

**BY ORDER OF THE COMMANDER
4TH FIGHTER WING**

**SEYMOURJOHNSON AFB INSTRUCTION
48-101**



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Aerospace Medicine

RADIATION PROTECTION PROGRAM

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This instruction defines responsibilities and gives general guidance for conducting the Radiation Protection Program at Seymour Johnson Air Force Base including USAFR tenant units. This instruction supplements requirements detailed in the following regulations: AFD 48-1, *Aerospace Medical Program*, AFI 40-201, *Managing Radioactive Materials in the US Air Force*, AFOSH Standard 48-9, *Electro-Magnetic Frequency (EMF) Radiation Occupational Health Program*, AFOSH Standard 48-139, *LASER Radiation Protection Program*, and AFMAN 48-125, *Personnel Ionizing Radiation Dosimetry*. It provides guidance for protecting personnel from exposure to ionizing (i.e. radioisotopes and X-ray producing devices) and non-ionizing radiation (i.e. RFR and LASER radiation), and applies to all Air Force and tenant units on Seymour Johnson AFB that possess or use radioactive materials or radiation producing devices. This instruction does not apply to the exposure of patients by the Medical Service during diagnostic or therapeutic exposures or exposures to personnel by radiation resulting from the employment of nuclear or thermonuclear weapons in combat. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

This Instruction has been revised in its entirety. It must be completely reviewed for changes and new information. Major changes include a complete re-write due to Air Force regulation updates.

1. OBJECTIVE. It is Air Force policy that all exposures to radiation be As Low As Reasonably Achievable (ALARA). There should be no exposure to ionizing or non-ionizing radiation without an expected benefit, and the dose received should be the lowest possible. While the established maximum permissible exposure doses are conservative and offer a low risk of adverse health effects compared to other hazards of life and occupation, it is prudent that every effort be made to reduce exposures to the lowest level that is reasonably achievable, thereby lowering the health risk associated with the exposure. This instruction implements ALARA by establishing a comprehensive, coordinated, and base-wide radiation protection program that incorporates all of the current radiation protection requirements as well as certain additional management concepts and controls specifically designed to maintain exposures to personnel ALARA.

2. AUTHORITIES/REFERENCES. This base instruction implements the radiation control policies and requirements contained in:

- 2.1. AFI 48-148, *Ionizing Radiation*.
- 2.2. AFI 40-201, *Managing Radioactive Materials in the US Air Force*.
- 2.3. AFMAN 48-125, *Personnel Ionizing Radiation Dosimetry*.
- 2.4. AFOSH Standard 48-9, *Electro-Magnetic Frequency (EMF) Radiation Occupational Health Program*
- 2.5. AFOSH Standard 48-139, *LASER Radiation Protection Program*
- 2.6. T.O. 00-110N Series, *Safety and Control Requirements in the Radiation Field*.
- 2.7. 10 CFR, *Energy*.
- 2.8. 21 CFR, *Food and Drugs*.
- 2.9. 49 CFR, *Transportation*.
- 2.10. Department of Defense Instruction (DODI) 6055.8, *Occupational Radiation Protection Program*.
- 2.11. AFI 91-204, *Safety Investigations and Reports*.

3. DEFINITIONS.

3.1. ALARA CONCEPT: The ALARA concept is a set of management and administrative actions taken to reduce personnel radiation dose to as low as possible consistent with existing technology, costs, and operational requirements. The ALARA concept was developed in response to scientific evidence that suggests that no level of radiation exposure is totally risk free.

3.2. IONIZING RADIATION: Electromagnetic radiation which may cause ionization within cells or tissues of the body. Alpha particles, beta particles, gamma rays, X-rays, and neutrons are examples of types of ionizing radiation.

3.3. RADIO FREQUENCY (RF) RADIATION: Electromagnetic radiation emitted at frequencies from 10 kilohertz (KHz) to 300 gigahertz (GHz). Examples of RF radiation producing devices are Radar and communications equipment, and microwave ovens.

