

## **19 TECHNICAL SPECIFICATIONS**

### **19.1 Conduct of Review**

The Technical Specifications define the conditions that are deemed necessary and sufficient for safe ISFSI use. The objective of the review of the Technical Specifications is to ensure that they are complete, appropriately defined and justified, and supported by the technical disciplines reviewed in the SER.

Requirements for Technical Specifications and for the details that must be included in the Technical Specifications are as follows:

- 10 CFR 72.26 requires that each application include proposed Technical Specifications in accordance with 10 CFR 72.44 and a summary statement of the bases and justifications for these Technical Specifications.
- 10 CFR 72.44(c) requires licenses issued under 10 CFR Part 72 to include Technical Specifications, and those Technical Specifications must include requirements in the following categories: (1) functional and operating limits and monitoring instruments and limiting control settings, (2) limiting conditions, (3) surveillance requirements, (4) design features, and (5) administrative controls.

#### **19.1.1 Functional and Operating Limits**

Functional and operating limits are those limits on fuel handling and storage conditions necessary to protect the integrity of the stored fuel, to protect employees against occupational exposure, and to guard against the uncontrolled release of radioactive materials. The functional and operating limits that will be included in the PFS Facility Technical Specifications are listed in Table 19-1. The table lists the section of this SER which addresses each functional and operating limit.

**Table 19-1: Functional and Operating Limits**

| <b>Technical Specification Item</b> | <b>Functional and Operating Limit</b>      | <b>Associated SER Section</b> |
|-------------------------------------|--------------------------------------------|-------------------------------|
| 2.1.1                               | Fuel Stored at the ISFSI                   | 4.1.1                         |
| 2.2.1                               | Violation of Technical Specification 2.1.1 | NA                            |

Based on an extensive review of the application, the staff concludes that the functional and operating limits listed in Table 19-1 are those placed on fuel to be stored at the PFS Facility and are necessary to protect the integrity of the stored fuel, to protect employees against occupational exposure, and to guard against the uncontrolled release of radioactive materials. The staff concludes, therefore, that the PFS Facility Technical Specifications are in compliance with 10 CFR 72.44(c)(1)(i).

### 19.1.2 Limiting Conditions/Surveillance Requirements

Limiting Conditions for Operation (LCO) are the lowest functional capability or performance levels of equipment required for safe operation. Surveillance Requirements (SRs) provide for inspection and test activities to ensure that the necessary integrity of required systems is maintained, confirmation that operation of the ISFSI is within the required functional and operating limits, and confirmation that the limiting conditions required for safe storage are met. The LCOs and SRs that will be included in the PFS Facility Technical Specifications are listed in Table 19-2. The table also lists the section of the SER that addresses each LCO and SR.

**Table 19-2: Limiting Conditions for Operation/Surveillance Requirements**

| <b>Technical Specification Item</b> | <b>Limiting Condition for Operation</b>                    | <b>Associated Surveillance Requirement</b> | <b>Associated SER Section</b>    |
|-------------------------------------|------------------------------------------------------------|--------------------------------------------|----------------------------------|
| LCO 3.1.1                           | Storage Cask Heat Removal System                           | SR 3.1.1                                   | 6.1.1, 15.1.2.8                  |
| LCO 3.1.2                           | Canister and Transfer Cask Removable Surface Contamination | SR 3.1.2                                   | HI-STORM 100<br>SER Section 10.1 |
| LCO 3.1.3                           | Storage Cask Average Surface Dose Rates                    | SR 3.1.3                                   | 7.1.2.1                          |

The staff confirmed that the LCOs listed in Table 19-2 specify the lowest functional capability for that equipment required for safe operation. In addition, the staff confirmed that the SRs listed in Table 19-2 provide for necessary inspection and testing, confirm operation within appropriate functional and operating limits, and confirm that LCOs for safe storage are met. The staff concludes that the PFS Facility Technical Specifications are in compliance with 10 CFR 72.44(c)(2) and (c)(3).

### 19.1.3 Design Features

The Design Features portion of the Technical Specifications includes items that could have a significant effect on safety if altered or modified, such as materials of construction or geometric arrangements. The Design Features that will be included in the PFS Facility Technical Specifications are listed in Table 19-3. The table also lists the section of this SER that address each Design Feature.

**Table 19-3: Design Features**

| <b>Technical Specification Item</b> | <b>Design Feature</b>                      | <b>Associated SER Section</b>  |
|-------------------------------------|--------------------------------------------|--------------------------------|
| 4.1                                 | Site Location                              | 2.1.1.1                        |
| 4.2.1                               | Storage System                             | 1.1.3                          |
| 4.2.2                               | Storage Capacity                           | 1.1.2, 4.1.1                   |
| 4.2.3                               | Storage Cask Spacing                       | 5.1.3                          |
| 4.2.4                               | Site Temperature Limits                    | HI-STORM 100 SER Section 3.3.2 |
| 4.2.5                               | Cask Transporter                           | 5.1.5.1                        |
| 4.2.6                               | Storage Pads                               | 5.1.3, 2.1.6.4                 |
| 4.3.1                               | Transfer Cask and Canister Lifting Devices | 5.1.4                          |
| 4.3.2                               | Canister Transfer Building Requirements    | 4.1.3, 5.1.3, 5.1.4            |

The staff confirmed that the Design Features listed in Table 19-3 are those, which if altered, could have a significant effect on safety. The staff concludes that the PFS Facility Technical Specifications are in compliance with 10 CFR 72.44(c)(4).

