

**BY ORDER OF THE COMMANDER
TRAVIS AIR FORCE BASE**

**TRAVIS AIR FORCE BASE
INSTRUCTION 48-105**

4 AUGUST 2004

Aerospace Medicine

IONIZING RADIATION CONTROL PROGRAM



COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFD 48-1, *Aerospace Medical Program*, AFI 40-201, *Managing Radioactive Materials in the Air Force*, AFI 48-148, *Ionizing Radiation Protection*, AFI 48-125, *USAF Personnel Dosimetry Program*, AFI 48-145, *Occupational Health Program*, AFI 91-204, *Safety Investigations and Reports and Controls* required by Title 10, Code of Federal Regulation (10 CFR), Energy, sections 19, 20, 21, 30 and 40. It outlines the responsibilities for ensuring proper management of radioactive materials (RAM), maintaining a dosimetry monitoring program for personnel occupationally exposed to ionizing radiation, and maintaining exposures to ionizing radiation as low as reasonably achievable (ALARA). This instruction pertains to all units (including tenants) and contractors using or handling radioactive materials or radiation producing devices and personnel exposed to ionizing radiation on Travis AFB.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

1. General.

1.1. Radioactive materials and ionizing radiation producing devices have many beneficial uses in industrial applications, construction, armament development/testing and research. Such materials and equipment may be directly or indirectly hazardous to personnel by virtue of their potential to cause serious biological damage to body tissues and organs, and are of significant concern with respect to protection of the environment. Federal regulations set specific limits for exposure to ionizing radiation (or dose equivalent), which include keeping all exposures ALARA. When the term "base" is used in this instruction, it includes all areas under Travis control or jurisdiction unless otherwise noted.

2. Objective.

2.1. The primary objective of this program is to minimize risks health and safety while utilizing ionizing radiation emitting equipment.

3. Responsibilities.

3.1. 60 AMW/CC:

3.1.1. Appoints, in writing, a qualified Base Radiation Safety Officer (RSO).

3.1.2. Approves and supports requirements set forth in this instruction to ensure compliance with Air Force, state and federal regulations.

3.2. 60 CONS/Base Contracting Agencies:

3.2.1. Ensures provisions of [Attachment 3](#) and [Attachment 4](#) are included in statement of work (SOW) involving contractor use of RAM.

3.2.2. Will involve Bioenvironmental Engineering (BE) Flight to any pre-performance conference involving contractor use of RAM.

3.3. Base Radiation Safety Officer:

3.3.1. Implements and executes requirements described in AFI 40-201, Managing Radioactive Materials in the US Air Force, AFI 48-148, Ionizing Radiation Protection and, AFI 48-125, The US Air Force Personnel Dosimetry Program.

3.3.2. Serves as 60 AMW/CC primary point of contact for all radiation safety matters and acts as approval authority for on base contracting operations involving the use of RAM.

3.3.3. Develops or reviews training provided to Unit RSO. Provides training, as requested, to ensure Unit and Permit RSO are knowledgeable of requirements, responsibilities and hazards.

3.3.4. Ensure personnel authorized to use ionizing RAM are briefed annually on relevant hazards, the radiation protection program, and the use of radiation protection equipment.

3.3.5. Reviews plan and design specifications for any use of radioactive materials or radiation producing equipment.

3.3.6. Performs an annual radiation protection inspection of each USAF RAM sources.

3.3.7. Takes action to terminate uses of RAM and ionizing radiation producing devices (RPDs) by any user on Travis AFB when conditions of use are found to be unnecessarily detrimental to health and safety or users, observers or general public.

3.3.8. Notifies the USAF Radiation Isotope Committee on incidents, accidents, or permit violations.

3.3.9. Reviews the Radiation Safety and ALARA program annually, and provide annual briefings to the 60 AMDS Aeromedical Council and 60 AMW Mishap Prevention Council.

3.3.10. Reviews and approves, members' use of USAF RAM permits.

3.3.11. Oversees the base TLD Program.

3.3.12. Establishes the base ALARA Investigational levels (See [Attachment 2](#))

3.4. Unit Commanders:

3.4.1. Monitor workplace enforcement of this instruction, compliance with terms and conditions of USAF RAM permits and other restrictions/requirements imposed by the Base RSO.

