

**BY ORDER OF THE COMMANDER
341ST MISSILE WING**

**341ST MISSILE WING INSTRUCTION
48-101**



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Aerospace Medicine

**INSTALLATION IONIZING
RADIATION CONTROL PROGRAM**

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This instruction complements AFPD48-1, *Aerospace Medicine Enterprise*, Title 10 of the Code of Federal Regulations (10 CFR, Energy), 21 CFR (Food and Drug), 29 CFR (Labor), 40 CFR (Environment), 42 CFR (Public Health), 49 CFR (Transportation), Department of Defense Instruction (DoDI) 6055.8, *Occupational Radiation Protection Program*, AFI 48-148, *Ionizing Radiation Protection*, AFI 40-201, *Managing Radioactive Materials in the US Air Force*, AFI 91-108, *Air Force Nuclear Weapons Intrinsic Radiation and 91(B) Radioactive Material Safety Program*, and AFI 91-108_AFGSCSUP, *Air Force Nuclear Weapons Intrinsic Radiation and 91(B) Radioactive Material Safety Program*. This instruction applies to the 341 MW and all associate units. Tenant unit, Air National Guard and Air Force Reserve personnel operating at Malmstrom AFB facilities shall comply with the provisions of this publication. This publication is consistent with Department of Labor Occupational Safety and Health Act (OSHA) regulations 29 CFR 1910.1096 and 29 CFR 1926.53. 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). Comply with AFI 33-332, *Privacy Act*, for documents containing Privacy Act Information. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF Form 847, **Recommendation for Change of Publication**; route the AF Form 847 through the wing publishing office. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service does not imply endorsement by the Air Force.

SUMMARY OF CHANGES

This publication has been renamed and completely rewritten to streamline wing-specific instruction while emphasizing mandatory AF-level guidance.

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1. Overview: Ionizing radiation protection remains one of the most heavily regulated aspects of occupational safety and health while control of radioactive materials remains one of the most heavily regulated aspects of hazardous materials management. The intent of this publication is to clarify roles and responsibilities with respect to controlling ionizing radiation sources within the 341st Missile Wing and on Malmstrom AFB property.

1.1. Program Criteria:

- 1.1.1. Protects personnel and the general public from overexposure to ionizing radiation.
- 1.1.2. Prevents unauthorized use or storage of radioactive material (RAM) on the installation.
- 1.1.3. Prevents unauthorized displacement, disposal, transportation, or release of RAM.
- 1.1.4. Complies with applicable US Federal, Department or Defense, and Air Force regulations.
- 1.1.5. Emphasizes the role of commanders, supervisors, and individuals working with radiation.
- 1.1.6. Ensures radiation safety officers (RSO) receive and provide quality guidance.
- 1.1.7. Considers all sources and applications of ionizing radiation on the installation.
- 1.1.8. Enables installation personnel to respond to and report radiological incidents.

1.1.9. Keeps exposures to ionizing radiation as low as reasonably achievable (ALARA).

1.1.10. Monitors and records exposure of workers and the general public to ionizing radiation.

2. Program Responsibilities: Many different offices and individuals play a role in radiological health protection and radioactive material control at the installation level. All players must strive to know and execute their roles to keep exposures as low as reasonably achievable.

2.1. Commander (341 MW/CC):

2.1.1. Maintains full responsibility for the installation ionizing radiation control program.

2.1.2. Ensures integration of all tenant organization and unit radiation safety programs, including nuclear capable units possessing 91b nuclear material.

2.1.3. Appoints, in writing, a qualified installation radiation safety officer (IRSO) and alternate(s).

2.1.4. Provides required resources and access to the IRSO to protect health and control RAM.

2.1.5. Delegates to the IRSO authority to suspend operations involving RAM that pose a significant health risk, violate federal instructions, or could negatively impact AF operations.

2.1.6. Prohibits the receipt or transfer of radioactive material (to include radioactive material used in classified operations) and/or radioactive waste without prior coordination and/or approval by the installation RSO.

2.1.7. Ensures the IRSO is notified of all activities pertaining to the generation and maintenance of radioactive waste or radioactive waste burial sites.

2.1.8. Understands and exercises wing commander responsibilities found in AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.1.9. Enforces compliance with this instruction, DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.2. Chief of Safety (341 MW/SE)

2.2.1. Support IRSO, weapons safety officer (WSO), and nuclear unit radiation safety officer (URSO) efforts toward integrating nuclear weapons intrinsic radiation (INRAD) safety training, assessment, dosimetry, and reporting into the installation ionizing radiation control program.

2.2.2. Ensures installation safety personnel cooperate with the IRSO and nuclear URSOs in exercising responsibilities found in DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.3. Commander, Medical Group (341 MDG/CC):

2.3.1. Ensures proper execution of the radiological bioassay, medical examination, occupational restriction, and information management aspects of ionizing radiation exposure.

2.3.2. Understands and implements medical responsibilities found in DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.4. Commander, Security Forces (341 SFG/CC):

2.4.1. Understands and implements security responsibilities found in AFI 40-201, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.5. The Staff Judge Advocate (SJA):

2.5.1. Shall be consulted when the IRSO requires assistance in interpreting either DOD or Air Force policy/instructions governing RAM, MW, or LLMW.

2.6. Installation Radiation Safety Officer (IRSO):

2.6.1. Coordinates a comprehensive installation ionizing radiation control program.

2.6.2. Maintains a consolidated inventory of US Nuclear Regulatory Commission (NRC) generally licensed material, NRC licensed material, AF Radioisotope Committee (RIC) permitted material, and ionizing radiation producing devices used by the 341 MW or tenant organizations on Malmstrom AFB property.

2.6.3. Provides technical assistance and reviews/endorsees unit training materials when requested by commanders, URSOs, and RIC permit radiation safety officers (PRSOs).

2.6.4. Performs annual regulatory and health risk assessments for NRC generally licensed material, NRC licensed material, AF Radioisotope Committee (RIC) permitted material, and ionizing radiation producing devices used by 341 MW or tenant organizations on Malmstrom AFB property.

2.6.5. Directs participation in as well as execution, documentation, and analysis of the installation radiological dosimetry program.