3.4. LASER (Light Amplification by Stimulated Emission of Radiation). Devices that can emit a single and coherent frequency of energy in the range 315 to 1,400 nanometers (nm).

3.5. RADIATION SAFETY OFFICER (RSO): An individual designated by the appropriate level commander to manage radiation protection programs. The RSO provides consultation and advice on the hazards associated with radiation and effectiveness of measures to control these hazards. This individual shall be the most technically qualified and experienced person available to assure capability commensurate with the assignment. The term "RSO" is a functional title and is not intended to denote a commissioned status or a job classification within the Air Force. There are three distinct categories of RSOs at Seymour Johnson AFB:

3.5.1. INSTALLATION RSO: An individual designated by the installation commander to manage the Installation Radiation Protection Program. This individual will usually be the base bioenvironmental engineer or a senior bioenvironmental engineering technician (AFSC 4B0X1) with experience subject to approval by the USAF Radioisotope Committee.

3.5.2. UNIT RSO: An individual designated by the unit commander to act as the single focal point for the unit on radiation protection matters. Each operational unit that uses or operates radiation producing devices or materials will appoint, in writing, a unit RSO.

3.5.3. PERMIT or LICENSE RSO: An individual designated by the unit commander and approved by the USAF Radioisotope Committee or Nuclear Regulatory Commission (NRC) to manage the radiation protection aspects associated with the use of radioactive materials for which a specific USAF Radioactive Material Permit or an NRC License has been issued.

4. RESPONSIBILITIES.

4.1. The Commander, 4th Fighter Wing will:

4.1.1. Appoint, in writing, an Installation Radiation Safety Officer (usually the base's senior ranking bioenvironmental engineer).

4.1.2. Delegate the authority to the Installation RSO to suspend installation operations involving radioactive materials that pose a significant health risk to personnel, are in clear violation of regulations or requirements, or can negatively impact AF operations, materiel, or real estate.

4.1.3. Prohibit the receipt or transfer of radioactive material (to include radioactive material used in classified operations) without prior coordination and/or approval by the Installation RSO.

4.2. The Commander, 4th Medical Group will:

4.2.1. Ensure complete records are maintained of either measured or estimated radiation dose received by personnel during occupational practices and contingency operations in the member's medical record.

4.2.2. Ensure all reported incidents of suspected or alleged overexposure to ionizing, RF, or LASER radiation are reported to and investigated by Bioenvironmental Engineering and the results of such investigations are properly documented by Public Health.

4.2.3. Ensure medical follow-up of personnel receiving significant exposures to ionizing radiation in accordance with AFI 48-148, Chapter 6.

4.2.4. Ensure medical use of radiation complies with AFI 48-148, Chapter 4.

4.2.5. Comply with all other requirements of AFI 48-148, paragraph 2.13., AFOSH Std 48-9 paragraph 1.8., and AFOSH Std 48-139, paragraph 1.8.

4.3. Commander, 4th Contracting Squadron will:

4.3.1. Ensure that all installation contracts executed after the effective date of this instruction include the following requirements:

4.3.1.1. All uses of radioactive material or ionizing radiation-producing equipment on Seymour Johnson AFB must be coordinated and approved in writing by the installation RSO prior to use. To obtain installation RSO approval, follow the procedures outlined in SEYMOURJOHNSONAFBI 48-101, paragraph 11.

4.3.2. Comply with all other requirements of AFI 40-201, paragraph 1.18.

4.4. Commander, 4th Logistics Readiness Squadron will:

4.4.1. Prevent the transfer of any radioactive material to units on the installation without prior coordination with the installation or affected permit RSO.

4.4.2. Develop and implement procedures to prevent the inadvertent transfer of radioactive material/items containing radioactive material or suspect items through the Defense Reutilization Management Office (DRMO) system.

4.4.3. Comply with all other requirements of AFI 40-201, paragraph 1.19.

4.5. Commander, 4th Civil Engineering Squadron will:

4.5.1. Comply with all requirements of AFI 40-201, paragraph 1.20.

4.6. Commander, 4th Security Forces Squadron will:

4.6.1. Immediately notify the installation RSO of suspected, attempted, or actual theft or sabotage of radioactive material, to include supply items containing radioactive material.

