOD CAMPUS:** 617-432-1720
**ONLINE:** http://ehs.harvard.edu/tools

PI: ___________________________ Safety Contact: ___________________________ Phone Number: ____________

Last Update August 2015
**Disposal Restricted Waste (DRW)**

There are a number of waste types that are generated through research and university operations that have reduced regulatory requirements but that pose a risk to the greater Harvard community. The DISPOSAL RESTRICTED WASTE (DRW) label is being implemented in order to help to clarify waste management practices, reduce risk, and improve hazard communication for the university.

### How to use this Label

1. If your waste is either Hazardous chemical waste, radioactive waste, biological waste or Universal waste, then this is the wrong label for your waste.
2. If your waste is not listed above, then determine if your waste falls into one of categories listed on the DRW label as described below.
3. Select an appropriate container, affix the label, date the label with the date you started accumulating the waste and check off the appropriate box on the label.

### Waste Type Instructions Container to Use Disposal Why is this waste Disposal Restricted?

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Instructions</th>
<th>Container to Use</th>
<th>Disposal</th>
<th>Why is this waste Disposal Restricted?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agarose or Polyacrylamide Gels</td>
<td>Gels may or may not contain Ethidium Bromide, SYBR green, SYBR gold, or other mutagens/heratogens. Gels typically contain mutagenic concentrations of 0.3-0.5 ug/ml. In these low concentrations, trash disposal is allowed if the procedures to the right are followed. If not handled properly these waste streams can cause issues with garbage odors and custodial concerns over exposure to lab chemicals.</td>
<td>1 gallon &quot;mayo jar,&quot; 5 gallon pail (double bagged), sealed ziplock bag.</td>
<td>Collect near (but not in) your hazardous waste satellite accumulation area for pickup by the chemical waste vendor. When Container is ¾ full request a pickup at <a href="http://www.ehs.harvard.edu/tools">www.ehs.harvard.edu/tools</a>. Alternatively Gels may be dried out or placed in a sealed Ziploc™ style bag before being placed in the trash.</td>
<td>Ethidium bromide, Sybr green, and Sybr gold contain known mutagens and should be disposed of properly to prevent impacts to aquatic life. If not dried or in sealed containers gels can decay and cause nuisance odors in labs and dumpsters.</td>
</tr>
<tr>
<td>Metal Blades</td>
<td>Collect metal blades (razors, scalpels, saws) in a shatter resistant glass jar to allow for recycling. Metal blades may be recycled if not contaminated with hazardous materials (cutting oil is ok) and not co-mingled with needles or glass sharps.</td>
<td>Collect near (but not in) your hazardous waste satellite accumulation area for pickup by the chemical waste vendor. When Container is ¾ full request a pickup at <a href="http://www.ehs.harvard.edu/tools">www.ehs.harvard.edu/tools</a>.</td>
<td>If disposed of improperly, sharps present a significant hazard to coworkers, custodial staff, and waste management staff.</td>
<td></td>
</tr>
<tr>
<td>Non-Biological Sharps</td>
<td>Physical sharps (any item capable of puncturing or cutting the skin). Includes needles, syringes, slide covers. May be contaminated with solvent residue. No liquids or mercury. This category can be used for non-biological labs that are using physical sharps. If separating blades and non-biological sharps is not feasible for your lab then collect everything in one of the approved containers to the right, and check off the box for &quot;non-biological sharps&quot; on the DRW label.</td>
<td>Collect near (but not in) your hazardous waste satellite accumulation area for pickup by the chemical waste vendor. When Container is ¾ full request a pickup at <a href="http://www.ehs.harvard.edu/tools">www.ehs.harvard.edu/tools</a>.</td>
<td>If disposed of improperly, sharps present a significant hazard to coworkers, custodial staff, and waste management staff. 105 CMR 480 prohibits even unused needles from being disposed of in the trash.</td>
<td></td>
</tr>
<tr>
<td>Other Disposal Restricted Waste</td>
<td>Waste that can't go down the drain or in the trash and/or that needs further evaluation/analysis before drain disposal (examples are glycol, vegetable oil, or wastewater pending analysis). List constituents in the container in the space provided and contact EHS for assistance with collecting analytical if characterization is needed.</td>
<td>A container that is in good condition, that can close tightly and that is compatible with the waste.</td>
<td>Request a pickup at <a href="http://www.ehs.harvard.edu/tools">www.ehs.harvard.edu/tools</a> or if approved for drain disposal by EHS then dispose down the drain once analytical results confirm that drain discharge is permitted.</td>
<td>Certain materials are prohibited from discharge by university wastewater discharge permits and must be analysed/approved for discharge.</td>
</tr>
<tr>
<td>Regulated Recyclable Material – Mercury amalgam or Solvents for Recycling</td>
<td>Select the material that your location is generating. A Class A recycling permit must be submitted to manage your waste in this manner. Contact EHS for assistance.</td>
<td>A container that is in good condition, that can close tightly and that is compatible with the waste.</td>
<td>Collect near (but not in) your hazardous waste satellite accumulation area. Follow procedures established for your location to manage these regulated recyclable materials.</td>
<td>This material would be considered hazardous waste if not permitted for recycling. Regulated Recyclable Material must be managed in accordance with 310 CMR 30.200 which requires either onsite or off-site recycling.</td>
</tr>
</tbody>
</table>
Laboratory Common Items Disposal Guidance