2.6.6. Responds to, investigates, and reports on emergencies, alleged over-exposures, and unauthorized activities involving ionizing radiation.

2.6.7. Provides radiological risk communication to commanders, AF members, and the public.

2.6.8. Consult with and provide requiring activities with information necessary to develop a Performance Work Statement/Statement of Work for compliance with all applicable statutes, regulations and instructions for managing RAM in the USAF, and provide contracting officers information necessary to ensure appropriate award selection criteria are included in the solicitation (based on guidance and information from the NRC, SDR, RICS, USAFSAM/OE, etc.).

2.6.9. Advise commanders on compliance with applicable Federal policy relating to RAM as found within 10 CFR Chapter I, Title 29 of the Code of Federal Regulations (29 CFR) Chapter XVII *Occupational Safety and Health Administration*, Department of Labor, 40 CFR Chapter I, 49 CFR Chapter I, DTR 4500.9-R-Part II Chapters 204 and 208, AFJI 23-504, AFJMAN 23-209, AFMAN 24-204, AFMAN 24-210, and *IATA Dangerous Goods Regulation* with respect to this AFI.

2.6.10. Coordinate with AFSEC and the RICS regarding the authority for the transfer to, or use of, RAM on the installation by DOE or DOE prime subcontractors.

2.6.11. Provides annual brief(s) on the status of the ionizing radiation control program to 341 MW/CC, 341 SFG/CC, 341 CES/CC, 341 CES/CEF Chief, and the Environment, Safety, and Occupational Health (ESOH) Council.

2.6.12. Understands and exercises IRSO responsibilities found in AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.6.13. Verifies compliance with this instruction, DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.7. Aerospace Medicine (341 MDG/SGP) and/or Public Health Officer (PHO):

2.7.1. Establishes and implements medical examination requirements for personnel potentially exposed to hazardous radiation sources.

2.7.2. Provides briefings and other health education consultations concerning radiation when requested by URSO's or commanders.

2.7.3. Initiates investigations of alleged or suspected radiation overexposures.

2.7.4. Prepares and distributes an *Occupational Illness/Injury Report* and additional documentation as appropriate.

2.7.5. Understands and exercises preventive medicine, occupational medicine, and public health responsibilities found in DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.8. Civil Engineering (341 CES).

2.8.1. Understands and lawfully implements civil engineering responsibilities for radiation facility design, radiological threat response, and environmental radiation mitigation found in DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.9. Contracting (341 CONS).

2.9.1. Ensure all contractors notify the contracting officer in writing of their intent to use radiation producing devices or radioactive material under the contract or on installation property.

2.9.2. Ensure that all contracts involving RAM contain required contract clauses and incorporate a detailed Performance Work Statement or Statement of Work.

2.9.3. Once contract award has been made, the contractor, through the material submittal process (AF IMT 3000), shall be required to produce to the government for review, approval, or disapproval; this requires a written storage plan and a radiological site health and safety plan for contractors intending to handle radiation producing devices or radioactive material under the contract as part of the project approval process. The Contractor will not be authorized to bring such devices onto the installation or conduct work that uses such devices until the applicable material submittal has been approved by all required installation agencies.

2.9.4. Include language in all contracts that explicitly prohibits contractors from proceeding onto installation property with RAM before 341 CONS and IRSO approval and receipt of separate copies of a valid US Air Force radioactive material permit, US

Navy radioactive material permit, US NRC radioactive material license, or an Agreement State radioactive material license with attached US NRC Form 241, **Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, or Offshore Waters.**

2.9.5. Explicitly prohibit contractors from proceeding on contract or onto installation property with unlicensed RAM or license-exempt quantities of RAM without first coordinating written approval of type, quantity, and use of RAM by IRSO.

2.9.6. Explicitly prohibit contractors from proceeding on contract or onto installation property with radiation producing devices without first coordinating approval of operating credentials and instructions by the IRSO.

2.9.7. Ensure that all coordinated contractor requests, whether approved or disapproved, are received and properly filed with other contracting documents.

2.9.8. Ensure program managers and contractors immediately contact the contracting officer and IRSO whenever their use of radiation may impact AF operations, personnel, facilities or real estate.

2.9.9. Periodically assess contractor performance for proper storage and safe use of radiation sources; request assistance of IRSO if necessary.

2.9.10. Ensure a clause authorizing the IRSO to suspend unsafe operations involving the use of RAM is included in contract.

2.9.11. Understands and lawfully implements contracting responsibilities with respect to DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.10. **Logistics Readiness (341 LRS).**

2.10.1. Ensure IRSO is contacted upon notification of a RAM transport. The IRSO will ensure that DOT regulations are followed prior to LRS transport.

2.10.2. Develop and implement procedures to prevent the inadvertent transfer of RAM or items of supply known or suspected of containing RAM through the Defense Reutilization Management Office (DRMO) system or Disposition Services Field Office (DSFO).

2.10.3. Establish procedures to notify the IRSO in the event of an incident(s) or the need to perform radiological survey(s) of items that have been identified by DRMO (or DSFO) as having the potential to contain RAM and/or components.

2.10.4. Understands and lawfully implements transportation responsibilities found in AFI 40-201, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.11. **The Installation Antiterrorism Working Group (ATWG).**

2.11.1. Include the IRSO on the installation ATWG and any other installation working groups dealing with emergency management or force protection.

2.12. **Commanders of 341 MW Squadrons and Tenant Organizations:**

2.12.1. Notifies IRSO immediately of any previously unknown 91b nuclear material, NRC generally licensed material, NRC licensed material, AF Radioisotope Committee (RIC) permitted material, and ionizing radiation producing devices possessed by the unit or tenant organization.

2.12.2. Appoints a URSO and alternate in writing when in possession of RAM or radiation sources found in AFI 48-148 or when directed by AFI, AFGSC, 20th AF, 341 MW/CC, or the IRSO. Update appointment letters immediately when personnel PCA or PCS.

2.12.3. Appoints authorized users in writing for radiation producing devices when exposures to ionizing radiation could exceed 10% of the occupation limits found in AFI 48-148 or when directed by AFI, AFGSC, 20th AF, 341 MW/CC, or the IRSO. Update authorized user lists immediately when personnel PCA or PCS.

