CERTIFICATE OF COMPLIANCE FOR SPENT FUEL STORAGE CASKS

The U.S. Nuclear Regulatory Commission is issuing this Certificate of Compliance pursuant to Title 10 of the Code of Federal Regulations, Part 72, "Licensing Requirements for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste" (10 CFR Part 72). This certificate is issued in accordance with 10 CFR 72.238, certifying that the storage design and contents described below meet the applicable safety standards set forth in 10 CFR Part 72, Subpart L, and on the basis of the Final Safety Analysis Report (FSAR) of the cask design. This certificate is conditional upon fulfilling the requirements of 10 CFR Part 72, as applicable, and the conditions specified below.

Certificate No.	Effective Date	Expiration Date	Docket Number	Amendment No.	Amendment Date	Package Identification No.
XXXX	XX/XX/XX	XX/XX/XX	72-XXXX	0		USA/72-XXXX

Issued To: (Name/Address)

Safety Analysis Report Title

CONDITIONS

This certificate is conditioned upon fulfilling the requirements of 10 CFR Part 72, as applicable, the attached Appendix (Technical Specifications), and the conditions specified below:

1. CASK

   a. Model No. XXXXX Cask System

      The XXXXX Cask System (the cask) consists of the following components: (1) a canister which contains the fuel; (2) a storage overpack (XXXXXX), which contains the canister during storage; and (3) a transfer cask (YYYYYY), which contains the canister during loading, unloading, and transfer operations. The cask stores up to XX fuel assemblies.

   b. Description

      The XXXXXX Cask System is certified as described in the Safety Analysis Report (SAR) and in NRC's Safety Evaluation Report (SER) accompanying the Certificate of Compliance. The cask comprises three discrete components: the canister, the YYYYY transfer cask, and the XXXXX storage overpack.

1. b. Description (continued)

[The canister is the confinement system for the stored fuel. It is a welded, cylindrical container with a honeycombed fuel basket, a baseplate, a lid, a closure ring, and the canister shell. It is made entirely of stainless steel except for the neutron absorbers and aluminum heat conduction elements. The canister shell, baseplate, lid, vent and drain port cover plates, and closure ring are the main confinement boundary components. The honeycombed basket, which is equipped with Boral neutron absorbers, provides criticality control. The canister holds up to XX PWR fuel assemblies that must be intact.

The YYYY transfer cask provides shielding and structural protection of the canister during loading, unloading, and movement of the canister from the spent fuel pool to the storage overpack. The transfer cask is a multi-walled (carbon steel/lead/carbon steel) cylindrical vessel with a water jacket attached to the exterior. The maximum weight of a loaded transfer cask during any loading, unloading, or transfer operation is XXX tons.

The XXXX storage overpack provides shielding and structural protection of the canister during storage. The overpack is a heavy-walled, steel and concrete, cylindrical vessel. Its side wall consists of plain concrete that is enclosed between inner and outer carbon steel shells. The overpack has four air inlets at the bottom and four air outlets at the top to allow air to circulate naturally through the cavity to cool the canister inside. The inner shell has channels attached to its interior surface to guide the canister during insertion and removal, provide a flexible medium to absorb impact loads, and allow cooling air to circulate through the overpack. A loaded canister is stored within the XXXX storage overpack in a vertical orientation.]

2. OPERATING PROCEDURES

Written operating procedures shall be prepared for cask handling, loading, unloading, movement, surveillance, and maintenance. The user's site-specific written operating procedures shall be consistent with the technical basis described in Chapter 8 of the SAR.

3. ACCEPTANCE TESTS AND MAINTENANCE PROGRAM

Written cask acceptance tests and maintenance program shall be prepared consistent with the technical basis described in Chapter 9 of the SAR.

The heat transfer characteristics of the cask system will be recorded by temperature measurements for the first Spent Fuel Storage Canister (SFSC) System placed into service with a heat load equal to or greater than XX kW. An analysis shall be performed that demonstrates the temperature measurements validate the analytic methods and predicted thermal behavior described in Chapter 4 of the SAR.

Validation tests shall be performed for each subsequent cask system that has a heat load that exceeds a previously validated heat load by more than X kW. (e.g., if the initial test was conducted at XX kW, then no additional testing is needed until the heat load exceeds XX kW). No additional testing is required for a system after it has been tested at a heat load equal to or greater than XX kW.

Letter reports summarizing the results of each validation test shall be submitted to the NRC in accordance with 10 CFR 72.4. Cask users may satisfy these requirements by referencing validation test reports submitted to the NRC by other cask users.

4. QUALITY ASSURANCE

Activities in the areas of design, purchase, fabrication, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems and components, and decommissioning that are important to safety shall be conducted in accordance with a Commission-approved quality assurance program which satisfies the applicable requirements of 10 CFR Part 72, Subpart G, and which is established, maintained, and executed with regard to the cask system.

5. HEAVY LOADS REQUIREMENTS

Each lift of a canister, a YYYY transfer cask, or a XXXX overpack must be made in accordance with the existing heavy loads requirements and procedures of the licensed facility at which the lift is made. A plant-specific safety review (under 10 CFR 50.59 or 10 CFR 72.48, if applicable) is required to show operational compliance with existing plant-specific heavy loads requirements. Lifting operations outside of structures governed by 10 CFR Part 50 must be in accordance with Section 4.4 (Cask Transfer Operations) of the Appendix to this certificate.

6. APPROVED CONTENTS

Contents of the XXXX Cask System must meet the fuel description as provided for in the Appendix to this certificate.

7. DESIGN FEATURES

Features or characteristics for the site, cask, or ancillary equipment must be in accordance with the Appendix to this certificate.

8. PRE-OPERATIONAL TESTING AND TRAINING EXERCISE

A dry run training exercise of the loading, closure, handling, unloading, and transfer of the Cask System shall be conducted by the licensee prior to the first use of the system to load spent fuel assemblies. The training exercise shall not be conducted with spent fuel in the canister. The dry run may be performed in an alternate step sequence from the actual procedures, but all steps must be performed. The dry run shall include, but is not limited to the following:

a. [Each applicant shall list the procedures important to its design.]

9. CHANGES TO THE CERTIFICATE OF COMPLIANCE

The holder of this certificate who desires to make changes to the certificate, which includes the Appendix (Technical Specifications) shall submit an application for amendment of the certificate.

10. AUTHORIZATION

The XXXX Cask System, which is authorized by this certificate, is hereby approved for general use by holders of 10 CFR Part 50 licenses for nuclear reactors at reactor sites under the general license issued pursuant to 10 CFR 72.210, subject to the conditions specified by 10 CFR 72.212, and the attached Appendix.

FOR THE U. S. NUCLEAR REGULATORY COMMISSION

E. William Brach, Director
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Attachment: Certificate Appendix

UNITED STATES NUCLEAR REGULATORY COMMISSION