

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. 31-18014-01

LICENSEE:

DEPARTMENT OF THE NAVY

USS FULTON (AS-11)

FPO NEW YORK, NEW YORK

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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 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 a 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 the corrective action(s) is/are accomplished in an effective, timely manner and is/are not being delayed by production schedules or other conflicts.

c. Radiological Controls Officer (RCO) - Responsible for the safe receipt, handling, operation, and shipment of licensed materials in/by the Radiac Calibration Facility (RCF), the Radiological Controls Officer is responsible for the following attributes of the RMPQA Program:

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

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

(3) Completing records of shipments to/by the RCF prior to releasing them to the appropriate record keeping officer.

(4) Ensuring that corrective action, when required, is accomplished by the RCF in an effective, timely manner.

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

SECTION TWO - QUALITY ASSURANCE PROGRAM

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

2.3 Procedure

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

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

(1) The Commanding Officer, Repair Officer, and Radiological Controls Officer are specifically assigned by the Naval Military Personnel Command in accordance with established directives.

(2) The Radiographic Safety Officer 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 following completion of Appendix (A) to this section.

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

(5) RCF Technicians shall be qualified in accordance with requirements for NEC 9597.

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

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

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

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

e. While in the custody of FULTON, 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 competent authority.

(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.

(3) Shipping containers for licensed radiac calibration sources shall be maintained and used in accordance with reference (a). They shall be stored in the locked section of the RCF when not in use.

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 FULTON (AS-11)

Licensed Materials - Those materials for which USS FULTON 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

RCF - Radiac Calibration Facility

RCO - Radiological Controls Officer

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

d. Radiographic Safety Officer (RSO) - Either the Quality Assurance Officer or the Non-destructive 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 NDT laboratory are properly conducted and documented.

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

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

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

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, Radiological Controls 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 organizational chart and matrix which graphically display the division of responsibility of the above functions into four levels of responsibility.

SECTION ONEAPPENDIX "B"RESPONSIBILITY MATRIX

<u>FUNCTION</u>	<u>COMMANDING OFFICER</u>	<u>REPAIR OFFICER</u>	<u>RADIOLOGICAL CONTROLS OFFICER</u>	<u>RADIOGRAPHIC SAFETY OFFICER</u>	<u>RMPQA OFFICER</u>
PROGRAM	A	E	E	E	E
TRAINING	A	C	D,E	D,E	
CERTIFICATION		B	E	E	
TESTING		B	E	E	
DOCUMENT CHANGES	A	C	D	D	
SHIPPING	A	C	E	E	
AUDITS	B				E
AUDIT SCHEDULE	A	C			D

LEGEND

A - Approve
 B - Accept
 C - Concur
 D - Initiate
 E - Perform

SECTION TWO

APPENDIX A

From: _____
(RMPQA Officer Designate)

To: Commanding Officer, USS FULTON (AS-11)

Subj: Training and Experience as RMPQA Officer

1. I have reviewed and am familiar with the most recent revisions to the following instructions and regulations:

10CFR71

RMPQA Program

RMPQA Records and Audits

License No 31-18014-01

Instruction 9090.1

2. I am prepared to assume the responsibilities of the USS FULTON RMPQA Officer.

Signature

Approved:

Commanding Officer/Date

SECTION THREE - DOCUMENT CONTROL

3.1 Purpose. This section describes requirements for the control of documents related to 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 or shipping licensed materials. When not required to be in the custody of the FULTON Supply Officer, or others, for review, documents shall be maintained in the custody of the Radiographic Safety Officer. 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.

SECTION FOUR - 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 concerning the handling storage, and shipping of packages for special form 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 handling operations for those shipping 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 Radiological Controls Officer is responsible for the critical handling, storage, and shipping operations for each shipment of licensed materials by the RCF. He shall ensure, for each shipping container, that:

(1) Established safety restrictions concerning the handling, storage and shipping of packages for certain special form radioactive material are being followed.

(2) Shipments are not made unless all test, certification, acceptance, and final inspections have been completed.

(3) Work instructions have been provided for handling, storage, and shipping operations.

b. The Radiographic safety Officer is responsible for the critical handling, storage, and shipping operations for each shipment of licensed material by the NDT Laboratory. He shall ensure, for each shipping container, that:

(1) Established safety restrictions concerning the handling, storage and shipping of packages for certain special form radioactive material are being followed.

(2) Shipments are not made unless all test, certifications, acceptances and final inspections have been completed.

(3) Work instructions have been provided for handling, storage and shipping operations.

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 nonconforming 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 Radiological Controls 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 RCF. He shall ensure, for each shipping container, that:

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

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

(3) Status of nonconforming parts or packages are positively maintained by established procedures.

b. 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:

(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 nonconforming parts or packages are positively maintained by established procedures.

SECTION SIX - QUALITY ASSURANCE RECORDS

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

6.2 Discussion. Adequate documentation will be maintained to demonstrate to interested parties that FULTON 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 retrieveable.
- 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 are not limited to:

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

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. Appendix (A) to this section contains the audit plan for use in audits of the RMPQA Program. This format specifies the minimum requirements of each audit. The auditor should audit to the intent rather than the letter of the audit plan. That is to say each area described in the audit plan should reveal several questions which must be answered to satisfactorily complete the audit.

b. Established schedules of audits of the RMPQA Program will be performed. Results of all audits will be reported to the Commanding Officer, with copies to the Repair Officer, Radiological Controls 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 or shipment.

c. Semi-annually, a complete 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, Radiological Controls Officer, 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.

