

## TRAINING GUIDE FOR RADIATION WORKERS

(Type or Print Clearly)

The following checklist of training items is a suggested format for required training to all Radiation Workers under the Authorized User's (AU's) authority *prior* to using radioactive material without direct supervision of the Authorized User or another approved Radiation Worker. The training should be performed by the AU but can be delegated to laboratory supervisors who are approved as Radiation Workers (RW's). Training records must be documented, dated and retained in the AU's records for 3 years. A copy may be sent to the RS Office for record retention.

**The following items should be covered to the extent appropriate, according to the Radiation Worker's assigned responsibilities, for all personnel working with or surveying for radioactive materials:**

DATE	TOPIC
___	Basic radiation principles; types of radiation, particle / photon emissions.
___	Radiation protection; time, distance, shielding, dose calculations, radiation measurements, area postings (signage).
___	Radiation units and terminology; including rad, rem, roentgen, curie, etc.
___	Description of ALARA concept.
___	10 CFR Part 19 requirements, regulatory terminology, NRC form 3, rights of RW's, where is the regulation located, and recommended areas to post NRC form 3 in your laboratory.
___	Radiation dosimetry; dosimetry terminology, how to wear dosimetry, bioassay, declared pregnant worker program, fetal dosimetry, terminology (TEDE, CEDE).
___	Emergency response procedures involving radioactivity; Fires, injuries, major and minor spills, spill response, notification and clean up procedures.
___	Instructions on how to perform radiation surveys and what are any specific requirements for the area.
___	Description of the various isotopes used in the laboratory; handling procedures, waste minimization strategies, disposal and precautions associated with specific isotopes.
___	Review the Authorization documentation; applications, authorizations, conditions necessary to maintain compliance, basic lab rules (lab coats, eye protection, eating restrictions, and open toed shoe restrictions), etc.
___	Procedures for ordering, receipt and transfer of radioactive materials.
___	Record keeping requirements; inventories, training, etc.
___	Instructions on managing radioactive waste, requesting a pickup and disposal documentation.

## TRAINING GUIDE FOR RADIATION WORKERS – CONTINUED

- \_\_\_ Notification requirements; when to call the RS Office.
- \_\_\_ Observe and demonstrate the appropriate technique for checking and using a survey meter.
- \_\_\_ Observe and demonstrate the appropriate use of a liquid scintillation counter; discuss windows, protocols, efficiencies, dpm vice cpm, trigger levels, and false positives and appropriate corrective actions.
- \_\_\_ Observe and demonstrate the appropriate use of any other method of counting used. The use of a type counter was demonstrated.
- \_\_\_ Observe and demonstrate the procedure for performing a laboratory survey for contamination and discuss trigger levels.
- \_\_\_ Emphasize the importance of dry runs and cold runs prior to performing each type of experiment.

- 1) What does ALARA stand for? \_\_\_\_\_
- 2) What are the colors of a "CAUTION RADIOACTIVE MATERIALS" sign? \_\_\_\_\_
- 3) What can you do to minimize your dose from radioactive materials? \_\_\_\_\_
- 4) Can beta radiations from tritium, carbon-14 or sulfur-35 penetrate the skin? \_\_\_\_\_
- 5) What unit is used to measure activity? \_\_\_\_\_

### **I understand and have demonstrated the noted training topics.**

Print Name: \_\_\_\_\_ Employee/Student Id: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Print Trainer's Name: \_\_\_\_\_ Employee/Student Id: \_\_\_\_\_

Trainer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Authorized User Name: \_\_\_\_\_ Au #: \_\_\_\_\_

Course Id: \_\_\_\_\_ Course Hx: \_\_\_\_\_ Date Entered: \_\_\_\_\_ Initials: \_\_\_\_\_