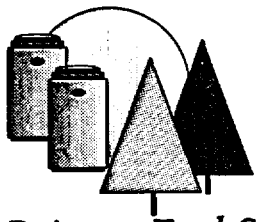

Private Fuel Storage, LLC

P.O. Box C4010, La Crosse, WI 54602-4010
John D. Parkyn, Chairman of the Board

September 14, 2000

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

LICENSE APPLICATION AMENDMENT No. 18
DOCKET NO. 72-22/TAC NO. L22462
PRIVATE FUEL STORAGE FACILITY
PRIVATE FUEL STORAGE L.L.C.

This letter submits Amendment No. 18 to the Private Fuel Storage Facility (PFSF) License Application. This amendment makes several revisions to the Proposed Technical Specifications, Appendix A of the PFSF License Application (LA). These revisions address comments received from Mark Delligatti and Marissa Bailey of the NRC regarding design features associated with the cask transporter and the cask seismic support struts.

If you have any questions regarding this submittal, please contact me at 608-787-1236 or Mr. J. L. Donnell, Project Director, at 303-741-7009.

Sincerely,

John D. Parkyn, Chairman
Private Fuel Storage L.L.C.

JDP:JRJ
Enclosure

NMSS01Public

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PREFACE

PRIVATE FUEL STORAGE FACILITY

LICENSE APPLICATION

AMENDMENT 18

Enclosed are the following revisions to the Private Fuel Storage Facility License Application documents:

License Application – Revision 11

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4.2.3.2 The individual columns of PFSF Storage Pads shall be located such that parallel columns of STORAGE CASKs on separate Storage Pad columns are no closer than 38 feet, centerline-to-centerline.

4.2.4 Site Temperature Limits

4.2.4.1 LOADING OPERATIONS and TRANSPORT OPERATIONS shall only be conducted if the working area ambient temperature is $\geq$ 0°F.

4.2.5 Cask Transporter

4.2.5.1 Transfer of a loaded STORAGE CASK to an PFSF Storage Pad shall be conducted using the Cask Transporter

4.2.5.2 The quantity of fuel in the Cask Transporter shall be $\leq$ 50 gallons.

4.2.5.3 The Cask Transporter shall be designed to mechanically limit the lifting height of a STORAGE CASK to a maximum of 10 inches.

4.2.5.4 In order to preclude any incipient tipping during a seismic event, the Cask Transporter shall be designed to ensure that its dimensions, center of gravity, and weight when carrying a loaded STORAGE CASK are such that the loaded transporter will not begin to tip due to the PFSF design basis ground motion. In addition, the Cask Transporter shall be designed to ensure that its dimensions, center of gravity, and weight when carrying a loaded STORAGE CASK are such that a design basis tornado-driven missile striking the Cask Transporter or STORAGE CASK could not cause the Cask Transporter to tip over, nor could it cause the STORAGE CASK to temporarily rise above its analyzed drop height of 11 inches.

4.0 DESIGN FEATURES

4.2.6 Storage Pads

The Storage Pads and foundation shall have the following characteristics as applicable to the drop and tipover analysis.

4.2.6.1 Concrete Thickness: $\leq$ 36 inches

4.2.6.2 Concrete Compressive Strength: $\leq$ 4,200 psi at 28 days

4.2.6.3 Reinforcement top and bottom (both directions):

Reinforcement area and spacing determined by analysis

Reinforcement shall be 60 ksi yield strength ASTM material

4.2.6.4 Soil Effective Modulus of Elasticity: $\leq$ 28,000 psi (measured prior to installation of Storage Pads)

An acceptable method of defining the soil effective modulus of elasticity applicable to the drop and tipover analyses is provided in Table 13 of NUREG/CR-6608 (February, 1998) with soil classification in accordance with ASTM D2487-93, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System, USCS) and density determination in accordance with ASTM D1586-84, Standard Test Method for Penetration Test and Split/Barrel Sampling of Soils.

4.2.6.5 The soil cement, which underlies all storage pads, shall have a minimum compressive strength of 250 psi (36,000 ksf).

4.3 CANISTER TRANSFER BUILDING (CTB)

4.3.1 TRANSFER CASK and CANISTER Lifting Devices

Lifting of a loaded TRANSFER CASK and CANISTER shall be performed in a CANISTER TRANSFER BUILDING (CTB) that is designed, operated, fabricated, tested, inspected and maintained in accordance with the guidelines of NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants," and the below clarifications.

