



U.S.S. HECTOR (AR 7)  
C/O FLEET POST OFFICE  
SAN FRANCISCO, CALIFORNIA 96643

HECTORINST 9090.1B  
04:WRW:1n

21 SEP 1981

USS HECTOR (AR 7) INSTRUCTION 9090.1A

Subj: Quality Assurance Program for the Packaging of Radioactive Material  
for transport and transportation of Radioactive Material under certain  
conditions (10CFR71)

Ref: (a) U.S. Nuclear Regulatory Commission Material License #04-18130-01  
(b) Code of Federal Regulations Title 10, Part 71 (10CFR71)  
(c) Code of Federal Regulations Title 49

Encl: (1) RMPQA Program

1. Background. USS HECTOR (AR 7) is authorized by reference (a) to use certain radioactive materials aboard HECTOR and on ships and in areas where HECTOR is operating. In the course of exercising this authorization, some of these materials are shipped to and from civilian suppliers who are likewise licensed by the NRC to provide these materials. A recent revision to reference (b) requires the development of a program as follows:

"The licensee shall establish, maintain and execute a quality assurance program satisfying each of the applicable criteria specified in appendix E, 'Quality Assurance criteria for shipping packages for radioactive material', and satisfying any specific provisions which are applicable to the licensee's activities, including procurement packaging."

2. Scope. This instruction applies to all radioactive materials covered by reference (a). As an end-user it is not intended that HECTOR engage in the manufacture or alteration of shipping packages. Rather, this program is designed to ensure that the quality of the shipping packages received is initially certified by the supplier and maintained while such packages are in the custody of USS HECTOR. This instruction is not to be construed in any case, as a relaxation of the requirements in reference (a) or other directives of higher authority.

3. Action. This instruction provides for procedures necessary for the satisfactory establishment and execution of the quality assurance program for use in packaging, shipment, and transportation of licensed materials by USS HECTOR (AR 7).

*[Signature]*  
A. VENEZIA

Distribution:  
HECTORINST 3120.1A  
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HECTORINST 9090.1B

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QUALITY ASSURANCE PROGRAM FOR THE PACKAGING OF  
RADIOACTIVE MATERIAL FOR TRANSPORT AND TRANSPORTATION  
OF RADIOACTIVE MATERIAL UNDER CERTAIN CONDITIONS (10CFR71)

U. S. NUCLEAR REGULATORY COMMISSION MATERIALS  
LICENSE NO. 04-18130-01

LICENSEE:  
DEPARTMENT OF THE NAVY  
USS HECTOR (AR 7)  
FPO SAN FRANCISCO 96643

21 SEP 1981

CHANGE  
NUMBER

DATE OF CHANGE

RECORD OF CHANGES

DATE  
ENTERED

ENTERED BY  
(SIGNATURE)

21 SEP 1981

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DEFINITIONS

THE FOLLOWING TERMS ARE DEFINED AS THEY ARE INTENDED TO BE USED IN THIS INSTRUCTION:

CFR - CODE OF FEDERAL REGULATIONS

LICENSED ACTIVITY; LICENSEE - USS HECTOR (AR 7)

LICENSED MATERIALS - THOSE MATERIALS FOR WHICH USS HECTOR HOLDS AN NRC APPROVED LICENSE

NRC - U. S. NUCLEAR REGULATORY COMMISSION

NDT LABORATORY - NON-DESTRUCTIVE TEST LABORATORY

PACKAGE - A SHIPPING CONTAINER FOR LICENSED RADIOACTIVE MATERIALS

RMPQA OFFICER - THE QUALITY ASSURANCE OFFICER FOR THE RMPQA PROGRAM - CHARGED WITH INSPECTING AND AUDITING TO VERIFY THE PROGRAM

RMPQA PROGRAM - QUALITY ASSURANCE PROGRAM FOR THE PACKAGING OF RADIOACTIVE MATERIAL FOR TRANSPORT AND TRANSPORTATION OF RADIOACTIVE MATERIAL UNDER CERTAIN CONDITIONS (10CFR71)

