

**BY ORDER OF THE COMMANDER  
JOINT BASE MCGUIRE-DIX-  
LAKEHURST**

**JOINT BASE MCGUIRE-DIX-LAKEHURST  
INSTRUCTION 48-148**

**10 August 2023**



**OPERATIONAL MEDICAL READINESS**

**IONIZING RADIATION PROTECTION  
PROGRAM SUPPLEMENT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directive (AFPD) 48-1, *Aerospace Medicine Program*, Air Force Manual (AFMAN) 40-201, *Radioactive Materials (RAM) Management*, AFMAN 48-148, *Ionizing Radiation Protection*, Department of Defense Instruction (DODI) 6055.08, *Occupational Ionizing Radiation Protection Program*, Nuclear Regulatory Committee (NRC) Title 10, *Code of Federal Regulations (CFR)*, and Department of the Air Force Manual (DAFMAN) 48-125, *Personnel Ionizing Radiation Dosimetry*. It reinforces the AF policy that radioactive materials will only be used on Air Force installations when properly authorized by an appropriate permit or license, and when approved by the installation commander. It applies to all organizations and personnel (including contractors) conducting activities on Joint Base McGuire-Dix-Lakehurst (JB MDL). It sets forth how radioactive material (RAM) and radiation-producing devices (RPD) are acquired, received, used, stored, secured, transferred, transported, and disposed of. It provides clarification on areas of federal jurisdiction and establishes the charter requirements of the Radiation Safety Committee. Finally, it establishes local policy for the radiation dosimetry program, radiological incident response, and contract approvals involving the use of RAM or RPDs.

Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program* and disposed of IAW with the Air Force Records Information Management System (AFRIMS) located at <https://www.mv.af.mil/gcss-af61a/afrims/afrims/>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. This publication may not be supplemented.

**1. General.** RAM and RPDs have many practical uses in medicine, research, construction, non-destructive inspection, armament development and testing, and military operations, but present a hazard if used improperly because they produce ionizing radiation. Exposure to ionizing radiation causes microscopic damage to living tissue potentially resulting in cancer, tumors and genetic damage at low doses. High doses may result in skin burns and radiation sickness. To minimize exposures to ionizing radiation, the federal government has established dose limits for workers and the general public. In addition to these dose limits, all DoD personnel are directed to maintain exposures to ionizing radiation as low as reasonably achievable (ALARA). This means that no practice involving exposure to radiation shall be adopted unless there is sufficient benefit to the exposed individual or to achieving necessary military objectives to offset the harm it may cause. In those cases where the use of ionizing radiation is justified, the magnitude of individual doses and the number of people exposed shall be kept ALARA, while taking economic, military, and social factors into account.

**2. Objective.** The purpose of this program is to support operational requirements involving the use of RAM and RPDs while ensuring the health and safety of all JB MDL personnel. Specific objectives are to: 1) maintain exposures to workers and the public ALARA; 2) enhance installation security; and 3) ensure compliance with federal/state law and DoD/AF policy.

### **3. Responsibilities:**

#### 3.1. Installation Commander:

3.1.1. Appoints in writing a qualified Installation Radiation Safety Officer (IRSO) and alternate. The requirements of this position are established in AFMAN 40-201 and AFMAN 48-148.

3.1.2. Establishes controls to prevent unauthorized acquisition, receipt, use, storage, transfer, transport, or disposal of RAM on the installation (to include RAM used in classified operations). This policy extends to all organizations, agencies, and individuals, to include contractors.

3.1.3. Delegates the authority to the IRSO to suspend installation operations involving RAM or RPDs that pose a significant health risk to personnel, are in clear violation of regulations, or can negatively impact AF operations, materiel, or real estate.

3.1.4. Provides the IRSO with clearance and access to all activities governed by this instruction.

#### 3.2. Wing Commanders, Sister Service Commanders, and Mission Partners:

3.2.1. Enforce compliance with this instruction by Air Force and non-Air Force organizations, to include contractors.

3.2.2. Ensure any abnormal exposures or suspected overexposures to radiation are immediately reported to the IRSO.

3.2.3. Establish controls to prevent unauthorized use or transfer of RAM within your organization (to include RAM used in classified operations). This applies to all military services and mission partners on base.

