

Radiation Protection Program Update July 2010

The July rollout of Radiation Protection Program documentation marks the latest in SLAC's policy alignment with the Department of Energy's (DOE) update of 10 CFR 835, which is the federal regulation that establishes occupational radiation protection requirements for DOE facilities.

The updated regulation is based on recent International Commission on Radiation Protection (ICRP) recommendations and uses new dosimetric terminology and quantities. Mandated changes include updated radiation and tissue weighting factors as well as source accountability limits.

All affected Radiation Protection Program systems have been reviewed and the documentation and training material have been updated to remain in compliance. Additional training requirements only affect Radiation Protection Department staff and there are no new requirements for the SLAC site. Dose summary reports will continue to report exposure in millirem (mrem) even though the methodology has been refined to incorporate the new requirements.

Updated documents reflect both the mandated changes as well as program improvements that have been instituted within the past year, which are summarized below. For details refer to the links under "Resources", in particular the PowerPoint presentation, or contact Radiation Protection Field Operations (RPFO) group lead Jim Allan at ext. 4064, or Dosimetry Program Manager Henry Tran at ext. 3793.

Additional Program Improvements

Radioactive Material

- Notification.**
 Before any radioactive material (RAM) is brought on-site, it must be reported to RPFO (ext. 4299). This applies to *any* type of RAM, including naturally occurring RAM such as thorium welding rods and sand blasting media, sealed sources, and any radiation generating device (RGD) such as a soil density gauge or radiographic unit.
- Posting.**
 Radioactive material must be within an area posted for radiological controls.



All RGDs Must Be Cleared by RPFO Before Being Brought On-site

Dosimetry

The following program improvements were instituted to help ensure dose measurement accuracy.

- Dosimeter Storage Racks.**

Using a provided storage rack provides both convenient dosimeter storage and it eliminates the need for dose investigations due to non-occupational exposures that can occur at airports and medical or dental offices. The rack can also make dosimeter exchange at the end of the wear period seamless. Additional racks can be requested from a dosimeter point of contact (POC) or the dosimetry program manager at ext. 3793.



Dosimeter Storage Rack

- Dosimeter Return Reminder.** To encourage prompt return, email reminders will be sent to any dosimeter wearer who has not returned their dosimeter within 15 days after the wear period ends. After 30 days their supervisor will be notified.
- Occupational Exposure Report for SLAC Work at Other Sites.** A SLAC employee who conducts official SLAC work at another institution should request that the institution send a dose report to SLAC Dosimetry, Mail Stop 84, if a dosimeter was issued. This ensures a complete dose record.

- Supplemental Dosimetry.**

Electronic dosimeters are to be used in all instances in which radiological controls require supplemental dosimetry – such as when entering a high radiation area. In the past, pocket ion chambers, or PICs, were often used but because they do not meet current calibration requirements their use is now prohibited. Please send all PICs to the RPFO office.



Electronic Dosimeters Replace PICs

Resources

RPP Update: The Details ([PowerPoint](#))

["Radiation Protection Department"](#)

[SLAC Environment, Safety, and Health Manual \(SLAC-I-720-0A29Z-001\), Chapter 9, "Radiological Safety"](#)

[SLAC Radiological Control Manual \(SLAC-I-720-0A05Z\)](#)

Title 10, Code of Federal Regulations, Part 835, "Occupational Radiation Protection" ([10 CFR 835](#)), "Code of Federal Regulations: Main Page"