71-0276 PDR

DEPARTMENT OF THE NAVY
NAVAL SUBMARINE BASE
PEARL HARBOR, HAWAII
96860

SUBASEINST 9090.1
705:RB:rv
14 FEB 1973

SUBMARINE BASE INSTRUCTION 9090.1

Subj: Quality Assurance Requirements for Transportation Packaging (20CFR71)

Ref: (a) SUBASEINST 9900.1G
(b) SUBASEINST 9900.7

Encl: (1) Organization and Responsibilities of Radiography Licensees
(2) Operating Instructions for Tech Ops Model 650 Source Changer

1. Purpose. To provide requirements for NRC License Number 53-10226-01.

2. Action. The requirements contained in enclosure (1) of this instruction are effective upon receipt and will be adhered to by all SUBASE industrial radiographers.

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REVISIONS:

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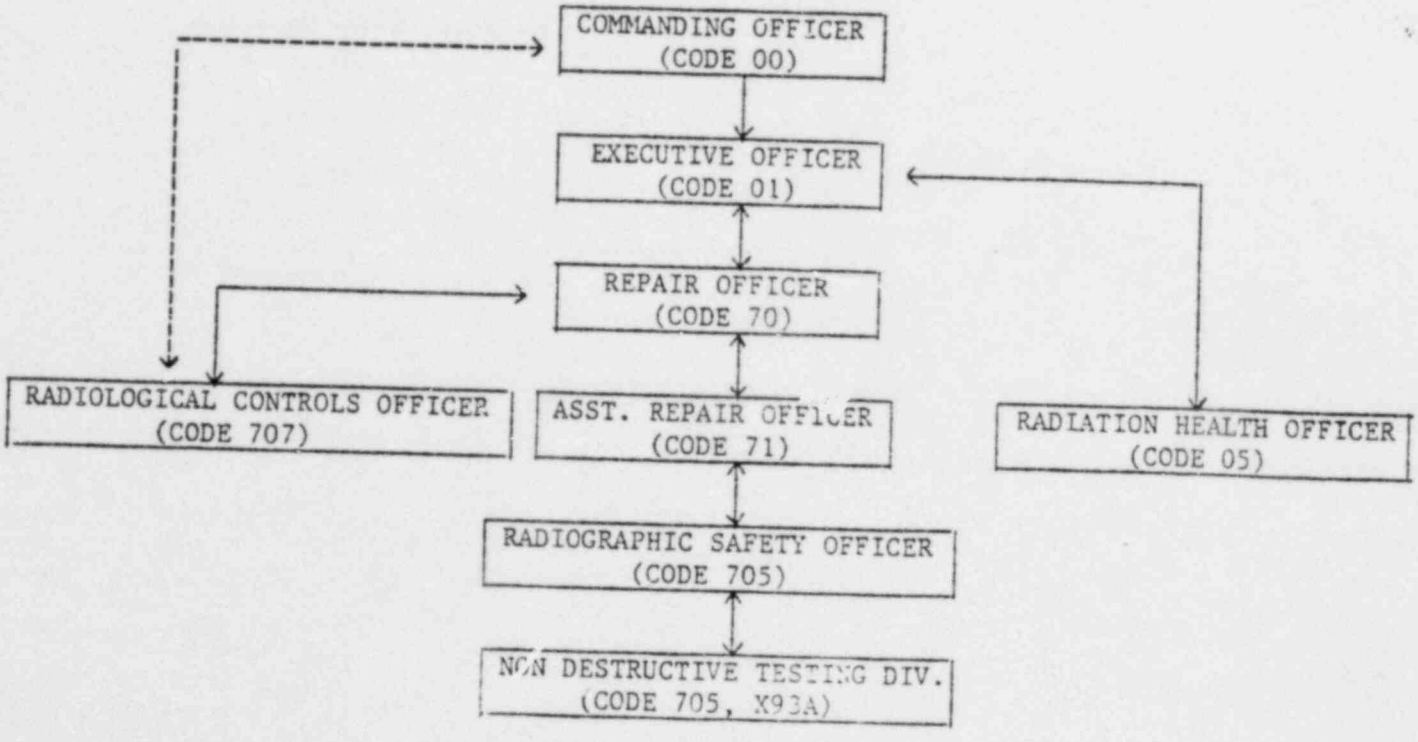
Organization and Responsibilities of
Radiography Licensees

1. Organization

a. The final responsibility for the Quality Assurance Program for Part 71 Requirements rests with Naval Submarine Base Pearl Harbor, Hawaii. Design and fabrication of radioactive material shipping packages shall not be conducted under this Quality Assurance Program. The Quality Assurance Program is implemented using the following organization:

(NOTE: Designation of personnel by name is not practical due to frequent transfer of management personnel. Since the Radiographic Safety Officer (RSO) will be a graduate of the Radiographic Safety Officer Course, Service School Command, San Diego, the RSO assigned will always meet the requirements to be assigned as an RSO.