### 3.3. IRSO:

3.3.1. Serves as a liaison between JB MDL and the USAF Radioisotope Committee in all matters pertaining to radioactive materials IAW 10 CFR and AFMAN 40-201.

3.3.2. Implements and executes requirements established by AFMAN 40-201 and AFMAN 48-148.

3.3.3. Conducts public dose assessments and implements controls to maintain exposures ALARA.

3.3.4. Has delegated authority from the installation commander to suspend operations (including contractor operations) involving RAM or RPDs that pose a significant health risk to personnel or the public, are in clear violation of regulations or requirements, or can negatively impact JB MDL operations, materiel, or real estate.

3.3.5. Serves as JB MDL approval authority for contract operations involving the use of RAM or RPDs.

3.3.5.1. Provides guidance to contracting officers, contract originators and contract monitors on contract material submittal requirements and procedures for operating safely on JB MDL.

3.3.5.2. Advises on the appropriate use of Federal Acquisition Regulation (FAR) 52.223-7 Notice of Radioactive Materials.

3.3.5.3. Ensures federal and state regulatory requirements are met for contractors, and provides written approval as required.

3.3.6. Conducts installation radiation dosimetry program IAW AFMAN 48-148 and DAFMAN 48-125.

3.3.7. Ensures radiation safety (i.e. ALARA) training is provided annually to all organizations/personnel who use or store RAM or operational RPDs.

3.3.8. Assists Unit RSOs (URSO) with training requirements, and reviews adequacy of training plans and documentation.

3.3.9. Manages tracking and closure of NRC, Joint Force Inspections, or AF Inspection Agency discrepancies.

3.3.10. Provides emergency responders (87 SFS, 87 CES/EOD, 87 CES/CEX, and 87 CES/CEF) with a list of RAM storage areas that could cause substantial dose if not controlled properly (updated annually).

3.3.10.1. Out-of-cycle notifications will be made whenever contractors temporarily bring RAM onto the installation.

### 3.4. Unit commanders (or equivalent):

3.4.1. Designate, in writing, a URSO when in possession of RAM or RPDs.

3.4.2. Ensure contract originators and contract monitors are aware of their duties to the AF policy, the FAR and this instruction.

3.4.3. Enforce compliance with this instruction by all unit personnel, to include contractors, and ensure the conditions of HQ USAF RAM permits (if applicable) are met.

3.4.4. Ensure any abnormal exposures or suspected overexposures to radiation are immediately reported to the IRSO.

3.4.5. Establish controls to prevent unauthorized use or transfer of RAM within your unit (to include RAM used in classified operations).

3.4.6. Identify and report to the IRSO for possession, transfer, and disposal of permitted or generally licensed RAM or RPDs for tracking in Radioactive Materials Management Information System (RAMMIS).

### 3.5. Unit RSOs:

3.5.1. Brief unit commander as needed on radiation safety program to include procedures to maintain exposures ALARA.

3.5.2. Provide initial and annual radiation safety training to personnel IAW IRSO guidance. Ensure training is properly documented. Request assistance from the IRSO as needed.

3.5.3. Notify IRSO of incidents, accidents or unusual circumstances involving use of RAM or RPDs. This includes loss or theft, abnormal exposures, and suspected overexposures. Assist IRSO with exposure investigations.

3.5.4. Notify IRSO prior to procurement or disposal of RAM or RPDs.

3.5.5. Notify IRSO prior to any significant change in operations involving RAM or RPDs.

3.5.6. Ensure this instruction, as well as local operating instructions, are being followed by unit personnel (to include contractors).

3.5.7. Maintain an inventory of all RAM sources, and RPDs, for your unit; provide to BE at least semi-annually.

### 3.6. Workplace Supervisors:

3.6.1. Enforce compliance with this instruction by all workplace personnel, to include contractors.

3.6.2. If required by RAM permit or the IRSO, author a workplace-specific radiation safety operating instruction which includes safety controls and emergency response procedures.

3.6.3. Obtain and make available safety equipment necessary for the safe use of RAM or RPDs.

3.6.4. Provide results of dosimetry measurements to workers promptly upon receipt and provide signed confirmation of receipt back to the IRSO.

