The Integrated Safety Plan (ISP) Certification Process
ISP Main Goal

- Ensure and improve the safety of students and employees by...
  - Fostering a culture of safety dedicated to continuous improvement
  - Evaluating, encouraging, and assisting with safety, regulatory, and policy compliance
  - Certifying and indemnifying safety programs that demonstrate a strong commitment to safety and regulatory compliance
What is REM checking for?

- A safety program that has...
  - Regular safety committee meetings with a frequency commensurate with hazards (or minimum twice a year)
  - Means of communicating safety issues to the organization in a timely manner
  - Upper administrative support for safety
  - Regulatory compliance and training documentation
  - Proper injury reporting and accident or near miss investigations (if applicable)
  - Emergency preparedness (i.e. Building Emergency Plans)
  - ISP Self-Audits Checklists* completed for all areas
  - Abated deficiencies found during the self-audits
  - Annual ISP certification audits by REM

* The self-audit checklists presented to REM at the walk-through should not be more than six (6) months old.
ISP
Self-Audit Checklists
Noncontiguous laboratories and shops must be done one per checklist

Offices, computer labs, storage areas, and common areas (i.e. kitchenettes, conference rooms), may be combined into one checklist per type area
ISP Self-Audit Checklists

Required for ISP Certification

- 100% returned
- 100% completed within 6 months of audit
- 100% signed by “Responsible Individual” (i.e. the person with hire or fire authority)
  - PI or laboratory supervisor
  - Shop supervisor
  - Most senior person (e.g. department head) when like areas are combined onto one checklist
Safety committee must review and ensure deficiencies are corrected prior to REM audit.

If there are 15 or more checklist, make them available for REM to review before the audit date but after the safety committee review.

- Send REM electronic or physical copies

  or

- Schedule time for REM to come and review them (a safety committee member need not be present)
Checking “No” for an applicable question or section will normally indicate noncompliance.

Sections 1, 2, 3 and 6 will apply to everyone:

1. Emergency Preparedness and Fire Protection
2. Housekeeping
3. General Electrical Safety
6. Personal Protective Equipment (PPE) Policy
Personal Protective Equipment (PPE) Policy
PPE Policy

Applicability and Training

- **ALL** areas require a hazard assessment and certifications thereof.
  - Where applicable, “No hazards requiring PPE” is acceptable on the certification document.

- When PPE is required the following is also required:
  - Task or procedure specific training on the correct use, care, donning, doffing, and limitations of PPE
  - Task or procedure specific training documentation
Hazard Communication Program (HazCom/Right-to-Know)

or

Chemical Hygiene Plan (CHP)
Initial training is required **upon hire** for everyone not covered by the Chemical Hygiene Plan (CHP)

A designated trained individual (DTI) is responsible for
- Providing training
- Maintaining training documentation

DTI training is provided by REM
Two (2) categories:

1. *Comprehensive* training is required when chemical use or exposure is a significant part of the job.

2. *Awareness* training is required for those using products per manufacturer’s intended purposes at a frequency commensurate with consumer use.
Refresher Training

- For employees whose job requires significant chemical use and exposure
  - Annually
  - Whenever a new physical or health hazard is introduced

- For employees whose chemical use and exposure does not exceed consumer use levels
  - Whenever a new physical or health hazard is introduced
Hazard Communication Online Training

- **Good for:**
  - Awareness training
  - Comprehensive training
  - Refresher training

- Requires a Purdue Career Account login and password to access
Chemical Hygiene Plan

- **Laboratory use of hazardous chemicals** means handling or use of such chemicals in which all of the following conditions are met:
  - (i) Chemical manipulations are carried out on a "**laboratory scale**;"
  - (ii) Multiple chemical procedures or chemicals are used;
  - (iii) The procedures involved are not part of a production process, nor in any way simulate a production process; and
  - (iv) "Protective laboratory practices and equipment" are available and in common use to minimize the potential for employee exposure to hazardous chemicals.

- **Laboratory scale** means work with substances in which the containers used for reactions, transfers, and other handling of substances are designed to be easily and safety manipulated by one person. "Laboratory scale" excludes those workplaces whose function is to produce commercial quantities of materials.
Chemical Hygiene Plan (Restated)

- For laboratory workers that use reagents to perform chemical manipulations and/or multiple chemical procedures.

- The CHP must be lab-specific and incorporate:
  - Hazard assessment certifications for physical and chemical hazards that provide PPE guidance
  - Standard operating procedures (SOPs) for dangerous processes and chemicals
Requirements and Responsibilities

The PI or laboratory supervisor is ultimately responsible for training and documentation.

Training must be lab-specific.

Initial training and annual refresher required for everyone.

CHP training can be documented by:

- The Lab-Specific Training Certification form from CHP
- Lab-specific SOPs and Lab Safety Fundamentals online training
Lab Safety Fundamentals (LSF) Online Training

- General introductory awareness training for chemical and physical hazards
- Alone it does not substitute for any regulatory required training
- In conjunction with lab-specific SOP training, it becomes acceptable part of CHP training documentation
- Requires registration and login as well as a Purdue Career Account login to use the software
Common Deficiencies

Most Cited Items of Concern
Minimum 36 inches \textit{(floor to ceiling)} not maintained in front of a switchboard, breaker panel, or disconnect.

