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The Changing Face of Lab Safety at CSU

Leading Positive Change for Academic Success

CSU Fitting the Pieces Together Conference
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Agenda

- The landmark event that changed everything
- What's at stake: Regulations overview and consequences of non-compliance
- Key lessons from the University of California settlement agreement
- Implications for CSU
- Reflections from having "lived" the UC experience
- Recent activities and next steps
- Resources

2008 UCLA Lab Incident

- On December 29, 2008, while transferring t-BuLi, a pyrophoric chemical, Ms. Sangji pulled the plunger out of the syringe. The chemical spilled onto her and ignited. She was wearing goggles and gloves, but not a lab coat. She suffered second and third degree burns, and eventually died 18 days later.
- Cal/OSHA investigated and referred matter for criminal prosecution
  - Landmark first-ever criminal charges due to an academic lab incident
- Los Angeles District Attorney (LADA) brought criminal charges against:
  - Professor Harran
  - UC Regents

Regulatory Overview

- Applicable regulations:
  - CA OSH Act of 1973 (CA Labor Code 6300-6719)
  - Title 8 of the California Code of Regulations
- California Department of Industrial Relations
  - Division of Occupational Safety and Health – Cal/OSHA
    - Enforces regulations
    - Inspects workplaces
    - Investigates incidents
    - Issues citations for regulatory violations

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Investigation and Criminal Context

- Cal/OSHA Bureau of Investigations (BOI)
  - Conducts criminal investigations for Cal/OSHA
  - Right to access all places of employment for investigation
- State statutes may impose criminal liability on supervisors
  - CA Labor Code Sections 6423, 6425, and 6426
  - Per CA Labor Code § 6425: it is a crime for any employer or "***any employee having direction, management, control, or custody of any employment, place of employment, or of any other employee***," to ***willfully*** violate a Cal/OSHA standard, where that violation causes death or permanent/prolonged bodily impairment to an employee.
  - CA Penal Code Sections 192 (manslaughter) and 387
    - Cal/OSHA Bureau of Investigations concluded violation had occurred however LADA did not pursue manslaughter charges

Criminal Context (continued)

- LADA brought 4 criminal charges under Labor Code § 6425 for willful violations of Cal/OSHA standards related to Ms. Sangji's death
- Violations of 4 Cal/OSHA regulations:
  - 8 CCR § 5191(f)(4) – failure to properly train Ms. Sangji.
  - 8 CCR § 3203(a)(6) – failure to maintain effective Injury and Illness Prevention Program (IIPP) and to correct unsafe conditions in timely manner.
  - 8 CCR § 3383(b) – failure to provide clothing appropriate for work to be performed (i.e. PPE in the form of a flame-resistant lab coat).
  - 8 CCR § 3383(a) – failure to provide body protection for employees whose work exposes them to hazardous substances.

Criminal Context (continued)

- Key legal arguments:
  - "Employer" includes "every person … which has any natural person in service." Labor Code § 3300.
  - Even if not an "employer," Professor Harran can be criminally liable as a supervisor, even if regulation only imposes duty on "employer."
    - Under Labor Code § 6425, supervisory employees can be criminally liable for ***willful*** failures to implement safety regulations on behalf of their employers.

Overview of the UC Settlement Agreement

- In 2012, UC entered into a Prosecution Enforcement Agreement, i.e. a “Settlement Agreement” (SA) to resolve criminal charges against the UC Regents
- Criminal charges against Professor Harran proceeded separately
  - Separate agreement for “Deferred Prosecution”
  - https://www.chemistryworld.com/news/ucla-chemist-avoids-prison-time-for-lethal-lab-accident/7501.article
- Cal/OSHA viewed UC as “one” employer (not 10 separate campus employers)

Key Requirements of the SA

- Each campus must “exercise due diligence to prevent and detect violations of the Labor Code involving lab safety”
- Maintain Lab Safety Manuals and Chemical Hygiene Plans in compliance with Title 8 requirements
- Train personnel on lab safety
- Comply with Title 8 requirements for Standard Operating Procedures (SOPs)
- Maintain and follow written procedures for safe handling of pyrophorics
- Immediately report workplace injuries to EH&S

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How Did UC Meet the SA Requirements: Systemwide Focus

- Clear and firm expectations and support from Senior Leadership
- Aggressive creation of technology tools
  - Consistency across campuses
  - Repeatable processes
  - Robust and up-to-date recordkeeping
  - Personnel tracking by role and hazard exposure
  - Supervisor/Principal Investigator identification and certification of hazards and mitigation procedures
  - Employee acknowledgement of hazards and mitigation procedures
  - E-learning delivery of training
- New policies establishing/documenting minimum campus requirements