3.6.5. Ensure any abnormal exposures or suspected overexposures to radiation are immediately reported to the IRSO.

3.6.6. Ensure that initial and annual radiation safety training is provided to and documented for personnel who are potentially exposed to ionizing radiation (i.e. RAM or RPDs). For assistance, contact the URSO or IRSO.

3.6.7. Submit requests for radioactive waste disposal to the IRSO.

3.6.8. Ensure all RAM is shipped or accepted with proper authorization. In addition, immediately notify the IRSO upon arrival or prior to shipment to conduct leak checks (if required).

3.7. Range Operators:

3.7.1. Comply with all requirements of any applicable radioactive materials license.

3.7.2. Notify IRSO of any changes, or permit violations, relating to operations or processes involving RAM or radiation contaminated areas.

3.7.3. In order to ensure effective and timely exit monitoring, notify the IRSO immediately of any need, by any party, to enter designated radioactive areas.

3.7.4. Report any accidents, incidents, or emergencies regarding RAM or radioactive material to the IRSO immediately.

3.8. Individuals who work with or around RAM or RPDs:

3.8.1. Become familiar with and observe safety rules in workplace radiation safety operating instructions.

3.8.2. Properly wear and store Optically Stimulated Luminescence (OSL) badges and PPE as required by the URSO (with consultation from IRSO), technical data, regulations and/or manufacturer.

3.8.3. Report accidents, hazardous conditions, and permit violations promptly to the supervisor and URSO.

3.9. Contracting Officers:

3.9.1. Provide a copy of this instruction to contract originators, as well as contract monitors and contract representatives at pre-construction meetings. Request assistance from the IRSO as required to ensure compliance with AFMAN 40-201 as written into the statement of work.

3.9.2. Include FAR clause (i.e. FAR 52.223-7 Notice of Radioactive Materials) where appropriate. Consult with IRSO whenever use of RAM or RPDs is suspected or confirmed.

3.9.3. Require contractors to provide their own support for federal and state regulatory compliance when using RAM or RPDs.

3.9.4. Ensure the contractor obtains written approval from the IRSO prior to allowing any RAM or RPDs on JB MDL.

3.10. Contract Originators:

3.10.1. Ensure the requirements package addresses the potential for contractor use of RAM or RPDs. Coordinate with the IRSO on construction projects, A&E projects, and whenever the potential for contractor use of RAM or RPDs is present.

3.10.2. Review the purchase request package (SOO, SOW, PWS, etc.) and determine whether or not it requires the contractor to use RAM or RPDs. Include a material submittal requirement, as directed by the IRSO, for all construction contracts.

- 3.10.3. Limit the use of RAM where feasible, consistent with joint partner's needs. Ensure all contract statements of work requiring the use of RAM or RPDs are coordinated on by the IRSO prior to implementation.
- 3.10.4. Provide recommendation to the government contracting officer on whether or not the FAR clause (i.e. FAR 52.223-7 Notice of Radioactive Materials) should be included.
- 3.10.5. IAW AFMAN 40-201, seek written approval from IRSO prior to establishing a requirement that involves the use of RAM or RPDs. This should occur at least 30 days prior to arrival on base. In all cases, the IRSO must be notified prior to bringing RAM or RPDs onto JB MDL. **Note:** If notifications are not performed, the Nuclear Regulatory Commission or New Jersey Department of Health may issue a notice of violation to the USAF, JB MDL, or the installation commander resulting in potential fines and contractor work stoppage.
- 3.10.6. Include the topic of RAM and RPDs in program reviews, as applicable.
- 3.10.7. Provide the prime contractor with this instruction and request assistance from the IRSO, as required.
- 3.10.8. If at any time during the performance of the contracting effort, it is discovered that the use of RAM or RPDs is required, notify the IRSO and the contract officer.
- 3.10.9. Receive initial awareness training from the IRSO if project requirements may possibly involve the use of RAM or RPDs.
- 3.10.10. Ensure the contractor obtains written approval from the IRSO prior to allowing any RAM or RPDs on JB MDL.
- 3.10.11. Organizations supporting tests or training missions on JB MDL can receive approval from the IRSO through the Safety Appendix and Request for Environmental Impact Analysis (AF IMT 813) processes.
- 3.11. Contract Monitors (to include Project Engineers, Project Inspectors and Project Monitors):
  - 3.11.1. 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.
  - 3.11.2. Ensure the contractor obtains written approval from the IRSO prior to allowing any RAM or RPDs on JB MDL.
  - 3.11.3. Ensure the contractor has a copy of this instruction and follows the requirements of AFMAN 40-201 and any other requirements established by the IRSO.
  - 3.11.4. Notify the IRSO of any accident, incidents, or unplanned/unapproved operations that occur related to RAM or RPDs.
  - 3.11.5. Receive initial awareness training from the IRSO if project requirements may possibly involve the use of RAM or RPDs.
- 3.12. Contractors must follow applicable federal law, DoD, and AF regulations. Including:
  - 3.12.1. Notify contracting officer, contract monitor and IRSO whenever the use of RAM or RPDs is anticipated.

