

OSU-CHS Radiation Safety Program

MODULE 3

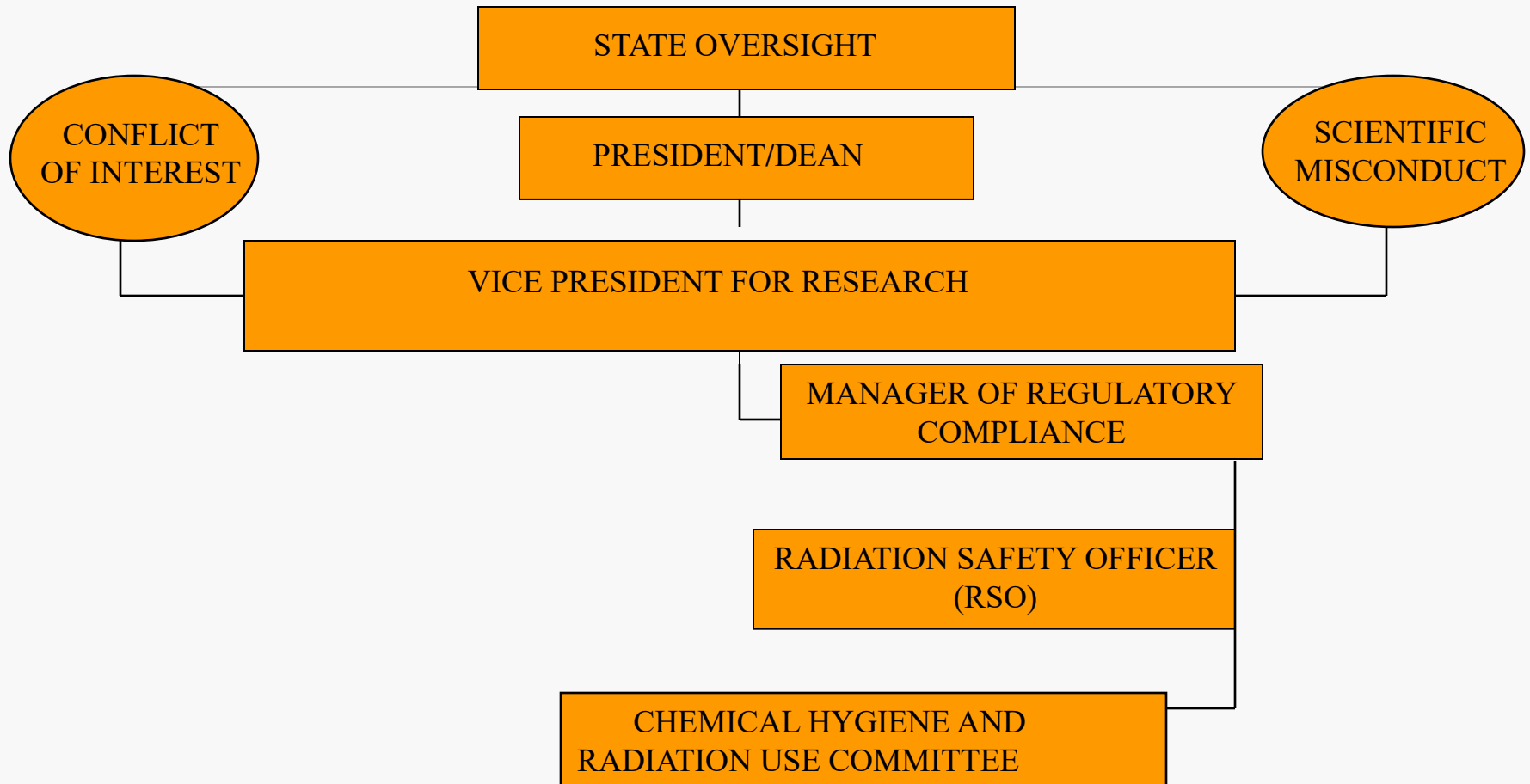


OKLAHOMA STATE UNIVERSITY
CENTER FOR HEALTH SCIENCES

OSU-CHS ALARA Statement

The OSU-CHS radiation safety program will be conducted in such a manner so that exposure to faculty, staff, students, the public, and the environment will be maintained **ALARA** (as low as reasonably achievable) and that no radiation exposure will be received without societal benefit. This will be accomplished without impeding legitimate research, or realistic teaching objectives in accord with State and Federal regulations.

CHS's Compliance Structure



'Radiation User' Approval

1. Protocol reviewed by the CHRUC committee and RSO.
2. Approval Letter sent to PI:
 - i. Lists approved isotopes
 - ii. Lists approved laboratory location(s) and lab layout schematics
 - iii. Protocol expiration date is set.
3. PI Duties
 - i. PI provides record of 40-hour training for self and other protocol personnel (Authorized Users/AU's)
 - ii. PI is added the license with OKDEQ (if approved)
 - iii. PI is responsible for lab safety and regulatory compliance of all their laboratory workers

What is Provided for Rad-Users?

