Academic Personnel
Department Chair Fall Forum

The Role of the Chair in ensuring Environmental Health & Safety

10/24/2016

Russell Vernon, Director of Environmental health and Safety
Albert Vasquez, Executive Director of Enterprise Risk Management
Environmental Health & Safety Obligations of Chairs

Sources of Obligations

Care for self & others
- US Constitution
- Legal Rulings
- International Agreements
- Federal & State Laws & Regulations
- UC Policy & Contracts
  - UCR Policy & Procedures
    - College policies & practices
    - Department polices & practices

Types of Obligations:

- Occupational Safety
  - Employer (Regents)
  - Supervisors
  - Employees
- Environmental Protection
  - Air, Water, Land
- Radiation Use
- Public Safety & Health
- Grant HSE Compliance
EH&S Supports Academia *through*

- Industrial Hygiene & Safety Engineering
- Fire & Life Safety
- Laboratory / Research Safety
  - Biosafety
  - Laser Safety
  - Radiation Safety
  - Controlled Substances
  - Travel and Field Safety
  - Drone Safety
- Environmental Programs
  - Hazardous Materials
  - Waste Management
  - Environmental Health
  - Training & Communications
Industrial Hygiene & Safety Engineering

- Protects worker health and safety
- Implementation of the Injury and Illness Prevention Program
- Oversight of
  - Ventilation & fume hoods,
  - Hearing conservation & noise reduction
  - Heat stress prevention,
  - Indoor air quality & mold remediation,
  - Personal protective equipment
  - Exposure monitoring, etc.

- Electrical Safety
  - Lock-Out/Block-Out
  - Arc Flash Hazard Awareness
- Confined Space Entry
  - Atmospheric Testing
  - Ventilation
  - Rescue Planning
- Fall Protection
  - Fixed & Mobile
- Accident Investigation & Prevention

✓ Industrial Hygiene & Safety Manager, Safety Engineer
✓ CCR Title 8, NIOSH, ACGIH
Fire & Life Safety

- Management of fire prevention, fire inspections, and fire protection engineering
  - Engages with Construction and Remolding Projects
- Prevents loss of life and property from fire related incidents.
  - Oversight on testing, inspection & maintenance of detection and suppression systems
  - Review of fire cause and origin, prevents reoccurrence
  - Reports to State Fire Marshal

- Designated Campus Fire Marshal, two Fire Safety Inspectors
- California Code of Regulations Title 19 & Title 24, Memorandum of Understanding with State Fire Marshal, Industry Standards
Laboratory & Research Safety

› Provides safety guidelines for hazards found in the laboratory and research setting.

› Oversight of
  › Chemical hygiene plans,
  › Laboratory Manual,
  › Standard Operating Procedures,
  › Laboratory Audits, and
  › Laboratory Safety Officers program

✓ Research Safety Manager, Lead Safety and four Safety Mentors
✓ California Code of Regulations, Title 8 section 5191, 5194 and others
Biosafety

- Prevents against infectious agents and biohazardous materials.
- Ensures compliance with
  - Bloodborne pathogens regulations
  - Biological Use Authorization
  - Exposure Control Plans, and
  - Biosafety Cabinets Use

- Biosafety Officer, Assistant Biosafety Officer, Director of High Containment Laboratories

- California Code of Regulations, Title 8, California Medical Waste Management Act, Bloodborne Pathogens Standard, CDC/NIH BMBL, USDA & CDC Select Agent Standard
Laser Safety

- Facilitates safe use, design, and implementation of lasers
  - Oversight of Class 3B and Class 4 laser registration
  - Improves and maintains Laser Safety Manual
- Laser Safety Officer, Radiation Safety Specialist
- California Code of Regulations Title 8 section 3382, Industry Standards & Best Practices
Radiation Safety

- Ensures compliance with ionizing and non-ionizing radiation such that exposure is as low as reasonably achievable
- Radiation Safety Officer, Radiation Safety Specialist
- California Code of Regulations Title 17. California Radiological Health Branch processes and procedures, Nuclear Regulatory Commission regulations, UCR Broadscope License
Controlled Substances (\& California Precursors)

- Manages authorization of Federal Drug Enforcement Agency scheduled or listed controlled substances and California precursor chemicals for research use.
- Oversight of Controlled Substance Use Authorization, ordering, storage requirements, use logs, and disposal

- Controlled Substances Program Administrator, EH&S Director
- UC Code of Federal Regulations, Title 21, Chapter 13, Subchapter I & II, US DOJ, DEA, Diversion Control Division practices & procedures, California Controlled Chemical Substance Program
Travel and Field Safety

› Travel Insurance & Safety Guidance, Timely Alerts, Plan for a safe field excursion
✓ Research Safety Manager
✓ Best Practices, Risk Reduction, Travel Insurance Contracts
Drone Safety