- 3.12.2. Obtain written approval from the IRSO before bringing RAM or RPDs onto JB MDL (this includes shipping, transfer, receipt, use or storage).
  - 3.12.3. Must have proper licensing/permitting. For JB MDL, URSO must hold a valid NRC license for RAM or have a current NRC Form 241 reflecting reciprocity paid to NRC. For JB MDL range operations, URSO must hold a valid state license for RAM or have currently paid reciprocity to the state of New Jersey (in the case of an out-of-state license).
  - 3.12.4. 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.
  - 3.12.5. Ensure a contractor safety and health plan is established. These procedures must be followed IAW the federal or state license/permit. Contractors should be reminded that they are solely responsible for the safety and health of their employees.
  - 3.12.6. 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.
  - 3.12.7. Anticipate spot checks and/or audits, as required. Spot checks of contractor operations are necessary to enforce AF policy on management and control of RAM or RPDs on AF installations.
- 3.13. Defense Reutilization and Marketing Office (DRMO):
- 3.13.1. Immediately notify the IRSO of any suspected RAM-containing items.
  - 3.13.2. Ensure the radiation detection system in-place is confidence checked regularly as described by manufacturer. Inform leadership and request resources to fix any identified defects. Inform the IRSO when equipment is not functioning correctly and provide an estimated completion date for repair/replacement.
  - 3.13.3. Provide radiation safety/awareness training to all DRMO personnel upon employment and annually thereafter. Ensure training is properly documented. Request training materials/assistance from the IRSO, as required.
- 3.14. 305 APS Shipping and Receiving:
- 3.14.1. Have procedures in place to immediately notify IRSO whenever a radioactive item is offered for shipment or receipt, even if transient.
  - 3.14.2. Ensure all shipped or received RAM meets Department of Transportation (DOT) requirements. Notify the IRSO of any discrepancies.
  - 3.14.3. Immediately notify the IRSO whenever a radioactive item fails to meet DOT regulations, is found leaking, or exceeds the level for instruments and articles.
  - 3.14.4. Provide radiation safety/awareness training to all shipping/receiving personnel upon employment and annually thereafter. Ensure training is properly documented. Request training materials/assistance from the IRSO, as required.

3.14.5. Provide a copy of radiation shipping/receiving logs quarterly to the IRSO.

#### **4. Acquisition and Receipt of RAM or RPDs:**

4.1. Limit the use of RAM where feasible, consistent with joint partner needs. Ensure all procurement efforts and/or contract statements of work requiring the use of RAM or RPDs are coordinated on by the IRSO prior to implementation.

4.2. Specific restrictions on the acquisition and receipt of RAM IAW AFMAN 40-201 and 10 CFR are as follows:

4.2.1. Care should be taken to ensure any system or items being developed or acquired by the USAF do not contain radium.

4.2.2. GLDs should be purchased using Defense Federal Acquisition Regulations, assigned an NSN and registered in the Federal Logistics Information System and Hazardous Material Information Resource System. GLDs shall be registered in the USAF logistics system and identified as radioactive and inventoried in RAMMIS.

4.3. At least 30 days prior (and as early as possible), a unit representative must notify the IRSO of planned receipt and/or use of RAM or RPDs.

