AN INTRODUCTION TO DOSIMETRY

The Radiation Safety Section is responsible for establishing radiation dosimetry (badge) service for all radiation workers on campus expected to receive 10% of the annual exposure limits.

The coordination of ordering, distributing and collecting badges from wearers, returning badges to the vendor for processing, and generating and distributing reports is a monumental task and is critically dependent on the Badge Coordinators' direct involvement. We distribute a little over 20,300 badges each year.

The standard operating procedure is to **establish a Badge Coordinator at the site where the wearers are located** in order to maintain direct communication regarding wear dates, return dates and distribution of badges to wearers. The Radiation Safety Section has established a record of a Badge Coordinator for each "series" of badges distributed on campus. That record is used to communicate vendor problems with radiation dosimetry distribution, wearer report distribution and problems involving badge return.

We appreciate your willingness to assume this important responsibility of Badge Coordinator. Please do not share or pass this responsibility on to someone else without first contacting Radiation Safety.

Contact Information:

The best way to contact us is through our general office e-mail at radiation.safety@osu.edu.

Instructions and Forms:

The instructions and forms you will need as a badge coordinator can be found on our website at <u>https://ehs.osu.edu/radiation-safety</u>. Please review each document.

Click on the Radiation Safety Link.

The page that comes up will look like the figure to the right.

Scroll down and click on "Personnel Monitoring."

For additional information and forms click on "View Related Documents."

÷	Non-medical X-ray Devices and Electron Microscopes	
•	Ohio Department of Health Licensing and Registration	
·	Personnel Monitoring	
	The most common methods to measure external exposures to radiation are whole body and ring dosimeters or badges. Dosimeters are issued to individuals who are likely to exceed 10% of the dose limits set for occupational workers.	
	Please review the important documents below:	
Exposure Reports Badge Return Deadlines		
	View Program View Related Documents	
	For questions or additional information please contact Lisa Everman at 614-292-4763.	
+	Procurement and Receipt of Radioactive Material	

TITLE	SHORT DESCRIPTION
Add & Delete Badges/Wearers	How to add new wearers and delete wearers that no longer need badges.
Anatomy of a Badge	Layout of the information found on a badge.
Badge Storage	How to properly store radiation badges.
Badge Wear Dates and Return Deadlines	When are your badges due to Radiation Safety?
Control Badges	Purpose of control badges and how to use them.
Exposure Reports	Types of reports you will receive and what to do with the reports.
Guide for Pregnant Workers	Information guide on the effects of radiation on a fetus.
Instructions for Spare Badges	How to issue a spare badge.
Personnel Monitoring Program	Details of our dosimetry badge program.
RS-10: Badge Request	Form used to add a new wearer.
RS-11: Exposure Record Authorization	Form that allows us to send for exposure reports for an employee or student
RS-12: Lost or Damaged Badge	Form to report a lost or damaged badge.

A list like the one shown to the right will appear.

Badge Series:

Please always <u>include your Series ID on all e-mails and forms</u>. Everything in the badge database is by series ID. The series ID will greatly aid in our ability to assist you. The Series ID can always be found on one of your badges. See diagram below.

Anatomy of a Badge:



Anatomy of a Series ID:

A series ID has a numerical category, followed by a building number, then usually ending in three letters specific to the series.

General category	Building #	Specific to series, usually 3 letters
02 = NRL	For example	For example
03 = Hospital	089 = Doan Hall	$\alpha \alpha M = $ monthly series
04 = OSU East Hospital	353 = Ross Heart	$\alpha \alpha Q =$ quarterly series
05 = Medical Office	354 = Rhodes Hall	
06 = Dental	375 = James Cancer	
07 = Veterinary		
08 & 09 = Research Labs		
9# = Fetal Badges		

Badge Color and Type:

Collar badges, which are orange, should be worn at the collar level and over the lead apron, if applicable. Whole Body badges, which are white, should be worn at about chest / abdomen level and under the lead apron, if applicable.

Spare Badges:

Not all series have spare badges. If your series does have spare badges, please note the following:

If you have any unused spare badges, please return them at the end of the quarter. Spare badges cannot be used outside the quarter they are intended to be used. The date on the badge shows the time period of the badge. (See Anatomy of a Badge) There is a fee of nearly \$20 for unreturned spare badges. If a spare badge is given to someone, an RS-10: Badge Request form must be completed so that the exposure on the spare badge assigned can be correctly attributed to the person wearing the spare badge. If you run out of spare badges contact Radiation Safety at <u>radiation.safety@osu.edu</u> for more spare badges.

Return of Old Badges:

After new badges arrive and are distributed, the old badges should be returned by the 15th of that month. Badges should be returned to Dosimetry, Radiation Safety, Environmental Health and Safety, 1314 Kinnear Road, Columbus, OH 43212. Or if you are located in or near the main Hospital, please return your badges to the red Badge Return bin located in the Hospital's main mail room in N129 Doan Hall. See photo and diagram below. There is a fee of about \$20 per badge not returned or returned late.



