

UC SAFETY SPOTLIGHT

A UC Systemwide Publication of
the Environment, Health & Safety
Leadership Council



NOVEMBER 2017

Preparedness

IN THIS ISSUE

The Disaster Expert

How to Cope and Deal with
Stress

Ready, Set, Go! Safety Checklist

EH&S Professional Education
Partnership

POSTER OF THE MONTH

MONTHLY UC SAFETY SPOTLIGHT
Poster of the Month
November 2017
By Jim Diaz, Senior Safety Engineer, UC Berkeley

PREPARING YOUR LAB FOR AN EMERGENCY

Emergency Preparedness Checklist for Labs

- 1. **Inventory physical, biological and chemical hazards** and determine how each should be dealt with during an emergency. Prioritize "hazardous" based on chemical storage, biohazard containment and biohazard processes, such as clean-up. Also prioritize maintaining egress pathways and adequate lighting along egress routes.
- 2. **Review hazardous materials and what must be done to "make them safe" prior to evacuating the lab.** Only one person should be in the lab during the evacuation process. Review all safety data sheets (SDS) for each chemical, biological, radioactive material or other hazard. Review all safety data sheets (SDS) for each chemical, biological, radioactive material or other hazard. Review all safety data sheets (SDS) for each chemical, biological, radioactive material or other hazard.
- 3. **Review lab equipment, biological containment and processes** in research critical operations or high hazard conditions that require biological isolation or safe shut-down before the lab is to be evacuated.
- 4. **Develop Equipment / Process SOPs** for shutting down equipment or "making safe" before the chemical, biological or process prior to evacuation.
- 5. **Train all lab users on the Lab Emergency SOPs** and document this training in lab records.
- 6. **Train all lab users on the BIP (Building Emergency Plan)** to ensure they know how to safely exit the building and receive instruction in the field.
- 7. **Label utility shut-off locations** clearly for the lab critical equipment which include emergency shut-off valves, process / cooling water valves, electrical loads switches or circuit breakers, clean water, hydraulic system control valves, process control valves and other equipment.
- 8. **Identify the minimal disturbance of critical equipment** to critical research processes or equipment that could take more than 30 seconds, or more than 2-3 critical equipment items, to safely shut down and make them "ready" to be evacuated. Programmatic Logic Controllers and automated valves and switches to monitor safety systems that are critical to research that have emergency stop capability should be ready to shut down the lab.
- 9. **Participate in emergency practice drills** in which there is a real emergency to determine how well emergency protocols and shut-down procedures are viable and ensure lab safety during an emergency. Conduct a debriefing after the practice drill, and modify Lab SOPs and assessment and check systems as needed to improve response and safety.
- 10. **Review emergency and shut-off research data** and research equipment designs are "checked out" off-site in multiple copies of data files stored in multiple locations. Check critical research data emergency equipment for damage / deterioration. Review emergency procedures for safety and security, but keep critical research data collection and control equipment within the lab where possible to prevent damage from fire or radiation.

Research labs are unique places that often have hazardous materials, equipment and/or processes that should be "made safe" prior to researchers exiting the lab in an emergency. Research lab emergency shut-down planning ensures the ongoing continuity of the research, the safety of lab building occupants and the safety of emergency responders who must enter the building and possibly the lab. Depending upon the complexity of the lab, its processes, hazards and equipment, "making safe" the research could be as simple as shutting off equipment with a control switch, or "locking a fence" around the lab, before leaving the lab which takes little to no time. But hazardous chemicals or biologicals may need to be isolated or safely stored away prior to evacuation. For complex equipment and associated lab processes, multiple utilities may need to be shut-off using automated emergency control systems and pre-programmed shut-down sequencing to ensure safe shut-down while lab users exit the building.

During emergency, time is critical and seconds can mean the difference between life and death. By planning for emergency and the need to evacuate your lab with the utmost of speed, you can minimize the potential for loss of critical research data and equipment while ensuring researchers and emergency responders' health and well-being. As a planning target time frame, a lab should take a single researcher working in a lab more than 30 seconds to "make safe" all lab equipment, processes and hazardous chemicals / biologicals prior to evacuating the lab. Contact your EH&S department for collaborative safety engineering support should you determine your lab cannot be "made safe" and evacuated in under 30 seconds.

Here's a checklist that will help you prepare for an emergency in your lab.

In the event of an emergency, rapidly assess the situation of emergency shut-down in your lab, evacuate to safety without hesitation. Remember to make your way to your lab building's meeting point for a head count, for roll call, and ready to follow the lab's Fire and EMT responses at the muster point about the activities and processes in your lab.

change, or there is any question as to whether it's safe to continue emergency shut-down in the lab, evacuate to safety without hesitation. Remember to make your way to your lab building's meeting point for a head count, for roll call, and ready to follow the lab's Fire and EMT responses at the muster point about the activities and processes in your lab.

