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*"Safety Comes First"*

## Case Western Reserve Environmental Health and Safety

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### *"World Class" in Safety, too!*

CWRU has a reputation for 'world class' research and that is something we all take pride in. It has been said that great research and great lab safety programs go hand in hand. Great lab safety and chemical hygiene programs, with exceptional lab housekeeping and hygiene augment a 'world class' research agenda. I believe it. I hope you do too!

Labs that are well organized, clean, compliant, and safe prevent injuries and regulatory violations, but what can it add to the research going on in the lab? We think that it contributes to the quality of the research directly; by fostering careful experimentation, insuring rigorous risk assessment, preventing equipment and counter space contamination, helping insure chemical purity, preventing equipment damage, and insuring that our researchers and their team can continue their productive work without interruption, that is so vital to our university, the national research effort, and our country. The PI must set the example and tone for their lab. The lab staff takes their lead from the PI. This cannot be stressed any more strongly. The PI has to wear the lab coat and safety glasses, cannot wear shorts or sandals in the lab, and must follow their CHP and all safety rules in their lab, if they expect their staff to do the same. I hope that this serious approach to the research lab environment will spill over into all areas that are important to PI's and lab personnel. I think that we also have a duty to our students to teach and mentor them in all areas of research practice, including the modern lab safety and regulatory

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## *Three New EHS Members!*

*“Jim’s hobbies include hunting, outdoor activities, and training his new yellow lab puppy. He provides community service as a Firefighter/EMT for Hinckley, Ohio...”*

### **Jim Dahle**

We wish to introduce to the Case Western Reserve University community James Dahle. Jim began employment with the University in March 2008. He has a Bachelor of Science degree in Criminal Justice with a concentration in Arson Investigation from Edinboro University in Pennsylvania and an Associate in Applied Science degree in Fire Protection Technology from the University of Akron. Originally Jim is from Pleasantville, PA, just like the movie, which is in Northwestern Pennsylvania.

Jim’s current job title is Fire & Life Safety Specialist and he has been with EHS since July 1, 2011. His prior position was the Fire Safety & Prevention Coordinator under Police & Security Services. Jim’s hobbies include hunting, outdoor activities, and training his new yellow lab puppy. He provides community service as a Firefighter/EMT for Hinckley, Ohio where he and his wife live. Pretty much anything makes him laugh and he’s always up for a good practical joke.

### **Kumuduni Kulasekere**

We wish to introduce Kumuduni Kulasekere to the Case Western Reserve University community. Kumudu began employment with the University an August 1, 2011 in the Environmental Health and Safety Department as a Health Physics Specialist. She has a Masters of Science in Nuclear Engineering from University of Missouri in Columbia, Missouri and a Bachelor of Science degree in Physics with minors in Mathematics and Computer Science from the University of Colombo in Columbo, Sri Lanka.

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*“Kumudu’s favorite activity is tennis... [her] goal is to provide her daughter with the best education possible so that someday she too can be independent and equipped to handle both the many blessings and the many challenges of life.”*

## *Three New EHS Members!*

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She is originally from Sri Lanka, which is a small island in the Indian Ocean. Sri Lanka is a beautiful, tropical country, very similar to Hawaii. Of course since it is an island, there are beaches all around the country, as well as mountains, rivers, and plains. Kumudu grew up with five brothers and one sister and because of this she was quite a tomboy when she was young.

The Sri Lankan education system is similar to the British system. When you are in the tenth grade, you have to take the Ordinary Levels, which are an island-wide exam. If you pass that, you take the Advanced Levels (university entrance) exam. A score in the top 5% of the entire country for that year provides to college in Sri Lanka for free where Kumudu obtained her degree.

Among several previous positions, Kumudu worked with University Hospitals and Akron City Hospital as a medical physicist.