4.7. Organization or Unit Commanders will:

4.7.1. Designate, in writing, an organizational or unit RSO when an organization possesses a radioactive materials permit or when an organization's practices can potentially result in radiation exposure at or above 10 percent of the annual radiation dose limits. For Seymour Johnson AFB, this applies to the following organizations: 4 MXG

(MXQA), 4 CMS (MXMVS), 4 EMS (MXMFN), 916 MXS (MXMFN), 916 CES (CEX), 4 CES (CEX and CED), 4 AMDS (SGGD), 4 MDSS (SGSAR).

4.7.2. Ensure shop supervisors responsible for the operation of potentially hazardous radiation producing equipment develop unit radiation safety awareness training plans.

4.7.3. Comply with all other requirements of AFI 48-148, paragraph 2.11., AFOSH Std 48-9 paragraph 1.9., and AFOSH Std 48-139, paragraph 1.11.

4.8. Permittees (Unit Commanders of Units Possessing Radioactive Material Permits) will:

4.8.1. Coordinate with the installation RSO prior to receiving, possessing, using, distributing, storing, transporting, transferring, or disposing of any radioactive material or commodity containing radioactive material.

4.8.2. Comply with all other requirements of AFI 40-201, paragraph 1.23.

4.9. Installation RSO (Bioenvironmental Engineer) will:

4.9.1. Conduct the base wide Radiation Protection Program, which includes surveillance of all radioactive materials and radiation producing devices.

4.9.2. Coordinate and assist unit RSOs as necessary to ensure a comprehensive, coordinated radiation protection program.

4.9.3. Perform initial and periodic hazard evaluations of all radiation sources or modifications as needed. Define health hazards, hazardous areas, and recommend proper control measures to commanders and users.

4.9.4. Compile and keep a current inventory of Air Force owned and operated radiation sources on base.

4.9.5. Operate the Base Personnel Dosimetry Program. Issue personnel dosimeters and review all results.

4.9.6. Conduct or arrange for investigations of alleged personnel overexposures to radiation.

4.9.7. Make available ALARA, RFR, and LASER training tools to unit RSOs and supervisors of personnel who use or operate radiation sources.

4.9.8. Provide briefings and other health education consultations concerning radiation when requested by unit RSOs and commanders.

4.9.9. Review annually this program, individual unit permit programs, and periodically areas that use radiation producing devices or radioactive material.

4.9.10. Ensure key base agencies (e.g., base commander, fire department, CES commander, and SFS commander) are informed of authorized uses of radioactive material (RAM) on the installation annually with periodic updates as required.

4.9.11. Brief annually to wing leadership the status of the base radiation protection program at the wing's quarterly Environment, Safety, and Occupational Health (ESOH) Council.

4.9.12. Maintain and annually review this installation radiation safety instruction.

4.9.13. Comply with all other requirements of AFI 40-210 paragraph 1.15, AFI 48-148 paragraph 2.15., AFOSH Std 48-9 paragraph 1.8.1, and AFOSH Std 48-139 paragraph 1.8.1.

4.10. Public Health Flight will:

4.10.1. Start action to investigate alleged or suspected radiation overexposures. Prepare and distribute AF Form 190, *Occupational Illness/Injury Report*, and additional documentation as appropriate for all incidents of alleged personnel exposure to radiation as outlined in AFI 48-101, *Aerospace Medical Operations*.

4.11. Unit RSOs will:

4.11.1. Act as a single point of contact for the unit on radiation safety matters and maintain active liaison with the Bioenvironmental Engineering Flight.

4.11.2. Conduct annual radiation safety training for the pertinent personnel in their unit and record the training on a sign-in roster and on the individuals' AF Form 55, *Employee Safety and Health Record*. Provide a copy of the sign-in roster to the installation RSO.