2.12.4. Ensure unit or permit RSOs forward copies of RSO appointment letters and authorized user lists to the IRSO.

2.12.5. Coordinates application for a RAM permit with IRSO and RIC IAW AFI 40-201.

2.12.6. Serves as the legally and fiscally responsible "Permittee" for unit RIC permits IAW AFI 40-201.

2.12.7. Appoints a qualified permit RSO and alternate permit RSO in writing from within the unit IAW AFI 40-201; ensures replacement RSOs are qualified, appointed, and approved by IRSO and RIC before permit RSOs are removed from responsibility.

2.12.8. Coordinates RAM permit renewals, amendments, and RSO changes in a timely manner with IRSO and RIC IAW AFI 40-201.

2.12.9. Publishes unit operating instructions (OI) that list and describe each source of radiation as well as proper training, safe use, source locations, hazards, personnel access, controls, emergency procedures, reporting and disposition for sources of ionizing radiation.

2.12.10. Ensures periodic training on radiation hazards, safety procedures, incident management, overexposure procedure, and keeping exposures ALARA IAW AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.12.11. Enforces strict adherence to this instruction and exercises commander responsibilities found in DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.12.12. Ensures timely reporting and investigation of radiological incidents and overexposures IAW AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.13. **Permittee:**

2.13.1. Be the commander, or equivalent (an employee of the USAF), identified in Block 1 of the permit, and the individual ultimately responsible for meeting permit conditions, and compliance with AFIs and applicable Federal regulations.

2.13.2. Ensure compliance with the specific conditions of the permit.

2.13.3. Ensure an annual internal audit is completed.

2.13.4. All incident reports required must be forwarded to the RICS.

2.13.5. Delegate the authority to the PRSO to suspend operations that pose a significant health risk to personnel or the public, or can cause contamination of the environment or noncompliance with this instruction.

2.13.6. Ensure compliance with AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements, permit conditions and representations in permit applications, or applicable NRC General License conditions.

2.14. Unit RSO:

2.14.1. Coordinates and documents unit ionizing radiation control program IAW AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements; actively promotes ALARA concept.

2.14.2. Perform periodic visits to all work areas in their organization that use or operate radiation sources to verify safety and health control requirements, warning devices, procedural controls, and maintenance of documentation and inventory by user.

2.14.3. Acts as the single point of contact for unit radiation safety matters and maintains active liaison with BE and Public Health personnel.

2.14.4. Ensure all newly assigned personnel whose duties involve exposure to ionizing radiation receive ALARA training, be placed on the authorized user list, and are reported to the base RSO for potential entry into the personnel dosimetry program before working around ionizing radiation.

2.14.5. Maintains a consolidated, itemized inventory of NRC generally licensed material, NRC licensed material, AF Radioisotope Committee (RIC) permitted material, and ionizing radiation producing devices possessed by the unit or tenant organization; ensures IRSO has latest copy.

2.14.6. Delivers IRSO-endorsed technical assistance and training to supervisors and workers.

2.14.7. Accompanies IRSO on annual regulatory and health risk assessments for NRC generally licensed material, NRC licensed material, AF Radioisotope Committee (RIC) permitted material, and ionizing radiation producing devices used by 341 MW or tenant organizations on Malmstrom AFB property.

2.14.8. Implements adequate hazard controls and authorized, safe use for work with or around ionizing radiation.

2.14.9. Ensures appropriate wear, care, and use of radiological dosimeters.

2.14.10. Supports IRSO in response to, investigations of, and reports on unit emergencies, alleged unit over-exposures, and unauthorized unit activities involving ionizing radiation.

2.14.11. Provides radiological risk communication to unit commanders, supervisors, and workers.

2.14.12. Provides annual brief(s) on the status of the unit ionizing radiation control program to the unit or tenant organization commander.

2.14.13. Understands and exercises URSO responsibilities found in AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.14.14. Verifies unit compliance with this instruction, DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.15. Permit RSO:

2.15.1. Fully understands and complies with the permit itself as well as applicable requirements in AFI 40-201, AFI 48-148, and manufacturer manuals or technical orders.

2.15.2. Briefs the permittee (commander) and IRSO annually on permit status IAW permit and AFI 40-201.

2.15.3. Maintains appropriate ionizing radiation instrumentation for type of source or coordinates support from Bioenvironmental Engineering (341 MDOS/SGOJ).

2.15.4. Implements adequate hazard controls and authorized, safe use for RAM.

2.15.5. Notifies IRSO immediately upon discovery of a hazardous condition or missing RAM.

2.15.6. Coordinates packaging and transportation of permitted RAM with the 341 LRS transportation flight and 341 MDOS/SGOJ.

