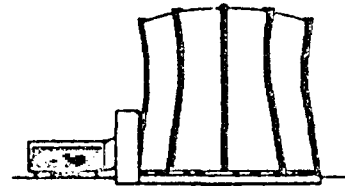


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July 3, 2006

2006-0052

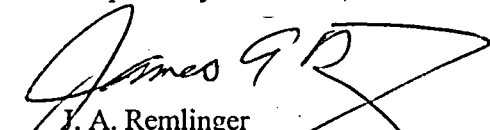
Document Control Desk  
ATTN: E. William Brach  
Director, Spent Fuel Project Office  
MS 0-13D13  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

**Subject: Texas A&M University Nuclear Science Center (Docket Number 50-128,  
License Number R-83) Re-submittal of Changed Quality Assurance  
Program Pages**

On June 19<sup>th</sup>, 2006 the Texas A&M University, Texas Engineering Experiment Station's Nuclear Science Center (NSC) submitted a Quality Assurance Program to the NRC for approval (NSC Memo 2006-0045). In a subsequent review and discussion with NRC's James Pearson several changes to the original document were made by the NSC. Changes were made to pages 3, 4, 5, 9 and 10 of the original document. Attached are copies of the changed pages, with change bars, noting where the changes were made. Please remove the corresponding older pages from the original document and replace them with the attached modified pages.

If there are any questions or concerns with these changed QA Program pages please contact me at (979) 845-7551, and/or e-mail me at [jaremlinger@tamu.edu](mailto:jaremlinger@tamu.edu).

Respectfully Submitted,

  
J. A. Remlinger  
Associate Director, TAMU-NSCR

cc: Marvin M. Mendonca - NRC Project Manager  
James Pearson - NRC  
QA Program Files  
TAMU NSC Files  
2.11/Central File

Umsso1  
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**Texas A&M University Nuclear Science Center**  
**Quality Assurance Program**

**Introduction**

With this document the Texas A&M University Nuclear Science Center (NSC) establishes a Shipping Quality Assurance (QA) Program in accordance with 10 CFR 71, Subpart H. It is designed to assure the safety of the general public during packaging and transportation of licensed material in excess of a Type A quantity.

**Quality Assurance Program**

**1. Scope**

The NSC Shipping QA Program establishes requirements applicable to the procurement, use, maintenance, and repair of packaging used to transport licensed material in excess of a Type A quantity (refer to 10 CFR 71.4 and Appendix A of 10 CFR 71). The program includes the purchase, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, and repair of Type B (reference 10 CFR 71.4 and Appendix A of 10 CFR 71) shipping containers regulated by 10 CFR 71. The QA Program applies to those activities affecting the casks and their components, which are significant to safety. Quality assurance comprises those planned and systematic actions necessary to provide adequate confidence that a system or component will perform satisfactorily in service. Shipping casks regulated by 10 CFR 71 will be released for shipping only after they have satisfactorily met the requirements of the NSC Shipping QA Program.

The description of the QA Program, contained within, will include a discussion of which requirements of 10 CFR 71, Subpart H are applicable and how they will be satisfied. The NSC does not store or maintain non Type A shipping materials and packages. Therefore, this QA Program shall require vendor supplied documentation of quality-related activities applicable to the design, fabrication, inspection, testing, purchase, use, maintenance and repair of packages used and provided by the vendor (or organization) for transportation of licensed material in excess of a Type A quantity to or from the NSC. Establishment of the QA Program deems that all quality related activities applicable to the design, fabrication, inspection, testing, purchase, use, maintenance and repair of packages are implemented with written procedures approved by appropriate levels of management and are contained in Shipping QA files.

The Director of the NSC retains the responsibility for the overall effectiveness of the QA Program.

Indoctrination and training will be included as part of an existing requalification program so that personnel performing quality-related activities are trained and qualified to perform these activities. Upgrading of personnel performing quality related work will be on a continuing basis as changes are implemented in quality assurance procedures.

## **2. Responsibilities**

The Texas A&M University Reactor Safety Board (RSB) Committee is responsible for reviewing the facility's Shipping QA Program and its policies, goals, and objectives. The Director of the NSC retains overall authority and responsibility for the QA Program. All NSC personnel involved with the shipment of licensed material shall follow this QA Program.

## **3. Quality Assurance Organization (10 CFR 71.103)**

The facility organization chart can be found in the NSC Technical Specifications in Section 6.1. Any or all of the personnel on the NSC staff may perform functions under this QA Program as designated by the Director of the NSC. The Director will ensure that measures are established to provide adequate control over any designated quality-related activities. Individuals performing QA functions have the responsibility and authority to stop unsatisfactory work, the delivery or installation of nonconforming materials, and have direct access to the Director of the NSC, his designee, or higher-level management that can ensure accomplishment of quality-related activities.

The duties and qualifications required for the Director of the NSC, who retains overall authority and responsibility for the QA Program, and other principal personnel performing quality related functions will be established and documented in the QA files.

## **4. Package Design Control (10 CFR 71.107)**

The NSC is only a user of packaging. Therefore, design activities will not be performed by this facility and the criterion of 10 CFR 71.107 is not applicable. However, the NSC shall assure that the design of the packaging used was accomplished under control of a NRC approved QA Program. This will be accomplished by requiring the supplier of packaging to submit documented proof (e.g. drawings, etc.) of package design under a NRC approved QA plan. Documented proof will be kept on file.