3.4.2. Appoint unit RSO's in writing for workplaces that use, handle, or store RAM or ionizing radiation-producing device (RPD). Ensure unit RSO meets requirements set by Base RSO and regulatory guidance.

3.4.3. Contact Base RSO when use of RAM is required to accomplish the unit mission for guidance on whether a RAM permit is required.

3.4.4. Procure protective equipment required by Base RSO or BE Flight for safe use of ionizing radiation. Refer questions regarding the need for specific equipment items to BE Flight or the Base RSO.

3.4.5. Ensure all contractors working for or in your organization follow the contractor specific instructions covered in **Attachment 3** and **Attachment 4** of this instruction.

3.5. Bioenvironmental Engineering (BE) Flight Personnel:

3.5.1. Determine those persons who are occupationally exposed to ionizing radiation and require monitoring under the Thermoluminescent Dosimetry (TLD) program.

3.5.2. Enroll occupationally exposed persons in the USAF Personnel Dosimetry Program.

3.5.3. Brief personnel on the hazards of ionizing radiation and the use, care, and handling of the dosimeters at the time of initial enrollment in the program. Brief female occupational radiation workers on hazards of radiation during pregnancy, and procedures to follow if pregnant. This training will be entered on Standard Form 600, **Health Record- Chronological Record of Medical Care**, and placed in the individual's medical record.

3.5.4. Exchange badges and forward them to Air Force Institute of Occupational Health (AFIOH/SDRD), Brooks City Base, Texas for processing.

3.5.4.1. Prior to the exchange, BE Flight personnel will provide to each area TLD monitor a copy of the area's SDRD Listing 1523, **Dosimetry Data**.

3.5.4.2. The area TLD monitor will update the SDRD Listing with any additions, deletions or name changes prior to the badge exchange.

3.5.4.3. BE Flight and the area TLD monitor will reconcile all changes and account for all missing badges before the old badges are turned over to BE Flight and before the new badges are released to the area TLD monitor.

3.5.5. Receive, review, and maintain in the BE Flight office files the SDRD Listings 1499-1, **(Occupational Radiation Exposure Report (Current))** and SDRD Listings 1499-2, **Occupational Radiation Exposure Report (Summary)**, until the AF Form 1527, **History of Occupational Exposure to Ionizing Radiation**, is received.

3.5.6. Receive AF Form 1527 from SDRD for personnel enrolled in the program and forward to Outpatient Records for posting in the medical records.

3.5.7. Forward a copy of the SDRD Listings 1499-1 and 1499-2 along with the names of respective unit personnel whose TLD results exceeded abnormal exposure or overexposure action levels to the appropriate TLD monitor and/or unit RSO.

3.5.8. Perform or access quarterly ventilation (hood) surveys and semi-annual room ventilation of rooms in which radioactive gases and aerosols are used.

3.5.9. Perform radiation protection inspection as part of routine surveillance process per AFI 48-145, Occupational Health Program.

3.6. Permit Radiation Safety Officers:

3.6.1. Be appointed in writing by USAF Radioisotope Committee (RIC) RAM Permit (hereto referred to as permit) Commander and approved by RIC.

3.6.2. Follow all requirements specified in the permit.

3.6.3. Obtain training by Base RSO and follow all provided instructions.

3.6.4. Maintain an inventory of calibrated radiation monitoring equipment used by your unit which allows routine radiological surveillance as well as immediate response to emergency situations.

3.6.5. Ensure compliance with AFI 40-201, paragraph 3.7. and paragraph 3.8. in entirety when RAM is transferred or shipped.

3.6.6. Medical permittees will comply with the provisions of 10 CFR Part 35.

3.7. Unit Radiation Safety Officers (RSO) will:

3.7.1. Obtain training by Base RSO or BE Flight technician assigned by Base RSO on radiation safety hazards and responsibilities.

3.7.2. Ensure all new equipment containing RAM or RPD is coordinated with the Permit and Base RSO.

3.7.2.1. Coordinate Base RSO approval of equipment containing RAM at least 60 days prior to planned arrival on Travis AFB. Equipment use and storage may be impacted if a permit is required and not enough time is allotted for the submission and approval.

3.7.2.2. Coordinate Base RSO approval of use of any RPD by government personnel prior to use. This includes medical, industrial and test use.