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How Did UC Meet the SA Requirements: Local Campus Focus

- As the saying goes “all politics are local” and “the devil is in the details”
- Establish faculty leadership to carry the flag (peer to peer accountability)
- Campus safety committee structure (endorsement of program elements)
- Campus “how to” guidelines
- Define campus department roles (example – who manages lab coats?)
- Train campus EH&S staff to a common standard (knowledge and consistency)
- Local communications strategy at all levels and modalities
- Engage other partners – Fire Department, Police Department, HR, Student Health, Facilities Maintenance, etc. (multiple eyes and ears)

Implications for CSU

- Recognize that the landscape for lab safety has changed
  - Regulatory agency and governmental agency expectations
  - Community standard (societal) awareness
  - Obligation to prepare our students for success using best practices
- A CSU systemwide and campus-by-campus approach is critical to responding to evolving academic needs while minimizing long-term cost and risk
- Lab Safety is a team effort
  - Every group has a distinct role but faculty should lead and “own” the program
  - EH&S as the coach, project coordinator, and facilitator
- Utilize technology to the fullest
  - Consistency, recordkeeping, data integrity, efficiency, information, training

Getting Started On Your Campus

- Find your faculty cheerleaders. *The importance of faculty engagement and leadership cannot be emphasized enough*
- Review your campus safety committee structure
  - Ensure there is a formal committee that is faculty driven to review and approve campus lab safety matters
- Talk to your boss and consult with campus counsel about senior campus leadership support
- Prepare and train your EH&S staff and any other key departmental safety staff
- Prepare a deployment plan for available technology resources
- Establish a process for document review and approval
- Call your local Fire Department and engage the Hazardous Materials unit

What I've Learned

- Realize that you are doing this for the right reason. There is no higher moral imperative than effectively managing safety.
- Change is a process that won't happen overnight but positive momentum will build with consistent and sustained effort.
- Detractors may try to interfere but don't let them derail your efforts; stay the course and even those detractors will come around.
- Build your coalition of believers
  - Find faculty who "get it". Cultivate relationships and recruit them for safety committees or projects.
  - Find student leaders who want to help. *Never underestimate the power of student pressure.*

What I've Learned (continued)

- Don't reinvent the wheel; build upon the good work of others.
- Don't fall into the "perfection" trap. Perfection is the enemy of good. Remember, this is a process. Deploy, evaluate, improve, repeat.
- Don't forget that other spaces also have hazards, not just labs. Evaluate and deploy appropriate safety procedures in art studios, theaters, mechanical shops, etc.
- Seek to educate, enable and empower vs. enforce. But don't hesitate to be tough and firm when necessary.
- Lab safety is as much a communication project as a technical one.
- You can do this one step at a time.

Recent Activities and Next Steps

- Systemwide Environmental Health and Safety Taskforce
  - Dawn Theodora, Asst. Vice Chancellor and Chief Counsel, Business & Finance, Co-Chair
  - Zachary Gifford, Director, Systemwide Risk Management, Co-Chair
- Lab Safety Workgroup
  - Pearl Boulter, EH&S Director, CSU Fullerton, Chair
- Procured lab safety software developed by UC
- Procured e-learning lab safety training from Lab Safety Consortium (founded by UC)

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Recent Activities and Next Steps (continued)

- California State Audit (CSA) Health & Safety Compliance Audit
  - Chancellor's Office and 4 CSU campuses included in scope
  - Report of findings and recommendations will be published on April 24, 2018
    - The findings and recommendations are likely to be consistent with themes learned from other university incidents across the nation including those at UC:
      - Oversight (policies, inspections, documentation, periodic program review, etc.)
      - Training and education
      - Hazard assessment and routine upkeep
    - Task Force and Workgroup actions will be updated based on audit report

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Resources

- Laboratory Task Force Report at Sac State
  - http://www.csus.edu/aba/rms/documents/report-to-president-final-6-12-17.pdf
    - Draft Lab Safety Manual
    - Draft Safety Committee membership and charge
    - Draft SOPs
    - Draft campus-specific safety procedures and guidelines
- National Research Council, *Prudent Practices in the Laboratory*
  - http://ucanr.edu/sites/ucehs/files/133892.pdf
- American Chemical Society, *Safety in Academic Chemistry Laboratories*
  - https://www.acs.org/content/dam/acsorg/about/governance/committees/chemicalsafety/publications/safety-in-academic-chemistry-laboratories-faculty.pdf
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Questions?