71-0570

University of Wisconsin

NUCLEAR REACTOR LABORATORY
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December 27, 1990

U. S. Nuclear Regulatory Commission
ATTN: DOCUMENT CONTROL DESK
Division of Safeguards and Transportation
Washington, DC 20555

RE: Docket 71-0570; Request for renewal of Quality Assurance Program Approval for Radioactive Material Packages No 0570

Dear Sirs:

We request renewal of approval No. 0570. The QA program is designated UWNR 021 in our internal record system, and a copy of the present document is enclosed. There are no changes from our original submission except for incorporation of the NRC requirement for record retention for two years and the subsequent internal review dates.

Very truly yours,

R. J. Cashwell
Reactor Director

CC: USNRC Region III

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UWNR QUALITY ASSURANCE PROGRAM FOR RADIOACTIVE MATERIAL PACKAGES
NRC Approval Number 0570 Revision 0 Expires 1/31/91

Introduction

This document describes the Quality Assurance Program governing shipment and receipt of radioactive materials, including special nuclear materials, at the University of Wisconsin Nuclear Reactor Laboratory (UWNRL). Activities at the UWNRL are governed by licenses R-74 and SNM-116. The docket number applicable to license R-74 is 50-156.

This Quality Assurance Program is submitted pursuant to 10 CFR Part 71, paragraph 71.12 and subpart H. The program outline follows Regulatory Guide 7.10 annex 2 insofar as applicable to the activities contemplated by the laboratory.

1. Organization

Figure 1 shows the organizational chart for operation of the University of Wisconsin Nuclear Reactor. The Quality Assurance function is the responsibility of the Reactor Director. All written procedures are reviewed and approved by the Reactor Safety Committee under the existing system established in accordance with the Technical Specifications of license R-74. Reactor operating personnel have the responsibility for shipping, receiving and monitoring shipments of radioactive materials shipped directly from or to the laboratory. Shipments under the University of Wisconsin license for byproduct materials, however, are under the control of the University Radiation Safety Committee through the organization set up for those shipments. That program is not addressed in this QA plan. The University Health Physics office of the University Safety Department audits all programs at the Reactor Laboratory, but has no direct responsibility for the program described in this document.

2. Quality Assurance Program

The scope of the program includes packing, unpacking, handling, loading or unloading, and delivery to a carrier for transport shipping containers which have been approved by the NRC and/or DOT. No provisions for fabrication, maintenance, or modification of such containers are included in the plan since the laboratory will not be involved in those activities. Procedures will include provisions for inspection of the shipping containers for degradation or other unsuitability for use. Quality control will be exercised primarily by the use of written procedures based on (a) Federal regulations requirements; (b) instructions,procedures, and drawings furnished by container fabricators; and (c) applicable portions of University and laboratory radiation protection procedures. Quality assurance will be effected by formatting these procedures as check lists to be executed by those carrying out the activities.

3. Design Control

Design activities related to the shipping package are not

performed by the UWNRL. The proper design control by the fabricator of packages used shall be established by a copy of the current Certificate of Compliance and expiration date or by other appropriate evidence of NRC and/or DOT approval.

4. Procurement Control

Procurement activities relative to fabrication of the shipping package will not be performed by UWNRL. Containers will be used for shipment only if the fabrication has furnished UWNRL with:

(a) Certification that the package was manufactured under the control of a NRC-approved QA program or otherwise meets the requirements of 10 CFR Part 71;
(b) Identification of tests and inspections required during use and maintenance; and
(c) Other documentation as required for use of the container by the approving authority.

5. INSTRUCTIONS, PROCEDURES, AND DRAWINGS

5.1 Preparation of Packaging for Use.--The routine determinations of 10 CFR 71.87, where applicable, will be subject to checklist assurance.

5.2 Repairs, Rework, and Maintenance. --The activities repair, rework, or maintenance are not to be performed. Servicing, such as gasket replacement, shall be in accordance with package specifications.

5.3 Loading and Unloading. --Transfer of material to or from the package shall be conducted under a plan of sufficient specificity to identify and account for quantities conforming to shipping papers and inventory change reports. Surveys of radiation fields and surface contamination of the package shall be made and recorded.