3.7.2.3. Ensure all contractors using RAM containing or a RPD device in the unit are fully coordinated with the Base RSO prior to planned arrival or use of equipment on Travis AFB. See [Attachment 3](#) and [Attachment 4](#) for contractor requirements. This pertains to industrial and medical units.

3.7.3. Ensure personnel properly use, store and exchange TLD devices in a timely manner as described by the BE Flight TLD program manager.

3.7.4. If required by RAM permit or Base RSO, author a workplace specific radiation safety operating instruction which includes safety controls, use of TLDs, and emergency response procedures.

3.7.5. Medical unit RSO's must develop operating instructions stating unique identification methods, testing procedures, pass/fail criteria, documentation (i.e., device tagging and audit outcome) and proper procedures for disposal of rejected lead protective material) as described in AFI 48-148, Ionizing Radiation Protection.

3.7.6. Provide and record initial and annual radiation safety training to workers.

3.7.7. Immediately notify the Base RSO of incidents, accidents or unusual circumstances involving ionizing radiation sources or equipment. This includes loss or theft of sources, personal injury, etc. (The BE Flight Primary On-Call technician can be reached through the command post after duty hours.)

3.8. Workplace Supervisors:

3.8.1. Enforce this instruction and other restrictions/requirements recommended by the unit RSO, Base RSO or permit.

3.8.2. Obtain and make available safety equipment necessary for the safe use of ionizing radiation sources and equipment.

3.8.3. Provide results of dosimetry measurements to workers promptly upon receipt and provide signed confirmation of receipt back to Base RSO.

3.8.4. Ensure initial and annual radiation safety training is provided to users of RAM and ionizing radiation producing equipment; ensure training is documented.

3.8.5. Submit requests for radioactive waste disposal to BE Flight, 60 AMDS/SGPB.

3.8.6. Ensure all contractors working for or in your workplace follow the contractor specific instructions covered in this instruction.

3.8.7. Ensure no RAM shipments are accepted unless the Base RSO/BE Flight has confirmed you can accept them, they are not leaking, and that they conform to Department of Transportation (DOT) regulations. (EXCEPTION: shipping documents are not required on the base proper.)

3.9. Units that Receive, Store, Ship, or Dispose of RAM will:

3.9.1. Immediately notify Base RSO with all confirmed or suspected RAM prior to accepting unless pre-coordinated through internal standard operating procedures approved by Base RSO.

3.9.2. Ensure all shipped or received RAM meets DOT requirements.

3.10. 60 MDG RSO will:

3.10.1. Be a health physicist, medical physicist or a nuclear medicine personnel board member.

3.10.2. Be the RSO for USAF medical RAM permits and medical x-ray.

3.10.3. Request and maintain medical USAF permits in coordination with the Base RSO.

3.10.4. Maintain all records required by the 60 MDG USAF permit conditions.

3.10.5. Maintain and review medical center personnel dosimetry results.

3.10.6. Investigate and apprise medical center personnel if exposures are above ALARA, abnormal exposure or overexposure action levels.