- UC Unmanned Aircraft Systems Safety, flight authorization, UAS registration
- Research Analyst
- Best Practices, Risk Reduction, FAA regulations, Californian law, UC Policy
Environmental Programs

- Ensuring compliance with environmental regulations
  - Air Quality Management
  - UCR Integrated Pest Management,
  - Separate Sewer Stormwater Systems Management and
  - UCR Clean Water program

- Environmental Programs Manager & Specialist
- Clean Air Act, South Coast Air Quality Management District, Clean Water Act, Regional Water Quality Board
Hazardous Materials

- Protects against chemicals that pose significant risk to people, property or the environment
  - Oversight of chemical inventory, placards, and Safety Data Sheets
  - Facilitates compliance with Hazardous Materials Business Plan Reporting
  - Supports Maximum Allowable Quantity Fire Code Limits
- Hazardous Materials Specialist, Chemical Inventory Specialist
- Department of Homeland Security Chemical Facility Antiterrorism Standard, Title 8 Hazardous Communications Standard, California Community Right to Know Act – Hazardous Materials Business Plan
Waste Management

- Servicing of hazardous chemical, radioactive, and biohazardous waste
  - Oversight of hazardous waste using the Waste Management and Labeling Software (WASTe),
  - Specific Medical and Biohazardous waste disposal,
  - Radioactive waste disposal

- Hazardous Waste Specialist, two Hazardous Waste Technicians
- EPA, Resource Conservation & Recovery Act, California Department of Toxic Substances Control, CCR Title 22
Environmental & Public Health

- Prevents human health and diseases caused by environmental factors.
  - Oversight of Food Permits,
  - Swimming pool and Spa compliance
  - Drinking water quality

- Registered Environmental Health Specialist
- California Retail Food Code, Pool & Spa regulations, Memorandum of Understanding with Riverside County Environmental Health
Training & Communications

- Delivers classes, records, and resources for learning about health and safety responsibilities
- Oversight of schedule of classes, transcripts, online training courses, needs assessment, publications, and videos
- Training & Communications Manager
- National & California Laws & Regulations, UC Policy Training and best practice
EH&S Related Services By Others

- Enterprise Risk Management
  - Emergency Management
- Parking & Transportation Service
  - Driving and Pedestrian Safety
- Human Resources
  - Ergonomics
  - Learning Management System Administration
- Not Yet Fully Covered
  - Occupational Health
  - Diving and Boat Safety
    - Evaluating need
EHS Challenges
Webber Hall Before & After Fire
Injury Data

MEASURING TO MANAGE
Academic Cost vs All Injuries FY 2009 - 2016

Number of Injuries vs Total Cost

- FY 09-10: 75 Injuries, $570,000 Cost
- FY 10-11: 78 Injuries, $680,000 Cost
- FY 11-12: 68 Injuries, $570,000 Cost
- FY 12-13: 57 Injuries, $760,000 Cost
- FY 13-14: 46 Injuries, $550,000 Cost
- FY 14-15: 55 Injuries, $460,000 Cost

Number of Injuries: Blue Bars
Total Cost: Red Line
Academic Recordable Cost vs Injuries FY 2009 - 2016

- **Recordable Injuries Total**
- **Recordable Cost Total**

<table>
<thead>
<tr>
<th>Year</th>
<th>Recordable Injuries Total</th>
<th>Recordable Cost Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 09-10</td>
<td>58</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>FY 10-11</td>
<td>64</td>
<td>$700,000</td>
</tr>
<tr>
<td>FY 11-12</td>
<td>55</td>
<td>$400,000</td>
</tr>
<tr>
<td>FY 12-13</td>
<td>49</td>
<td>$500,000</td>
</tr>
<tr>
<td>FY 13-14</td>
<td>57</td>
<td>$300,000</td>
</tr>
<tr>
<td>FY 14-15</td>
<td>38</td>
<td>$200,000</td>
</tr>
<tr>
<td>FY 15-16</td>
<td>39</td>
<td>$100,000</td>
</tr>
</tbody>
</table>
Academic Severe Cost vs Injuries FY 2009 - 2016

Academic Severe Injuries Total
Academic Severe Cost Total

FY 09-10: 22
FY 10-11: 26
FY 11-12: 10
FY 12-13: 12
FY 13-14: 10
FY 14-15: 8
FY 15-16: 9
Improving Communication about Injuries & Loss

- EH&S is partnering with Risk Management and Human Resources
- Developing a real-time monthly review of injuries and claims with the organization in which the loss occurs
- EH&S Safety Engineer investigates all reported employee injuries and develops guidance to prevent reoccurrences
- Created a way to collect near-miss reports
  [www.ehs.ucr.edu/forms Near Miss Report](http://www.ehs.ucr.edu/forms)
Questions, Suggestions