2.15.7. Forwards a copy of all RIC correspondence to IRSO.

2.15.8. Maintains permit binder that contains the following in addition to items specified in AFI 40-201:

2.15.8.1. Table of contents and clearly labeled tabs.

2.15.8.2. Permit and tie-down documents (attachments) listed on permit.

2.15.8.3. Previous version or amendments of unexpired permit.

2.15.8.4. Required RSO and authorized user training certificates.

2.15.8.5. Documentation of inventory procedure, completion, delinquency, and anomalies.

2.15.8.6. Documentation of leak test procedure, completion, delinquency, and anomalies.

2.15.8.7. Documentation of RAM area survey procedure, completion, delinquency, and anomalies.

2.15.8.8. Documentation of packaging and transportation procedure, activity, and incidents.

2.15.8.9. All correspondence with respect to permitted items.

2.15.8.10. Authorized user appointments/lists.

2.15.8.11. Mission-specific ALARA training materials and completion log(s).

- 2.15.8.12. Annual briefing materials from unit commander (permittee) briefs.
 - 2.15.8.13. Sealed Source and Device Registry information.
 - 2.15.8.14. The last three calibration certificates for the dedicated radiological survey instrumentation used.
 - 2.15.8.15. Any other documentation required by AFI 40-201 records retention schedule or permit itself.
 - 2.15.8.16. Radiation safety and transportation portion of manufacturer manuals or technical orders.
 - 2.15.8.17. A copy of unit OI and permittee policies for permit execution.
 - 2.15.8.18. A copy of this instruction.
 - 2.15.8.19. A current copy of AFI 40-201.
 - 2.15.8.20. A current copy of AFI 48-148.
 - 2.15.8.21. A current copy of NUREG 1556 (applicable volume).
- 2.16. Supervisors:**
- 2.16.1. Notifies their commander and the IRSO immediately of any previously undocumented NRC generally licensed material, NRC licensed material, AF Radioisotope Committee (RIC) permitted material, and ionizing radiation producing devices possessed by the unit or tenant organization.
 - 2.16.2. Coordinates with IRSO prior to initiating any project including procurement, utilization, or storage of radioactive sources or ionizing radiation producing devices, or any change in working conditions or activities which would involve ionizing radiation.
 - 2.16.3. Maintains an inventory of all radiation sources which shows receipt, quantities on-hand and items disposed; notify URSO (or PRSO) and IRSO of any proposed changes or modification to equipment, parameters, or facility in writing.
 - 2.16.4. Writes OIs which delineate safety and health precautions, management controls for keeping exposures ALARA, and procedures for overexposure when operating or using radiation sources as specified in hazard evaluations.
 - 2.16.5. Ensures personnel receive documented, IRSO-endorsed training and perform work in the way that keeps their exposure to radiation ALARA and in all cases below the occupational exposure limits.
 - 2.16.6. Ensures suspected emergencies or alleged overexposures are immediately reported to the URSO (or PRSO) and IRSO and that injured or exposed individuals receive timely medical attention.
 - 2.16.7. Ensures personnel obtain a copy of their AF Form 1527, **History of Occupational Exposure to Ionizing Radiation**, from IRSO, as applicable; ensures radiation workers receive and understand dosimetry and dose assessment information.
 - 2.16.8. When subordinates lose or fail to turn in a thermoluminescent dosimeter (TLD), signs a memorandum describing radiation-related activities of the subordinate for the monitoring period and the circumstances surrounding the lost TLD.

2.16.9. Refer all pregnant active duty members and all pregnant civilians to Public Health as soon as possible *if and when member declares pregnancy*.

2.16.10. Provide the IRSO with a list of all personnel who perform off-duty tasks or occupations involving ionizing radiation.

2.16.11. Halts normal work activities involving ionizing radiation upon order by the IRSO or discovery of unsafe or illegal conditions, overexposures, or emergencies; report events to URSO (or PRSO) and unit commander.

2.16.12. Enforces strict adherence to this instruction and exercises commander responsibilities found in DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.16.13. Ensures timely reporting and investigation of radiological incidents and overexposures IAW AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.17. Individuals Using or Working around Sources of Ionizing Radiation.

2.17.1. Protect themselves, their fellow workers, and the general public from unnecessary exposure or overexposure to ionizing radiation.

2.17.2. Follow procedures for safe work given in equipment technical orders and manuals, unit OIs, etc.

2.17.3. Ensure required engineering controls, training programs, warning signs, safety devices, and personal protective equipment (PPE) are fully operational before beginning work and that everyone understands the procedures and signals to be used for the task being done.

2.17.4. Provides the IRSO with a copy of all dosimetry results obtained while working off-duty.

2.17.5. Halts normal work activities involving ionizing radiation upon order of the IRSO or discovery of unsafe or illegal conditions, overexposures, or emergencies; report events to supervisor and URSO (or PRSO).

2.17.6. Knows and exercises applicable rights and responsibilities found in this instruction, federal regulations, DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.17.7. Ensures timely reporting and investigation of radiological incidents and overexposures IAW AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.18. All Installation Civilian and Military Personnel.

2.18.1. Immediately reports any suspected exposure to, possible unknown sources of, or unsafe or illegal conditions involving ionizing radiation to unit commanders and the IRSO IAW AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

2.18.2. Maintains a general awareness of AF measures to protect members of the general public as described in AFI 48-148.

3. Program Elements and Considerations. Radiological health and RAM control regulation touches on a wide variety of concepts, topics, and concerns. AFIs do not fully explain all aspects of a comprehensive approach to radiation safety; participants in the ionizing radiation control program must research and exercise their roles from AFIs and federal regulations in addition to this instruction.

3.1. As Low as Reasonably Achievable (ALARA).

3.1.1. Policy dictates keeping exposures of those working with ionizing radiation ALARA.

3.1.2. No person will expose another person to ionizing radiation without an IRSO-approved justification, an IRSO-approved operating procedure, and IRSO-approved exposure controls.

3.1.3. No person will accept RAM or devices that contain RAM unless specifically authorized on the permit. Organizations shall not physically accept custody of non-exempted RAM without first obtaining written approval via a permit or other authorization from the RICS or AFSEC/SEW.

3.1.4. Ionizing radiation doses should be kept as far below federal regulatory limits as possible.

3.1.5. URSO (or PRSO) will provide, document, and copy IRSO on mission-specific and equipment-specific ALARA training materials, sessions, and logs.

3.1.6. Prohibit the use of radioluminescent exit signs on base.

3.1.7. All exempt and non-exempt RAM must be secured from unauthorized removal or access.

3.1.8. All permitted and licensed radioactive sources and devices must be inventoried and documented.

3.1.9. ALARA programs and annual training must be documented and comply with DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, and AFGSC and 20th Air Force supplements.

3.2. Nuclear Weapons Intrinsic Radiation (INRAD) Safety.

3.2.1. This instruction includes radiation emitted by nuclear weapons and 91b material.

3.2.2. Nuclear units will immediately notify IRSO of new employees and new model weapons systems.

3.2.3. Nuclear units (i.e., squadrons) will provide, document, and copy IRSO on mission-specific and equipment-specific INRAD training materials, sessions, and logs.

3.2.4. Nuclear units will ensure access to INRAD hazards upon request of IRSO and integration into unit operations and the installation radiation control program IAW DoDI 6055.8, AFI 40-201, AFI 48-148, AFI 91-108, AFGSC and 20th Air Force supplements, and T.O. 11N-20-7, *Nuclear Safety Criteria*.

3.2.5. Consult the USAF School of Aerospace Medicine's *Intrinsic Radiation Guidebook for Bioenvironmental Engineers, and Nuclear Weapons Workers and their Supervisors* for more information.