3.10.7. Investigate all incidents of radiation contamination in the medical center.

- 3.10.8. Be a consultant to Base RSO.
 - 3.10.9. In conjunction with the base RSO, perform a quarterly review of the 60 MDG ALARA program.
 - 3.10.10. Be the recorder for the 60 MDG Radiation Safety Committee meeting minutes.
 - 3.10.11. Perform weekly smear survey of nuclear medicine laboratory.
 - 3.10.12. Perform quarterly inventory of sealed sources.
 - 3.10.13. Perform quality assurance checks on dose calibrator.
 - 3.10.14. Give annual radiation safety briefings to medical center radiation workers.
 - 3.10.15. Ensure that semiannual leak tests for medical sealed sources are accomplished.
 - 3.10.16. Conduct annual surveys of all medical x-ray units.
 - 3.10.17. Perform medical x-ray installation surveys.
 - 3.10.18. Perform medical shielding surveys for the medical center.
- 3.11. Area TLD Monitors will:
- 3.11.1. Ensure personnel make an appointment with and report to BE Flight with their medical records to enroll in the TLD program.
 - 3.11.2. Notify BE Flight by telephone of personnel departing Travis AFB for permanent change of station (PCS), separation, or retirement, so clearing procedures can be accomplished.
 - 3.11.3. Provide a TLD storage rack/board capable of storing TLDs for all department ionizing radiation sources.
 - 3.11.4. Ensure the TLD badge, when not worn during work, is stored at the storage rack. Storage in areas other than the designated rack (for example, desk drawers, clothing, vehicle glove compartments, etc.) is prohibited as such actions may affect results.
 - 3.11.5. Brief all personnel on the requirements of the dosimetry program and ensure personnel comply with the requirements of wearing the badge and returning the badge to the storage rack when departing the immediate work area.
 - 3.11.6. Notify BE Flight of any TLD wearer being employed in a second job that involves ionizing radiation.
 - 3.11.7. Notify BE Flight of any TLD wearer going temporary duty (TDY), who may be exposed to ionizing radiation, and will require the TLD.
 - 3.11.8. Ensure all TLDs are present and accounted for during BE Flight monthly/quarterly exchange. Report instances where TLDs cannot be located to the section superintendent.
- 3.12. Personnel Enrolled in the TLD Program will:
- 3.12.1. Store TLDs, when not worn, on the designated storage board with the control TLD. Storage anywhere else will affect results.
 - 3.12.2. Wear TLDs whenever performing primary duties which may expose them to ionizing radiation, including TDYs.

3.12.3. Wear TLD outside of normal clothing but beneath any leaded aprons or other whole body protective clothing used.

3.12.4. Not wear their TLD at any time when they are receiving diagnostic or therapeutic x-rays.

3.12.5. Not hold patients during x-raying. (Family members may hold patients. If this isn't possible, then non-occupationally exposed Medical Technicians should hold the patient.)

4. Personnel Monitoring, Surveillance and As Low As Reasonably Achievable (ALARA).

4.1. This instruction describes the administrative organization for radiation safety and provides written policy and procedures to foster the ALARA concept as required by AFI 91-204, AFI 40-201, AFI 48-148, AFI 48-125, applicable sections of 10 CFR and the conditions of USAF RAM permits issued to units on Travis AFB.

4.2. If designated by Base RSO, military and government civilian employees will be placed in the USAF Personnel Dosimetry Program, which requires wearing personal dosimetry devices. They may also be required to submit bioassay specimens for laboratory analysis, or undergo lung or whole body counting. Determination of who is placed on the program is based on exposure criteria and work functions. Workers who have the potential to exceed 10 percent of established levels of dose equivalent will be entered in to the program.

4.3. Contract personnel are monitored through their own occupational safety program unless specified in the contract and agreed/coordinated by 60 AMDS/SGPB, 60 AMDS/CC ,and 60 MDG/CC. See [Attachment 3](#) and [Attachment 4](#).

5. Training.

5.1. Workplace supervisors are responsible for scheduling and documenting training and maintaining records of training. Training records must be retained for at least Three (3) years and must document subjects covered and dates training was provided.

5.2. The Base RSO or designated representative will provide training to unit RSOs who then provide the required training to other employees assigned to the workplace. BE Flight will provide a training outline upon request to assist unit RSOs with developing a workplace specific training plan and outline.

5.3. **NOTE:** Contractor specifications or other appropriate documents must require contract employees who use or handle ionizing radiation sources to have appropriate training as required by state and federal requirements. This training must be contractor provided.

5.4. Upon request, BE Flight may provide training required for sealed-source type permits and non-medical x-ray sources when resources do not exist locally to provide this training.

5.5. Training may be performed in-house by the unit RSO if the training plan is approved by the Base RSO. The training provided must be documented for each employee, and identify subjects covered and dates of training. Documentation must be retained for a minimum of three (3) years. Forward a copy of training records to BE Flight within 30 days after training is provided.

6. New Equipment or Facility Requirements.

6.1. All non-medical ionizing RPDs must be evaluated by 60 AMDS/SGPB for potential hazards prior to first time use. Therefore the user, supervisor, or unit RSO must send a request to 60 AMDS/SGPB at least **30 days** prior to the desired use date.

6.2. All medical ionizing radiation equipment must be evaluated by a qualified medical equipment repair center (MERC) technician or biomedical equipment technician (BMET) and potentially a Medical Physicist as described in AFI 48-148 and AFI 40-201 prior to first time use.

