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 No.	Amendment No.	Amendment Effective Date	Package Identification No.
1029	02/05/03	02/05/23	72-1029	1	TBD	USA/72-1029

Issued To: (Name/Address)

Transnuclear, Inc.
Four Skyline Drive
Hawthorne, New York 10532

Safety Analysis Report Title

Transnuclear, Inc., "Final Safety Analysis Report for the Standardized Advanced NUHOMS® Horizontal Modular Storage System for Irradiated Nuclear Fuel"

CONDITIONS

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

1. CASK:

a. Model No. Standardized Advanced NUHOMS®-24PT1 and 24PT4

The two digits refer to the number of fuel assemblies stored in the dry shielded canister (DSC), the character P for pressurized water reactor (PWR) or B for boiling water reactor (BWR) is to designate the type of fuel stored, and T is to designate that the DSC is intended for transportation in a 10 CFR Part 71 approved package

b. Description

The Standardized Advanced NUHOMS® System is certified as described in the Final Safety Analysis Report (FSAR) and in the U. S. Nuclear Regulatory Commission's (NRC's) Safety Evaluation Report (SER). The Standardized Advanced NUHOMS® System is a horizontal canister system composed of a steel dry shielded canister (DSC), a reinforced concrete advanced horizontal storage module (AHSM), and a transfer cask (TC). The Standardized Advanced NUHOMS® is similar to the Standardized NUHOMS® except that it has been enhanced to withstand high seismic spectra and to reduce radiological doses. The welded DSC provides confinement and criticality control for the storage and transfer of irradiated fuel. The concrete module provides radiation shielding while allowing cooling of the DSC and fuel by natural convection during storage. The TC is used for transferring the DSC from/to the Spent Fuel Pool Building to/from the AHSM.

1.b. Description (continued)

The principal component subassemblies of the DSC are the shell with integral bottom cover plate and shield plug and ram/grapple ring, top shield plug, top cover plate, and basket assembly. The shell length is fuel-specific. The internal basket assembly is composed of guide sleeves, support rods, and spacer disks. This assembly is designed to hold 24 PWR fuel assemblies. The basket assembly aids in the insertion of the fuel assemblies, enhances subcriticality during loading operations, and provides structural support during a hypothetical drop accident. The DSC is designed to slide from the transfer cask into the AHSM and back without undue galling, scratching, gouging, or other damage to the sliding surfaces.

The AHSM is a reinforced concrete unit with penetrations located at the top and front for air flow. The penetrations are protected from debris intrusions by wire mesh screens during storage operation. The DSC Support Structure, a structural steel frame with rails, is installed within the AHSM module to provide for sliding the DSC in and out of the AHSM and to support the DSC within the AHSM. AHSMs are arranged in arrays to minimize space and maximize self-shielding. Adjacent AHSMs are keyed and tied to provide maximum resistance to environmental conditions including high seismic loads.

The TC is used for transfer operations within the Spent Fuel Pool Building and for transfer operations to/from the AHSM. The TC is a cylindrical vessel with a bottom end closure assembly and a bolted top cover plate. Two upper lifting trunnions are located near the top of the cask for downending/uprighting and lifting of the cask in the Spent Fuel Pool Building. The lower trunnions, located near the base of the cask, serve as the axis of rotation during downending/uprighting operations and as supports during transport to/from the Independent Spent Fuel Storage Installation (ISFSI).

With the exception of the TC, fuel transfer and auxiliary equipment necessary for ISFSI operations are not included as part of the Standardized Advanced NUHOMS® System referenced in this Certificate of Compliance (CoC). Such site-specific equipment may include, but is not limited to, special lifting devices, the transfer trailer, and the skid positioning system

c. Drawings

The drawings for the Standardized Advanced NUHOMS® System are contained in Section 1 and A.1 of the FSAR.

d. Basic Components

The basic components of the Standardized Advanced NUHOMS® System that are important to safety are the DSC, AHSM, and TC. These components are described in Section 2.5, A.2.5, and Table 2.5-1 and Table A.2.5-1 of the FSAR.

2. OPERATING PROCEDURES

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

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 and A.9 of the FSAR.

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 DSC and TC 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.

6. APPROVED CONTENTS

Contents of the Standardized Advanced NUHOMS® System must meet the fuel specifications description as provided 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 Standardized Advanced NUHOMS® 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 procedural guidelines in Chapter 8 and A.8 of the FSAR. The dry run shall include but not be limited to the following:

Loading Operations
a. Fuel Loading
b. DSC sealing, drying, and backfilling operations
c. TC downending and transport to the ISFSI
d. DSC transfer to the AHSM

8. Cont.

Unloading Operations
a. DSC retrieval from AHSM
b. Flooding of DSC
c. Opening of DSC

9. AUTHORIZATION

The Standardized Advanced NUHOMS® 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 A.

FOR THE U. S. NUCLEAR REGULATORY COMMISSION

DRAFT

John D. Monninger, Chief
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Attachments:

1. Appendix A: Technical Specifications