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Aerospace Medicine

RADIATION PROTECTION PROGRAMS

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This instruction implements AFD 48-1, *Aerospace Medical Program* and specifies responsibilities to reduce ionizing and electromagnetic radiation source exposures to the maximum extent reasonably possible on Kadena Air Base. It applies to units assigned to the 18th Wing and all tenant units on Kadena Air Base, Japan.

SUMMARY OF REVISIONS

AFI 91-108, *Air Force Nuclear Weapons Intrinsic Radiation Program* to para **1.1.**; after duty hours emergency care has been moved to Lester Naval Hospital; the Bioenvironmental Engineering Flight is now responsible for conducting annual radiation safety training. New or revised material is indicated by a bar (|).

1. References:

- 1.1. AFI 91-108, *Air Force Nuclear Weapons Intrinsic Radiation Safety Program*.
- 1.2. AFR 160-132, *Control of Radiological Health Hazards*.
- 1.3. AFR 48-28, *Personnel Dosimetry Program and the USAF Master Radiation Exposure Registry*.
- 1.4. AFOSHSTD 48-9, *Exposure to Radio-frequency Radiation*.
- 1.5. AFOSHSTD 161-10, *Health Hazard Control for Laser Radiation*.
- 1.6. T.O. 00-11ON-2, *Radioactive Waste Disposal*.
- 1.7. T.O. 00-11ON-3, *Requisition, Handling, Storage, and Identification of Radioactive Materials*.
- 1.8. Headquarters US Air Force Surgeon General's Office (HQ USAF/SGPA) Policy Letter, 17 Oct 84, Implementation of the ALARA Concept in the Air Force Radiation Protection Program.

1.9. Title 10, *Code of Federal Regulations*, Part 20 (10 CFR 20), *Standards for Protection Against Radiation*.

2. Responsibilities:

2.1. Unit Commanders will designate an officer or NCO as the Unit Radiation Protection Officer (RPO) and an alternate RPO in writing, to the Base Radiation Safety Officer (RSO) (18 AMDS/SGPB).

2.2. Unit RPO will:

2.2.1. Monitor annually their unit's radiation sources' activities to ensure all safety procedures are followed and findings documented.

2.2.2. Notify the Base RSO of any suspected over exposure to radiation to personnel during normal duty hours at DSN 634-4752 or after duty hours at Lester Naval Hospital, DSN 643-7338.

2.2.3. Prepare and maintain a unit operating instruction, which has been reviewed and approved by the Base RSO.

2.2.4. Attend annual radiation safety training provided by the Bioenvironmental Engineering Flight (18 AMDS/SGPB).

2.2.5. Annually train all unit personnel potentially exposed to radiation sources.

2.2.6. Maintain documentation of inspections, safety training, and reports of incidents. This file must be presented to the Base RSO or designated representative upon request.

2.3. Supervisors of applicable work centers will:

2.3.1. Ensure all workers and visitors to the work center comply with appropriate radiation safety directives.

2.3.2. Provide the necessary safety equipment, monitoring instruments, warning signs and devices to all potentially exposed personnel.

2.3.3. Document worker training on AL listing 1499-1, *Current Occupational Radiation Exposure Report*, to include radiation hazards and procedures to keep exposures as low as reasonably achievable (ALARA).

2.3.4. Notify the unit RPO of all suspected radiation overexposures.

2.3.5. Ensure workers wear and properly maintain personal dosimetry devices when designated by the Base RSO.

2.4. Individuals working with radiation sources will:

2.4.1. Immediately notify supervisors of all suspected radiation overexposure or hazardous conditions.

2.4.2. Comply with the unit safety and health operating instructions and AF directives.

2.4.3. Wear personal monitoring devices only in the area designated by the Base RSO.

2.4.4. Female workers must immediately notify supervisors of suspect pregnancy.

2.5. Base RSO will:

- 2.5.1. Submit changes in writing to the 18th Wing Commander (18 WG/CC) for approval of any changes in the status of the primary and alternate Base RSO.
 - 2.5.2. Prepare and maintain the annual ionizing and electromagnetic radiation device inventory.
 - 2.5.3. Investigate all reported radiation exposures and personnel exposures greater than the action level indicated in paragraph 3. Brief quality all dosimetry results to the Aerospace Medicine Council.
 - 2.5.4. Brief the Base Integrated Safety Council if a radiation incident exceeded the standard.
 - 2.5.5. Evaluate potential radiation exposure to pregnant workers to assist physicians in advising patients on fetal protection.
 - 2.5.6. Conduct periodic evaluations to include personal dosimetry of all base units and tenants where radiation exposure may occur.
 - 2.5.7. Review for approval all proposed x-ray facilities or significant alterations to existing facilities.
- 2.6. Public Health will provide initial and annual radiation safety training to Unit RPOs with assistance from the BEF.

3. Personnel Dosimetry:

- 3.1. The Base RSO will only issue personnel dosimetry devices to workers who are potentially exposed to 50 millirems or greater per monitoring period as determined by radiation surveillance or AF directives/guidance.
- 3.2. The work center supervisor may request personnel dosimeters for workers from the Base RSO by calling DSN 634-4752. The request must include the following:
 - 3.2.1. Radiation producing device for which the dosimeter is to monitor.
 - 3.2.2. The date the dosimeter is required.
 - 3.2.3. Work center location and office symbol.
 - 3.2.4. Person's name who will supervise the work.
 - 3.2.5. Complete description of situation requiring personnel dosimetry devices for personnel on temporary duty to Kadena AB.
- 3.3. The Base RSO will maintain personnel dosimeters for emergency response personnel (fire fighters, EMTs, disaster response, etc.) on Kadena AB. These dosimeters may be used for unusual situations such as short-notice deployments to facilities that do not have a radiation protection program.
- 3.4. Radiation Protection Standards:
 - 3.4.1. The standards for exposure to radiation are listed in 10 CFR 20.101, *Permissible Doses, Levels, and Concentrations*. This document is available upon request at the BEF. Call DSN 634-4752 for an appointment with the Base RSO or representative.
 - 3.4.2. The whole body exposure action level for investigation based on dosimeter results is greater than 50 millirems (mrem) per month or 125 mrem per quarter.

3.4.3. The extremity exposure action level for investigation based on dosimeter results is greater than 500 mrem per month or 1,250 mrem per quarter.

JAMES B. SMITH, Brigadier, General, USAF
Commander, 18th Wing