4.11.3. Submit semi-annual inventory of all radiation producing items in the workplace to the installation RSO. Inventories must include date of the inventory, model number and serial number of each source if assigned, the identity of the radionuclide and quantity (manufacturer date if sealed source) for ionizing radiation sources, the location of each source, and the signature of the unit/permit RSO certifying the accuracy of the inventory.

4.11.4. Comply with all other requirements of AFI 48-148 paragraph 2.16.

4.12. Permit RSOs will:

4.12.1. Ensure annual radiation safety training is accomplished and recorded.

4.12.2. Annually brief the permittee and installation RSO on the permit radiation safety program, including the program's regulatory compliance, and that exposures are ALARA. Document the annual brief with a memo or Staff Summary Sheet signed by the permittee and maintain with permit records.

4.12.3. Comply with all other requirements of AFI 40-201 paragraph 1.26.

4.13. Supervisors will:

4.13.1. Ensure that workers follow procedures published in equipment technical orders and manuals, unit OIs, etc., for protection of personnel from exposure to radiation.

4.13.2. Ensure members of the general public are protected from non-occupational exposures resulting from AF practices.

4.13.3. Ensure their personnel are trained on radiation hazards in the workplace and appropriate requirements for protection upon initial assignment to the workplace and annually thereafter. Radiation safety training plans should be reviewed by Bioenvironmental Engineering annually.

4.13.4. Ensure personnel perform the duties of their job in accordance with ALARA principles.

4.13.5. Notify the primary care manager of the declared pregnancy status of workers.

4.13.6. Notify the responsible RSO of changes in practices or procedures involving radiation sources.

4.13.7. Notify the responsible RSO of potential violations of AFIs or this instruction, of unsafe work practices involving radiation sources, or of accidents or incidents involving radiation.

4.13.8. Contact Bioenvironmental Engineering immediately following a suspected or alleged abnormal exposure to radiation.

4.13.9. Ensure new radioactive materials including ionizing, non-ionizing sources, and LASERs are not procured without first consulting the Installation RSO.

4.13.10. Maintain a current copy of this instruction.

4.14. Workers will:

4.14.1. Follow procedures for safe work given in equipment technical orders and manuals, unit OIs, etc., and perform operations in a manner that maintains doses ALARA.

4.14.2. Make sure required warning signs and safety devices are in place or properly set before beginning work, and that everyone understands the procedures and signals to be used for the task being done.

4.14.3. A female military member shall, on becoming aware she is pregnant, notify her workplace supervisor or primary care manager. A female non-military member should notify their workplace supervisor or primary care manager, but their decision to declare their pregnancy is entirely voluntary.

4.15. Non-Air Force organizations will: abide with *AFI 40-201, Managing Radioactive Materials in the USAF*, to include obtaining written approval from the installation RSO at DSN 722-5401 or Comm (919) 722-5401 before they bring new sources on base. AFI 40-201 paragraph **11** outlines specific requirements.

5. USAF RADIOACTIVE MATERIAL PERMITS. A single broad scope NRC license has been issued to the USAF Radioisotope Committee (HQ AFMOA/SGPR). The committee is the sole authority within the Air Force to approve and control use, possession, receipt, transfer, and disposal of all radioactive materials for which the NRC has jurisdiction.

5.1. Permit Procedures: The application procedures for renewal, amendment, and new permits will follow the procedures outlined in AFI 40-201, *Managing Radioactive Materials in the Air Force*. Those organizations making application for authority to use, process, receive, transfer, or dispose of radioactive material which are licensable materials (10 CFR 30) will continue to submit applications using appropriate NRC forms and NRC Regulatory guides. Applications will be reviewed and approved or disapproved by the USAF Radioisotope Committee. The Installation RSO will be the focal point for all permit activities on Seymour Johnson AFB.

