Department Safety Coordinators together with Research Safety

“Building a Safety Culture”
Agenda

- Introductions – DSC and ORS staff
- Overview of the Office of Research Safety & Commitment
- The DSC Role
- Overview of Lab inspection results
- Overview of HAZCOM Inspection results
- Incident reviews and Near Miss reporting
- Q&A
Safety as part of the Mission

- Delivering world class research
- Part of the student learning experience
- Safety is part of any job, any career
- Safety performance can help or hurt the organization’s brand
- APLU Safety Culture Guidelines
  - University formed Task Force
Office of Research Safety

- 14 professionals
- Located in Clemson Centre, Suite 104
- Research Park and CURI (North Charleston)
ORS Programs

http://www.clemson.edu/research/safety/

Radiation Safety

Industrial Hygiene & Lab Safety

Biosafety

Training

Hazardous Materials Management

General Safety
The DSC Role

• The Department Safety Coordinator (DSC) is an integral part of promoting health and safety throughout all campuses.

• The DSC’s role is to assist with the implementation of the Research Safety program for their assigned department.

• All DSCs will receive a monthly email with safety materials, Fact Sheets or safety information to share with their department.

• Quarterly meetings to discuss issues and new information

The Office of Research Safety would like to thank you for your involvement and your continued support.
DSC Activities

- Attend Quarterly DSC meetings
- Communicate monthly safety information from Research Safety to personnel in their department,
- Communicate important safety information from Research Safety
- Participate in Lab or HAZCOM and/or Satellite Accumulation Areas conducted by Research Safety, when available.
- Notify Research Safety of new PIs or researchers

- Notify Research Safety of PIs that will be leaving
- Providing new employees the information on Research Safety.
- Participate with incident investigations as needed.
- Be a liaison for safety related questions and concerns.
- Be a positive role model for safety.
<table>
<thead>
<tr>
<th>Month</th>
<th>Safety Topic</th>
<th>Lab Safety Coordinator</th>
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<tbody>
<tr>
<td>February</td>
<td>Laboratory Inspections and signage</td>
<td>Read, disseminate info, Conduct self-inspections</td>
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<tr>
<td>March</td>
<td>Personal Protective Equipment</td>
<td>Read, disseminate info, Identify PPE needs and respirator wearers</td>
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<tr>
<td>April</td>
<td>Hazardous materials and spills</td>
<td>Read, disseminate info, Check for spill kits in areas</td>
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<tr>
<td>May</td>
<td>Hazardous Waste</td>
<td>Read, disseminate info, SAA inspections</td>
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<tr>
<td>June</td>
<td>Radiation Safety</td>
<td>Read, disseminate info, Identify Radiation sources, lasers, UV</td>
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<td>July</td>
<td>Heat Stress</td>
<td>Read, disseminate info</td>
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<tr>
<td>August</td>
<td>BIOSAFETY</td>
<td>Read, disseminate info, Verify IBCs and BSC</td>
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<tr>
<td>September</td>
<td>Laboratory Safety</td>
<td>Read, disseminate info, lab employees sign CHP</td>
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<tr>
<td>October</td>
<td>Fume hoods and ventilation</td>
<td>Read, disseminate info, verify fume hoods are operational</td>
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<tr>
<td>November</td>
<td>Fire Safety and Emergency equipment</td>
<td>Read, disseminate info</td>
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<tr>
<td>December</td>
<td>Chemical Segregation</td>
<td>Read, disseminate info</td>
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# New Research Lab Setup Checklist

## LAB INFORMATION

<table>
<thead>
<tr>
<th>Principal Investigator:</th>
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<tbody>
<tr>
<td>Department:</td>
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<tr>
<td>PI Phone Number:</td>
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<tr>
<td>PI Email:</td>
<td></td>
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<tr>
<td>Building:</td>
<td></td>
</tr>
<tr>
<td>Lab Number:</td>
<td></td>
</tr>
<tr>
<td>Dept. Safety Coordinator:</td>
<td></td>
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<tr>
<td>Move In Date:</td>
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</table>

- **Complete Basic Lab Safety Training**
  - Training must be completed by the PI and all Lab Personnel
    - Chemical Hygiene Training
    - Hazardous Waste Training
    - If chemicals (including dry ice) will be shipped, Hazardous Materials Shipping training is required. Contact the Hazardous Materials Manager to schedule a live training session.
    - See Training Matrix for additional training requirements