Kumudu's favorite activity is tennis. She is a very outgoing person and loves to be around people. She enjoys going the extra mile for her friends when they are in need. She considers her primary mission in life, her daughter, who is a gifted student, runner and a beautiful dancer. Kumudu's goal is to provide her daughter with the best education possible so that someday she too can be independent and equipped to handle both the many blessings and the many challenges of life.

### **Zachary Schweikart**

We wish to introduce to the Case Western Reserve University community Zachary Schweikart. Zach began employment with the University on June 13, 2011 in the Environmental Health and Safety Department as an Industrial Hygienist. He has a Bachelor of Science degree in Environmental Health from Bowling Green University in Bowling Green, OH, which is south of Toledo.

Originally, Zach is from Oregon, OH, which is a suburb of Toledo. Among his previous positions, Zach worked with Bureau Veritas as an Industrial Hygienist. Zach's hobbies include traveling, mountain biking, and kayaking. He provides community service as a volunteer at the Akron-Canton Regional Food Bank.

*"Zach's hobbies include traveling, mountain biking, and kayaking. He provides community service as a volunteer at the Akron-Canton Regional Food Bank."*

## Security of Radioactive Materials

*“Equipment that is used occasionally for radioactive material storage [...] shall be locked even if no radioactive material is currently present.”*

Security of all hazardous materials is a primary concern of EHS and should be a primary concern for all individuals using hazardous materials. Radioactive materials are no exception to this rule. All radioactive material (this includes stock vials and stock solutions) shall be secured against unauthorized access or removal unless you or someone from the laboratory authorized to use the material is present (reference OAC 3701:1-38-17; ODH Broad Scope License).

Equipment containing radioactive materials, e.g., cabinets, refrigerators, freezers, that is located in hallways must be locked or contain a secure lock-box inside the storage unit. Moreover, a refrigerator containing a secure lock-box should also have a special label posting on the outside of the refrigerator.

If the radiation-labeled equipment does not contain radioactive material and is not being used for radioactive material, then the equipment should be decommissioned. For equipment that is used occasionally for radioactive material storage, the equipment shall be locked even if no radioactive material is currently present.

An unsecured refrigerator or freezer labeled as radioactive but which contains no radioactive material is

considered a security violation as per RSOF guidelines.

Radioactive waste does not need to be secured in the same manner as other radioactive material. However, waste is to be kept in the waste area of the laboratory and its activity sensibly minimized.

For clarity remember, if you or someone from your lab authorized to use radioactive material is not present, all radioactive material must be secured.

Call EHS at ext. 2906 with any questions regarding security

### Where is EHS?

If you're new to Case (or simply haven't been to visit us yet), we are located in the Service Building on the 1st floor just off Circle Drive between the Health Sciences Library to the east and the Powerhouse Building to the west. For clarity, call x2906/2907 or check our website ([case.edu/ehs](http://case.edu/ehs)) for a map and directions before your visit. Keep in mind that much of the information and services (manuals and forms, upcoming training sessions, online training sessions, past newsletters, etc.) that EHS provides can be found conveniently online at ([case.edu/ehs](http://case.edu/ehs)) at any time.

## *Do you have to wear that badge?*

Even though you work with a radioisotope you may not need to wear a badge to monitor radiation levels. Some isotopes have such low energy emissions that badge monitoring devices are not effective. Below are some guidelines to help you decide if you need to wear a badge and, if so, what kind of badge is recommended.

<b>If you work with:</b>	<b>Badge:</b>
$^{35}\text{S}$ , $^{14}\text{C}$ , $^3\text{H}$ (tritium)	none
$^{51}\text{Cr}$ , $^{125}\text{I}$ , $^{33}\text{P}$	body
$^{32}\text{P}$ , $^{86}\text{Rb}$ , $^{22}\text{Na}$ (over 0.5 mCi)	body, ring
X and/or gamma rays	body
Equipment that yields neutrons	neutron
If you are a pregnant woman	body badge for yourself AND a separate badge for fetus

Any radiation worker who is pregnant or thinks she might be pregnant may declare herself a 'Pregnant Worker' by completing a 'Declaration of Pregnancy Form' and sending it to the RSOF. Declaration of pregnancy is voluntary. Counseling will be provided and an additional dosimeter will be issued which is read every month. This additional fetal badge is worn to conservatively measure any dose to the developing baby. The 'Declaration of Pregnancy Form' can be found on the EHS website <https://www.case.edu/ehs> under the 'Radiation Safety' link.

