

## Research Laboratory Safety Self-Inspection: Radiation Safety Checklists

|                                |                         |
|--------------------------------|-------------------------|
| <b>Principal Investigator:</b> | <b>Department:</b>      |
| <b>Lab Building:</b>           | <b>Inspector Name:</b>  |
| <b>Lab Rooms:</b>              | <b>Inspection Date:</b> |

| Question  | Y                     | N                     | NA                    | Comments or Deficiencies<br><small>* Indicate room where deficiency is identified</small> |
|---|-----------------------|-----------------------|-----------------------|---|
| <b>Radiation Safety</b>   |                       |                       |                       |   |
| <b>Radioactive Materials</b>  |                       |                       |                       |   |
| Is current drawing of the laboratory available and represents authorized and actual work areas?     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Does lab have Radioactive Material Authorization (RMA) available?                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are Isotope Usage records properly maintained?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are radioactive material transfer records properly maintained?                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are radioactive waste disposal logs properly maintained?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are the quarterly inventories of radioactive material properly maintained?                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Have weekly wipe surveys of isotope work areas been properly maintained?                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Is the annual in-laboratory training log current?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are copies of training certificates available for all personnel working with the material?          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are the current versions of the Title A card, RHA20, and Emergency Phone numbers posted in the lab? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are appropriate warning signs posted?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Are the isotope work areas properly labeled and restricted?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |
| Is the "hot" sink(s) properly labeled and restricted for isotope use?                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |   |

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| Are the refrigerator(s) or freezer(s) marked for isotope storage?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are supplies and equipment properly labeled and restricted for isotope use?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Do all personnel know how to access U.S.C. Radiation Safety Manual from the EHS website?                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is proper shielding available?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are the waste area(s) and procedures adequate?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is the Geiger Counter calibrated and in working order?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are eating and drinking prohibited in restricted areas?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are the laboratory and/or isotopes secured during absence of personnel?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are personnel properly wearing dosimetry device(s)?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are lab personnel using appropriate PPE?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Wipes indicate no removable contamination above 3 times background   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| <b>X-Ray Equipment- Research</b>   |                       |                       |                       |  |
| Is a "Caution: X-ray Equipment" sign or sign of similar intent posted on doors leading into the area?                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is an OSHA formRHA.-20 "Notice To Employees" posted in the area near the x-ray equipment?                                      | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Do employees know how to access Part 3 and Part 9 of "Title B, South Carolina Rules and Regulations for Radiation control?"    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is equipment arranged so radiation levels to individuals do not exceed limits set forth in R.H.B.3.4?                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is radiation area survey performed as required?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Have all operators completed the Basic X-Ray Safety course and all laboratory personnel signed the in-laboratory training log? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Have all non-X-Ray equipment operators signed the in-laboratory training log?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are normal operating and emergency procedures written and available for review by operators?                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |

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| If warranted, are personnel properly monitored for radiation exposure?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is a "Caution-Radiation -This Equipment Produces Radiation When Energized" label or one of similar intent located near the "X-Ray-On" switch. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is "Caution-High Intensity X-Ray Beam" label located on or immediately adjacent to the X-Ray source housing?                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is an "X-Ray On" light located near the power switch and illuminated only when the X-Ray tube is energized?                                   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are warning devices "Fail-Safe?"  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are safety devices operational or variance granted?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are safety devices checked annually and records kept?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| <b>Electron Microscope</b>  |                       |                       |                       |  |
| Is the Electron Microscope currently registered with SC DHEC?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Was Radiation Safety notified of any maintenance or modifications to an EM Scope?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is DHEC's registration sticker visible on the control?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| <b>Laser Laboratory Inspection</b>  |                       |                       |                       |  |
| Are written operating procedures available and posted near the laser?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are written emergency procedures available and posted near the laser?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are alignment procedures available and posted near the laser?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Have all operators of laser(s) been trained in the use of the specific laser and completed in laboratory training?                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are all laser areas properly posted with appropriate warning signs?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is access to the laser area controlled with appropriate engineering or procedural entry way control?  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Are only authorized personnel allowed in laser area and to operate the laser?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| Is appropriate eye protection for the laser available and worn?   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| <b>Class III or IV Laser</b>  |                       |                       |                       |  |

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| Is a protective housing in place and fitted? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |
| If no housing, are other controls available? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |  |