

Chapter 1. Organization of USACE Radiation Protection Program.

1-1. Purpose.

This guidance manual prescribes the requirements of the Radiation Protection Program of the US Army Corps of Engineers (USACE) contained in Engineer Regulation (ER) 385-1-80, Ionizing Radiation Protection, and Engineer Manual (EM)385-1-1, Safety and Health Requirements Manual. It is to be used when activities utilize or handle radioactive material (which includes radioactive wastes) or a radiation generating device. Radiation generating devices include X-ray equipment, accelerators, lasers, radio-frequency and electromagnetic field generators. Authoritative guidance and regulations are contained in 10 CFR (Energy) and the NRC Regulatory Guides, 29 CFR (Labor) 1910 and 1926 OSHA regulations, and 40 CFR (Protection of the Environment). This manual is intended to assist USACE Commands in integrating essential requirements contained in Federal, DA and USACE radiation protection regulations to ensure that the safety and health requirements of all agencies are met.

1-2. Applicability.

This manual is applicable to USACE personnel and visitors to a worksite under the jurisdiction of USACE where radioactive material or a radiation generating device may be present. It shall be used in conjunction with ER 385-1-80 and EM 385-1-1. Contractor requirements concerning ionizing and non-ionizing radiation protection issues are contained in EM 385-1-1.

1-3. Policy.

a. USACE will work to ensure that all personnel radiation exposure is kept as low as is reasonably achievable (ALARA) taking technological and socioeconomic factors into account. Radiation exposure to USACE personnel, visitors and contractors, as well as to the general public, will be controlled so that exposures are held well below regulatory limits. There shall be no radiation exposure without a commensurate benefit.

b. All personnel involved with ionizing radiation work of any kind will be knowledgeable of the programs, policies, and procedures contained in ER 385-1-80 and this manual. Personnel working with non-ionizing radiation should be knowledgeable of the specific information concerning these topics presented in this manual. They should demonstrate responsibility and

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accountability through an informed, disciplined, and cautious attitude toward radiation and radioactivity.

c. Continuing improvement in radiation (ionizing and non-ionizing) protection is essential to USACE operations involving radiation. All personnel working with radiation are expected to look for ways to improve radiation protection and make USACE projects more efficient.

1-4. Management Commitment, Involvement, and Leadership.

Superior, consistent performance is achieved when qualified personnel use approved procedures and when management actively monitors the work place and assesses ongoing activities. To achieve such performance requires constant review, informed involvement and leadership by senior management. All levels of management must emphasize the need for high standards of radiation safety through direct communication, clear instruction, and frequent inspections of the work area.

1-5. Scope.

a. This manual fully describes policies and procedures for the safe use of radioactive material and radiation generating devices at all USACE sites. It should be used to evaluate the

acceptability of health and safety practices by USACE personnel and contractors on USACE controlled sites.

b. The manual is also intended to be consistent with all Federal (NRC, OSHA, EPA, DOE, and DOT) DA, USACE, State, and local statutes and regulations (that is, "applicable regulations"), and integrate the various regulations into one coherent publication for USACE operations. It will be revised whenever necessary to achieve consistency with statutes and regulations.

c. For all contracts and activities that require Federal, State, or local licensure or permitting, such licenses or permits shall be secured, and all license or permit conditions shall be adhered to. If the stated license or permit conditions vary from applicable sections of this manual, such license or permit conditions prevail. Contractors will be required to secure proper licensure or permitting (for activities that require it) within specified time frames and before the date that they are scheduled to begin the work. All USACE Commands and contractors using Army radioactive materials will meet requirements of

Nuclear Regulatory Commission (NRC) licenses and Army Radiation Authorizations (ARAs)

issued to USACE and the US Army Materiel Command, and of applicable Army technical publications.

e. Alternatives to procedures addressed in this manual may be acceptable provided the alternatives achieve the same, or higher, level of radiation protection. Alternative procedures must be approved by the Radiation Protection Officer, or Laser Safety Officer, as appropriate, and for specific conditions, higher level authorities prior to implementation.

This manual is designed to address all health and safety aspects of work with radiation within USACE. Most personnel within USACE will not need the entire manual but will need to select the chapters and sections applicable to their work requirements. Some generic classifications of radiation work are listed in Table 1-1 with reference to the applicable chapters of this manual. It is recommended that all personnel working with radioactive material and radiation generating devices read Chapters 1, 2 and 3 of this manual. Depending on the type of work being performed, portions of other chapters may be applicable.

1-6. Overview of this Manual.

Table 1-1
Personnel Positions in Relation to Applicable Chapters

Applicable Sections of EM 385-1-80	Personnel Positions					
	AUA	AU	RPO	LSO	SUPERVISOR ORIGINATOR REVIEWER CQA	SOHO RPC RPSO HPs
Chapter 1 - Radiation Protection Program	X	X	X	X	X	X
Chapter 2 - Personnel Responsibilities	X	X	X	X	X	X
Chapter 3 - Introduction to Ionizing Radiation	X	X	X		X	X
Chapter 4 - Licensing		X	X		X	X
Chapter 5 - Dose Limits and ALARA	X	X	X		X	X
Chapter 6 - Working With Radiation	X	X	X		X	X
Chapter 7 - Personnel Monitoring			X		X	X
Chapter 8 - Transportation of Radioactive Material			X		X	X
Chapter 9 - Waste Management			X		X	X
Chapter 10 - Lasers				X	X	X
Chapter 11 - RF & EMF			X		X	X

AUA Authorized User's Assistant AU Authorized User
RPO Radiation Protection Officer LSO Laser Safety Officer
SUPERVISOR Supervisor of activities involving radioactive material
ORIGINATOR Originator of projects/plans/procedures using radioactive material
REVIEWER Reviewer of projects/plans/procedures using radioactive material
CQA USACE Construction Quality Assurance personnel
SOHO Safety and Occupational Health Office
RPC Radiation Protection Committee
RPSO Radiation Protection Staff Officer
HPs Health Physics personnel