3.3. Ionizing Radiation Producing Devices (Industrial, Medical, and Dental X-ray).

3.3.1. Units should maintain a current inventory of all ionizing radiation producing devices that includes make, model, serial number, location, use, and type of radiation for any device; forward a copy to the IRSO.

3.3.2. Units must comply with 21 CFR, 29 CFR, 42 CFR, AFI 48-148, T.O. 33B-1-1, *Nondestructive Inspection Methods*, and other applicable federal regulations for industrial or medical use of ionizing radiation producing devices.

3.3.3. Units must have a commander-signed radiation safety policy, a well-documented training program, operating instructions, and commander-signed authorized user lists and any other items prescribed in 21 CFR, AFI 48-148, or T.O. 33B-1-1, *Nondestructive Inspection Methods*.

3.3.4. Medical devices must be acknowledged by regional medical physicist and medical equipment repair center (MERC) for medical/dental applications, IAW AFI 48-148, technical orders, and applicable federal regulation.

3.3.5. Operators should maintain proof of appropriate training and certification IAW 42 CFR, AFI 48-148, T.O. 33B-1-1, other technical orders, and applicable federal regulation.

3.3.6. Biomedical equipment technicians (BMET), IRSO, and URSO will evaluate medical and dental units annually to assure all safety and health precautions are enforced by the user.

3.3.6.1. Defective radiation control and protective equipment should be removed from use and replaced.

3.3.6.2. Units must ensure documentation of annual inspections in a logbook or by a letter; include the local identification number for the item, date of inspection, and any findings.

3.3.7. Commanders and supervisors must ensure appropriate ionizing radiation exposure control measures remain in place and operable IAW AFI 48-148, technical orders, and applicable federal regulation.

3.4. USAF Radioactive Material (RAM) Permits.

3.4.1. The US NRC issues a single Master Materials License (MML) to the USAF Radioisotope Committee which in turn issues subordinate RAM template and non-template permits to unit commanders; the AF Medical Support Agency (AFMSA) manages the RIC Secretariat and day-to-day RIC function. The committee approves and controls use, possession, receipt, transfer, and disposal of all radioactive materials for which the AF has jurisdiction.

3.4.1.1. Initial applications, renewal applications, and all permit amendments for permits are prepared and submitted through the IRSO to the RICS with a courtesy

- copy to the MAJCOM Bioenvironmental Engineer (BEE) IAW current guidance provided by the RICS, e.g. RIC website content.
- 3.4.1.2. Permittees under new permits will notify AFIA/SG immediately upon first receipt of RAM.
- 3.4.1.3. Each Permittee and each applicant for a RAM permit for NRC-licensed RAM must prominently post an NRC Form 3 and supplemental notice in the workplace(s) storing or using the licensed RAM.
- 3.4.2. For NRC licensed, state licensed, or US Navy permitted materials not regulated by RIC, the IRSO will approve and monitor use of these materials when on USAF property or in proximity to USAF operations.
- 3.4.3. The AF Safety Center regulates 91b nuclear material from nuclear storage, maintenance, waste and accidents.
- 3.4.4. Units desiring to acquire, use, process, receive, transfer, or dispose of items containing RAM should first consult AF 40-201 and the IRSO for appropriate procedures; the RIC must ultimately approve most actions.
- 3.4.5. Units will ensure full compliance with RIC permit conditions, this instruction, AFI 40-201, AFI 48-148, and any additional IRSO guidance.
- 3.4.6. Units will ensure documentation of compliance with RIC permits, DoDI 6055.8, AFI 40-201, and AFI 48-148 records retention requirements as well as any additional RIC or IRSO guidance.
- 3.4.7. Units will notify IRSO and RIC of accidents, incidents, or issues IAW AFI 40-201 AFI 48-148 reporting requirements.
- 3.4.8. If permitted operations cease, the Permittee must initiate decommissioning operations within two years of the date when use of the permitted material stops.
- 3.5. US NRC Generally Licensed Devices and Radioactive Artifacts.**
- 3.5.1. US NRC generally licensed devices and various radioactive artifacts like radium dials do not require a RIC permit but must be inventoried and controlled by the IRSO and units IAW AFI 40-201.
- 3.5.2. Individuals suspecting or discovering any radioactive components or items should immediately contact IRSO and their unit commander for further analysis.
- 3.6. Radioactive Material Receipt, Storage, Shipment, and Labeling:**
- 3.6.1. Comply with provisions of AFI 40-201 concerning the requisition, receiving, and storage, and transportation of radioactive materials, and provisions of 10 CFR 71, *Packaging and Transportation of Radioactive Material*, 49 CFR 171-180, *DOT Hazardous Materials Regulations*, and AFMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*, for transportation requirements.
- 3.6.2. Notify the IRSO within 3 hours upon receipt of RAM (except DOE shipments to the 341 MUNS) during normal duty hours, or within the first 3 hours of the next duty day for RAM received after normal duty hours, of packages containing radioactive materials. IRSO can assist in checking for contamination.

3.6.3. No packages containing radioactive materials will be released to the users until the IRSO accomplishes this survey (except DOE shipments to the 341 MUNS).

3.6.4. No damaged container or containers with broken seals will be accepted from shippers; isolate the container and notify the URSO (or PRSO) and IRSO if the shipments are received damaged, with seals broken, or show evidence of tampering.

3.6.5. All stored items, which contain radioactive materials, shall be labeled IAW AFI 40-201.

3.6.6. Sealed sources may be stored in unrestricted areas where containers are properly labeled and radiation levels do not result in a total effective dose equivalent (TEDE) of 100 mrem in a year to any human being.

3.6.7. Areas where radiation levels potentially exceed 2 mrem in any one hour will be restricted areas, and units will coordinate surveys to ensure the area's perimeter does not exceed 2 mrem in any one hour.

3.6.8. Commodities containing radioactive material are not consolidated with other materials for shipment since radioactive items are designated as "hazardous."

3.6.9. Contact the IRSO to determine if a particular commodity contains radioactive material or radioactive waste.

3.6.10. Chain of custody must be strictly enforced.

3.6.11. The URSO (PRSO) must coordinate with IRSO in measuring exterior ionizing radiation levels for packages IAW the BEE Guide to Ionizing Radiation, AFMAN 24-204, AFI 40-201, and 49 CFR 171-180.