4.0 DESIGN FEATURES

4.3.2 CTB Structure Requirements

4.3.2.1 CTB and Stationary Lifting Devices

a. The CTB is a reinforced concrete and steel structure. The design of the structure shall be in accordance with ANSI/ANS 57.9, ACI-349, and ANSI/AISC N690. Load factors and allowable stresses used in the design shall be in accordance with ACI-349 and ANSI/AISC N690.

b. The CTB cranes (overhead bridge crane and the semi-gantry crane) shall be classified as Type I cranes in accordance with ASME NOG-1. Allowable stresses used in the crane designs shall be in accordance with ASME NOG-1. These cranes, and the CANISTER lifting device (CANISTER Downloader), shall be of single-failure-proof design and meet the requirements of NUREG-0554 and NUREG-0612.

c. The TRANSFER CASK and CANISTER lifting devices used with the CTB shall be designed, fabricated, operated, tested, inspected and maintained in accordance with NUREG-0612, Section 5.1.

d. The structural connection between the seismic support struts and the casks (TRANSFER CASK, STORAGE CASK, and Shipping Cask) must be sufficiently rigid to resist the design basis ground motion. Prior to commencing LOADING OPERATIONS within the CANISTER TRANSFER BUILDING: 1) the design of the seismic support strut connection to the casks and the necessary engineering analyses of the design must be completed, and 2) the licensee shall provide written confirmation to the U.S. Nuclear Regulatory Commission that the design and engineering analyses are complete.

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5.0 ADMINISTRATIVE CONTROLS

5.5 Programs (continued)

c. As part of LOADING OPERATIONS, TRANSPORT OPERATIONS and STORAGE OPERATIONS, external contamination monitoring of the TRANSFER CASKs, and STORAGE CASKs prior to their relocation to the PFSF Storage Pads, will be performed to ensure that removable surface contamination levels do not exceed 1000 dpm/100 cm^2 from beta and gamma sources and 20 dpm/100 cm^2 from alpha sources in accordance with the Radiation Protection Program.

5.5.4 Onsite Cask Transport Evaluation Program

This program provides a means for evaluating various transport configurations and transport route conditions to ensure that the design basis drop limits are met. This program is not applicable when the TRANSFER CASK or a STORAGE CASK is being handled by a device providing support from underneath (i.e., on a rail car, heavy haul trailer, air pads, etc.).

This program shall evaluate the site-specific transport route conditions.

a. The lift height above a transport surface meeting the requirements prescribed in Specification 4.2.6 shall not exceed the limits in Table 5-1. Also, the program shall ensure that the transport route conditions (i.e., surface hardness and pad thickness) are equivalent to or less limiting than those prescribed for the reference pad surface which forms the basis for the values cited in Specification 4.2.6.

b. For STORAGE CASK transport conditions which are not bounded by the surface characteristics in Specification 4.2.6, the program may evaluate the site-specific conditions to ensure that the impact loading due to site-specific drop events does not exceed 45 g. This alternative analysis shall be commensurate with the drop analyses described in the Final Safety Analysis Report for the HI-STORM 100 Cask System. The program shall ensure that these alternative analyses are documented and controlled.

5.0 ADMINISTRATIVE CONTROLS

5.5 Programs (continued)

c. The STORAGE CASK, when loaded with a CANISTER, may be lifted above its lifting height limit or over a hardened surface exceeding Specification 4.2.6 characteristics during TRANSPORT OPERATIONS, provided the lifting device (e.g., Cask Transporter) is designed in accordance with ANSI N14.6 and has redundant drop protection features.

d. The TRANSFER CASK and CANISTER may be lifted to those heights necessary to perform cask handling operations, including CANISTER transfer, provided the lifts are made with structures and components designed in accordance with the criteria specified in Specification 4.3, as applicable.

Table 5-1

TRANSFER CASK and STORAGE CASK Lifting Requirements

ITEM	ORIENTATION	LIFTING HEIGHT LIMIT (in.)
TRANSFER CASK	Horizontal	42 (Note 1)
TRANSFER CASK	Vertical	None Established (Note 2)
STORAGE CASK	Horizontal	Not Permitted
STORAGE CASK	Vertical	11

Notes: 1. To be measured from the lowest point on the TRANSFER CASK (i.e., the bottom edge of the transfer lid)

2. See Technical Specification 5.5.4d.