#### **19.1.4 Administrative Controls**

The Administrative Controls portion of the Technical Specifications includes controls on the organization and management, record keeping, review and audit, and reporting processes necessary to assure that the operations involved in storage of spent fuel at the ISFSI are performed in a safe manner. The Administrative Controls included in the PFS Facility Technical Specification are listed in Table 19-4. The table also lists the section of this SER which documents the acceptability for each Design Feature Technical Specification.

**Table 19-4: Administrative Controls**

| <b>Technical Specification Item</b> | <b>Administrative Control</b>                      | <b>Associated SER Section</b> |
|-------------------------------------|----------------------------------------------------|-------------------------------|
| 5.1                                 | Responsibility                                     | 10.1.1                        |
| 5.2                                 | Organization                                       | 10.1.1                        |
| 5.3                                 | PFS Facility Staff Qualifications                  | 10.1.4                        |
| 5.4                                 | Procedures                                         | 10.1.3                        |
| 5.5.1                               | Technical Specifications and Bases Control Program | N/A                           |
| 5.5.2                               | Radioactive Effluent Control Program               | Chapter 14                    |
| 5.5.3                               | Radiation Protection Program                       | Chapter 11                    |
| 5.5.4                               | Onsite Cask Transport Evaluation Program           | Chapter 4, Chapter 5          |
| 5.5.5                               | Pre-operational Testing                            | 10.1.2                        |

The staff confirmed that the Administrative Controls listed in Table 19-4 are those necessary to assure that the operations involved in storage of spent fuel at the ISFSI are performed in a safe manner. The staff concludes that the PFS Facility Technical Specifications are in compliance with 10 CFR 72.44(c)(5) and (d).

#### **19.1.5 License Conditions**

Section 72.44 requires that each license issued under Part 72 includes license conditions which pertain to design, construction, and operation, or which the Commission may include as it deems appropriate. In addition, 10 CFR 72.44 specifies certain license conditions which apply to each license issued under Part 72 whether or not they are explicitly stated in the license. Those conditions are specified in 10 CFR 72.44(b)(1) through (b)(6) and are binding on the PFS Facility license but are not explicitly restated in the PFS Facility license.

Table 19-5 lists the license conditions that the staff identified during its review of the PFS Facility License Application and associated documents. These license conditions are discussed in their associated SER chapter.

**Table 19-5: License Conditions**

| License Condition Description      | Associated SER Chapter |
|------------------------------------|------------------------|
| Sampling of Shipping Cask Internal | Chapter 3              |
| Startup Plan                       | Chapter 10             |
| Financial Assurance                | Chapter 17             |
| Safeguards and Physical Protection | Chapter 18             |

## **19.2 Evaluation Findings**

The staff concludes that the conditions for the PFS Facility identify necessary Technical Specifications to satisfy the requirements of 10 CFR 72.44(c) and (d). The proposed Technical Specifications provide reasonable assurance that the ISFSI will allow safe storage of spent fuel. This finding is based on the regulation itself, appropriate regulatory guides, applicable codes and standards, and accepted practices.

## **19.3 References**

Holtec International. 2000. *Final Safety Analysis Report for the Holtec International Storage and Transfer Operation Reinforced Module Cask System (HI-STORM 100 Cask System)*. Volumes I and II. HI-2002444. Docket 72-1014. Marlton, NJ: Holtec International.

Nuclear Regulatory Commission. 2000b. 10 CFR Part 72 *Certificate of Compliance No. 1014, Amendment 0, for the HI-STORM 100 Cask System*. Docket No. 72-1014. May 31.

Nuclear Regulatory Commission. 2000c. *Holtec International HI-STORM 100 Cask System Safety Evaluation Report*. Docket No. 72-1014. May.

Private Fuel Storage Limited Liability Company. 2000. *Safety Analysis Report for Private Fuel Storage Facility*. Revision 18. Docket No. 72-22. La Crosse, WI: Private Fuel Storage Limited Liability Company.

Private Fuel Storage Limited Liability Company. *License Application for the Private Fuel Storage Facility*. Docket Number 72-22. June 20, 1997, as amended May 22 and August 28, 1998; May 19, August 10, August 27, September 8, September 21, December 16, 1999; and February 2, March 17, April 14, May 8, June 23, July 18, July 27, August 11, August 31, September 14, and September 25, 2000.