6.3. Radioactive Material (RAM)/RAM Containing Devices:

6.3.1. All RAM must be either HQ USAF permitted, exempt by NRC and the RIC, or generally licensed. Furthermore, it must be approved by the Base RSO prior to arrival or use on Travis AFB. Contractors see [Attachment 3](#) and [Attachment 4](#).

6.3.2. The Base RSO will provide direction based on the specific type, quantity and use of RAM involved. Any RAM not exempt, generally licensed or already possessing a permit will need a RIC permit prior to use on Travis AFB. New permits generally take 60 days.

6.3.3. Provide the following information when contacting the Base RSO for guidance. The RSO will provide guidance based on AFI 40-201, AFI 48-148 and current policy letters.

6.3.3.1. Type and quantity of material.

6.3.3.2. Copy of permit.

6.3.3.3. Specific days and location plan to use if temporary.

6.3.3.4. Specific location/purpose of use if permanent or long-term.

6.3.3.5. Location plan to store (if applicable).

7. Reporting Accidents and Incidents.

7.1. Individuals or supervisors must promptly report damage, loss or theft of RAM sources; uncontrolled releases of RAM and actual or suspected exposures to 60 AMDS/SGPB upon discovery. IAW AFI 40-201, paragraph 3.11, Reporting Radioactive Materials Incidents and Accidents, and AFI 48-148, Ionizing Radiation Protection, paragraph 3.5, 4.14, 5.2. A partial list of reporting criteria are as follows:

7.1.1. Actual or suspected exposure to external radiation in excess of 50 milliRoentgen (mR) in a single event.

7.1.2. Actual or suspected inhalation, ingestion, injection or absorption of any RAM.

7.1.3. Observed leakage from RAM storage containers or equipment.

7.1.4. Any situation that violates the conditions of a USAF RAM permit or could lead to a violation.

7.1.5. Actual or suspected uncontrolled release of any quantity of RAM to the environment.

8. Radioactive Material Storage.

8.1. RAM and RAM waste will be stored only in areas designated by the Base RSO. Guidance is provided in AFI 40-201, AFI 48-148 and RIC permits and are dependent on type, quantity and purpose of storage. New storage requests must be submitted to the Base RSO at least 30 days prior to the required storage date.

8.2. More than 100 electron tubes containing exempt quantities of RAM together in one location may be considered radioactive storage. However, some electron tubes can be disposed of as normal trash. Contact Base RSO for additional information.

9. Low Level Radioactive Waste (LLRW) and Commodities Disposal.

9.1. All LLRW and commodities disposal must be controlled/managed as described by a RIC permit for a specific waste and/or AFI 40-201.

9.2. Contact Base RSO anytime an item suspected to contain RAM or radioactive waste is found unless Base RSO approved procedures and/or a permit is already in-place.

10. Forms Adopted. SF 600, Health **Record-Chronological Record of Medical Care**, SDRD Listing 1523, **Dosimetry Data**, SDRD Listing 1499-1, **Occupational Radiation Exposure Report (Current)**, SDRD Listing 1499-2, **Occupational Radiation Exposure Report (Summary)**, AF Form 1527, **History of Occupational Exposure to Ionizing Radiation** and NRC Form 241, **Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, or Offshore Waters.**

ALLARD R. CARNEY, Col, USAF
Director Wing Staff

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

AFI 40-201 *Managing Radioactive Materials In The US Air Force, 1 Sep 2000*

AFI 48-148, *Ionizing Radiation Protection, 12 Oct 2001*

AFI 48-125, *USAF Personnel Dosimetry Program, 1 Mar 1999*

AFI 48-145, *Occupational Health Program, 1 Apr 1999*

AFI 91-204, *Safety Investigations and Reports, 11 Dec 2001*

Title 40 Code of Federal Regulation (40 CFR), *Protection of Environment*

Title 49 Code of Federal Regulation (49 CFR), *Transportation*

Title 10, Code of Federal Regulations (10 CFR), *Energy*

AFPD 48-1, *Aerospace Medical Program, 22 Jul 93*

AFMAN 23-110V5, *Air Force Medical Material Management System - General*

T.O. 00-110N-3, *Requisition, Handling, Storage, and Identification of Radioactive Materials, 15 Aug 96*