Space is needed to...

- Provide immediate access to cut power in a hurry
- Prevent spread of fires that may be caused by
  - Faulty wiring
  - Heat buildup
  - Sparks
- Power cord damaged or broken

Electrical tape is unacceptable
Extension cord used as permanent wiring

- Grounded 1 to 1 Temporary Only
- Household Use 3 to 1 Not Allowed
Multiple outlets connected in series
Chemical Hygiene

- Label missing, inadequate, or deteriorated
### Chemical Hygiene

#### Acceptable Labeling Key

<table>
<thead>
<tr>
<th>Container Labeled</th>
<th>Chemical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHCl₃</td>
<td>Chloroform</td>
</tr>
<tr>
<td>CH₄</td>
<td>Methane</td>
</tr>
<tr>
<td>C₂H₆</td>
<td>Ethane</td>
</tr>
<tr>
<td>EtOH</td>
<td>Ethanol</td>
</tr>
<tr>
<td>dH₂O</td>
<td>Distilled water</td>
</tr>
<tr>
<td>ddH₂O</td>
<td>Double-distilled water</td>
</tr>
<tr>
<td>diH₂O</td>
<td>Deionized water</td>
</tr>
<tr>
<td>H₂O</td>
<td>Water</td>
</tr>
<tr>
<td>HCl</td>
<td>Hydrochloric acid</td>
</tr>
<tr>
<td>HNO₃</td>
<td>Nitric Acid</td>
</tr>
<tr>
<td>H₂SO₄</td>
<td>Sulfuric acid</td>
</tr>
<tr>
<td>HOAc</td>
<td>Acetic Acid</td>
</tr>
<tr>
<td>NaCl</td>
<td>Sodium Chloride</td>
</tr>
<tr>
<td>TBS</td>
<td>Tris-buffered saline</td>
</tr>
</tbody>
</table>

#### Unacceptable Labeling Key

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Container Labeled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic Acid</td>
<td>HOAc</td>
</tr>
<tr>
<td>Benzene</td>
<td>CHCl₃</td>
</tr>
<tr>
<td>Chloroform</td>
<td>CH₄</td>
</tr>
<tr>
<td>Ethane</td>
<td>CH₄</td>
</tr>
<tr>
<td>Ethanol</td>
<td>dH₂O</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>HCl</td>
</tr>
<tr>
<td>Methane</td>
<td>H₂SO₄</td>
</tr>
<tr>
<td>Nitric Acid</td>
<td>HNO₃</td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td>NaCl</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>H₂SO₄</td>
</tr>
<tr>
<td>Water</td>
<td>H₂O</td>
</tr>
</tbody>
</table>
Chemical Hygiene

- Fume hood not used for either work or storage exclusively

Dual use problems

- Incompatible chemicals too close together
- Ignition sources too close to flammables
- Custom shelving interferes with proper airflow
- Poor housekeeping
PPE Policy:
Hazard Assessment Certification

Incomplete, inadequate, or outdated information

Not signed

Door Posting

Laboratory Information*

Person Responsible for Room
Name: ___________________  Work Phone: ___________________  Emergency Phone: ___________________

Faculty Associated with Room (if more than one)
Name: ___________________  Work Phone: ___________________  Emergency Phone: ___________________
Name: ___________________  Work Phone: ___________________  Emergency Phone: ___________________
Name: ___________________  Work Phone: ___________________  Emergency Phone: ___________________

Other EMERGENCY Faculty or Staff Contacts
Name: ___________________  Work Phone: ___________________  Emergency Phone: ___________________
Name: ___________________  Work Phone: ___________________  Emergency Phone: ___________________

Document Locations
Hazard Assessment Certification:
Chemical Acronym, Abbreviation, or Formula Key: ___________________
Chemical Hygiene Plan (CHP):
Safety Data Sheets (SDS):

Special Instructions

* Post outside the laboratory entrance doors.

Egress

- Obstructed aisle or route of egress

- A tunnel or tape to cover a cord, cable, or hose is not acceptable in a normal work area
Fire Protection

- **Obstructed sprinklers**
  - No combustibles within...
    - 18 inches of sprinkler head or
    - 24 inches of non-sprinkled ceiling
  
  Storage along walls is ok as long as it is not directly below the sprinkler head.
Fire Protection

- Obstructed fire extinguisher
Fire Protection

- **Fire door propped open**
  - Fire doors shall not be blocked, obstructed, propped open*, or otherwise made inoperable.
  - **Never** use a chock, wedge, hold open, or install a plunger stop on a fire door

*Exception: fire door equipped with an automatic closing device tied into the smoke and fire alarm system
Heat resistant pad or tray not underneath a coffee pot, hot pot, hot plate, toaster, or toaster oven may result in...
Machine Guarding

- Missing or inadequate guarding
Personal Protection

- First aid kit
  - Contains expired items
  - Inventory not maintained
Personal Protection

- Obstructed safety shower and/or eyewash
Compressed Gas Cylinders

- Not OK
- Not OK
- Not OK
- Not OK

- OK
- OK
- OK
- OK
- OK
- OK
Housekeeping
Any questions?