5.2. Inventory/Control Procedures: Specific inventory requirements and health and safety precautions contained in the USAF Permit will be adhered to by the using agency. An inventory of the material will be maintained by the using agency and will be conducted IAW the RAM permit or at least semi-annually. Permitted radioactive materials in Base Supply

possession will be inventoried and controlled by an appointed Supply RSO. All receipts transfer, and disposal of radioactive material will be annotated on the inventory. A radiation protection survey will be conducted periodically, based on the Installation RSO's risk assessment, to assure compliance with applicable regulations. Swipe/leak tests will be performed by the Bioenvironmental Engineering Flight, but it is the permit RSO's responsibility to ensure swipe/leak tests are performed IAW the RAM Permit. Results are maintained by the permit RSO and reviewed by the Installation RSO.

5.3. Documentation: All documentation concerning the radioactive material will be maintained by the using organization until actual elimination by the using organization and for at least 3 years thereafter. Termination of use and/or permit does not relieve the user of documentation requirements.

5.4. Loss of Material: Notification of accidents and/or incidents which were reportable to the NRC will now be reported to the USAF Radioisotope Committee. The committee will provide the required notification to the NRC as necessary.

6. RADIOACTIVE MATERIAL RECEIPT, STORAGE, SHIPMENT, AND LABELING.

6.1. Receiving.

6.1.1. Upon receipt of radioactive material or commodities containing radioisotopes, the permit licensee or the source of supply which received the material will contact the Bioenvironmental Engineering flight, to perform appropriate swipe tests and radiation monitoring of the received item. If the package is labeled as White I, Yellow II, or Yellow III, they need to be monitored within 3 hours. Bioenvironmental Engineering can be contacted at 722-5401, if after normal duty hours contact the on-call technician at 919-750-1132. (Reference: 10 CFR 20.1906).

6.1.2. The container should be visually inspected and labeled with Air Force Technical Order (AFTO) Form 9B (AFI 40-201). The properly packaged and labeled radioactive material should be forwarded immediately to the using organization or storage area as applicable.

6.1.3. Isolate the container and notify the unit and installation RSO if the shipments are received damaged, if seals are broken, or if tampered with. Discrepancies will be reported as outlined in T.O. 00-110N-3.

6.2. Storage: Radioactive materials will be stored in secured and identified areas approved by Bioenvironmental Engineering (BE). All commodities which contain radioactive material will be labeled IAW AFI 40-201. Provisions must be made to preclude unauthorized removal of radioactive material or items.

6.3. Shipping: All shipment of radioactive materials must be coordinated with the installation RSO/Bioenvironmental Engineering Flight. Commodities containing radioactive material will not be consolidated with other materials for shipment since radioactive items are designated as "hazardous". Contact the installation RSO to determine if a particular commodity contains radioactive material. Items must be shipped in accordance with DOT regulations.

6.4. Marking and Identification: All commodities, packages, containers, work, and storage areas containing radioactive material must be identified. Requirements for radioactive material warning labels and placing of placards are outlined in AFI 40-201.

6.5. Documentation: All base agencies storing or using commodities containing radioactive material will maintain logs indicating all items received, stored, or transferred. All radiation protection survey reports and swipe sample results will be maintained on file by the using agency and reviewed by the installation RSO.

7. RADIOACTIVE WASTE DISPOSAL. All disposal actions will be coordinated through the installation RSO. Specific procedures for radioactive waste disposal are available from the 88 ABW web site (<https://afkm.wpafb.af.mil/rad>) and representatives of the office can be reached at DSN 787-2010 or commercial 937-257-2010.

8. INDUSTRIAL, MEDICAL, AND DENTAL X-RAY UNITS. All equipment capable of producing X-rays must be monitored for potential exposure to workers and the public. The Installation RSO will maintain an inventory of all equipment and BEF will perform X-ray scatter evaluations of work areas with a frequency as determined by the installation RSO's risk assessment. Scatter surveys will be maintained on file by the Installation RSO as well as by the shop supervisor.

8.1. Industrial X-ray Units. Procedures for Non-Destructive Inspection (NDI) facilities (shielded and unshielded operations) must be evaluated annually by the Installation RSO to assure compliance with T.O. 33B-1-1. This annual evaluation does not require a new scatter survey as long as the current survey is accurate.

