



Radiation Safety Office Audit

- I. Authorized User (AU): Department:
- II. UNMC Internal License: Expiration Date:
- III. Date of Audit: Audit Type: Annual Renewal
- IV. For Renewal Audits, indicate changes on application & current license:
- a. Rooms of Authorized Use:
 - b. Nuclides (e.g., possession limit, form):
 - c. Personnel:
 - d. Other:
- V. Correspondence (e.g., amendments) Since Last Audit:
- VI: Date of Last Audit:
- VII. Non-Compliances Identified in Last Audit:
- VIII. Inspection Finding: This audit is an examination of the activities conducted under the above license as they relate to radiation safety and to compliance with the State of Nebraska regulations (Title 180 Nebraska Administrative Code 1), the University of Nebraska Medical Center (UNMC) Radiation Safety Manual, and conditions of the UNMC broadscope license and the AU's internal license. The audit was conducted through review of documentation and records, interviews with personnel, observations, and confirmatory measurements. The following findings were identified from this audit.
- Items of Non-Compliance Identified:
- IX. Radiation Safety Personnel Performing Audit:

A. Postings and Labeling

Ensure that rooms are properly posted and labeled. Attach additional sheets as necessary.

Room:				
Posting checklist in license?				
Room map in license?				
Room posted, "Caution Radioactive Material"?				
Hot sink & drain labeled?				
Hood labeled & calibrated within the last year?				
Refrigerator labeled?				
Freezer labeled?				
Waste containers appropriate & labeled (radionuclide indicated)?				
Radiation work areas (e.g., benches) posted?				
Equipment labeled?				
Safety rules posted?				
Emergency procedures posted?				
Notice to Employees posted?				
Appropriate shielding in place?				
Appropriate contamination control (e.g., blue pads) in place?				
General Assessment: Are the rooms & equipment suitable for the radioactive material used?				

Comments:

Are there any items of non-compliance? Yes No N/A

List items of non-compliance:

B. Instrument Calibration Records

Does AU have survey instrument(s)? Yes No N/A (uses only H-3)

If "No", borrows instrument from (state AU):

If yes, list radiation survey meter(s):

Make & Model	SN	Calibration Date	Function Checks OK?	Comments

Is the most current instrument calibration record maintained by Radiation Safety?
 Yes No N/A

C. Inventory Control

Conduct physical inspection of licensed material and review receipt, tracking and transfer documentation.

Inspection Item	Response (Yes, No, N/A)	Comments
Is all licensed material physically accounted for & matches RSO records?		
Is there an RSO-8 form for each licensed material item?		
Is usage of material properly documented on RSO-8 form(s)?		
Was receipt of licensed material properly documented?		
Was transfer of radioactive material properly documented?		

Comments:

Are there any items of non-compliance? Yes No N/A

List items of non-compliance:

D. Waste Disposal

Review RSO-8 forms, sewer disposal logs, available waste tags and other documentation related to disposal of licensed material.

Item	Inspection	Response (Yes, No, N/A)	Comments
Are disposals (including sewer) properly documented on RSO-8 forms (required by RSM)?			
Are sewer disposals documented by a sewer log in vicinity of sink (recommended)?			
Was any of the sewer limits exceeded?			
Is waste segregated by radionuclide (C-14 & H-3 solid waste may be co-mingled)?			
Are proper containers (e.g. "Sharps") being used for waste?			
Is potentially non-radioactive waste (e.g., shipping box, gloves) properly disposed of?			

What is the frequency of radioactive waste pickups?

Comments:

Are there any items of non-compliance? Yes No N/A

List items of non-compliance:

E. Personnel - Training & Occupational Dose Monitoring

Review the Personnel Training & Badging database printout for the AU and RSO bioassay records.

Inspection Item	Response (Yes, No, N/A)	Comments
Is the personnel list accurate (e.g., have any individuals left the lab)?	YES	
Is radiation safety training complete & up to date for personnel?	YES	
Are individuals who work with radioactivity being badged? (badging not required for work with solely H-3, C-14 and/or S-35)	YES	
Indicate dates of bioassays performed since last audit?	N/A	
Are extremity badges required (& used) for the radioactive work performed in this lab?	N/A	
Are bioassays performed in accordance with the conditions of the license?	N/A	
Are workers receiving an annual report of their radiation dose?	YES	

Comments:

Are there any items of non-compliance? Yes No N/A

List items of non-compliance:

F. Laboratory Surveys

Inspection Item	Response (Yes, No, N/A)	Comments
Are records of contamination wipe surveys properly maintained & performed at the required frequency? -Survey results included -Decontamination records complete -Indicate any rooms that require contamination surveys more frequent than monthly		
Is QC performed on instrument used for counting wipes (e.g., C-14 standard counted with wipes)		
When was the last contamination survey performed?		
Maps available showing locations where wipes are taken?		
Are copies of the Laboratory Contamination Survey form being sent to Radiation Safety Office (Note missing forms in Comments Section)?		
In conversations with lab personnel, is an instrument survey performed at the end of each working day (not required for H-3)?		

RSO Survey Results of Rooms on AU License:

- 1) Instrument Survey
 Model: Ludlum 3 S/N: 163926 Background reading (cpm): 30
 List all areas & readings that are >2 times Background: NONE

- 2) Contamination Survey
 Wipes counted on: RSO Liquid Scintillation Counter Other:

 List all areas & readings that are > 220 dpm:

 Are there any items of non-compliance? Yes No N/A

 Comments:

G. Operating Procedures/Security

Review file & discuss with personnel the use of radioactive material in the laboratory.

Inspection Item	Response (Yes, No, N/A)	Comments
Review the procedures involving radioactive material on file with Radiation Safety. Are procedures current?		
Have there been incidents or concerns regarding the use of radioactive material?		
Was radioactive material secured at the time of the audit (e.g., was there activity above exempt quantities in an unlocked room not occupied by a radiation worker)?		
Discuss with lab personnel how radioactive material is secured (indicate in Comments section). Is material properly secured?		

Comments:

Are there any items of non-compliance? Yes No N/A

List any items of non-compliance:

Performance-Based Audit

The purpose of the performance based audit is to determine if radioactive material use in the laboratory is being performed safely and in accordance with the principles of ALARA and conditions of the license. The performance based audit is conducted by observation of radioactive material use and discussion with personnel working in the laboratory. Performance based audits are required for all renewal audits (optional for annual audits).

- 1) Personnel observed/interviewed:
- 2) Indicate the type of procedure observed or briefly describe procedures commonly used in this laboratory:
- 3) Observe/discuss the following radiation safety practices:

Practice Observed/Discussed/Demonstrate	Comments
No food, drink, smoking or application of cosmetics in use areas.	
Containers, equipment, work areas where radioactive material is used and/or stored.	
Appropriate protective clothing & contamination control used with unsealed radioactive material; (e.g., Disposable gloves, Lab coats, Bench paper, Trays).	
Proper personnel monitoring (whole body, extremity badging) used & worn (and stored).	
Proper survey meter used. Have individual perform function check of a radiation survey meter & demonstrate use of meter.	
Monitoring of individuals after using radioactive material and before leaving laboratory.	
End of the day instrument surveys & action levels.	
Monitoring items (e.g., gloves, packaging, bench paper) & demarcation prior to disposal as normal trash.	
Proper technique for performing contamination swipes; documentation of contamination swipe surveys.	
Proper disposal of radioactive waste & tracking of material use (e.g., sewer logs, RSO-8 forms).	
Adequate security of material while in use or storage.	

Summary:

Follow-up required?

Comments: