

DESCRIPTION OF 10 CFR PART 71
QUALITY ASSURANCE PROGRAM FOR
RADIOISOTOPE THERMOELECTRIC GENERATORS

JULY 1980

NAVAL ENERGY AND ENVIRONMENTAL SUPPORT ACTIVITY
PORT HUENEME, CALIFORNIA 93043

ENCLOSURE (1)

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1. Introduction. Under the provisions of U.S. Nuclear Regulatory Commission Materials License No. 04-07316-03, the Naval Nuclear Power Unit (now the Naval Energy and Environmental Support Activity (NEESA)) is authorized to receive, acquire, possess, deliver, or transfer certain radioisotope thermoelectric generators (RTGs). NEESA is further authorized to store, operate, and service the RTGs. Changing, adjusting, or handling of the heat source capsules is not authorized.

Licensed RTG models and their corresponding Certificate of Compliance numbers are listed in Appendix A.

Activities performed relative to RTGs include:

- a. Handling
- b. Shipping
- c. Storing
- d. Operating
- e. Assembling/disassembling shipping containers
- f. Maintaining RTGs and shipping containers; e.g., painting
- g. Repairing or replacing worn or broken components such as parts of shipping containers.

The purpose of this document is to outline the procedures which will be followed to comply with 10 CFR 71.51.

2. Quality Assurance Organization. The final responsibility for the Quality Assurance (QA) program rests with the Officer in Charge, NEESA. The QA Program is implemented using the organization outlined in Appendix B.

3. Quality Assurance Program. The Officer in Charge, NEESA will implement the QA Program through the organization described in paragraph 2. QA Program revisions will not be made without his approval. The Program will insure that all activities involving RTGs (see paragraph 1) are performed in accordance with applicable NRC, DOT, and U.S. Navy regulations as well as NRC License No. 04-07316-03 and the specific provisions of the RTG shipping package design approval. The QA Program emphasizes control of the administrative and operational matters which are critical to safety. Controls have been established to insure that activities involving RTGs are conducted in accordance with the regulations, license and approvals mentioned above. Furthermore, specific procedures have been implemented which govern the shipping and receiving of RTGs. These are described in paragraph 6.

Design and fabrication of RTGs and their shipping containers shall not be conducted under this Program. Hence, the following QA Program elements will

not be addressed in this Program: design control; instructions, procedures and drawings; control of purchased material, equipment and services; identification and control of materials, parts and components; control of special procedures; inspection; test control; control of measuring and test equipment; nonconforming materials, parts or components and corrective action.

4. Procurement Document Control. The Director, Radiological Affairs Support Office will insure that provisions are included in procurement specifications for RTGs and shipping containers which will require that they be designed and manufactured under a QA Program approved by the Nuclear Regulatory Commission. This requirements will be satisfied by receipt of a certification to this effect and a copy of the Program from the manufacturer.

5. Document Control. All documents related to a specific shipping package (e.g., Certificates of Compliance, Shipping and Receiving Procedures, etc.) will be controlled and maintained by the Director, Radiological Affairs Support Office (RASO). All revisions and changes will be processed through him and he will insure that current versions of the documents are on file.

He shall also insure that all activities are conducted in accordance with the latest applicable changes to these documents.

6. Handling, Storage and Shipping. Written safety procedures concerning the handling, storage, and shipping of RTGs will be followed. These procedures include the RTG Shipping and Receiving Procedures (Appendix C to the QA Plan). Work instructions will be provided for handling, storage, and shipping operations. Shipments will not be made unless all tests, certifications, acceptances, and final inspections have been completed.

The Director, RASO will be responsible for all handling, storage, and shipping operations.

Maintenance of RTGs and shipping containers will be conducted, repairs made, and components replaced in accordance with the manufacturer's recommendations. Modifications to components of shipping packages which exist to comply with 10 CFR 71 design criteria will not be made without prior Nuclear Regulatory Commission approval.

7. Inspection, Test and Operating Status. Inspection and test status of RTGs and their shipping containers will be controlled and recorded in accordance with the RTG Shipping and Receiving Procedures. Operating status is not applicable. Status will be indicated by tag, label, marking, or entry on the forms specified in the RTG Shipping and Receiving Procedures.

8. Quality Assurance Records. Records of package approvals (including references and drawings), procurements tests, audits, personnel training and qualifications, and RTG shipments will be maintained. Descriptions of RTGs, manufacturer's operation and maintenance manuals, and procedures pertinent to RTG activities will also be maintained.

These records will be maintained by the Director, Radiological Affairs Support Office. They will be kept in such a manner as to be easily identifiable and readily retrievable.

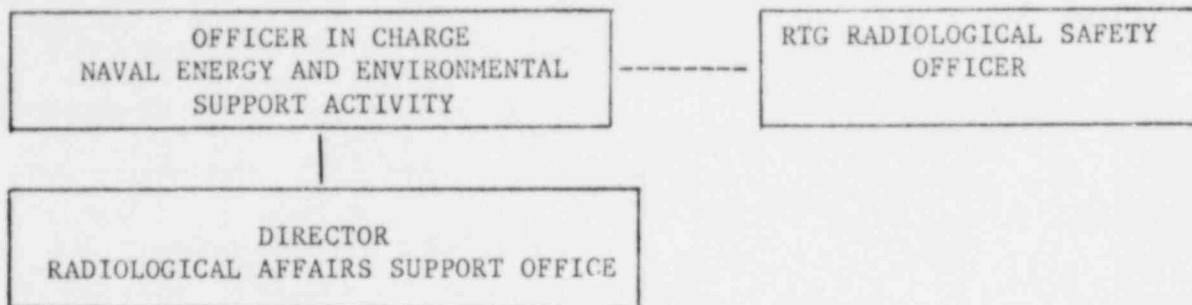
9. Audits. Individual(s) performing the audits will have no responsibility in the activity being audited. Normally the RTG Radiological Safety Officer will perform audits. Audits of the QA Program will be performed on an annual basis. Results of audits will be maintained and reported to the Officer in Charge, NEESA. Audit reports will be evaluated and deficient areas corrected. Audit reports will be maintained as parts of the QA records.

LICENSED RTGs AND CERTIFICATE OF COMPLIANCE NUMBERS

<u>RTG MODEL</u>	<u>CERTIFICATE OF COMPLIANCE NUMBER</u>
URIPS-P1	5071
SENTINEL-25E	4888
SNAP-21	5830
SENTINEL-100F	5862

QUALITY ASSURANCE PROGRAM ORGANIZATION

1. Organization



2. Responsibilities Relative to the QA Program

a. Officer in Charge, Naval Energy and Environmental Support Activity.
The Officer in Charge is responsible for:

(1) Overall responsibility for the transport, storage, operation, maintenance, repair, and disposal of RTGs and their shipping containers.

(2) Assuring compliance with the license and pertinent Federal and Navy regulations relating to radiological safety.

b. RTG Radiological Safety Officer. The RTG Radiological Safety Officer is appointed by the Officer in Charge. The Radiological Safety Officer is responsible for:

(1) Assuring the implementation of the approved radiation safety program for the stated use of RTGs.

(2) Reviewing plans for RTG operation, servicing, shipment and receipt; and providing recommendations to the Officer in Charge relative to radiation safety.

(3) Performing QA audits.

(4) Assessing the safeguards to be employed to limit exposure of personnel during storage, operation, and servicing.

(5) Assessing qualifications of individuals desiring to operate and/or service RTGs to assure that the operators and personnel servicing the RTGs have sufficient education, training and/or experience to assure the safety of operations.

c. Director, Radiological Affairs Support Office (RASO), Naval Energy and Environmental Support Activity. The Director, RASO is responsible for:

(1) Insuring that the tasks assigned the Officer in Charge, NEESA, are properly accomplished.

(2) The overall administration of the QA Program.

(3) Performing the duties of RTG Custodian for all RTGs in storage at the RTG Surveillance Facility, NAS, Point Mugu, California.

d. Radioisotope Thermoelectric Generator Custodian. The custodian of the RTGs is responsible for:

(1) Complying with the license for use of the RTG(s) in his custody.

(2) Insuring that the RTG Shipping and Receiving Procedures are followed.

(3) The care and accountability of the RTG(s) assigned him.