1. Access to Liquid Scintillation Counter, Geiger counters, and /or other radiological survey methods.
2. Radiation dosimetry badges, if applicable.
3. Radioactive waste pick up and storage, & arrangement for disposal (contact RSO at chslabsafety@okstate.edu).
4. Assistance with regulatory compliance (contact email above).

What Is Not Provided for Users?

1. Disposal of radioactive waste by release into sanitary sewerage (PI is responsible).
2. Disposal of short-lived radioactive waste (PI is responsible).

**All disposal should be handled according to state and federal regulations, what's outlined in campus RAM License, and campus Radiation Safety Program SOPs.*

Who Can Order Radioactive Material?

1. Authorized Users (PI)
2. Persons Approved as Agents of Authorized Users

How To Order Radioactive Material

1. Complete RS-5 “Radiation Materials Order Form,” including an account number to pay for it.
2. Send completed RS-5 form to Radiation Safety Officer, at chslabsafety@okstate.edu.
3. Radiation Safety Officer will place order for radioactive material, if approved.
4. Radioactive material will be delivered to Authorized User.

Radioactive Material (RAM) Packages

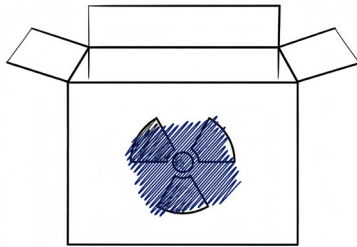
1. All packages must be surveyed for contamination **within 3 hours of receipt** (by authorized user).
2. Results placed on RS-6 “Radiation Materials Receiving Report”.
3. Record radioactive material authorization number on receiving record.
4. Send copy of receiving record to Radiation Safety Officer at chslabsafety@okstate.edu.

Material Disbursement

After packages have been logged in and surveyed, the material shall be placed in authorized safe storage, as outlined in the approved RAD protocol.

Track radioactive material from receipt to disposal using RS-7 “Radioactive Materials Accountability Record”.

Must deface label when the material has been removed from packaging.



In-Laboratory Training

Every person who frequents a laboratory where radioactive material is stored or handled must complete training covering the following topics, minimally (training is given by the PI):

- In laboratory safe conduct of procedures
- Rules regarding eating, drinking, storage of food and utensils and cosmetic application
- Proper security for radioactive materials
- Procedures for discarding potentially contaminated waste
- Ancillary personnel training, as appropriate.

Laboratory Surveys

The Authorized User ensures compliant survey frequencies in laboratories where radioactive material is used or stored, as outlined in their RAD protocol and campus policies.

The Radiation Safety Office may make unannounced surveys.

Commonly, cleanup is initiated at a level $> 200 \text{ dpm}/100 \text{ cm}^2$.

‘Contamination Zone’ established at: 1000 dpm

Laboratory Audits

- All locations where radioactive material is used or stored are internally audited, annually.
- RAM Inventory logs must be kept current.
- In-lab surveys shall be documented and saved, and available to RSO upon request.
- Ensure the survey instruments are within calibration date and operating properly.
- Warnings, notice to workers, and emergency signs/labels are posted.
- Record of in-laboratory training is available to RSO upon request.

Responsibilities (Program)

1. Assure that college personnel, students, and visitors are not subject to undue radiation exposure
2. Assure that all federal and state regulations are in full compliance
3. Assure that all college regulations and policies related to radiation safety are in full compliance



Responsibilities (Program)

Assure that local and state codes and ordinances are in full compliance.

Assure that the integrity and usefulness of college facilities are not compromised.

Assure that maximum standards of good practice and safe handling are maintained.

These general responsibilities apply to all individual users, technicians, students, and operating personnel.

Responsibilities (Users)

Each person who handles radioactive materials or radiation sources must realize that the ultimate success of a radiation safety program lies in responsible actions by individuals in their daily work.

Common Violations

1. Eating and Drinking in Laboratories
2. Leaving Radiation-Producing Equipment and/or Radioactive Material Unsecured
3. Failure to Verify Waste as Nonradioactive Prior to Being Discarded as Ordinary Trash
4. Failure to Conduct and Record In-Laboratory Surveys and at Appropriate Frequencies
5. Failure to Return Copies of Radiation Log Documents to the Radiation Safety Office in a Timely Manner

Consequences of Violations

Will result in consequences up to and including **permanent loss of privilege** to use radioactive materials and/or sources of radiation at OSU-CHS.