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NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY RADIOLOGICAL AFFAIRS SUPPORT OFFICE
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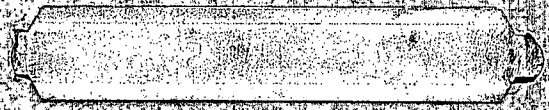
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5 May 1981

MEMORANDUM

From: Aircraft Intermediate Maintenance Department
To: Staff Civil Engineer

Subj: Naval Energy and Environmental Support Activity Radilogical Affairs
Support Office Technical Assistance Visit

Ref: (a) NAVENENVSA 41:LCL:lm 3252.25A Ser 1144 of 12 Sep 1980
(b) Your memo of 14 Apr 1981

Encl: (1) AIMD Agana Action Taken or Intended on Items Listed in Findings of
Reference (a)

1. Enclosure (1) forwarded for your required action to reference (a).

PA Brown
P. A. BROWN

AIMD Agana Action Taken or Intended on Items Listed in Findings of Reference (a)

A. General

1. Reference (d) designated the Air Frames Division Officer as the Radiation Safety Officer (RSO) for the administration and management of the radiation safety program. However, at the time of the assistance visit the Air Frames Division Officer was not aware of the appointment.

Action: The Airframes Division Officer is fully aware of the appointment and responsibilities as outlined in reference (d) and all related program instructions.

2. The radiation health program was administered by the Naval Regional Medical Center, Guam. The following discrepancies were noted:

a. Radiation medical examinations were not being performed in accordance with pertinent instructions. Additionally, one individual had not received a pre-placement radiation medical examination. (III.A.1.)

Action: All assigned personnel have received pre-placement examinations and routine/special examinations are being conducted in accordance with reference (a).

b. A complete radiation exposure history was not being maintained. The last entry on the DD Form 1141, Record of Occupational Exposure to Ionizing Radiation, in the health record was 20 November 1979. No attempt had been made to obtain previous exposure history. (III.A.2.) (III.A.3.)

Action: Complete radiation history is being compiled and maintained in accordance with reference (e) on a quarterly basis and entered on DD Form 1141. Additionally previous history of assigned personnel has been requested from Chanute Air Force Base, Illinois, as required in reference (e).

c. DD Forms 1141, with current dose information, were not maintained in the individual's health records. (III.A.4.) (Repeat Finding)

Action: The DD Form 1141'S are being maintained in accordance with reference (e) and the Naval Regional Medical Center staff have been instructed on use and application of reference (e).

d. Estimated exposures were not recorded properly on the DD Form 1141.

Action: The DD Form 1141'S are being maintained in accordance with reference (e) and the Naval Regional Medical Center staff have been instructed on use and application of reference (e).

e. Situational Reports of Personnel Exposure to Ionizing Radiation, MED-6470-1, were not being submitted. (III.A.6.)

Action: The Situational Reports, MED 6470-1, will be submitted as required in reference (e).

3. Survey instrument maintenance and calibration were provided by the NAVELEX Radiac Maintenance and Calibration Program. Available instrumentation included three IM-231/PD ionization chamber radiac sets, and IM-9()P/D pocket dosimeters. One IM-231/PD was available for use by radiographers during radiographic

operations. All radiac instruments were on a six-month calibration cycle.
(III.A.7.) (III.A.8.)

Action: Four IM-231-PD ionization chamber radiac sets are on board at this time on a three-month calibration cycle. Calibration has been staggered to ensure a minimum of two units operational at all times and pre-operational response testing is being accomplished prior to each use. Twelve each IM-235 ()PD dosimeters are on hand.

4. In addition to the film badge, pocket dosimeters were worn by radiographers when performing radiography. A review of the pocket dosimeter log indicated that pocket dosimeters were not fully charged prior to use.
(III.A.9.)

Action: Dosimeters are fully charged before each use as recommended by NAVELEXINST 9673.9A.

B. Facilities and Operations

1. Industrial radiography was performed in a permanently established radiography exposure room located on the ground floor, north side of Building 17-3088. The exposure room measured 9-feet wide by 15-feet long. The ceiling height was 14.5-feet. Exterior room walls were of 8-inch concrete block construction. There was no information available to indicate if the concrete block cells were filled. The interior walls were lined with 1/8-inch lead sheeting adhered to 5/8-inch gypsum wall board. The floor and ceiling of the exposure room were poured reinforced concrete. Access into the facility was provided through a lead lined door. A 3-inch by 3-inch section in the lower left corner of the door had been removed to allow control cable penetration. At the time of the assistance visit the exposure room was furnished with office furniture and used as the AIMD Air Frames Office. A number of ventilation ducts, pipe openings, and wall supports ran directly into the exposure room from other spaces. These openings were not provided with baffles to insure that the overall protection of the barrier would not be impaired. (III.B.1.)

Action: A Public Works Request dated 10-6-80 has been initiated to install over-tapping lead shielding for entrance (AIMD Control No. 034-80; PWC Control No. 27157 refers). All piping has been lead taped and PWC Work Request No. 27157 has been initiated to install lead baffles.

-- 2. Remote aircraft radiography was performed in an isolated section of the flight line. The restricted area was indicated by the positioning of industrial x-ray warning devices (FSN 9905-945-9213).

Action: Danger x-ray signs and roping of area is used in conjunction with industrial warning devices (FSN 9905-945-9213).

3. At the time of the assistance visit, the AIMD Air Frames Shop contained the following mobile x-ray units:

- a. One Magna-Flux Model MX-150, 150 KVP, 7 MA, 100 percent duty cycle.
- b. One Sperry Products Model 140, 140 KVP, 5 MA, 40 percent duty cycle.

The MX-150 was leaking cooling fluid and awaiting repair.

Action: The MX-150 unit has been repaired and is fully operational.

4. The control panel was equipped with an x-ray ON light and a MA meter to indicate when x-ray exposures were being made. The control panel was positioned on the floor to the right of the exposure room access where positive surveillance would be exercised at all times by the radiographer.

Action: No action required.

5. A fail safe interlocking switch or device for preventing radiation unless the door is closed was not provided. (III.B.2.)

Action: A work request was initiated to install fail safe switch or device on door on AIMD Work Request No. 030-80 (PWC 23717).

6. A radiation survey was not performed during the assistance visit due to time constraints and the lack of physical or mechanical changes that had occurred since the last survey outlined in reference (c).

Action: No action required.

7. Radiation warning signs were not posted at the entrance or the interior of the exposure room. (III.B.3.)

Action: Numerous radiation warning signs have been placed in appropriate areas of the work center.

8. An opening measuring approximately 1-1/2 inch was visible at the top and sides of the access door to the exposure room. (III.B.4.)

Action: See paragraph B.1.

C. Records, Surveys and Training

1. The radiographers were graduates of the Non-Destructive Inspection Course conducted by the Air Training Command at Chanute Air Force Base, Illinois.

Action: No action required.

2. A utilization log was maintained for radiographic exposures. However, it did not contain primary beam direction, x-ray tube position, control console position, film and part position, or barrier position. (III.C.1.) (Repeat Finding)

Action: Radiographic utilization log is complete and all entries required by NA 01-1A-16 are being entered.

3. Comprehensive operating and emergency procedures pertaining to radiation safety had not been established. (III.C.2.) (Repeat Finding)

Action: A comprehensive instruction on x-ray radiography is initiated and emergency procedures for safety are posted in all areas.

4. A current issue of NAVMED P-5055 was not maintained. (III.C.3.)

Action: A current copy of the NAVMED P-5055 is maintained by the work center.