3.6.12. Radioactive waste disposal is an extremely sensitive issue and is of great concern to the general population, federal regulatory agencies, and the Department of Defense.

3.6.13. The Air Force Radioactive Recycling and Disposal (AFRRAD) office oversees RAM recycling, disposal, and waste management for the USAF.

3.6.14. In many cases, the manufacture will accepted return of items for disposal purposes.

3.6.15. Even minor infractions can mean adverse public reaction, federal regulatory fines (NRC, EPA, etc.) and suspension of the use of the commercial radioactive material burial sites.

3.6.16. No Air Force agency may enter into a radioactive waste disposal contract or agreement without approval of USAF Radioisotope Committee and the USAF School of Aerospace Medicine (USAFSAM) consultants.

3.7. Base Personnel Dosimetry Program.

3.7.1. The IRSO and Bioenvironmental Engineering (BE) must issue thermoluminescent dosimeters (TLDs), in some cases electronic personnel dosimeters (EPDs), to URSOs and supervisors of personnel whose occupational exposure to ionizing radiation could exceed 10% of any of the annual limits found in AFI 48-148 or whose participation in the radiation dosimetry program has been mandated by the IRSO, 341 MW/CC, or higher authority.

3.7.2. Dosimetry must be issued, worn, stored, returned, processed, and documented IAW AFMAN 48-125.

3.7.3. Bioenvironmental Engineering (341 MDOS/SGOJ) operates the TLD and EPD program.

3.7.4. Unit RSOs or supervisors of radiation workers turn in TLD badges to 341 MDOS/SGOJ at the end of the quarter as part of a 3-month monitoring schedule IAW AFI 48-148 and AFMAN 48-125; the default quarterly investigation action level (IAL) for total effect dose equivalent (TEDE) will be 60 mrem/quarter for workers. Dose information will be tracked and recorded by 341 MDOS/SGOJ and the USAF Master Radiation Exposure Registry (MRER) at the USAF School of Aerospace Medicine (USAFSAM).

3.7.5. Declared and AF uniformed pregnant workers will be switched from quarterly to monthly monitoring periods and monitored IAW DODI 6055.8, AFI 48-148 and AFMAN 48-125; the default monthly investigation action level (IAL) for a declared pregnant worker for total effect dose equivalent (TEDE) will be 10 mrem/month, but removal from radiation work may be the best option. Dose information will be tracked and recorded by 341 MDOS/SGOJ and the USAF Master Radiation Exposure Registry (MRER) at USAFSAM.

3.7.6. Dosimetry for INRAD personnel will be processed IAW AFI 91-108, and AFGSC and 20th Air Force supplements.

3.7.7. 341 MDOS/SGOJ will work with personnel on temporary duty to Malmstrom AFB for dosimetry services IAW AFMAN 48-125.

3.7.8. Occupational Exposure Limits per 29 CFR 1910 and AFI 48-148:

3.7.8.1. Total effective dose equivalent (TEDE) shall not exceed 5 rem.

3.7.8.2. Total organ dose equivalent (TODE) for any organ other than the skin or the lens of the eye shall not exceed 50 rem. The TODE is the sum of the deep dose equivalent (DDE) from external sources to a particular organ and the committed dose equivalent (CDE) from internally deposited radionuclide.

3.7.8.3. The annual occupational dose to the eye shall not exceed 15 rem and annual occupational dose to skin and extremities shall not exceed 50 rem, based on shallow dose equivalent (SDE).

3.7.9. The dose limits for members of the general public are as follows IAW AFI 48-148:

3.7.9.1. A yearly TEDE (as defined above) of 0.1 rem per year. This includes both internal and external doses.

3.7.9.2. A maximum external dose rate of 2 mrem in any one hour.

3.7.9.3. Emergency response operational dose guidance and protective actions may be found in AFI 48-148 and publications falling under DODD 3150.08, *DoD Response to Nuclear and Radiological Incidents*.

4. Accident and Overexposure Reporting Procedures.

4.1. All accidents and overexposure to ionizing radiation must be immediately reported to the IRSO and Public Health who will initiate action to investigate and document the alleged incident IAW with DoDI 6055.8, AFI 40-201, AFI 48-148, and AFI 91-108.

4.2. The Permittee, the PRSO, and the IRSO must reinforce each other to ensure the RICS receives reports required by 10 CFR. Report an incident if you have any reservations about whether reporting is required.

4.3. Time limits for reports begin when the event occurs or is first discovered. Incidents requiring an immediate report must be forwarded within three (3) hours. Realize the RIC/S must contact the NRC in turn—make every effort to report well before the stated reporting suspense. Include as much of the information and RIC written directives with reference to RIC website content (secondary guidance) and/or USAFSAM/OE technical guidance (secondary guidance) as is available, but do not delay reporting if you have not collected all the pertinent information.

5. Radioactive Materials Incidents and Accidents

5.1. Response to RAM Incidents and Accidents.

5.1.1. Ensure adequate precautions are taken to prevent possible radiological contamination of personnel or equipment, and to minimize the spread of any contamination that might be present.

5.1.2. When responding to aircraft incidents, determine whether or not cargo and/or aircraft components contain RAM.

5.2. Investigating RAM Incidents and Accidents.

5.2.1. The IRSO performs the investigation.

5.2.2. Investigating a mishap or incident according to AFI 91-204 may generate information requiring a separate report that can be forwarded to the NRC.

5.2.3. The RICS will decide when an investigation of an event involving RAM governed by this instruction is complete

6. Review of Radiation Facility/Source Installation Plans.

6.1. 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 URSO (or PRSO), IRSO, and possibly USAF School of Aerospace Medicine (USAFSAM) to ensure ALARA is considered.

7. Contractor Use of Radioactive Material on Malmstrom AFB.

7.1. Prior to any contractor use of radioactive material on an Air Force installation provide a valid US Navy RAM permit, a US NRC license, or an Agreement State RAM license with an NRC Form 241.

