

Document Separator Sheet



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ADMINISTRATIVE CONTROL AND STANDARDS FOR PROTECTION AGAINST RADIATION

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IN REPLY REFER TO
NSDGUAMINST 5100.4A
Code 05

19 JUN 1987

NSDGUAM INSTRUCTION 5100.4A

From: Commanding Officer, U. S. Naval Supply Depot, Guam

Subj: ADMINISTRATIVE CONTROL AND STANDARDS FOR PROTECTION AGAINST RADIATION

Ref: (a) Code of Federal Regulations, Title 10 Part 19, 20, 21 and 71
(b) Code of Federal Regulations, 49 Transportation
(c) NavMed P-5055 Radiation Health Protection Manual

1. Purpose. To promulgate instruction and identify the responsibilities of organizational elements and key personnel at Naval Supply Depot, Guam.
2. Cancellation. NSDGUAM Instruction 5100.4
3. Discussion. The standards/procedures set forth herein are designed for the safe and proper handling, receipt, temporary storage of radioactive commodities which are licensed by the Nuclear Regulatory Commission (NRC). This instruction also governs the radiation protection of individuals directly concerned with radioactive commodities and any personnel within the warehouse areas. Personnel exposure to ionizing radiation shall be kept as low as is reasonably achievable (ALARA).
4. Scope. This instruction is based on the Nuclear Regulatory Commission Regulations, Naval Supply Instruction and NavMed Health Protection Manual. This instruction shall be followed without deviation.
5. Definitions. In accordance with references (a), (b), (c) and this instruction the following definitions are applicable.
 - a. By-Product Material: Any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material.
 - b. Radioactive Material: Any material or combination of materials which spontaneously emit ionizing radiation.
 - c. Ionizing Radiation: Electromagnetic or particulate radiation capable of causing ionization in its passage through matter. Alpha, beta neutron particles, gamma and x-rays are examples of ionizing radiation.
 - d. Licensed Material: Radioactive material that is received, possessed, used, or transferred under a general or specific license issued by the (NRC).
 - e. Lithium Floride Thermoluminescent Dosimeter: The Lithium Floride Thermoluminescent Dosimeter, DT-583, referred to as the LiF TLD, is capable of detecting gamma, x-ray and neutron radiation. The LiF TLD may be issued to monitor personnel for gamma radiation (greater than 80 Kev) and/or neutron radiation. The LiF TLD may also be issued to monitor personnel for x-radiation from x-ray devices at 250 KVp potential or greater.

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f. Pocket Dosimeter: Is a pencil-shaped device for detecting and measuring an individual's exposure to ionizing radiation.

g. Milliroentgen: Is one one-thousandth of a roentgen, a unit of radioactive dose or exposure in which the NRC has established a conservative limit of exposure for the protection of the radiation workers.

h. Storage Container: A device in which sealed sources are transported or stored.

6. Responsibility:

a. Commanding Officer, U. S. Naval Supply Depot, shall maintain an effective radiation control program in accordance with this instruction.

(1) Establish and implement a formal radiation safety program.

(2) Designate a qualified Radiation Safety Officer (RSO) who shall be responsible for the Command's radiation safety program. The Radiation Safety Officer (RSO) should be appointed in writing.

(3) Insure effective coordination among the RSO, supervisors, workers fire/Security forces and appropriate medical personnel.

b. Radiation Safety Officer shall be directly responsible for the safe and proper handling, receipt, temporary storage of radioactive commodities which are licensed by the Nuclear Regulatory Commission (NRC).

(1) Develop and maintain standard operating procedures.

(2) Ensure all personnel who work with radioactive material are provided a minimum of annual training or more frequently if deemed necessary, concerning the potential hazard introduced by work with ionizing radiation. The RSO should maintain training records for personnel who work with radioactive materials.

(3) Ensure personnel involved in handling, receipt and temporary storage of radioactive material governed by this instruction maintain up to date applicable regulations in accordance with references (a) and (b).

c. Supervisors shall be directly responsible for maintaining the most current radioactive material lists of source inventory. Knowing the exact location of each item and assuring the items are secured against unauthorized removal.

(1) Posting appropriate warning signs and notices.

(2) Assuring that employees have received thorough instructions prior to being assigned or being exposed to radiation.

(3) Controlling contamination and personnel exposure.

(4) Enforcing radiation safety instructions rules and regulations.