T. O. 00110N-2, *Radioactive Waste Disposal, 22 Jun 88*

Abbreviations and Acronyms

CFR—Code of Federal Regulations

DOE—Department of Energy

DOT—Department of Transportation

LLRW—Low level radioactive waste

NRC—Nuclear Regulatory Commission

OSHA—Occupational Health and Safety Administration

Permit—USAF Radioisotope Committee Radioactive Material Permit

RIC—USAF Radioisotope Committee

RAM—Radioactive materials

RPD—Radiation Producing Device

RSO—Radiation Safety Officer

Terms

Abnormal Exposure—An exposure received in any monitoring period that, if continued at the same rate would exceed the limits specified in 10 Code of Federal Regulations (CFR). Determine an abnormal exposure dose equivalent by dividing the applicable (stochastic or nonstochastic) annual limit by the number of monitoring periods during the year. For stochastic exposures, an abnormal exposure is 417

millirem (mrem) [4.2 milliSievert (mSv)] for any monthly monitoring period and 1250 mrem (12.5 mSv) for any quarterly monitoring period.

ALARA (As Low As Reasonably Achievable) Program—A set of management and administrative actions taken to reduce personnel radiation exposures to as low as reasonably achievable. The ALARA concept was developed in response to scientific evidence that suggests that no level of ionizing radiation exposure is totally risk free.

ALARA Action Level—Locally established radiation exposure limits for personnel dosimetry results that are less than the Air Force established criteria used to flag exposures that are above normal, higher than expected or could potentially result in an abnormal exposure if trends continue. Informal investigation is conducted by permit RSO to determine the specifics of the exposure, such as change in workload, tasks, or position. Results are reported to the Radiation Safety Committee.

Area TLD Monitor—Person assigned by the unit or section responsible for enforcing OI/STDs of the TLD program for that unit or area.

TLD -Thermoluminescent Dosimeter—The personnel dosimeter is used to indicate a close approximation of the exposure dose to ionizing radiation to ensure exposures are maintained ALARA. The badge contains a thermoluminescent dosimetry packet. The packet is exchanged monthly or quarterly depending on the area where an individual works.

Pregnant Worker Action Level—Personnel dosimetry result which, if continued for the term of pregnancy, would exceed the 500 mrem/9 month's exposure limit for the fetus. This equates to approximately 55 mrem on a monthly TLD.

Attachment 2

ALARA INVESTIGATIONAL LEVELS

Description	<u>Level I</u>	<u>Level II</u>
Whole body, head/trunk; active blood forming organs; or gonads	125 mrem/quarter	375 mrem/quarter
Lens of eyes	375 mrem/quarter	1125 mrem/quarter
Extremities; shallow dose	1250 mrem/quarter	3750 mrem/quarter

A2.1. Exposures less than ALARA Level I: Except when deemed appropriate by the Base RSO, no action is required.

A2.2. Exposures exceeding ALARA Level I, but less than ALARA Level II: The Base RSO will review the exposure of each individual whose exposure record exceeds Level I.

A2.3. Exposures exceeding ALARA Level II: The Base RSO will conduct an investigation and determine the causes of the exposure and make recommendations to preclude a recurrence. The RSO will forward a letter stating the dose received and making recommendations for radiation protection to persons who exceed ALARA Level II dose limits.

Attachment 3**NON-AIR FORCE ORGANIZATIONS/CONTRACTOR REQUIREMENTS**

A3.1. Non-Air Force organizations/contractors performing services involving use of their own RAM or ionizing RPD under the auspices of their own USNRC or Agreement State License shall:

A3.2. Send a request to the Base RSO at least **30 calendar days**, or as soon as notified/contracted if less than 30 days, before bringing/conducting operations involving RAM or RPD on Air Force installations. Per AFI 40-201 requests must be in writing and include:

A3.2.1. A brief description of the proposed activities:

A3.2.2. A copy of a current NRC or Agreement State license with current NRC Form 241, **Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, or Off-shore Waters** specifying specific use locations. The NRC Reciprocity Form (NRC Form 241) must accompany the Agreement State license. 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.

NOTE: Operations on property that is not exclusive federal jurisdiction will need to pay reciprocity. Likewise, State licensees may not work on Air Force or other installations where exclusive federal jurisdiction exists unless pre-coordinated and reciprocity is paid to the NRC.