7.2. Other necessary information includes proof of a valid Air Force contract, equipment manufactures specifications (power output, source of radioactivity, etc.), model and serial numbers, proposed storage location on installation property and duration of use, and a site health and safety plan.

8. Personnel Training.

8.1. All individuals working in or frequenting any portion of an area where radioactive material or radiation producing devices are used must receive initial and annual radiation protection training. Training must be conducted before work starts in areas involving radiation exposure or as soon as possible.

8.2. Annual refresher training will be conducted to re-emphasize and reinforce training objectives.

8.3. Shop supervisors and URSO or PRSOs use IRSO-approved materials to conduct the radiation safety training classes. Course content and instruction include:

8.3.1. Risk from radiation exposure.

8.3.2. Health risks to fetus exposed to radiation during pregnancy.

8.3.3. Maximum permissible dose limits and investigation action levels.

8.3.4. Protective measures for the specific radiation work (created by URSO or PRSO).

8.3.5. ALARA philosophy and practice.

8.4. Documentation. Training documentation is maintained locally by the respective unit RSO and a copy is forwarded to Public Health for inclusion in Tab F of the facility case files. AF Form 2767, **Occupational Health Training and Protective Equipment Fit Testing**, can be used to document this training or the AF Form 55, **Employee Safety and Health Record**.

8.5. Quality Control Program.

8.5.1. The IRSO conducts quality assurance review of the radiation program to include:

8.5.1.1. Quarterly review of personnel dosimetry (monthly for pregnant workers) to ensure overexposure, abnormal exposure, investigation, and pregnant female action levels have not been exceeded.

8.5.1.2. IRSO investigated personnel dosimetry results above the specific IAL and reports the results of the investigation reported to the Aerospace Medicine Council.

8.5.1.3. Personnel dosimetry results for declared pregnant workers are reviewed monthly and documentation maintained on all actions taken to ensure that the total dose to the fetus does not exceed 500 mrem during the term of pregnancy. Positive efforts should be made to limit the dose to ALARA but no more than an IAL of 10 mrem per month.

8.5.1.4. Annual radiation protection program reviews are accomplished and documented. The results are presented to the AMC and ESOH Council. The reviews will include:

8.5.1.4.1. A review of all personnel dosimetry results for the previous year to ensure adverse trends are noted and that all personnel dosimetry results which exceed action levels outlined in this instruction are acted upon.

8.5.1.4.2. A review of all radiation protection survey results for the previous year to ensure all required surveys have been performed and documented properly and

that corrective action, if necessary, has been accomplished.

8.5.1.4.3. A review of the current inventory of known radiation producing devices and NRC regulated radioactive materials.

RONALD G. ALLEN, JR., Colonel, USAF
Commander

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

- 10 CFR 19, *Notices, Instructions and Reports to Workers; Inspections.*
- 10 CFR 20, *Standards for Protection Against Radiation.*
- 10 CFR 30, *Rules of General Applicability to Domestic Licensing of Product Material.*
- 10 CFR 31, *General Domestic Licenses for Byproduct Material.*
- 10 CFR 71, *Packaging and Transportation of Radioactive Material.*
- 10 CFR 835, *Occupational Radiation Protection.*
- 21 CFR 892, *Radiological Devices.*
- 21 CFR 900, *Mammography.*
- 21 CFR 1000-1003, *Radiological Health.*
- 21 CFR 1020, *Performance Standards for Ionizing Radiation Emitting Products.*
- 29 CFR 1910, *Occupational Safety and Health Standards.*
- 29 CFR 1926, *Safety and Health Regulations for Construction.*
- 40 CFR 141, *National Primary Drinking Water Regulations.*
- 40 CFR 266, *Storage, Treatment, Transportation, and Disposal of Mixed-Waste.*
- 42 CFR 75, *Standards for the Accreditation of Educational Programs for and the Credentialing of Radiologic Personnel.*
- 42 CFR 482, *Conditions of Participation for Hospitals.*
- 49 CFR 100-185, *Pipeline and Hazardous Materials Safety Administration.*
- US Nuclear Regulatory Commission Regulatory Guide (NUREG) 8.1-40, *Occupational Health.*
- NUREG 1556, *Consolidated Guidance About (Radioactive) Materials Licenses.*
- DODD 3150.08, *DoD Response to Nuclear and Radiological Incidents.*
- DODI 3150.10, *DoD Response to U.S. Nuclear Weapon Incidents.*
- DOD 3150.8-M, *DoD Nuclear Weapon Accident Response Procedure.*
- DODI 6055.8, *Occupational Ionizing Radiation Protection Program.*
- DOD 4715.6-R *Low-level Radioactive Waste Disposal Program.*
- AFI 21-203, *Nuclear Accountability Procedures.*
- AFI 21-204, *Nuclear Weapons Maintenance Procedures.*
- AFMAN 24-204, *Preparing Hazardous Materials for Military Air Shipments*
- AFI 40-201, *Managing Radioactive Materials in the USAF.*

AFI 48-148, *Ionizing Radiation Protection*.

AFMAN 48-125, *The US Air Force Personnel Dosimetry Program*.

AF Report IOH-SD-BR-SR-2005-0004, *Bioenvironmental Engineer's Guide to Ionizing Radiation (2005)*.

AFI 91-101, *Air Force Nuclear Weapons Surety Program*.

AFI 91-108, *Air Force Nuclear Weapons Intrinsic Radiation (INRAD) and 91B Radioactive Material Safety Program*.

AFGSC Supplement to 90-108, *Air Force Nuclear Weapons Intrinsic Radiation Safety Program*

AF Report AFRL-SA-BR-SR-2009-0004, *Intrinsic Radiation Guidebook for Bioenvironmental Engineers, and Nuclear Weapon Workers and their Supervisors (2009)*.

AFGSC Plan 10-1, *Radiological Accident/Incident Response and Recovery Plan*.