SECTION SEVEN

APPENDIX "A"

RMPQA AUDIT

1. Audits of the radioactive Material Packing Quality Assurance Program must be conducted to meet the requirements of USS FULTON RMPQA Program and Appendix E to 10CFR71. The audit must be conducted by a knowledgeable officer not having direct responsibility in the area audited (10CFR71), Appendix E, paragraph 18). Follow-up action, including reaudit of deficient areas shall be taken when considered necessary.

2. For each of the established RMPQA procedures, check the following:

INITIAL

a. All procedures used were verified by the RMPQA Officer and RCO/RSO (as applicable).

b. The most current verified copy is on file.

c. Two years of files maintained.

d. All required signatures are present.

3. The current RMPQA Officer has completed enclosures (1) to FULTON INSTRUCTION 9090.2 and has been approved by the Commanding Officer.

4. All radiographers have completed reference (a) requirements for qualifications and have been approved by the required officers. RCF personnel are qualified in accordance with requirements for NEC 9597. _____

5. All RMPQA revisions have been authorized by the Commanding Officer and each revision is documented on the record of revisions page of FULTON INSTRUCTION 9090.2 on file with RMPQA records (and any others in use). _____

6. For each radioactive material shipping package to be used on board the USS FULTON verify that:

a. The NRC approval for that package is on board. _____

b. The specific provisions made with package approval are being adhered to. _____

7. A complete list of NRC approved packages is on board. _____

8. Registration with the NRC for use of a package occurred prior to use of the package and a copy of this registration is on file. _____

9. General Comments/Discrepancy: _____

(Signature)

SECTION II APPENDIX A

RADIOACTIVE MATERIAL CHECKOFF LIST

GENERAL INFORMATION:

ITEM NAME: _____

SHIPMENT NUMBER _____ DOCUMENT NUMBER _____

CONSIGNEE: _____

RADIOACTIVE MATERIAL LOG NUMBER: _____

NAME OF PERSON ASSIGNING APPLICABILITY: _____

NAME OF PERSON PERFORMING SHIPMENT: _____

CLASSIFICATION

APPLICABILITY
SIGNATURE/DATECOMPLETION
SIGNATURE/DATE

_____ 1. Radionuclide of major concern being shipped: _____

_____ 2. Transport group of this shipment: _____
(49CFR173.390)

_____ 3. Radiation/contamination survey perform: SAT/UNSAT _____

_____ 4. Activity with computations: _____
(NAVSHIPS 389-0153)

_____ 5. This shipment qualifies as "Low Specific Activity Material" under the provisions of 49CFR173.389(c) and meets the requirements of 49CFR173.392 _____

_____ 6. This shipment qualifies as "radioactive Material limited Quantities" under the provisions of 49CFR173.391 and is exempt from specification packaging, marking, and labeling and from the provisions of 49CFR173.393. _____

_____ Normal Form

_____ Radioactive Device

Figure V-4-1

FOR OFFICIAL USE ONLY

7. If shipment does not qualify as "Low Specific Activity" or "Limited Quantity" radioactive materials, it is classified in one of the following categories:
- a. Normal Form (49CFR173.389d)
 - 1) Type A Quant. (49CFR173.389L)
 - 2) Type B Quant. (49CFR173.389L)
 - 3) Large Quant. (49CFR173.389b)
 - b. Special Form (49CFR173.389e)
 - 1) Type A Quant. (49CFR173.389L)
 - 2) Type B Quant. (49CFR173.389L)
 - 3) Large Quant. (49CFR173.389b)

LABELING AND PACKAGING

- 1. Shipments that qualify as "Low Specific Activity Materials" have been packaged and labeled in accordance with 49CFR173.395.
- 2. Shipments that qualify as normal form type A&B and large quantities have been packaged in accordance with 49CFR173.395.
- 3. Shipments that qualify as special form type A&B and large quantities have been packaged in accordance with 49CFR173.394.
- 4. Package contact levels do not exceed 100mr/hr.

MARKING AND LABELING

- 1. Package has been marked and labeled IAW 49CFR172 Subparts D&E
 - a. Type label required:
 - b. Transport index:

SHIPPING PAPERS

- 1. The consignee is authorized to receive radioactive material by:
 - NAVSEANOTE 9210.08R
 - NRC License#

Figure V-4-2

FOR OFFICIAL USE ONLY

- _____ 2. Shipping document complies with _____
all the requirements of 49CFR172
Subpart C and NAVSHIPS 389-0153

INDEPENDENT OFFICER VERIFICATION: _____

(prior to shipment)

TO BE COMPLETED ON RELEASE TO CARRIER

- _____ 1. Section "D" of the radioactive _____
Material Logsheet has been completed
and a copy of the shipping document
attached IAW NAVSHIPS 389-0153

- _____ 2. Ensure carrier has been briefed _____
and supplied with an emergency
response plan.

- _____ 3. Ensure that if sole use vehicle _____
is required, the carrier in fact
has supplied a vehicle for sole use
by consignor and carrier has been
supplied with specific instructions
on how to maintain sole use conditions.

- _____ 4. Vehicle is placarded if required. _____

- _____ 5. receive one copy of signed ship- _____
ping papers.

- _____ 6. Lading is accomplished so as to _____
meet the applicable requirements.

INDEPENDENT OFFICER VERIFICATION: _____

- _____ 1. Clear radioactive material log 4 _____
source custody card.

- _____ 2. Mail applicable documents and _____
return receipt form to consignee.

CHECK LIST PREPARED BY: _____

RADCON OFFICER REVIEW: _____

/ _____
(prior to shipment) (completion of shipment)

Figure V-4-3