RSO - RADIOGRAPHIC SAFETY OFFICER

ARSO - ASSISTANT RADIOGRAPHIC SAFETY OFFICER - THE SENIOR RADIOGRAPHER WITHIN THE LICENSED ACTIVITY

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SECTION ONE - ORGANIZATION

1.1 Purpose. This section sets forth the organizational responsibilities in the RMPQA Program.

1.2 Description. The RMPQA Program is composed of five levels of responsibility.

a. Commanding Officer. By definition the senior official of the licensed activity, he is responsible for the establishment and execution of the RMPQA Program. Revisions to the program may be authorized only by him. The Commanding Officer assigns and certifies the qualification of the RMPQA Officer

b. Repair Officer. In his role as Head of Department which actually uses licensed materials, the Repair Officer has vested interest in the RMPQA Program. Therefore, he is responsible for ensuring that the RMPQA Officer has sufficient organizational freedom to fulfill his function and for ensuring that corrective action(s) is/are accomplished in an effective, timely manner and is/are not being delayed by production schedules or other conflicts.

c. Radiographic Safety Officer (RSO). Either the Quality Assurance Officer or the NonDestructive Test (NDT) Laboratory supervisor is normally assigned as the RSO. In addition to his responsibilities for ensuring the safe receipt, handling, operation and shipment of licensed materials used in radiography, he is responsible for:

(1) Ensuring that shipments of licensed materials used by the NDT Laboratory are conducted in accordance with references (a), (b), and (c).

(2) Ensuring that required inspection and testing incidental to shipment of licensed materials used by the NDT Laboratory are properly conducted and documented.

(3) Maintaining records of shipments as required in later sections of this instruction.

(4) Ensuring that corrective action, when required, is accomplished in an effective, timely manner by NDT Laboratory personnel.

(5) Ensuring that personnel under his cognizance to process licensed material are trained in the requirements of this instruction and references (a) and (b).

d. Assistant Radiographic Safety Officer (ARSO). The Senior Radiographer within the licensed activity not fulfilling the position of RSO will be assigned as the ARSO. In addition to the safe receipt, handling, operation and shipment of licensed material used in radiography, he is responsible for:

(1) Ensuring that shipments of licensed materials used by the NDT Laboratory are conducted in accordance with references (a), (b) and (c).

(2) Ensuring that required inspections and testing incidental to shipments of licensed materials used by the NDT Laboratory are properly conducted and documented.

(3) Physical maintenance of records for shipments as required by the RSO and in later sections of this instruction.

(4) Corrective action when required is accomplished in an effective timely manner.



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(5) Training of personnel under his cognizance, who process licensed material, in accordance with the requirements of this instruction and references (a), (b), and (c).

(6) Performing the duties of the RSO in his absence in accordance with the instruction, and references (a), (b) and (c).

e. RMPQA Officer. The RMPQA Officer shall be certified as to his qualification and appointed by the Commanding Officer. His primary function in the RMPQA Program is the verification of the credibility of the program. In this regard he is responsible for:

(1) Development of an audit schedule for approval by the Commanding Officer.

(2) Conducting or directly supervising the conduct of all audits of the RMPQA Program.