**Glass Trash:** Clean, broken or intact glass goes in a broken glass box and is removed by custodial services when the bag is tied and the box is closed and sealed with tape. Please place box in the hallway for pickup.

**Used Filter Cartridges from a RO Water Filtration Unit:** These items can be recycled by using the Hazardous Waste pickup online form – please click on the “Water Cartridge Recycling” under the Chemical Waste Services and stick the cartridge in a easily seen location near your SAA (Note: DO NOT place the cartridge in your SAA).

**Reusable or Disposable Solid Biowaste Containers:** the bag inside must be tied and the lid closed (cardboard boxes must be taped shut). These containers are moved to the hallway where they are picked up by custodial services.

**Old Electronics:** contact custodial services through Operations (see below for contact based on your location). Custodians will take these items. However, the hard drive must be removed.

**Small Batteries:** all small types of batteries are recycled after being put in these Universal waste containers – these containers are generally located near the security desk in your building – See [https://green.harvard.edu/topics/waste/e-waste](https://green.harvard.edu/topics/waste/e-waste) for a map of collection containers.

**Large Batteries:** Put these items out through your Satellite Accumulation Area (SAA) where you place your hazardous waste – these must be tagged and a waste request submitted.

**Mercury Containing Fluorescent Lightbulbs:** These bulbs are considered a Universal Waste. Request a pickup by contacting Operations (see below for contact based on your location) NOTE: Broken mercury containing lightbulbs are considered a hazardous waste – please put in an appropriate container and put out through the SAA (Satellite Accumulation Area).

**Mercury Containing Thermometers/Bulbs:** Please put these items out through your SAA (Satellite Accumulation Area). Mercury containing bulbs in this case contain visible liquid mercury (silver liquid).

**Regular Light Bulbs:** These are considered regular trash and should be disposed of in a broken glass container.

**Used Pump Oil:** dispose of through your SAA (Satellite Accumulation Area) – used pump oil is regulated by the State of MA as a hazardous waste.

**Operations Contact Info:**
If your lab is in Cambridge or the TH Chan School of Public Health, contact University Operations: extension x5-5560 from university landline or 617-495-5560 on cell phones. Cambridge labs may email requests to UOS_Operations@harvard.edu. Chan School labs should submit a work order for all custodial requests [https://www.hsph.harvard.edu/operations/services/custodial/](https://www.hsph.harvard.edu/operations/services/custodial/)

If your lab is in the Harvard Medical School or School of Dental Medicine, contact the Facilities Call Center at extension x2-1901 from university landline, 617-432-1901 on cell phones or email facilitiescallcenter@hms.harvard.edu