4.4. Specific notification information required by the IRSO is as follows:

4.4.1. A copy of the license or permit.

4.4.2. Where the source will originate.

4.4.3. The final destination of the source.

4.4.4. Mode of transportation used to transport the source to and from JB MDL.

4.4.5. How long the source will be on JB MDL while in transit.

4.4.6. Date the source will be shipped from the originator prior to being shipped, and approximate date of arrival to JB MDL.

4.5. Targets used on operational ranges subject to severe damage or destruction shall not contain RAM, including exempted materials (e.g. radium gauges), unless specifically allowed to do so by an Air Force permit or the Radioisotope Committee (RIC). Range authorities shall develop and implement procedures to screen all targets that potentially contain and/or suspect to contain RAM.

4.6. Units shall not procure facility radioluminescent exit signs (e.g. emergency exit signs containing tritium) and markers without written approval from HQAFMSA/SG3PB.

#### **5. Usage, Storage and Security of RAM or RPDs:**

5.1. All organizations and personnel (including contractors) conducting activities on JB MDL are required to obtain approval from the installation commander or IRSO prior to using or storing RAM or RPDs.

5.2. All non-medical RPDs must be evaluated by the IRSO for potential hazards prior to first time use. Therefore, the user, supervisor, or URSO should send a request to 87 OMRS/SGXB at least **30 days** prior to the desired use date.

5.3. All medical RPDs must be evaluated by a qualified biomedical equipment technician and in some cases a medical physicist prior to first time use IAW AFMAN 48-148.

5.4. RAM or RPDs may only be stored/used in areas approved by the IRSO. New requests should be submitted to the IRSO at least 30 days prior to the desired date.

5.5. The IRSO shall be contacted prior to any facility modifications where RAM or RPDs are stored.

5.6. RAM shall not be accessible to the general public and may only be made available to authorized personnel who are trained on proper use.

5.7. Security of RAM needs to be verified by the IRSO prior to RAM being stored on JB MDL.

5.8. RAM that is transported onto JB MDL will be considered transient unless on the installation more than 30 days. All storage requirements must be followed while in transient status.

## **6. Transfer and Transport of RAM:**

6.1. Permittees who desire to transfer RAM to another organization must obtain a copy of the receiving organization's RAM permit or NRC license and verify they can receive the item being shipped. Request assistance from the IRSO as required.

6.2. Prior to shipping RAM, ensure the requirements of 49 CFR 173, *Shipper's—General Requirements for Shipments and Packaging* are met. This is usually accomplished in coordination with the 305 APS.

6.3. When RAM is being shipped on or off the installation, the mode of transportation is required to be supplied to the IRSO (i.e. military air, commercial vehicle, etc.).

## **7. Recycling and/or Disposal of RAM:**

7.1. All AF RAM may be recycled or disposed of through the Air Force Radioactive Recycling and Disposal (AFRRAD) office, 88 ABW/CEV, 1450 Littrell Road, Wright-Patterson AFB, OH 45433, Comm: (937)257-2010, DSN: 787-2010. For Army and Navy generated or owned RAM, coordination of disposal through the U.S. Army Joint Munition Command (JMC) and shipping support will be with the IRSO.

7.2. All AF RAM disposal (i.e. commodities and low-level radioactive waste) must follow the requirements of AFMAN 40-201, the applicable RAM permit and instructions from the AFRRAD office. For Army and Navy, the proper disposal location must be utilized with coordination of shipping accomplished with IRSO.

7.3. Coordinate all recycling/disposal efforts through the IRSO.

## **8. Personnel Monitoring and Incident Reporting**

8.1. Bioenvironmental Engineering (87 OMRS/SGXB) is responsible for oversight and management of the personnel ionizing radiation dosimetry program.

8.2. The IRSO will identify those work centers/organizations and/or individuals requiring placement on the personnel dosimetry program. Some individuals may also be required to submit bioassay specimens for laboratory analysis or undergo lung or whole body counting as needed.

8.3. Individuals normally entered on the program include pregnant radiation workers and those workers who have the potential to exceed 10 percent of the annual limit during the worker year or if directed by T.O.

8.4. Contractors will not be enrolled on the AF personnel dosimetry program unless such enrollment is specified in the contract. Joint Service personnel will not be enrolled on the AF personnel dosimetry program unless a MOU/MOA is in place directing program support.