2. Quality Assurance Program

a. The management of Naval Submarine Base establishes and implements this Quality Assurance Program. Training for all QA functions, prior to engagement in these functions, is required according to written procedures. QA Program revisions will be made according to written procedures with management approval. The QA Program will ensure that all defined QA procedures, engineering procedures, and specific provisions of the package design approval are satisfied. The QA Program will emphasize control of the characteristics of the package which are critical to safety.

b. The Radiographic Safety Officer (RSO) shall assure that all radioactive material shipping packages are designed and manufactured under a Quality Assurance Program approved by the Nuclear Regulatory Commission for all packages designed or fabricated after 1 July 1978. This requirement will be satisfied by receiving a certification to this effect from the manufacturer.

3. Document Control

a. All documents related to a specific shipping package will be controlled through the use of written procedures. All document changes will be performed according to written procedures approved by the Repair Officer.

b. The Radiographic Safety Officer (RSO) shall insure that all QA functions are conducted in accordance with the latest applicable changes to these documents.

4. Handling, Storage and Shipping

a. All handling, storage and shipping of packages for radioactive sources shall be in accordance with this Quality Assurance procedure and references (a) and (b).

b. Radiography personnel shall perform the critical handling, storage and shipping operations.

5. Inspection, Test and Operating Status

a. Inspection, test and operating status of packages for certain special forms of radioactive material will be indicated and controlled by written procedures in accordance with reference (b). Status will be indicated by tag, level, marking or log entry. Parts of packages not submitted in accordance with these procedures will not be accepted by SUBASE.

b. Radiography personnel shall perform the required inspections and tests in accordance with reference (b). The Radiation Safety Officer (RSO) shall ensure that these functions are performed. (Note: RADIATION HAZARD-ALL THE PRECAUTIONS USED WHEN MAKING RADIOGRAPHIC EXPOSURES ARE APPLICABLE IN ACCORDANCE WITH 10 CFE 34).

6. Quality Assurance Records

a. Records of package approvals (including references and drawings), inspections, tests, operating logs, audit results, personnel training and qualifications and records of shipments will be maintained. Descriptions of equipment and written procedures will also be maintained.

b. All records will be maintained in accordance with reference (a). The records will be identifiable and retrievable. A list of these records, with their storage locations, will be maintained by the Radiation Safety Officer (RSO).

7. Audits.

a. Established schedules of audits of the Quality Assurance Program will be performed using written checklists. Results of audits will be maintained and reported to management. Audit reports will be evaluated and deficient areas corrected. The frequency of the audits will be dependent on the safety posture of the activity being audited, but each activity will be audited at least once per year. Audit reports will be maintained as part of the quality assurance records. Members of the audit team shall not be attached to the activity being audited.

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OPERATING INSTRUCTIONS FOR TECH OPS MODEL 650 SOURCE CHANGER

1. Locate source changer and projector in an area where the source may be safely exposed.

2. Situate units to minimize any bend radius in the source guide tube, (7-ft. extension), and control cabling.

a. Set projector as for an exposure.

b. Open source changer.

(1) To remove cover; break seal and unblot.
(2) Unlock and remove padlock.
(3) To remove source hold down cap, break seal and unblot.

CAUTION: WHEN CAP IS REMOVED, SOURCE CONNECTOR IS EXPOSED. SPECIAL CARE SOULD BE TAKEN NOT TO DISLODGE SOURCE WHEN HANDLING THE CHANGER.

c. Connect the extension source guide tube from projector to the fitting above the empty chamber. (avoid sharp bends).

d. Close and latch the source guides.

e. Crank source into the source changer.

(1) Survey this operation with a gamma survey meter to be sure soure has been transferred from projector to changer.
(2) With a survey meter verify radiation level does not exceed 200 mR/hr at the surface of changer.

f. Open guides. Disconnect cable from source assembly.

g. Disconnect the guide tube from changer. (If a new source is not to be transferred, to to step 2.d.)

h. Connect the guide tube to the fitting above chamber containing new source. (avoid sharp bends).

i. Crank projector drive cable until connector butts to source connector.

j. Couple the connectors.

WARNING: WHEN TESTING CONNECTORS FROM PROPER CONNECTION, DO NOT MOVE SOURCE MORE THAN ½ INCH FROM ITS STORED POSITION.

k. Close and latch the source guides.

l. Crank the source to full retraction within projector.

(1) Survey this operation with a gamma survey meter to be sure source has been transferred into the projector.

(2) With a survey meter verify radiation level does not exceed 200 mR/hr at the surface of the projector.

m. Disconnect the source guide tube from changer.

n. Affix ID plate of new source to projector.

o. Preapre source changer for shipping:

(1) Attach ID plate of old source to holddown cap.
(2) Bolt holddown cap in place and seal. (Source guides open).
(3) Bolt changer cover in place and seal.
(4) Fit padlock in place.
(5) Affix proper shipping labels.