



***Maintenance***

***NORMAL AND EMERGENCY X-RAY PROCEDURES***

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This Fighter Wing Instruction implements AFPD 21-1, purpose is to establish normal and emergency procedures for the use of industrial, X-Ray producing, equipment by 926th MS personnel. References for this instruction are T.O.'s 33B-1-1, 1A-10A-36, AFI's 21-101, 21-105, 48-125, AFOSH STD 127-110, 159 LOI 21-11.

**1. Responsibilities:** The senior Non-Destructive Inspection (NDI) technician/NCO present during x-ray operation is responsible for complying with procedures and precautions outlined in this FWI and T.O. 33B-1-1.

**2. Normal Procedures:**

2.1. Unshielded area: X-ray operations shall be conducted utilizing the 159th Fighter Wing's Alert facility, NAS JRB New Orleans. Qualified flightline personnel shall be provided to tow/reposition aircraft.

2.2. Shielded area: X-ray operations shall be conducted within the 159th Fighter Wing's NDI Exposure room 102D, Bldg 425, NAS JRB New Orleans. Note: Shielded areas are limited to removed parts.

2.3. Scheduling shall be conducted with full cooperation of both 926th, 159th Production Supervision. 926th Maintenance personnel shall comply with this and 159 LOI 21-11 when operating within host facility.

2.4. A minimum of two qualified radiographers shall be present at all times during operation of x-ray equipment. Other maintenance personnel are utilized as needed and briefed on the duties and responsibilities of radiation safety monitor assistants when required. Coordination with Bioenvironmental Engineering, will be accomplished prior to each x-ray operation.

2.5. All industrial radiographers and radiation safety monitors wear their Dosimeter (TLD), issued by the Bioenvironmental Engineer, and one digital alarm device (DAD). When the x-ray controls cannot be placed in a central location visible to all personnel involved in the x-ray process, an adequate means of communication is used which has been specified by the Bioenvironmental Engineer during a survey of the radiographic inspection area and operation. Adequate means of communication include, but are not limited to, two-way radios and whistles.

2.6. Radiation safety monitor assistants are utilized, to prevent unauthorized access into radiographic inspection areas. Assistants are stationed outside the radiation area, but in such a location to prevent barrier penetration. Assistants are at all times, in contact with the radiographer-in-charge, to affect radiation termination if required.

Precision Measurement Equipment Laboratory (PMEL) calibrated survey meters shall be used to monitor radiation levels during all x-ray operations.

2.8. During x-ray operations, a qualified radiographer remains at the x-ray control at all times. If for any reason the radiographer-in-charge must leave the x-ray unit unattended, he/she shuts down the unit and locks it.

2.9. When operating x-ray equipment, NDI technicians do so IAW step-by-step procedures outlined in appropriate T. O. or operator's handbook furnished with equipment.

2.10. When deployed, x-ray operating procedures shall comply with host facility LOI's. However, procedure shall never deviate from minimum requirements prescribed by T.O. 33B-1-1 and AFOSH STD 127-110.

2.11. The senior NDI technician present maintains the radiation log for each X-ray. The log shall include AFTO Forms 115 and 125.

### **3. Emergency Procedure ( X-ray overexposure to personnel ):**

3.1 . Cease all X-ray operations and report incident to supervisor.

3.2 . Obtain name, social security number and organization of all personnel suspected of overexposure.

3.3 . Collect all TLD's and complete AFTO Forms 125 and 115.

3.4. Determine and record exact position and duration of exposure. Record all other pertinent data.

3.5. Notify Command Post Maintenance / Expediter, and Bioenvironmental Engineer, Kevin Lowrance, Phone 678-3288, Pager 823-2467, Home 392-1650. Bioenvironmental Engineer shall determine further action.

3.6. Obtain a signed statement from exposed individual(s) of actions resulting in (or contributing to) the exposure.

3.7 . A complete report of the incident shall be prepared by the NDI Element Chief I.A.W. T.O. 33B-1-1. See Air Force note in Section 6.9.15.2

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