8.2. Medical and Dental Units: The Installation RSO will evaluate these units (with a frequency determined by the installation RSO's risk assessment) to assure all safety and health precautions are enforced by the user.

8.3. Testing of Protective Clothing: All leaded gloves, aprons and gonadal shields must be inspected at least annually for safety defects by the using agency. Radiographic inspection must be used when visual inspection detects cracks or defects.

8.3.1. Defective items should be removed from use and replaced. Document the annual inspection in a logbook or by a memorandum for record. The documentation should reflect the local identification number for the item, date of inspection, and any findings.

9. BASE PERSONNEL DOSIMETRY PROGRAM. Certain work areas are enrolled in the personnel dosimetry program based on specific risk criteria and exposure levels are outlined in AFMAN 48-125.

9.1. The primary monitoring device for use in determining occupational exposure to ionizing radiation on any Air Force installation is the Thermoluminescent Dosimeter (TLD). The TLD must be worn by the individual while performing any task involving potential exposure to ionizing radiation. When not in use, the dosimeter must be kept in appropriate storage areas free from radiation sources and away from excessive heat or moisture. When in use, the "whole body" badge should be worn between the chest and the hips. A whole body badge should never be worn on the collar, as a separate collar badge is issued for this purpose. When issued a collar and a whole body badge, both badges must be worn at all times while within work area/radiation area.

9.2. Issuance of Personnel Dosimeters: The Bioenvironmental Engineering Flight, 4th Medical Group, is responsible for the operation of the USAF Personnel Dosimetry Program on Seymour Johnson AFB. TLDs may be obtained at any time. All records will be maintained by this section. Master records will be maintained in the individual's medical record.

9.3. Pregnant Female Policy: The individual's supervisor or physician may restrict a pregnant female's duties involving radiation. There is no blanket policy to remove them from radiation duties. Each pregnancy is handled on a case-by-case basis depending upon their potential to receive radiation exposure. The individual's medical provider will provide a recommendation based on the risk assessment from the installation RSO/Bioenvironmental Engineering. Pregnant females may be enrolled in monthly dosimetry monitoring.

9.4. Deploying Personnel Enrolled in the Base Personnel Dosimetry Program: Deploying personnel **MUST** notify Bioenvironmental Engineering (Bldg 2810) of their deployment and leave their home-station TLD badge in their work area at Seymour Johnson AFB. Deployers should not take their TLD badge with them on their deployment. Instead, deployers should notify the Bioenvironmental Engineering unit at their deployed location as soon as they learn of their deployment so that the deployer can be enrolled in the dosimetry program at their deployed location as soon as possible.

9.5. Thermoluminescent Dosimeter (TLD) Action Levels: The Bioenvironmental Engineering Flight will review all TLD results for each work area. The RSO will establish ALARA action levels for each monitored area dependent upon frequency and exposure potential of radiation duties. Investigations of overexposures or abnormal exposures will be conducted when dosimetry results indicate they are warranted.

9.6. Accident and Overexposure Reporting Procedures: All accidents and overexposures to ionizing radiation will be reported to the installation RSO. The installation RSO will initiate action to investigate the alleged incident IAW AFMAN 48-125. Results of the investigation must be documented and filed accordingly. Medical exams will be arranged by the Public Health Flight. All results will be reported to the individual, the shop supervisor, unit commander, Aerospace Medicine Council, and HQ ACC as appropriate.

10. REVIEW OF RADIATION FACILITY/SOURCE INSTALLATION PLANS.

10.1. Review of Construction and Facility Maintenance. All plans for modification of facilities or design of new facilities which involve the use of radioactive material or radiation producing devices must be reviewed by the unit/installation RSO to assure that ALARA is considered.

10.2. Procedures. The user will notify the RSOs in writing of all changes and modifications, plans to procure and install new or replacement equipment, etc.

