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Safety

**EXPOSURE TO RADIO FREQUENCY (RF)
RADIATION**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Fighter Wing Instruction (FWI) implements AFD 91-3, *Occupational Safety and Health*. It establishes guidelines, directions, and references to prevent harmful exposures of personnel to electromagnetic energy emitted at frequencies from 10 kilohertz (kHz) to 300 Gigahertz (GHz), and procedures to follow if persons are, or believe they have been, accidentally overexposed to RF radiation. It is the responsibility of all supervisors/users to ensure strict adherence to this instruction.

SUMMARY OF REVISIONS

This is the initial publication of 926 FWI 91-301. A (I) indicates revisions from the previous edition.

1. Terms Defined:

1.1. Radio Frequency (RF) Radiation. For purposes of this FWI, RF an electromagnetic radiation at frequencies between 10 kHz and 300 GHz (very high frequency (VHF)), ultra high frequency (UHF), tactical air navigation (TACAN), beacon, identify friend or foe (IFF), electronic countermeasures (ECM), (Squirt boxes, PODS, etc.) and Radar Altimeter.

1.2. Permissible Exposure Limit (PEL). The biological effects of RF radiation on humans depend on the frequency of the incident radiation field, the polarization of the field, the size and shape of the person and the person's ability to dissipate, by normal biological mechanisms, the energy absorbed. See PELs listed in AFOSH Std 161-9, *Exposure to Radio Frequency Radiation*, Tables 1 and 2; IEEE C-95.1-1991, *IEEE Standard For Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 Ghz*; DODI 6055.11, *Protection of DOD Personnel From Non-ionizing Radiation*.

1.3. Wing Radiation Safety Officer (RSO). Responsibility of Wing Bioenvironmental Engineering as assigned by the 926th Fighter Wing Commander.

1.4. Unit Radiation Protection Officer (RPO). A person from the unit who is the most knowledgeable on operational characteristics of the emitters and hazards to personnel from RF radiation. See Letter of Appointment.

1.5. Radio Frequency. A frequency at which coherent electromagnetic radiated energy is useful for communication purposes, defined as 10 kHz to 300 GHz.

2. Procedures:

2.1. Individuals using or working on RF radiation emitting equipment are responsible for protecting themselves and others from possible harm from RF radiation.

2.2. RF warning signs are required at access points to areas in which radiation levels may exceed the PEL as determined by Bioenvironmental Engineering (SGPB) in accordance with AFOSH Standard 161-9 and IEEE C95.1-1991. This determination is made in coordination with the RPO.

2.3. The work center supervisor requests SGPB to identify types, locations and hazard producing potential of RF emitters. SGPB ensures the listed inventory gives the system nomenclature, location, hazard distance and hazard code. AF Form 2759, **Radio Frequency Emitter Survey (ASIMS only)**, discussed in AFOSH Std 161-17, *Standardized Occupational Health Program*, is used for recording detailed information about emitters.

2.4. Microwave ovens in non-occupational exposure areas (public areas, barracks, snack areas, etc.) do not require routine annual surveys. Ovens may be surveyed upon request from the using work center if leakage is suspected.

3. Overexposure:

3.1. Individuals alleged or suspected of overexposure to RF radiation must report to the 926th Medical Squadron and SGPB.

3.2. Every incident involving an overexposure must be investigated and evidence of overexposure or injury documented.

3.3. Work center supervisors take positive action on recommendation from the investigation to prevent recurrence.

4. Forms Prescribed . AF Form 2759.

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Commander