8.5. ALARA investigation levels for individuals enrolled on the personnel dosimetry program are established in Attachment 2. If an individual exceeds one of these levels, the IRSO shall contact the work center to determine the cause and make recommendations as required to maintain exposures ALARA. Exposures are documented on an United States Air Force School of Aerospace Medicine (USAFSAM) Form 1499-1.

8.6. Reference Level Reporting: Any dosimeter and/or bioassay result which indicates a dose more than 25 percent of the applicable annual dose limit, received for a quarterly monitoring period, or 10 percent of the applicable annual dose limits if monitored monthly, shall be investigated immediately by the IRSO (refer to AFMAN 48-148, for specific reporting requirements).

8.7. All URSOs will forward unit personnel's off-duty or moonlighting radiation dose records to the IRSO IAW AFMAN 48-148.

8.8. Individuals or supervisors must promptly report damage, loss or theft of RAM sources, uncontrolled releases of RAM, or abnormal or overexposures to ionizing radiation. Notifications should immediately be made through the chain-of-command to 87 OMRS/SGXB and IAW AFMAN 40-201, and AFMAN 48-148. Failure to conduct proper notifications may result in civil penalties or a notice of violation issued to the installation commander.

## **9. Radiological Emergency Management Operations:**

9.1. Guidance for emergency management operations is provided in JB MDL Comprehensive Emergency Management Plan 10-2.

9.2. During emergency response situations, BE will provide electronic personal dosimeters (EPDs) to response personnel as directed by the IRSO. Doses recorded or calculated will be added to personnel's medical records through an Air Force approved Occupational Environmental Health Management Information System.

9.3. The IRSO provides an annual report to emergency responders which lists all RAM on JB MDL.

9.4. Out-of-cycle notifications are made on an as-needed basis whenever contractors temporarily bring radioactive materials onto the installation. In the event of an accident this enables emergency responders to safely conduct operations.

## **10. Contractor Use of RAM or RPDs:**

10.1. To protect the public, maintain security, ensure compliance, and maintain exposures ALARA, contract operations that involve the use of RAM or RPDs shall follow the requirements of this instruction and must be coordinated with 87 OMRS/SGXB. **Exception:** The AF will not advise on PPE or training or provide dosimetry badges or medical exams to contractors unless otherwise specified in the contract.

10.2. Specific responsibilities related to contract operations are spelled out in sections 3.9 through 3.12.

**11. Training and Recordkeeping Requirements:**

11.1. Workplace supervisors and URSOs are responsible for providing and documenting radiation safety training IAW AFMAN 40-201 and AFMAN 48-148. Training records must be retained for at least 3 years and must document subjects covered and dates training was provided.

11.2. The IRSO will provide training to URSOs who then provide the required training to other employees assigned to the workplace. The IRSO will provide training outlines upon request to assist URSOs.

11.3. A copy of sign-in logs shall be provided to the IRSO after training has been accomplished.

11.4. Records shall be maintained IAW AFMAN 40-201 and AFMAN 48-148. Request assistance from the IRSO as required.

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## Attachment 1

### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

#### *References*

**AFPD 48-1**, *Aerospace & Operational Medicine Enterprise (AOME)*, 7 June 2019  
**AFMAN 40-201**, *Radioactive Materials (RAM) Management*, 29 March 2019  
**AFMAN 48-148**, *Ionizing Radiation Protection*, 20 July 2020  
**DODI 6055.08**, *Occupational Ionizing Radiation Protection Program*, 09 April 2021  
**DAFMAN 48-125**, *Personnel Ionizing Radiation Dosimetry*, 27 October 2020  
**AFI 33-322**, *Records Management and Information Governance Program*, 28 July 2021

#### *Prescribed Forms*

No Prescribed Forms.