## **5. Procurement Document Control (10 CFR 71.109)**

The NSC, when procuring packaging, shall require manufacturers of packaging to supply appropriate certifications verifying that the designated (model and serial number) packaging was manufactured under an approved NRC QA Program. Other pertinent documentation (as built drawings, photographs, sketches, use and maintenance manuals, etc.) are to be furnished by the manufacturer with the packaging. The Director of the NSC, or his designee, will determine all pertinent documentation required. If safety-related replacement parts are required to be procured for the packaging, the Director of the NSC, or his designee, will designate QA personnel to ensure that appropriate technical and QA requirements are included in purchase orders and that the purchase orders are placed with suppliers which have been previously qualified to supply the parts

required. Procurement shall be made in consultation with the package owner.

#### **6. Instructions, Procedures and Drawings (10 CFR 71.111)**

In the preparation of packaging for use, the Director of the NSC, or his designee, shall ascertain that the package with its contents satisfies the applicable requirements of 10 CFR 71 and of the licensee. The Director of the NSC, or his designee, must approve placing the package in use.

The Director of the NSC, or his designee, shall prescribe activities affecting quality by documented instructions or procedures of a type appropriate to the circumstances and shall require that these instructions or procedures be followed.

Any plans for maintenance or repairs will be reviewed by designated QA personnel (both NSC and vendor) to verify that the maintenance or repair plans emphasize those characteristics that are most important to safety. If a repair or maintenance is required to be performed on packaging, a written procedure will be followed and coordinated with the package owner and quality assurance personnel to ensure that appropriate inspection and test points are incorporated in the procedure and that effective repairs or maintenance has been satisfactorily performed.

#### **7. Document Control (10 CFR 71.113)**

Each of the shipping and packaging documents under control of the Shipping QA Program will be identified and maintained in the QA files. Documents will be reviewed biennially by appropriate NSC personnel not directly associated with radioactive material shipping. Substantial changes to documents shall be reviewed and approved by the RSB Committee.

Control shall be exercised over the following documents, including the changes thereunto, used in the procurement, use, maintenance, and repair of Type B Shipping packages:

1. Operating procedures
2. Maintenance procedures
3. Inspection and test procedures
4. Loading and unloading procedures
5. Packaging and transport procedures
6. Repair procedures
7. Audits
8. Drawings
9. Training records

Controlled copies of approved procedures will be made available to persons responsible for using those documents.

authorized without the approval of the Director of the NSC or his designated members of management.

#### **16. Nonconforming Materials, Parts or Components (10 CFR 71.131)**

Designated QA personnel will ensure established measures are followed to control materials, parts, or components which do not conform to specified requirements in order to prevent their inadvertent use or installation. All materials, parts, or components for use by this facility which must be quality controlled will be inspected upon receipt by designated QA personnel. This inspection will include as a minimum:

1. Proper identification of item and any nonconformance
2. Segregation of nonconforming items
3. Disposition
4. Evaluation

All nonconforming items will be placed in designated control hold areas until proper disposition is completed. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures. The acceptability of nonconforming items after designated repair or rework will be verified by designated QA personnel by re-inspecting or retesting the item against the original requirements. All information that is discovered concerning a nonconforming item will be recorded and kept with QA records such that it can be analyzed by designated QA personnel to determine quality trends for appropriate management review and assessment.

#### **17. Corrective Action (10 CFR 71.133)**

For activities important to safety concerning use, maintenance and repair of Type B packages, the Director of the NSC, or his designee, shall ensure that conditions adverse to quality, (e.g. those resulting from failures, malfunctions, deficiencies, deviations and defective material and equipment, etc.) are promptly identified and reported to appropriate levels of management. In the case of a significant condition adverse to quality, a root cause of the condition will be determined and corrective actions taken to preclude recurrence.

#### **18. Quality Assurance Records (10 CFR 71.135)**

Sufficient written records shall be maintained in the QA files to furnish evidence of activities affecting quality. The records shall include the following:

1. Instructions, procedures, and drawings required by 10 CFR 71.111
2. Design records
3. Inspections
4. Tests
5. Audits

6. Qualifications of personnel
7. Maintenance
8. Repairs
9. Delivery of package to a carrier (including proof that applicable NRC and DOT requirements have been satisfied.

All shipments of radioactive material must be reviewed and approved by Health Physics personnel. Shipping records for radioactive material will be kept by the NSC Radiation Safety Office.

Records of fuel shipments, including superseded records, utilizing a leased cask shall be kept for at least three years from the date of the last shipment.

Records that are to be retained for the lifetime of the packaging should include:

1. Appropriate design and production-related records, which are generated throughout manufacturing and furnished with packaging
2. Records demonstrating evidence of operational capability
3. Records verifying repair, rework, and replacement that are used as a baseline for maintenance.

QA records shall be adequately stored to prevent loss or deterioration and marked so as to be readily identifiable and retrievable.

## 19. Audits (10 CFR 71.137)

Audits of each safety related activity shall be completed at least annually to verify compliance with all aspects of the QA Program for radioactive packaging covered under this program and to determine the effectiveness of the program. The audit shall be performed by members of the RSB or their designee, but not by staff having direct responsibility in the areas being audited. Audit results shall be documented and reviewed by NSC management and the RSB. Follow-up action, including the re-audit of deficient areas, shall be taken where indicated.