11. NON-AIR FORCE ORGANIZATION USE OF RADIOACTIVE MATERIAL ON SEYMOUR JOHNSON AFB. Prior to any non-Air Force organization use of RAM on Seymour Johnson AFB, the non-Air Force organization must obtain written approval from the Installation RSO at least 30 days in advance of RAM arrival on base. For contractors, the requirements must be included in the contract or statement of work. Written approval is considered and may be granted once the following information is provided to the Installation RSO (4 AMDS/SGGB at 722-5401):

- 11.1. All requests must be in writing.
- 11.2. A brief description of proposed activities.
- 11.3. Evidence of a valid NRC or Agreement State Radioactive Material License.
- 11.4. A copy of an NRC Form 241, *Report of Proposed Activities in Non-Agreement States, Areas of Exclusive* or a similar document, listing the specific licensable items and their use locations. The license must either specifically list the installation or grant approval for work at temporary job sites anywhere in the United States where the NRC or Agreement State has jurisdiction. EXCEPTION: Contractors using generally licensed materials (e.g. certain NITON Lead Paint Analyzers) and Department of Energy (DoE) or DoE prime contractors operating in accordance with 10 CFR Part 835 do not require an NRC license or NRC Form 241 for Natural and Accelerator-produced Radioactive Materials.
- 11.5. Proof of a valid Air Force contract with inclusive dates of work.
- 11.6. The name, local address, and telephone number for the responsible local representative and the name, address, and telephone number of the RSO named on their license.
- 11.7. An acknowledgement that the installation RSO can make periodic checks to ensure that contractor personnel follow radiation safety practices to prevent exposures to Air Force personnel and avoid contamination of government property. In addition, the installation RSO must have authority to suspend contractor operations believed to be unsafe.
- 11.8. Agreement State licensees using NRC regulated materials must supply a copy of the NRC Form 241 approved by the installation's NRC region according to 10 CFR Part 150.20. The form must specify the correct locations and dates of performance of licensed activities. State licensees may not work on Air Force or other installations where exclusive federal jurisdiction exists for more than 180 calendar days per calendar year without first getting an NRC license.
- 11.9. Non-Air Force organizations that do not have an NRC or Agreement State License with current NRC Form 241 and who are not DoE or DoE prime contractors exempted from Licensing must contact AFMOA/SGPR for guidance and approval to use RAM on an Air Force installation.

PATRICK J. DOHERTY, Colonel, USAF
Commander

ATTACHMENT 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 48-148, *Ionizing Radiation*, 21 Sep 2011

AFI 40-201, *Managing Radioactive Materials in the US Air Force*, 16 Mar 2011

AFMAN 48-125, *Personnel Ionizing Radiation Dosimetry*, 4 Oct 2011

AFOSH Standard 48-9, *Electro-Magnetic Frequency (EMF) Radiation Occupational Health Program*, 14 Dec 2011

AFOSH Standard 48-139, *LASER Radiation Protection Program*, 10 Dec 1999

T.O. 00-110N Series, *Safety and Control Requirements in the Radiation Field*

10 CFR, *Energy*

21 CFR, *Food and Drugs*

49 CFR, *Transportation*

Department of Defense Instruction (DODI) 6055.8, *Occupational Radiation Protection Program*, 6 May 1996

AFI 91-204, *Safety Investigations and Reports*, 24 Sep 2008

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

AF Form 55, *Employee Safety and Health Record*

AF Form 190, *Occupational Illness/Injury Report*

AFTO Form 9B, *Caution Radioactive Material*

NRC Form 241, *Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, or Offshore Waters*

Abbreviations and Acronyms

AFMAN—Air Force Manual

AFRIMS—Air Force Records Information Management System

ALARA—As Low As Reasonably Achievable

BEF—Bioenvironmental Engineering Flight

DoE—Department of Energy

DRMO—Defense Reutilization Management Office

NRC—Nuclear Regulatory Commission

OPR—Office of Primary Responsibility

RAM—Radioactive Material

RDS—Records Disposition Schedule

RFR—Radio Frequency Radiation

RSO—Radiation Safety Officer

TLD—Thermoluminescent Dosimeter