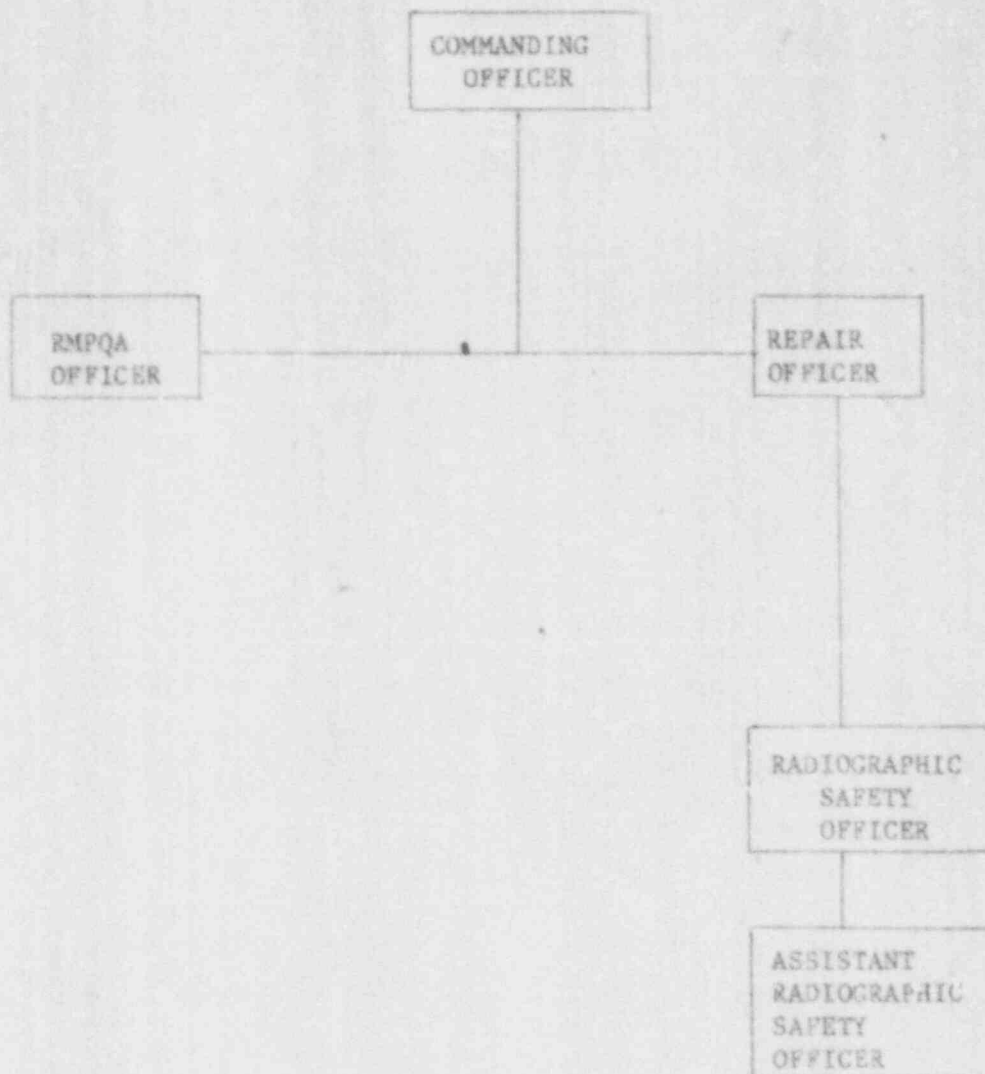
(3) Conducting or directly supervising the conduct of unannounced spot checks of the RMPQA Program.

(4) Reporting his findings directly to the Commanding Officer with copies to the Repair Officer and RSO.

(5) Conducting follow-up audits to ensure corrective action is accomplished. 1.3 Appendices. Appendices A and B to this section contain an organization chart and matrix which graphically display the division of responsibility of the above functions into four levels of responsibility.

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SECTION ONE  
APPENDIX "A"  
ORGANIZATIONAL CHART





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SECTION ONE

APPENDIX "B"

RESPONSIBILITY MATRIX

FUNCTION	COMMANDING OFFICER	REPAIR OFFICER	RADIOGRAPHIC SAFETY OFFICER	ASSISTANT RADIOGRAPHIC SAFETY OFFICER	RMPQA OFFICER
PROGRAM	A	E	E	E	E
TRAINING	A	C	D, E	E	
CERTIFICATION		B	E		
TESTING		B	E	E	
DOCUMENT CHANGES	A	C	E		
SHIPPING	A	C	E	E	
AUDITS	B				E
AUDIT SCHEDULE	A	C			D

LEGEND

A - APPROVE  
B - ACCEPT  
C - CONCUR  
D - INITIATE  
E - PERFORM

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## SECTION TWO - QUALITY ASSURANCE PROGRAM

2.1 Purpose. As the final responsibility for the QA Program as specified by reference (b), require its rest with HECTOR, this section specifies the necessary action which must be undertaken to successfully establish and execute a viable quality assurance program for packaging licensed materials.