The Disaster Expert

By Jim Medina, The UC Santa Barbara Current

UC Santa Barbara's James Caesar relies on communication and planning when responding to campus emergencies; and now he's been rewarded for it.

In 1989, Caesar faced a devastating human-caused environmental disaster — the Exxon Valdez oil spill. Then a member of an ocean cleanup team, he served as a liaison between the shipping company and regulatory agencies.

Twenty-six years later, Caesar — emergency manager for UCSB — experienced a flashback to his "former life" when more than 140,000 gallons of crude oil spilled at Refugio State Beach. With contamination spreading to UCSB's Coal Oil Point Reserve in Isla Vista, he rushed to help coordinate mop-up operations with emergency responders and university researchers. "It's always been my specialty to build partnerships," Caesar said. "That's what you need to respond to any emergency. You have to have the whole community involved."

That's not an easy task, according to John Sterritt, director of Environmental Health & Safety, Risk and Emergency Services at UCSB. Thanks in part to Sterritt's five-page nomination letter, Caesar and Amanda McKenna, business continuity specialist, are recipients of the 2017 Innovation Award by the Campus Safety Health and Environmental Management Association (CSHEMA), the professional organization for campus safety specialists.

"Caesar and his team has completely re-engineered the emergency management program to focus on campus, local and regional emergency management needs for the past eight years," Sterritt said. "The program has been built on leadership commitment and well-defined organizational procedures to assure that recognized emergency management situations are evaluated, risk classified and prioritized."

Caesar is quick to note that the honor recognizes the hard work of the entire UCSB community, including campus partners in many departments and the university police.

"The team is everybody on campus," Caesar said, adding that he coordinates emergency services with agencies from Goleta, Santa Barbara, Santa Barbara County and California. "Each UCSB department has a role on the team we would activate if there were an emergency on campus."

During the recent Whittier Fire, for instance, the university was on standby as a possible American Red Cross shelter for residents forced to evacuate their homes. Though it didn't occur, Caesar notified the UCSB recreation center (housing), parking department (signs), campus police (traffic control) and management (clearance) of the possibility.

READY, SET, GO! SAFETY CHECKLIST

Tips To Improve Family and Property Survival During A Wildland Fire

Home

1. Does your home have a metal, composition, tile or other non-combustible roof with capped ends and covered fascia?
2. Are the rain gutters and roof free of leaves, needles and branches?
3. Are all vent openings screened with 1/8 inch mesh metal screen?
4. Are approved spark arrestors on chimneys?
5. Does the house have non-combustible siding material?
6. Are the eaves "boxed in" and the decks enclosed?
7. Are the windows double-paned or tempered glass?
8. Are decks, porches and similar areas made of non-combustible material and are they free of easily combustible material?
9. Is all firewood at least 30 feet from the house?

Defensible Space

1. Has dead vegetation been removed from the defensible space zones around your home? (Consider adding distance due to slope of property.)
2. Is the required separation between shrubs maintained?
3. Have ladder fuels, such as immature trees, shrubs or downed branches been removed?
4. Is there a clean and green area extending at least 35 feet from the house?
5. Is there a non-combustible area within five feet of the house?
6. Is the required separation between trees and crowns maintained?

Emergency Access

1. Is the home address plainly legible and visible from the street?
2. Are trees and shrubs overhanging the street trimmed to 15 ½ feet?
3. If your home has a long driveway, does it have a suitable turnaround area?

By: <https://www.sandiego.gov/sites/default/files/rsg-english.pdf>

"Everybody is informed when something happens," he said, adding that communicating during an emergency is "huge."

Always tethered to his cell phone, Caesar is meticulous about preparation and planning. He's even made sure his family knows how to turn off the utilities at home if an earthquake strikes.

Why? "Because I'll be responding to the UCSB community's needs," Caesar said.

How to Cope and Deal with Stress

What Is a Traumatic Event?

Most everyone has been through a stressful event in his or her life. When the event, or series of events, causes a lot of stress it is called a traumatic event. Traumatic events are marked by a sense of horror, helplessness, serious injury, the threat of a serious injury or death.

What Are Some Common Responses?

Responses are different for everyone and can include feelings of fear, grief and depression. Physical responses include nausea, dizziness and changes in sleep pattern as well as withdrawal from daily activities. Responses to trauma can last for weeks to months.

What Can You Do for Yourself?