TECHNICAL ORDER 00-110N-2, *Radioactive Waste Disposal*, and T.O. 00-110N- Series

T.O. 11N-20-7, *Nuclear Safety Criteria*, and T.O. 11N- Series

T.O. 33B-1-1, *Nondestructive Inspection Methods*

Adopted Forms

AF Form 55, **Employee Safety and Health Record**

AF Form 847, **Recommendation for Change of Publication**

AF Form 1527, **History of Occupational Exposure to Ionizing Radiation**

AF Form 2767, **Occupational Health Training and Protective Equipment Fit Testing**

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

Abbreviations and Acronyms;

ALARA—As Low As Reasonably Achievable

AFMSA—Air Force Medical Support Agency

AFGSC—Air Force Global Strike Command

AFSC—Air Force Safety Center

AFI—Air Force Instruction

ALI—Annual Limits of Intake

AFMAN—Air Force Manual

BE—Bioenvironmental Engineering

BMET—Biomedical Equipment Technician

CC—Commander

CFR—Code of Federal Regulations

DoD—Department of Defense

DoDI—Department of Defense Instruction

DOT—Department of Transportation

INRAD—Intrinsic Radiation

MAJCOM—Major Command

MDOS—Medical Operations Squadron

mrem—Millirem (one thousandth rem; rem = roentgen equivalent in man)

MTF—Medical Treatment Facility

NRC—US Nuclear Regulatory Commission

OI—Operating Instruction

ORM—Operational Risk Management

OSHA—US Occupational Safety and Health Administration

PPE—Personal Protective Equipment

PH—Public Health

RAM—Radioactive Material

rem—Roentgen Equivalent Man

RIC—Radioisotope Committee

RSO—Radiation Safety Officer

TLD—Thermoluminescent Dosimeter

TEDE—Total Effective Dose Equivalent

TLD—Thermo Luminescent Dosimeter

USAF—United States Air Force

USAFSAM—United States Air Force School of Aerospace Medicine

WSO—Weapon Safety Officer

Attachment 2

CONTACT INFORMATION

Malmstrom AFB Radiation Safety Officer (IRSO):

341 MDOS/SGOJ (Bldg 2041)

Commercial (406) 731-1580

DSN 632-1580

On-call Technician (406) 781-9319

USAF Radioisotope Committee (RIC):

AFMSA/SG3PB

1500 Wilson Blvd, Suite 1600

Arlington, VA 22209

Commercial (703) 588-6308/6340

DSN 425-6308/6340

Fax (703) 588-1272

Fax DSN 425-1272

Email: USAF.RIC@Pentagon.af.mil

Website: https://kx.afms.mil/rad_prot**USAF School of Aerospace Medicine (USAFSAM):**

USAFSAM/OEH (Bldg 840)

2510 Fifth Street

Wright-Patterson AFB, OH 45433

Toll Free 1-888-232-ESOH (3764)

Commercial (937) 938-3764

DSN 798-3764

Email: esoh.service.center@wpafb.af.milWebsite: <https://kx.afms.mil/esoh>**USAF Radioactive Recycling and Disposal (AFRRAD):**

88 ABW/CEAR

1450 Littrell Road

Wright-Patterson AFB, OH 45433

Commercial 937-257-2010

DSN 787-2010

Fax 937-656-1534

Fax DSN 986-1534

After hours: 937-269-4487 (cell phone)

Website: <https://afkm.wpafb.af.mil/rad>

Attachment 3

CONTRACTOR USE OF RAM AND RADIATION PRODUCING DEVICES (RPD)

A3.1. Requirement to Use RAM or RPDs. Notify the contract monitor of your requirement to use RAM or RPDs. Ensure you have appropriate licenses and certifications required to perform radiation work. See explanation on Areas of Exclusive Federal Jurisdiction inside this brochure. *Obtain written approval through the installation radiation safety officer (IRSO).*

A3.2. Areas of Exclusive Federal Jurisdiction. IAW federal law, contractors may only use licensable quantities of RAM under two conditions: Possess NRC license, or NRC reciprocity (for an Agreement State license) via NRC Form 241.

A3.3. Areas under Agreement State Authority. The Nuclear Regulatory Commission has established licensing requirements for areas of “exclusive federal jurisdiction” and “agreement states.” These can be reviewed at http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/v19/#_1_25.

A3.4. What Contractors Need to Know!

A3.4.1. Notify contracting officer or IRSO whenever the use of RAM or RPDs is anticipated.

A3.4.2. Licensing/Permitting: For operations on areas of exclusive federal jurisdiction, contractor must hold a valid NRC license for RM or have a current NRC Form 241 reflecting reciprocity paid to NRC. For operations on areas of agreement state jurisdiction, must hold a valid state license for RAM for that state or have currently paid reciprocity to the state (in case of out-of-state license).

A3.4.3. Nature of Operations: Provide information on location, description of use and duration. Specific information describing the type/isotope, quantity/activity and intensity of radiation should be included. This enables the AF to assess impacts to operations, personnel and facilities, and in the event of an accident enables emergency responders to safely conduct operations.

A3.4.4. Contractor Health and Safety Plan: These procedures must be followed IAW the federal or state license/permit. Contractors are solely responsible for the safety and health of their employees.

A3.4.5. Risks to AF Operations, Personnel, Facilities or Real Estate: Program managers and contractors have a responsibility to immediately contact the contracting officer and IRSO whenever their radioactive items/devices may impact AF operations, personnel, facilities or real estate. Once aware of the impacts, the IRSO is responsible for assessing these risks, ensuring compliance, and making appropriate notifications.

A3.4.6. Spot Check/Audit, as required: Spot checks of contractor operations are necessary to enforce AF policy on management and control of RAM on AF installations.

A3.5. What Contract Monitors Need to Know!

A3.5.1. If possible, prior to awarding contract, review Purchase Request Package (SOO, SOW, PWS, etc.) and determine whether or not it requires contractors to use RAM or RPDs.

A3.5.2. Provide recommendation to the government contracting officer on whether or not the FAR clause should be included (FAR 52.223-7).

A3.5.3. Include the topic of RAM and RPDs in program reviews, as applicable. Limit the use of RAM and RPDs where feasible, consistent with AF needs.

A3.5.4. Notify the IRSO to obtain written approval prior to allowing any RAM or RPD on air force base.

A3.5.5. Follow requirements of AFI 40-201, 341MWI48-101, and any other restrictions/requirements established by the IRSO.

A3.5.6. Notify the IRSO of any accident, incidents, or unplanned/unapproved operations that occur related to RAM or RPDs.