EXCEPTION: Contractors using generally licensed materials (e.g., certain NITON Lead Paint Analyzers) and DoE or DoE prime contractors operating in accordance with 10 CFR Part 835 do not require an NRC license or NRC Form 241. However, Base RSO must receive written certification from DoE organizations or DoE prime contractors that they are exempt from NRC license requirements.

A3.2.3. Name, local address, and telephone number for the responsible local representative.

A3.2.4. Name, address, and telephone number of the permit or organization RSO named on their license.

A3.2.5. Copy of the Air Force contract describing work to be done at the installation and the inclusive dates of the work.

A3.2.6. An acknowledgment that the Base 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.

A3.2.7. Acknowledgement that the Base RSO has authority to suspend contractor operations believed to be unsafe.

A3.3. Organizations who regularly perform work on Travis AFB using RAM containing or RPD can perform a modified version of the above procedures if a Memorandum of Agreement or Understanding is in-place between that organization and the RSO.

A3.4. Once approved by Base RSO, contractor shall:

A3.4.1. Ensure they educate all personnel on correct emergency response procedures.

A3.4.2. Provide proof of certification for transportation as requested.

A3.4.3. Remove RAM daily unless a storage location is identified by contractor, appropriately labeled/controlled by contractor and approved by Installation RSO.

A3.4.4. Meet state certification requirements for all RPD on non-federal jurisdiction property.

A3.4.5. Must meet all appropriate DOT, OSHA, NRC and California occupational health requirements.

Attachment 4**CONTRACTOR REQUIREMENTS UNDER AF RAM LICENSES**

A4.1. Contractors organizations performing services involving use of RAM or ionizing radiation producing device (RPD) under the auspices of the an AF permit or using AF owned equipment.

A4.2. Contractor shall maintain all occupational health support to employees, specifically use of personnel dosimeters, health risk assessment measurement except those pertaining to public dose or AF/government employee exposure, occupation health physicals, training and personal protective equipment such as lead aprons. Exceptions may be made on a case-by-case basis when coordinated and approved by 60 AMDS/SGPB.

A4.3. Contractor shall appoint and obtain Unit RSO training for an individual in their organization to serve as Unit RSO.

A4.4. Contractor will maintain permit folder as described in Unit RSO training and in USAF RM permit. Specifically, contractor will ensure records are maintained in an orderly fashion as required by permit and kept on hand as required by AFI 40-201 Attachment 11, and must include:

A4.4.1. Inventories with explanation for all changes between inventories.

A4.4.2. Shipment paperwork. Ensure no RM shipments are accepted unless the Base RSO has confirmed you can accept them, they are not leaking, and that they confirm to Department of Transportation regulations. (EXCEPTION: shipping documents are not required on the base proper.)

A4.4.3. Leak test results or letters referencing such results.

A4.4.4. Confirmation of annual training.

A4.4.5. Letters of Appointment for Unit and Permit RSO signed by the permit holder.

A4.5. In addition to local inspections, the Air Force level agencies must inspect permit holders for compliance with statements made in their permit application, conditions listed on the permit, Air Force directives and instructions, and applicable NRC and DoT regulations in 10 CFR and 49 CFR. The NRC may also conduct no-notice inspection and enforces administrative actions, fines, and criminal penalties against the Air Force or individuals as described in 10 CFR Part 2, Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders. Appendix C, General Statement of Policy and Procedure for NRC Enforcement Actions, describes NRC's enforcement policy and the various enforcement options NRC may exercise.

A4.6. Therefore, at least one contract monitor will complete radiation safety officer training to ensure competence in review of permit compliance. This training may be obtained through a civilian course or the AF RSO on-line training course B6RSOM, DITIS Registration #77700150 through the Base Education Office.

A4.7. Contract monitor will incorporate permit requirements into contract performance audits.

A4.8. Contract monitor will ensure all deficiencies identified by Base or Permit RSO during annual or spot inspections are corrected within 7 working days.

A4.9. Contract monitor will ensure such deficiencies are reflected on contract performance reports.

A4.10. Contractor will support on-site spot inspections by Base or Permit RSO. Contractor will provide all documents requested by Base or Permit RSO within three (3) duty days.

A4.11. Contract Monitor, contractor Unit RSO, users and shop supervisors will be available for questions from AF Inspector General, AF Radioisotope Committee or Nuclear Regulatory Commission during any no-notice inspection.