Note that you do NOT need to wear a badge if you work only with  $^{35}\text{S}$ ,  $^{14}\text{C}$ , or  $^3\text{H}$  (tritium). Please call the Radiation Safety Office (368-2906) if you have questions about whether a radiation dosimetry badge is recommended for your use of the isotopes listed above or if the isotope with which you work is not listed.

*“Note that you do NOT need to wear a badge if you work only with  $^{35}\text{S}$ ,  $^{14}\text{C}$ , or  $^3\text{H}$  (tritium).”*



## *Mercury Thermometer Safety Tips*

We have seen lately a sudden increase of broken mercury thermometers, and therefore a lot of mercury spills clean-up in labs around our campus. In light of this, we would like to offer a few safety tips:

- 1) Don't use mercury thermometers—there are a number of substitutes available (e.g. alcohol thermometers) that are much safer in use.
- 2) If you must use a mercury thermometer, do not overheat it—if the temperature of a liquid or surface where you use a thermometer exceeds the maximum temperature reading on that thermometer, it will break. Make sure that you do not leave mercury thermometer unattended - on hot plates, inside ovens or inside water baths.
- 3) If a mercury thermometer breaks, call the Chemical Safety Office 216.368.2907 immediately. Mercury vapor is extremely hazardous to the human health and because of that any mercury spill on campus is treated as a major emergency.

Please follow the steps below to prevent exposure to the mercury vapors:

If it is possible, carefully place pieces of broken thermometer in a sealed container to prevent exposure to mercury vapors. Use nitrile gloves to pick up broken pieces and try to avoid breathing vapors near or directly over the broken thermometer. If you or any other member of the lab is pregnant, do not come into any contact with broken mercury thermometer and evacuate the area immediately.

Tape off the area where mercury may have spilled to prevent further contamination. If it is

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## *Disposal of Radioactive Liquids*

Disposing of radioactive liquids requires some special procedures not applicable to solid wastes. When readying liquids for disposal, keep in mind that:

Radioactive liquids ready for disposal must have a pH between 5 and 10. Please test to make sure that the liquid's pH is within these limits; if it is not, neutralize it before you call the Radiation Safety Office for disposal.

The Disposal Listing for Radioactive Material (Liquid) needs to be very specifically filled out. The names and amounts of the chemicals (percentages are fine) in the liquid need to be identified on this sheet. One sheet is required for each tagged container.

You must also account for each liquid container as a separate line item on the Radiation Waste Disposal Form.

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environment.

Let us know how we can help you improve the “safety culture” and meet your safety responsibilities in your lab. That is a primary part of our mission here at EHS. We look forward to partnering with you to protect our people, our facilities, our research products, and our ‘world class’ reputation.

Yes, we are a ‘world class’ research institution and we have to be ‘world class’ in safety too!

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possible, open the windows in the room to increase ventilation.

Have everyone leave the area; don't let anyone walk through the mercury on their way out.

Do not try to clean up mercury spill yourself – Chemical Safety specialist from EHS will arrive as soon as possible and will use appropriate tools and chemicals to decontaminate the spill area.

Do not hide broken mercury thermometers in the desk drawers or other places in the lab or office – mercury vapors will continue to evaporate and personnel will get exposed to high concentration of mercury vapors over the time.

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Please Remember, all back issues of the EHS Newsletter can be found online at [case.edu/ehs](http://case.edu/ehs). Simply click on the "Newsletter" link in the left-hand column!

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