QUALITY ASSURANCE PROGRAM

for

SHIPPING OF RADIOACTIVE SOURCES

The following Quality Assurance Program will be implemented by the U. S. Army Natick Research and Development Command in preparing for and shipping of cobalt-60 sealed sources using NRC approved package design.

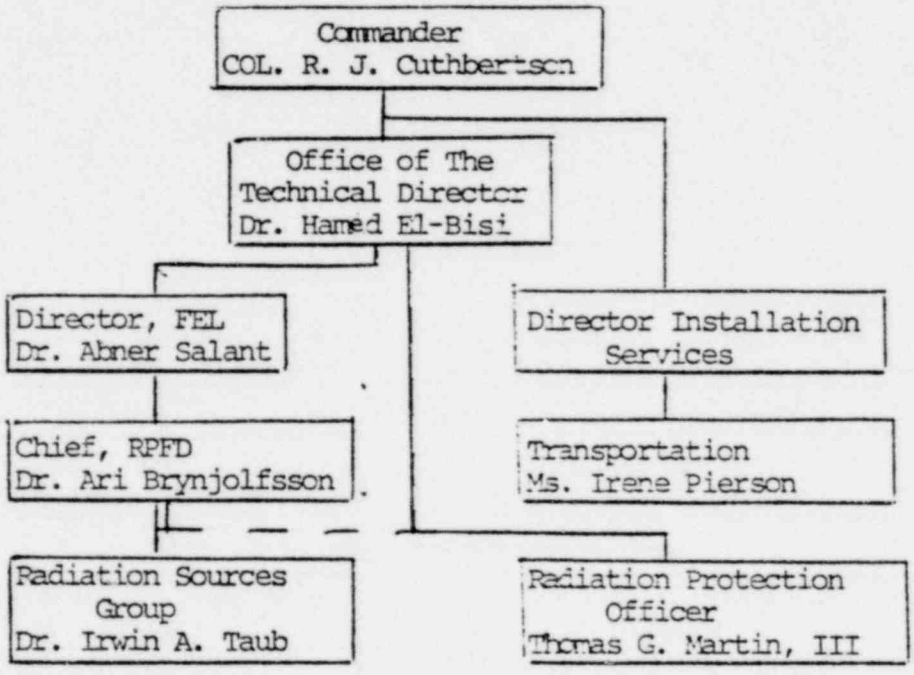
This quality assurance program applies to the use of NRC approved shipping casks for the shipment of cobalt-60 sources possessed and used under NRC Byproduct Material License 20-315-03. These sources are special form sources.

1. Organization

The final responsibility for the Quality Assurance (QA) Program for 10 CFR Part 71 requirements rests with the U. S. Army Natick Research and Development Command. Design and fabrication shall not be conducted under this QA program. The QA program is implemented using the organization in Figure 1.

Figure 1

Organization




The Radiation Protection Officer (RPO) is responsible for the overall administration of the program, training and certification, document control, and auditing.

The staff of the Radiation Sources Group is responsible for the handling, storage, shipping, inspection, test and operating status, and record keeping.

2. Quality Assurance Program

This Command has established and will implement this QA Program. Training, prior to engagement, for all QA functions is required according to written procedures. QA Program revisions will be made according to written procedures with management approval. This QA program will ensure that all

defined quality control 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.

The Radiation Protection Officer shall assure that all radioactive material shipping packages are designed and manufactured under a QA Program approved by the Nuclear Regulatory Commission. This requirement will be satisfied by the receipt at NAPADCOM of a certification to this effect from the manufacturer.

3. Document Control

All documents relating 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 management.

The RPO shall insure that all QA functions are conducted in accordance with the latest applicable changes to these documents.

4. Handling, Storage, and Shipping

Written safety procedures 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 will be provided for handling, storage, and shipping operations.

Members of the Radiation Sources Group shall perform the critical handling, storage, and shipping operations.

5. Inspection, Test and Operating Status

Inspection, test and operating status of packages for special form radioactive material will be indicated and controlled by written procedures. Status will be indicated by tag and log entry. Status of nonconforming parts or packages will be positively maintained by written procedures.

Members of the Radiation Sources Group shall perform the regulatory required inspections and tests in accordance with written procedures. The RPO shall ensure that these functions are performed.

6. Quality Assurance Records

Records of package approvals (including references and drawings), procurement, 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.

These records will be maintained in accordance with written procedures. The records will be identifiable and retrievable. A list of these records, with their storage location, will be maintained by the RPO.

7. Audits

Established schedules of audits of the QA Program will be performed using written check lists. Results of audits will be maintained and reported to management. Audit Reports will be evaluated and deficient areas corrected. The audits will be dependent on the safety significance 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 QA records. Members of the Audit Team shall have no responsibility in the activity being audited.