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(5) Reporting to the Radiation Safety Officer any incident, personnel injury, suspected overexposure, contamination, or internal deposition involving radiation exposure as soon as possible.

d. Warehouse personnel shall be trained and held responsible for:

(1) Knowing and following radiation safety instructions rules and regulations.

(2) Using personnel monitoring devices and radiation survey meter properly.

(3) Reporting to the supervisor any incident, personnel injury, suspected overexposure, contamination, or internal deposition involving radiation exposure as soon as possible.

(4) Reporting to the supervisor any hazardous or potentially hazardous working condition.

e. Action. All personnel who are being considered for routine assignment to duties or occupations requiring exposure to ionizing radiation or the handling of radioactive materials shall be given a medical examination prior to assignment or transfer to those duties or occupations. This examination shall be performed to ensure that a prospective worker is medically qualified for occupations exposure to ionizing radiation. Personnel who are not routinely exposed to ionizing radiation as a result of their normal duties or occupation and who are not likely to exceed 0.5 rem per year (e.g. visitors, including messengers, servicemen, deliverymen, and certain crewmembers or employees whose exposure is truly sporadic) are not required to have preplacement medical examinations. If an individual in this category (i. e., not required to have a preplacement radiation medical examination) exceeds 0.5 rem exposure in a calendar year, then he/she shall have a preplacement medical examination within one month of the time he/she exceeds 0.5 rem in a calendar year or as soon thereafter as operational requirements permit.

7. Posting. To be in accordance with reference (a) and include the following caution signs with the approved radiation symbols shall be posted.

a. The storage area entrance door "CAUTION-RADIOACTIVE MATERIALS"

b. HEALTH HAZARD AREA - NO SMOKING - NO EATING - NO DRINKING ALLOWED BEYOND THIS POINT

c. AUTHORIZED PERSONNEL ONLY BEYOND THIS POINT

d. NO UNAUTHORIZED ENTRY, NO LOITERING

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8. Personnel Monitoring.

Radiation Safety Program evaluation of warehouses 2, 3 and 9, reveals that the levels of radiation at the cage area are far less than that of an established restricted area boundary of 2 millirems per hour. Warehouse personnel at this point and time are not required to wear personnel monitoring devices.

9. Radiation Surveys.

Calibrated and operable survey instruments such as the AN/PDR-27()/PD low range meter, AN/PDR-43()/PD high range meter and E-140N with DT-304/PD will be available at all times near the entrance of the storage area. A radiation survey shall be made with the appropriate instrument quarterly. The purpose of this survey is to insure that personnel do not receive any unnecessary exposure. A record of all radiation surveys will be maintained.

10. Safety Precautions. The following precautions are to be observed at all times:

(a) Under no circumstances shall an individual enter the storage area without specific authorization from his/her supervisor.

(b) Under no circumstances shall an individual working inside the storage area attempt to move or relocate any component without an approval from his/her supervisor which would cause exposure to harmful radiation. Strict adherence to the "CAUTION and WARNING" instructions is mandatory.

11. Emergency Procedures.

(a) In the event of an accident, such as breakage of radioactive electronic tube, submersible wrist compass, submersible wrist watch, wrist depth gauge and/or spills, fire, flooding, etc., or in case any question arises the Radiation Safety Officer or his/her designated representative shall be contacted at once for advice on necessary emergency procedures.

(b) If a bonafide emergency exists, the OOD shall be notified and he/she in turn shall notify the Disaster Preparedness Officer and the Radiation Safety Officer.

(c) Warehouse Personnel will take the following action:

(1) Clear the area of all personnel and if possible make a quick radiation survey of the area. Retain evacuated personnel close to the warehouse area to prevent spread of contamination and to enable personnel to be whole body frisked for contamination.


(2) Rope off and post signs on all areas where the radiation level exceeds 2mR/hr or where possible radioactive contamination exists.

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(3) Notify the personnel in paragraphs 11.a and b.

(4) Keep all personnel away from posted area or away from the building.

(d) In accordance with applicable provisions of reference (a) notification shall be made to the Nuclear Regulatory Commission, notify NAVSEASYSKOM (CEL-R) (for loss of RADIAC check source material only) and NAVSEADET RASO in the event of theft, loss or incident of overexposure or excessive levels or concentrations involving licensed by-product material.


B. L. SHERMAN

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NSDGUAMINST 5216.9Q

List I & II, Case I

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