#### *Adopted Forms*

**DAF Form 847**, *Recommendation for Change of Publication*  
**NRC Form 241**, *Report of Proposed Activities In Non-agreement States, Areas of Exclusive Federal Jurisdiction, or Offshore Waters*  
**USAFSAM Form 1499-1**, *Occupational Dose Record for a Monitoring Period*

#### *Abbreviations and Acronyms* AC—Administrative Change

AF—Air Force  
 AFB—Air Force Base  
 AFDPO—Air Force Departmental Publishing Office  
 AFH—Air Force Handbook  
 AFI—Air Force Instruction  
 AFPD—Air Force Policy Directive  
 AFRRAD—Air Force Radioactive Recycling and Disposal  
 AFMAN—Air Force Manual  
 AFRIMS—Air Force Records Information Management System  
 ALARA—As Low As Reasonably Achievable  
 AMC—Air Mobility Command  
 AMCI—Air Mobility Command Instruction

**CE**—Civil Engineering  
**CFR**—Code of Federal Regulations  
**DOD**—Department of Defense  
**DOT**—Department of Transportation  
**DRMO**—Defense Reutilization and Marketing Office  
**FAR**—Federal Acquisition Regulation  
**IAW**—In Accordance With  
**IMT**—Information Management Tool (IMT has been converted to Form)  
**IRSO**—Installation Radiation Safety Officer  
**JB MDL**—Joint Base McGuire-Dix-Lakehurst  
**MAJCOM**—Major Command  
**NRC**—Nuclear Regulatory Commission  
**OPR**—Office of Primary Responsibility  
**OSL**—Optically Stimulated Luminescence  
**PPE**—Personal Protective Equipment  
**RAM**—Radioactive Material  
**RDS**—Records Disposition Schedule  
**RIC**—Radioisotope Committee  
**RPD**—Radiation-Producing Device  
**RSO**—Radiation Safety Officer  
**USAFSAM**—United States Air Force School of Aerospace Medicine

### *Terms*

**Adopted Form**—A form used (required) in a publication other than the prescribing publication.

**Administrative Change**—Change that does not affect the subject matter content, authority, purpose, application, and/or implementation of the publication (e.g., changing the POC name, office symbol(s), fixing misspellings, etc.)

**Approval Authority**—Senior leader responsible for contributing to and implementing policies and guidance/procedures pertaining to his/her functional area(s) (e.g., heads of functional two-letter offices).

**Certifying Official**—A minimum of one organizational level above the OPR, this individual certifies the need for the publication, to include currency of information, applicability to the Air Force, and propriety of content.

**Prescribed Form**—A form designed to support the implementation of requirements in a directive Air Force publication. Use and purpose of a prescribed form must be contained in the publication it supports (also known as the prescribing publication).

**Technical/functional Coordination**—Review of draft publications by technical/functional experts prior to publication. The list of technical/functional coordinators changes with each publication, based on the contents and applicability of the publication.

**Attachment 2**

**ALARA INVESTIGATION LEVELS FOR THE PERSONNEL  
DOSIMETRY PROGRAM**

**A2.1.** ALARA Investigation Levels in Tables A2.2 are based on 10 CFR 20, Subpart C, Occupational Dose Limits, and the guidance in AFMAN 40-201, establish investigation levels for individual occupational radiation exposures to ensure personnel exposures are maintained ALARA. Investigation levels should be developed for each occupational group and are intended to identify adverse trends, assess their causes, and implement appropriate corrective actions.

**A2.2.** The IRSO shall investigate any exposure that exceeds the levels established in Tables A2.1 or A2.2. In instances where the dosimeter is lost, units must provide documentation regarding the lost dosimeter and any additional information that may indicate a health concern.

**A2.3.** The IRSO may conduct additional investigations if any received dose is inconsistent with past results.

**A2.4.** The IRSO may request dose records information from any contractor conducting ionizing radiation activities on JB MDL.

**Table A2.1. ALARA Regulatory Levels.**

<b>Description</b>	<b>Regulatory Limit</b>	<b>Dosimetry Enrollment</b>
Total effective dose equivalent	5,000 mrem/yr	500 mrem/yr
Shallow dose equivalent	50,000 mrem/yr	5,000 mrem/yr
Dose to an embryo/fetus during the entire pregnancy	500 mrem/yr	Any radiation worker

**Table A2.2. ALARA Investigational Levels.**

<b>Area</b>	<b>Occupational Code</b>	<b>Investigation Level</b>
Medical Radiology	XR	125 mrem/qtr
Non-Destructive Inspection	F	125 mrem/qtr
Veterinary Clinic	VC	125 mrem/qtr
All other badged areas	All	45 mrem/qtr
All pregnant females	PF	25 mrem/mon