- **Review Lab Safety Documents**
  - All Lab Personnel must sign the Acknowledgement Page on page 3 of the CHP
    - Lab Safety Manual
    - Chemical Hygiene Plan

- **Post a Lab Door Sign**

- **Label all Chemical Storage Areas**
  - See Chemical Storage Guidelines for more information

- **Submit a Chemical Inventory to cheminventory@clemson.edu**
  - See Chemical SOP List for chemicals that require Standard Operating Procedures

- **Provide compatible Personal Protective Equipment (PPE) for Lab Personnel**
  - See PPE Guidelines for more information

- **Setup a Hazardous Waste Storage Area (Satellite Accumulation Area)**
  - See SAA Poster for more information

**Friendly Reminders**

- Safety Shower must be tested Monthly
- Eyewash must be tested Weekly
- Fire Extinguishers must be visually inspected Monthly
- Safe Work Practices with Chemicals
- Safe Work Practices with Lab Equipment

## Biological Safety & Radiation Safety Information

**Office of Research Safety Contact Information**

Please email a signed checklist to the Chemical & Lab Safety Manager (mkelly@clemson.edu) to schedule a lab walkthrough.

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| PI Signature | Date | DSC Signature | Date |
New Lab and HAZCOM Inspection Program

- Collaborative process—encourages success
- Outreach with one on one training
- Simplified items—based on UCLA
- Encourages preparation and self inspections
- Escalation process to close out critical items
- Web resources
  http://www.clemson.edu/research/safety/inspections.html
Common Lab Inspection Findings

• Update Lab Door Sign
• Chemical Segregation
• Fire Extinguisher Visual Inspection
• CHP & Signed Acknowledgement Page
• Cylinder Storage
• Training

• Chemicals Stored in Fume Hoods
• Respirators/Dust Masks in the Labs
• Chemicals & Chemical Storage Labeling
• Safety Shower/Eyewash Testing

515 Inspections completed
64% on campus labs completed
61.5% off campus labs completed
Common Lab Inspection Findings

Training
- PIs and Lab Personnel must complete all training required by Research Safety.

Labeling
- All chemical containers and storage areas must be properly labeled.

Check Safety Equipment
- The Safety Shower must be tested monthly, and the Eyewash weekly.
- Fire Extinguisher visual inspections must be done monthly.

Chemical Segregation
- Properly segregate incompatible chemicals. A storage guide can be found on the RS website.

http://www.clemson.edu/research/safety

Remember
Update Lab Door Signs
Read & Sign the CHP
Gas Cylinders: Chains not Straps
Contact RS before use of respirators/dust masks
HAZCOM Top 5 Findings

• Labeling (Containers, Storage Cabinets, etc.)
• Current Copy or QR Code for HAZCOM Plan
• Trainings
• Chemical Inventories
• Flushing Safety Shower (monthly) and Eye Wash (weekly)

25 areas completed 2015-2016
Still identifying all areas
What is a Near Miss?

Near misses are incidents or events that could have resulted in injuries or other adverse consequences, but fortunately did not.
Nice Catch, Tiger! APP

• Easy way to report near misses
• Share best practices across all campus
• Encourages collaboration among peers
• Reward program for those reporting
• Develop database to track near misses and identify trends.
Incidents

Genetics teaching lab
Transilluminator with UV lightboxes to cut DNA strands (13 years without an incident)

Corrective Actions:
Alternate procedure for lab.
TA disciplined,
UV Fact sheet developed.

Biology teaching lab
Shark dissection preserved in Carosafe.
Strong formaldehyde odors

Corrective Actions:
Modification to lab 2 sharks per lab,
Continuous air monitoring
Additional ventilation.
Supplier changed their processes
Responsibilities

• The Principal Investigator is responsible for the overall safety and compliance in the lab or shop area.

• Reporting of incidents and near misses promptly and investigating the causes of the incident to make improvements.

• Safety is everyone’s responsibility – A Team Effort.

• ASK Research Safety – submitted questions online.
Questions?

Office of Research Safety
391 College Ave. Suite 104

http://www.clemson.edu/research/safety/

“We are committed to innovation and exceptional customer service for our students, faculty and staff both on campus and across the state”