



↵ UC IRVINE RADIATION SAFETY NEWSLETTER ↵

Volume V, #4 (Fall 2009)

Prepared and distributed by the staff of the Radiation Safety Division of EH&S

The purpose of this newsletter is to keep radioactive material users at UC Irvine informed regarding campus radiation safety policies and procedures including tips to improve safety. Visit the EH&S website (www.ehs.uci.edu) under "[Radiation & Laser Safety](#)" for previous issues of this newsletter and more information on radiation safety.

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REDUCTION IN CAMPUS RADIATION DOSIMETRY

Unfortunately, because of a substantial reduction in the EH&S operating budget for this fiscal year, EH&S will be notifying some campus personnel who presently receive radiation dosimeter badges that we can no longer afford to pay for this service. **This will only include personnel who are not required to be badged based upon radiation control regulations and the quantities of radioisotopes which they use - and only then if their radiation dose histories indicate that they have been receiving very low or undetectable radiation doses in the recent years.** Affected persons will be provided with the opportunity to continue receiving dosimeters at their own expense.

Dosimetry will continue to be provided by EH&S to campus personnel as described below:

- ❖ Those who use 5 mCi or more of ³²P and/or ¹²⁵I in an experiment.
- ❖ Those who use 1 mCi or more of high energy gamma ray emitters such as ^{99m}Tc and ¹⁸F in an experiment.
- ❖ Those who operate x-ray machines (*dosimeter rings only for x-ray diffraction machine users*).
- ❖ Others involved in unique operations that can produce significant radiation exposures (Reactor Facility personnel, etc.).

EH&S will provide dosimetry to all persons currently enrolled in the dosimetry program for the remainder of the 2009 calendar year. Persons who will be dropped from the dosimetry badge program will be notified in early October when the October 1 – December 31, 2009, dosimetry is mailed out to campus personnel. Contact information for our dosimetry vendor will be included in that memo so that persons who would still like to receive the dosimetry can set up accounts of their own with Mirion Technologies/Global Dosimetry Services.



RADIOACTIVE WASTE PICKUP FEES

Please keep in mind that pickup fees for solid and liquid radioactive waste are based upon *the weight in pounds* of the actual waste inside the containers – not on the volumes of the containers. Some labs hold onto partially-filled waste containers for years without adding any additional waste in the belief that they will be charged for the full volumes of the containers if they dispose of them; this is not the case.

The current recharge rates for radioactive waste disposal (and for other types of waste also) can be found at this website: <http://www.ehs.uci.edu/rates/EH&SRechargeRates.pdf>. It will be noted that radioactive waste containing radioisotopes which have half-lives of less than 90 days (e.g., ^{32}P , ^{35}S , ^{125}I) is considerably cheaper to dispose of than waste containing radioisotopes with longer half-lives (e.g., ^3H , ^{14}C). This is because EH&S can hold the waste in a safe storage location for complete decay of the shorter half-life radioisotopes, and then dispose of the waste in regular trash (for solid waste) or into the sanitary sewer system (for liquid waste). *Do not store radioactive waste in your lab for decay and then dispose of it yourself.* EH&S monitors waste thoroughly before disposal to ensure that there is no remaining radioactivity. Decayed solid waste is shredded by EH&S or one of our contractors to ensure that all radiation symbols and inscriptions are destroyed.

The weblink for online radioactive waste pickups is: <http://www.ehs.uci.edu/apps/waste/radcollect.jsp>



MEMORABLE QUOTE

"Whenever anyone says, 'theoretically', they really mean, 'not really'."

David Parnas (1941 -), Canadian Software Engineer



RADIOACTIVE MATERIAL SECURITY!

Rooms that store small quantities of radioisotopes are subject to **normal building security procedures**. This means the rooms need to be locked whenever they are not occupied except for very brief absences (e.g., while using the restroom).


If substantial quantities of radioisotopes are present, such as individual vials with 5 mCi or more of ^{32}P , ^{125}I or 10 mCi or more of ^3H , ^{14}C , ^{33}P , and/or ^{35}S , the room access doors must be locked at all times when the room is not occupied (*even for very for short absences*) unless the radioisotopes are further secured in non-removable (physically secured) storage containers like locked refrigerators, freezers, cabinets, or drawers. These steps provide **enhanced security**. Radioisotopes in these higher quantities also need to be kept in secured storage containers whenever they are stored in large multi-user laboratories such as labs in buildings like Sprague Hall and Natural Sciences I. Alternatively, they can be stored in other rooms under the sole control of your PI. Radioactive materials must never be left unattended in unsecured locations such as hallways, loading docks, etc.

Since 9/11 secure storage of radioactive material has received increased scrutiny by regulatory agencies. The idea is that unscrupulous persons can cause a lot of problems and panic if radioactive material is used in criminal acts such as intentional contamination of public areas, construction of “dirty bombs”, etc.



NEW RADIATION SAFETY OFFICER

Debbie Hamano, who has been the UC Irvine main campus Radiation Safety Officer for the past 5 years, has retired. She has been replaced by Rick Mannix, who has been the alternate Radiation Safety Officer here for the past 6 years. The campus’ Radiation Safety Program has been very successful under Debbie’s leadership so no major changes in the program are expected. Rick was already the lead person on the campus’ Laser Safety Program, Radiation-producing Machine Program, and Non-ionizing Radiation Safety Program. He can be reached at 949-824-6098, or rcmannix@uci.edu.

 **If you have any questions about radiation safety, please contact EH&S at 949-824-6200. We will be happy to assist you with any radiation safety-related matter!**

