



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
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NAVFACINST 5104.1
SAFETY/OPS
29 APR 2011

NAVFAC INSTRUCTION 5104.1

From: Commander, Naval Facilities Engineering Command

Subj: RADIOLOGICAL CONTRACTOR OVERSIGHT MANAGEMENT AND SAFETY
PROGRAM

Ref: (a) NAVSEA S0420-AA-010 (RAD-010), Radiological Affairs
Support Program Manual
(b) EM-385-1-1, U.S. Army Corps of Engineers Safety and
Health Requirements Manual
(c) NAVFAC Guide Specification 01 35 26

1. Purpose. To delineate the requirements, responsibilities and procedures for performing oversight of contractor operations involving radioactive materials or radiation generating devices per references (a), (b), and (c).

2. Cancellation. None.

3. Scope. This instruction applies to the oversight associated with the administration of all contracts involving the use of radioactive materials or radiation generating devices.

4. Background. Operations involving radioactive materials or radiation generating devices have a potential for personnel (public and workers) to receive significant radiation exposures if not conducted in a safe manner. Therefore, all contracts executed by Naval Facilities Engineering Command involving radioactive materials or radiation generating devices must include measures to ensure the safety of Department of Navy personnel and the public. Planning and oversight of contractor operations involving radioactive materials or radiation generating devices is essential to safeguard personnel from undue radiation exposure.

5. Policy

a. Commander, Commanding Officer, Officer in Charge shall:

(1) Ensure the requirements of this instruction are enforced.

(2) Apply for Radiological Contractor Oversight Authorization in order to issue and oversee contracts involving the use of radiation sources. Contact Naval Sea Systems Command Detachment, Radiological Affairs Support Office (NAVSEADET RASO) for the application requirements.

(3) Designate, in writing, a Contractor Radiological Oversight Program Manager (CROPM), who is responsible for managing the contractor radiological oversight (CRO) program for a designated area of responsibility to ensure compliance with applicable criteria. The CROPM shall have direct access to their designated Commander, Commanding Officer or Officer in Charge on matters dealing with radiation safety. [NOTE: A CROPM may support the area of responsibility of multiple Commanding Officers.] The designated individual must have successfully completed the Radiation Safety Officer Course (S-4J-0016) provided by the Naval Sea Systems Command, Radiological Affairs Support Office (NAVSEADET RASO).

(4) Designate, in writing, Contractor Oversight Technicians (COTs), who are authorized to oversee contractor operations involving radioactive materials or radiation generating devices. The designated individual must have successfully completed Radiological Safety Oversight of Contractor Operations Course (S-493-0612) provided by NAVSEADET RASO.

(5) Ensure there is a current MOU/ISSA in place that outlines the CROPM services and responsibilities if they are provided by another Command.

(6) Notify NAVSEA RASO immediately if a contractor reports a lost or stolen radiation source.

b. Contracting Officer's Representative shall:

(1) Ensure that all contracts involving radioactive materials or radiation generating devices include radiation safety requirements from reference (c) within the contract

documents.

(2) Ensure submittals required by references (b) and (c) are completed and submitted by the contractor at least 14 days prior to commencement of operations involving radioactive materials or radiation generating devices.

(3) Ensure required submittals are forwarded to the COT for review and acceptance.

(4) Coordinate with the contractor in correcting any deficiencies noted by the COT.

(5) Ensure no operations involving radioactive materials or radiation generating devices commence without the COT's written acceptance.

c. Contractor Radiological Oversight Program Manager (CROPM) shall:

(1) Attend Radiation Safety Officer Course (S-4J-0016) provided by NAVSEADET RASO, and comply with any continuing education requirements necessary to maintain certification.

(2) Serve as subject matter expert for CRO program and support of the requirements of reference (a), which includes implementation of this instruction and requirements of references (b) and (c) for designated area of responsibility.

(3) Act as the COT's principal point of contact for safety issues related to radiation safety, and serve as principal liaison with NAVSEA RASO when assistance is needed to resolve contractor oversight issues.

(4) Verify the COTs have attended the NAVSEADET RASO Radiological Safety Oversight of Contractor Operations course (S-493-0612).

(5) Provide COTs annual refresher training covering the following topics:

i. Command radiological contractor oversight procedures, including radiation detection instrumentation operation, radiation survey techniques, and evaluation of contractor documentation required by reference (c).