2.2 Discussion. USS HECTOR is licensed to use certain radioactive materials as specified in reference (a). As an end-user HECTOR receives these materials from NRC licensed suppliers NRC approved containers. Therefore, the thrust of the QA Program on board USS HECTOR shall be directed toward establishing proof of and maintaining the quality of provided containers. Manufacture or repair of shipping containers for licensed material shall not be conducted aboard USS HECTOR without prior approval by the NRC.

### 2.3 Procedure

a. The promulgation and enforcement of this instruction by appropriate levels of the chain of command establishes and implements the RMPQA Program.

b. Training and experience for all RMPQA Programs functions shall be in accordance with the established procedures:

(1) The Commanding Officer and Repair Officer are specifically assigned by the Bureau of Naval Personnel in accordance with established directives.

(2) The RSO shall be assigned by the Commanding Officer in accordance with reference (a).

(3) The RMPQA Officer shall be assigned and certified by the Commanding Officer.

(4) Radiographers shall be qualified in accordance with reference (a).

c. Changes to the QA Program may be made only by a formal change to this instruction signed by the Commanding Officer. Changes which would significantly alter the program must be approved by the NRC. Each change shall be entered in the manner directed by the change and documented on the Record of Changes page.

d. Prior to use, all defined quality control procedures, engineering procedures, and specific provisions of the package design approval shall be satisfied. Additionally, the QA Program will emphasize control of critical safety characteristics for any shipping packages used in conjunction with licensed material.

(1) Documentation of this shall be maintained on board the HECTOR for any contractor-supplied shipping containers for use with licensed materials.

(2) Specific approval by the NRC shall be obtained, documenting the above attribute prior to locally fabricating, repairing, or altering a shipping container for use with licensed materials.

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SECTION-THREE -DOCUMENT CONTROL

3.1 Purpose. This section describes requirements for the control of documents related to the shipping packages.

3.2 Procedure. Each document related to a specific shipping container shall, where necessary, be processed in accordance with Naval Supply Systems Command directives in the course of receiving of shipping licensed materials. When not required to be in custody of USS HECTOR'S Supply Officer, or others, for review, documents shall be maintained in the custody of the RSO. It is anticipated that no document changes should be required. However, if the need arises, changes will be accomplished only with the permission of the Commanding Officer and in accordance with appropriate procedures.

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SECTION 4 - HANDLING, STORAGE, AND SHIPPING

4.1 Purpose. This section describes those aspects of handling, storage and shipping of packages which are important to safety and includes assignment of responsibilities for the critical aspects of handling, storage, and shipping.

4.2 Discussion.

a. Established safety restrictions as delineated in reference (a) concerning the handling, storage, and shipping of packages for special form of radioactive material will be followed. Shipments will not be made unless all tests, certifications, acceptances, and final inspections have been completed. Work instructions have been provided for handling, storage, and shipping operations for those containers in use. Work instructions will be provided for handling, storage, and shipping operations for those shipping containers contemplated for future use.

b. The responsibilities of certain personnel involved in the RMPQA Program are described in Section One. This section provides amplification of those responsibilities by specifying requirements for the aspects of handling, storage, and shipment of packages which are considered critical.

4.3 PROCEDURE.

a. The Radiographic Safety Officer is responsible for the critical handling, storage and shipping operations for each shipment of licensed material by the ND. Laboratory. He shall ensure, for each shipping container, that the ARSO performs the following operations:

- (1) Establishing safety restrictions concerning the handling, storage, and shipping of packages for certain special form and radioactive material are followed.
- (2) Ensuring that shipments are not made unless all tests, certifications, acceptances, and final inspections have been completed.
- (3) Ensuring that work instructions have been provided for handling, storage, and shipping operations.

b. While in the custody of USS HECTOR, shipping containers for use with licensed materials shall be controlled such that those characteristics of the package which are critical to safety are maintained.

