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NUCLEAR ENERGY SERVICE, INC.

CONAM INSPECTION DIVISION

DIVISION RADIATION SAFETY OFFICE

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QUALITY ASSURANCE PROGRAM

99-QAP-002

USE, MAINTENANCE AND REPAIR OF SHIPPING PACKAGES FOR
RADIOACTIVE MATERIAL

24-25



QA PROGRAM 99-QAP-002

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QUALITY ASSURANCE PROGRAM
99-QAP-002

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INTRODUCTION

This Quality Assurance (QA) Manual specifies the program to be implemented by Nuclear Energy Services Inc., CONAM Inspection Division (CONAM) to comply with the requirements of 10 CFR, Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions".

Radioactive materials referenced in this QA Manual are those special form materials licensed by the Nuclear Regulatory Commission under 10 CFR, Part 34 and by agreement states.

This QA program is mandatory for all elements of CONAM, whose activities effect the proper implementation of this program.

This QA Manual supplements the requirements of the CONAM Radiation Safety Program, as defined in the companies:

By-product Materials License's
Operating and Emergency Procedures Manual
Administrative Manual and Radiation Safety Office Directives



1.0 Organization

1.1 General

The final responsibility for the Quality Assurance (QA) Program for 10 CFR, Part 71 requirements rest with Nuclear Energy Services Inc., CONAM Inspection Division (CONAM). Design and Fabrication shall not be conducted under this QA Program. The QA Program is implemented using the organization described in Appendix "A".

1.2 Responsibilities

1.2.1 Radiation Safety Officer (RSO). The RSO has the primary responsibility for implementing this program. He will assure that the procedures required by this manual are prepared and distributed. He will monitor implementation of this program as part of the radiation safety audits.

1.2.2 Radiation Safety Program Members

The Radiation Safety Monitors, Managers, Assistant Managers and Supervisors are responsible for implementing this program within their respective operations.

1.2.3 Authorized Shipper

The detailed implementation of this program shall be accomplished by individuals authorized to ship sealed sources. As a minimum, authorized shippers shall be qualified radiographers in accordance with CONAM's Radiation Safety Program who have had specific instructions regarding this program and its implementing procedures.

2.0 Quality Assurance Program

2.1 CONAM Radiation Safety Personnel shall be responsible for implementing this program.

2.2 Training

2.2.1 Authorized shippers shall receive indoctrination in this manual and its procedures. The indoctrination shall be provided by members of the Radiation Safety Program and shall be documented. A copy of the documentation shall be placed in the individuals Radiation Safety Qualification file.



2.2.2 Members of the Radiation Safety Program shall be instructed in this program by the RSO or Radiation Safety Managers. This instruction shall be documented and filed in the individual's Radiation Safety file.

2.3 Revisions

Revisions to this program require the approval of the Radiation Safety Officer.

2.4 The key elements of CONAM's QA Program for shipping sealed sources are:

- 2.4.1 The assurance by the Radiation Safety Officer that all radioactive material shipping packages are designed and manufactured under a QA Program approved by the Nuclear Regulatory Commission for all packages designed or fabricated after July 1, 1978. (This requirement can be satisfied by receiving a certification to this effect from the manufacturer).
- 2.4.2 All defined Quality Control (QC) procedures, engineering procedures and specific provisions of the package design approval are satisfied.
- 2.4.3 The characteristics of the package critical to safety are controlled.
- 2.4.4 All shipments of radioactive material satisfy the requirements for:
 - a. Adequate labeling of shipments.
 - b. Proper preparation of shipping documents.
 - c. Inspection and testing of shipments for authorized radiation levels.

3.0 Document Control

All documents invaluable in shipping radioactive sources shall be controlled and retained as QA records.

3.1 Preparation and distribution of shipping documents shall be in accordance with CONAM's procedure for shipping radioactive materials as contained in the CONAM Operating and Emergency Procedure Manual (O&E).



- 3.2 Any change to a shipping document shall be accomplished by lining through the erroneous entry, listing the proper entry, initialing and dating the correction.
- 3.3 Shipping documents shall be maintained in the regional and division offices as required by the CONAM Administrative Manual.

4.0 Handling, Storing and Shipping

- 4.1 The O&E procedure for shipping of radioactive sources shall be observed for all shipments by common carrier.
- 4.2 The O&E procedure for transporting radioactive sources in company vehicles shall be followed when transporting sources on public highways.
- 4.3 Only authorized shipping containers and exposure devices as listed in the By-product Material License shall be used for shipping sources.
- 4.4 Radioactive sources shall be stored as required by the O&E.
- 4.5 Only qualified radiography personnel shall perform the critical handling, storage and shipping operations.

5.0 Inspection, Test and Operating Status

- 5.1 The operable status of shipping containers shall be verified by actual survey of the container when loaded with radioactive materials.
- 5.2 Prior to storage, sources containers shall be tested by measuring the radiation levels at defined distances from the surface as stated in the O&E. These surveys are recorded in the Daily Radiation Report as required by the O&E.
- 5.3 Prior to release for shipping, the shipping container shall be surveyed as required by the shipping procedures in the O&E. The survey results are to be entered on shipping labels, documents and reports as required by the O&E. The attachment of a completed shipping label on a shipping container shall represent a tag verifying the satisfactory functioning of this container.
- 5.4 Non-conforming Shipping Containers
 - 5.4.1 Non-conforming shipping containers are defined as those which fail the inspection and tests specified above. Non-conforming containers shall not be used.



- 5.4.2 Shipping containers belonging to CONAM suppliers may be used as authorized in CONAM's By-product Material Licenses. Said suppliers shall be notified if their container fails to meet the tests required above. Another shipping container shall be obtained for the shipment and the non-conforming container shall be returned empty to the supplier.

6.0 Records

Records as required by this program shall be retained as required by CONAM's Administrative Manual.

7.0 Audits

Audits of the implementation of this Quality Program shall be included in and performed as part of the Radiation Safety Audits as required in CONAM's licenses and referenced documents.

- 7.1 Audits will be conducted at least once each year using a written checklist. Results of audits will be maintained and reported to management.

- 7.2 Audit reports will be evaluated and deficient areas corrected.



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ELECTRONIC REPAIR DEPARTMENTRADIOGRAPHERS QUALIFIED IN ACCORDANCE WITH THE CONAM OPERATING AND EMERGENCY PROCEDURES
AND ADMINISTRATIVE MANUALS.

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APPENDIX "A"
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