- ii. Radiation exposure limits and control levels
- iii. Justification for not requiring dosimetry
- iv. Biological effects and risks associated with exposure to ionizing radiation
- v. Types and sources of ionizing radiation contributing to personnel exposure.
- vi. Specific procedures for using time, distance and shielding to maintain individual exposures As Low As Reasonably Achievable (ALARA).

(6) Provide training to each COT on the requirements of paragraph 5.c.5.i after they complete the NAVSEADET RASO Radiological Safety Oversight of Contractor Operations Course (S-493-0612).

(7) Notify NAVSEA RASO when contractor operations are suspended because of radiation safety concerns and other non-compliance issues.

d. Contractor Oversight Technician (COT) shall:

(1) Attend NAVSEADET RASO Radiological Safety Oversight of Contractor Operations Course (S-493-0612) and comply with any continuing education requirements necessary to maintain COT certification.

(2) Ensure the contractor operations within their area of responsibility are conducted in compliance with the provisions of this instruction and the requirements of references (b) and (c).

(3) Ensure contract execution preparatory meeting [i.e. pre-construction conference] discusses operations involving radioactive materials of radiation generating devices including type of radiation, expected length of operations, location of operations, location of any required physical boundary, method of communicating operations to workforce.

(4) Review and accept submittals required by references (b) and (c). Provide written deficiencies or acceptance of the contractor's submittals to the Contracting Officer's Representative.

(5) For all contracts that utilize radiographic inspection as part of their work:

i. Upon receipt of the Radiography Worksite Planning Sheet contained in reference (c), initiate Contractor Radiography Oversight Check Sheet, also contained in reference (c), for tracking the required contract oversight actions.

ii. Review the Radiography Worksite Planning Sheet, contained in reference (c). Ensure contract execution preparatory meeting [i.e. pre-construction conference] discusses radiography operations including type of radiography, expected length of radiography operations, location of radiography operations, and location of 2mrem/hr (20 μ Sv/hr) boundary.

iii. Provide WRITTEN deficiencies or acceptance of the contractor's plan to the contracting officer's representative.

iv. During contractor radiography operations, perform checks to verify 2mrem/hr (20 μ Sv/hr) boundary. In some circumstances the radiation area boundary may be established at a point where the dose rate may exceed 2mrem/hr (20 μ Sv/hr). In this case it must be demonstrated that the dose an individual received at the boundary would not exceed 2mrem in any one hour.

v. Verify signage is posted at the perimeter in accordance with references (b) and (c).

vi. For gamma radiography, arrange with Base Security to escort contractor from Base gate to site of radiography and back to gate once operations are completed. Perform a survey of contractor's vehicle upon arrival and prior to leaving the worksite to ensure radiation levels are <2mrem/hr (20 μ Sv/hr) on contact of the vehicle. If radiation levels on contact with the vehicle are >2mrem/hr (20 μ Sv/hr), have the contractor shield or reposition the source of radiation until levels are <2mrem/hr (20 μ Sv/hr) on contact with the vehicle. Do not allow security to approach the vehicle until radiation levels are <2mrem/hr (20 μ Sv/hr) on contact with the vehicle. Accompany base security during the transport.

vii. **IMMEDIATELY STOP** all radiography operations for any unsafe condition or for any violation of the 2mrem/hr (20 μ Sv/hr) boundary. Have the contractor place the source of radiography in a safe mode. Report the violation to the Contracting Officer's Representative, COT and CROPM prior to

recommencing operations. Inform the contractor that radiography shall not re-commence without authorization from the CROPM.

viii. The COT shall maintain completed copies of the Radiography Worksite Planning Sheet and Contractor Radiography Oversight Check Sheet for a period of 3 years.

(6) Notify installation radiation safety personnel of the contractor's use of radiation sources so that any environmental radiation monitoring devices near the contractor's work site may be temporarily removed or deactivated.

(7) Stop any work that does not meet the conditions of the contract or are determined to be unsafe, and notify the CROPM and contracting officer of any violation of reference (b) or (c) or unsafe condition that involves any contractor radiation source.

6. Administration and Maintenance. The NAVFAC Safety Officer is responsible for administration, maintenance and revision of this instruction. All changes to this instruction and reference (c) must be approved by NAVSEA RASO prior to implementation.

(b) (6)



Copy to:
NAVSEA RASO