- (1) Damage to shipping containers shall be reported immediately to the Radiographic Safety Officer.
- (2) Shipping containers for use with licensed radiographic sources shall be maintained and used in accordance with reference (a). They shall be stored in the radiography vault when not in use.

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SECTION FIVE - INSPECTION, TEST AND OPERATING STATUS

5.1 Purpose. This section describes those aspects of inspection, test and operating status of packages which are important to safety and includes assignment of responsibilities for the critical aspects of inspection, test, and operating activities.

5.2 Discussion

A. Inspection, test, and operating status of packages for certain special form radioactive material will be indicated and controlled by established procedures. The status will be indicated by the tag, label, marking, or log entry. The status of non-conforming parts or packages will be positively maintained by established procedures.

B. The responsibilities of certain personnel involved in the RMPQA Program are described in Section One. This section provides amplification of those responsibilities by specifying requirements for the aspects of inspection, test, and operating status which are considered critical.

5.3 Procedure

A. The Radiographic Safety Officer is responsible for the critical inspection, test and operating activities associated with each shipping container which may be used for shipment of licensed materials by the NDT Laboratory. He shall ensure, for each shipping container, that, the ARSO performs the following operations:

(1) Inspection, test and operating status of packages for certain special form radioactive material is indicated and controlled by established procedures.

(2) Status is indicated by tag, label, marking or log entry.

(3) Status of non-conforming parts or packages are positively maintained by established procedures.

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SECTION SIX - QUALITY ASSURANCE RECORDS

6.1 Purpose. This section provides the necessary requirements and guidance for satisfactorily documenting the operation of the RMPQA Program aboard USS HECTOR.

6.2 Discussion. Adequate documentation will be maintained to demonstrate to interested parties that USS HECTOR possesses an effective functional RMPQA Program. To this end the following actions shall be taken:

a. Records will be maintained and include operating logs, inspections, tests, and audit results.

b. Other records to be maintained will include qualifications of personnel and descriptions of procedures and equipment.

c. Records will be maintained according to established procedures.

d. Records will be identifiable and retrievable.

e. A list of the required records and their storage locations will be maintained.

6.3 Procedure

a. The RMPQA Officer shall maintain the original audit reports for all audits and shall maintain a master listing (Index) of all required records which shows their location.

b. The Radiographic Safety Officer shall maintain all other records. He shall maintain them in an auditable fashion, i.e., they shall be identifiable and retrievable. These shall include, but not limited to:

- (1) Operating logs, inspections, and tests.
- (2) Qualification of personnel.
- (3) Description of procedures and equipment.
- (4) Records of shipments.



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SECTION SEVEN - AUDITS

7.1. Purpose. This section specifies the requirements which must be met to establish an effective audit program.

7.2. Discussion.

a. Established schedules of audits of the RMPQA Program will be performed. Each activity will be audited at least once a year. Auditors shall have no day-to-day responsibility in the activity being audited. Results of all audits will be reported to the commanding officer, with copies to the repair officer and radiographic safety officer. Audit reports will be evaluated and deficient areas corrected. The audits being performed will be dependent on the safety significance of the activity being audited. Audit reports will be maintained as part of the quality control records.

7.3. Procedure

a. Audits shall be conducted by or under the direct supervision of the RMPQA Officer.

b. An audit of each receipt or shipment shall be conducted two weeks following that receipt of shipment.

c. Semi-annually - A completed audit of the RMPQA Program will be conducted. The specific dates shall be approved by the commanding Officer.

d. The signed audit report shall be forwarded to the Commanding Officer on the completion of each audit. Copies will be provided to the Repair Officer and Radiographic Safety Officer.

e. The Repair Officer will review proposed corrective actions and assign completion dates.

f. The original audit reports and original records of corrective action shall be maintained in an auditable fashion by the RMPQA Officer.