- Understand that your symptoms may be normal, especially right after the traumatic event.
- Keep to your usual routine.
- Resolve everyday conflicts so they do not add to your stress.
- Do not avoid situations, places or people that remind you of the traumatic event.
- Find ways to relax.
- Turn to people you trust for support.
- Participate in fun activities.
- Recognize that you cannot control everything.
- What Can You Do for Your Child?
- Children's reactions to traumatic events depend on their age. Their responses also are affected by how close they are to the event.
- Deal with the situation calmly and confidently.
- Answer questions simply.
- Spend extra time with them.
- Let them know it is okay to feel upset when something bad or scary happens.
- Encourage them to express feelings and thoughts.
- Return them to daily routines.

When Should You Contact Your Doctor or Mental Health Professional?

You may need to consider seeking professional help if your symptoms are severe enough during the first month to interfere a lot with your family, friends and job.

For more information, visit the [Centers for Disease Control and Prevention](#) and the [American Red Cross](#).

From: <https://www.cdph.ca.gov/Programs/EPO/Pages/Cope-Stress.aspx>



University of California EH&S Professional Education Partnership

Your workplace health and safety training connection

[UC Berkeley Center for Occupational & Environmental Health](#)

- [Process Safety Implementation Pyramid, Free Webinar with Richard Meier](#) (Wednesday, November 1, 2017, 10:30am – 11:30am, Online)
- [New Concepts in Toxicology & Tools to Use Now, Workshop with Kristie Sullivan, MPH](#) (Thursday, November 16, 2017, 1:00pm – 3:45pm, Oakland, CA)
- [Training Workers with Intellectual Disabilities about Health and Safety on the Job, Free Webinar with Robin Dewey](#) (Wednesday, December 6, 2017, 10:30am – 11:30am, Online)

[UCLA/UC Irvine Southern California Education & Research Center](#)

- [Hazardous Materials Management Series](#) (3 meetings, Tuesday, January 9, 2018 – Thursday, January 11, 2018, 8:00am – 5:00pm, Los Angeles, CA)
- [Comprehensive Industrial Hygiene \(CIH\) Exam Review](#) (5 meetings, Monday, March 19, 2018 – Friday, March 23, 2018, 8:30am – 5:00pm, Anaheim, CA)
- [Ergo Online Webinar Series 2018](#) (Enroll in 1 or More, 2nd Tuesday of each Month, 11:00am – 12:00pm, Online)

[UC San Diego Extension](#)

- [OSHA 5119 - Cal/OSHA Standards for General Industry](#) (4 Meetings, Monday, December 4, 2017 – Thursday, December 7, 2017, 8:00am – 4:30pm, Anaheim, CA)
- [OSHA 501 - Trainer Course in Occupational Safety and Health Standards for General Industry](#) (4 Meetings, Monday, December 11, 2017 – Thursday, December 14, 2017, 8:00am – 4:30pm, Los Angeles, CA)
- [OSHA 5600 – Disaster Site Worker Trainer Course](#) (4 Meetings, Monday, December 11, 2017 - Thursday, December 14, 2017, 8:00am – 4:30pm, UCSD Extension)

[UC Risk & Safety Training](#)

- [EH&S Professional Education](#) (Online Prerequisite to Workshop)
 - UC Berkeley Workshop (Tuesday, January 23, 2018, 9:00am – 5:00pm, UCB)
 - UC Riverside Workshop (Wednesday, March 28, 2018, 9:00am – 5:00pm, UCR)
 - UC Davis Workshop (Tuesday, April 17, 2018, 9:00am – 5:00pm, UCD)



CONNECT

Know where to turn on your UC campus for the information you need to keep yourself, your workplace and your environment safe and secure. Click on the campus links below to connect to local program, educational and informational resources.

[UC Berkeley](#) • [UC Davis](#) • [UC Irvine](#)
[UCLA](#) • [UC Merced](#) • [UC Riverside](#)
[UC San Diego](#) • [UC San Francisco](#)
[UC Santa Barbara](#) • [UC Santa Cruz](#)
[UCOP](#) • [UC ANR](#)

RESOURCES

Personal Emergency Preparedness: <http://www.ucop.edu/risk-services/crisis-management/personal-emergency-preparedness/index.html>

Community Emergency Response Team: <https://www.ready.gov/community-emergency-response-team>

Get a Kit: <http://www.redcross.org/get-help/prepare-for-emergencies/be-red-cross-ready/get-a-kit>



FEEDBACK PLEASE

Send an email to safetyspotlight@ucdavis.edu to submit your comments on the this issue or to suggest content ideas for future issues. We look forward to hearing from you!

This publication is produced and maintained by the Communications Team at Risk & Safety Solutions. For more information regarding our products and services, please email service@RiskandSafetySolutions.com.

 **RISK & SAFETY
SOLUTIONS**
www.RiskandSafetySolutions.com