5.4 Transport of Package. --Upon delivery of packages to a carrier for transport, the condition of the package as evidenced by visual inspection will be noted; the seals and labels will be recorded along with the package identification by model and identification number. A check list procedure will be used.

6. DOCUMENT CONTROL

Control shall be exercised over the following documents:

(1) Document check list
(2) Operating Procedures
(3) Inspection Procedures
(4) Loading or Unloading Plans
(5) Documents relating to package certification, QC, and QA
(6) Radiation Survey Records
(7) Shipping Papers, Procedures and check lists, and changes thereto, are to be approved in accordance to facility requirements on the use of procedures in conformance with Technical Specifications of license R-74.

7. CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICES

No special purpose materials or equipment are to be purchased for this activity. Services such as container off-loading, and carrier transport will be procured via normal University procedures.

8. IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, COMPONENTS

No materials, parts or components are to be identified or controlled for this activity. Replacements other than serviceable items will be performed by other approved programs.

9. SPECIAL PROCESSES

No special processes are to be undertaken under this program.

10. INSPECTION CONTROL

10.1 Receipt Inspection. --Inadequately identified packaging, or packaging which deviates significantly from certifications, will not be used unless or until corrected.

10.2 Maintenance. --Maintenance other than prescribed servicing will not be performed by the University.

10.3 Final Inspection. --Check lists will be established to ensure that:

(1) Packages are properly assembled.

(2) Moderators and/or neutron absorbers are present if required.

(3) Shipping papers are properly completed.

(4) Packages and transport vehicle are conspicuously and durably marked as required by DOT.

(5) Pre-loading and post-loading radiation surveys have been completed.

(6) Final inspection has been completed. Inspection is to be certified by the Reactor Director or his designated alternates.

11. TEST CONTROL

11 1 Use of Packages. --Tests permitted, recommended, or specified by package licensee will be used to establish a QA check list.

11.2 Radiation Survey--Radiation survey results are to be compiled and records maintained by the Reactor Director.

12. CONTROL OF MEASURING AND TEST EQUIPMENT

As a user, the University does not expect to use gauges, fixtures, reference standards, or other devices used to measure product (container) characteristics. Radiation survey equipment shall be maintained and calibrated in accordance with existing UWNRL procedures.

13. HANDLING, STORAGE, AND SHIPPING

13.1 Handling and Storage. --Special handling and lifting equipment will be used in accordance with equipment specified or provided by the package licensee, and according to conditions identified in a Certificate of Compliance as well as instruction provided by the package licensee. See Sections 4, 5, and 6. Containers will be used promptly and returned to package licensee; they will not be placed in storage.

13.2 Preparation for Release and Shipment. --Measures will be instituted to ensure that:

(1) Cavities are dry.

(2) Specified operations, inspections, and tests are to be verified by check list.

(3) The Reactor Director is responsible for the observation of NRC and DOT requirements, and for the preparation of the shipping papers.

(4) Quality Assurance will be performed with check lists.

14. INSPECTION, TEST, AND OPERATING STATUS

Status is to be tracked by a master check list that acknowledges check-off of individual check list completion.

15. CONTROL OF NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

Not applicable. Rework, repair, maintenance, or modification are not to be undertaken by the UWNRL.

16. CORRECTIVE ACTIONS

16.1 Reporting. --It is the responsibility of UWNRL QC/QA to report conditions detrimental to quality to the package licensee.

16.2 Closeout. --The UWNRL as a user will deem closeout completed upon (a) correction of the condition by the package licensee, or (b) package licensee's withdrawal of the container from service.

17. QUALITY ASSURANCE RECORDS

Records, showing evidence of delivery of packages to a carrier under NRC and DOT requirements shall be retained for a minimum of two years, except for SNM transfer and inventory records retained for the duration of NRC licensing authority over UWNRL. Records are to be retained by the Reactor Director, who is also responsible for maintaining all University records related to personnel exposures, radioactive material releases and shipment, and radiation protection matters related to the UWNRL.

18. AUDITS

Audit of performance under this program will be performed by the existing audit program established by the Reactor Safety Committee and carried out by the University of Wisconsin Health Physics office.