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SERVICES CORPORATION

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March 25, 1999

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
Attn: Rulemakings and Adjudications Staff

DOCKET NUMBER
PROPOSED RULE PR 72
(64FR1542)

Dear Sir or Madam:

EXCEL Services Corporation is pleased to have the opportunity to comment on the proposed rulemaking to add the Holtec International HI-STAR 100 cask system to the list of NRC approved casks for spent fuel storage in 10 CFR 72.214. EXCEL Services Corporation supports the addition of the Holtec International HI-STAR 100 cask system to the list of NRC approved casks for spent fuel storage in 10 CFR 72.214 and believes that Holtec has prepared an outstanding application. EXCEL Services Corporation presents the attached comments to further improve the Technical Specifications proposed with the Certificate of Compliance.

EXCEL Services Corporation is willing to discuss our comments with the NRC or other interested parties. Please call me at (301) 984-4400 if you have any questions regarding this or any other matter.

Sincerely,

Donald R. Hoffman
President

DRH:lw

11921 Rockville Pike, Suite 100 ■ Rockville, Maryland 20852 USA ■ (301) 984-4400 ■ (301) 984-7600 Fax

EXCEL

EXCEL Services Corporation
Comments on the Proposed Certification of Compliance Technical Specifications
For the Holtec International HI-STAR 100 Cask Storage System

Background

EXCEL Services Corporation has played a leading role in the development and implementation of Improved Technical Specifications (ITS) for nuclear power plants. EXCEL Services Corporation was instrumental in the negotiations leading to the issuance of the NRC's ITS NUREGs (NUREG-1430 through –1434) and has assisted many utilities in the development and implementation of ITS.

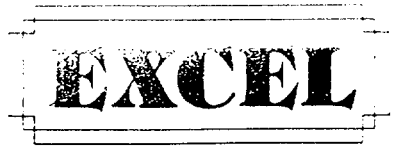
EXCEL Services Corporation, working with Virginia Power and the NRC, developed the North Anna ISFSI Technical Specifications in 1998. The North Anna ISFSI Technical Specifications were the first set of ISFSI Technical Specifications that followed the ITS format and content guidelines. The North Anna ISFSI ITS were provided to several cask manufacturers, including Holtec, as a starting point for the development of their cask-specific Technical Specifications.

EXCEL Services Corporation had several design goals in developing the North Anna ISFSI ITS. First, the resulting Technical Specifications should be easy to use for power plant operators familiar with the power plant ITS. Therefore, ITS format, level of detail, and wording conventions were used. The North Anna ISFSI ITS included only operational restrictions. Design restrictions and assumptions were not included in the Technical Specifications. The Use and Application rules presented in power plant ITS Sections 1.2, 1.3 and 1.4 were adopted with only minimal changes. The LCO and SR Applicability rules were adopted with placeholders for items that did not apply.

In developing the North Anna ISFSI ITS, EXCEL Services Corporation placed the cask-specific information (such as required vacuum during drying, backfill pressures, and maximum lifting heights) in tables thus allowing a set of standard specifications to be used with multiple cask designs. The goal of this decision was to present the North Anna ISFSI ITS as a standard which could be adopted for many cask designs by revising the tables and not the specifications. We believed that this was important as multiple cask designs may be employed at a given reactor site and commonality between the Technical Specifications would facilitate operator training, procedure development, and ISFSI operations.

The Industry and NRC agree on the need to further improve the content, format and detail of the Technical Specifications for Casks and ISFSIs. In order to do so, there are some basic philosophical issues that need to be resolved. These include:

1. Ensuring the Technical Specifications focus on those requirements necessary to operational safety. This requires establishment of a firm set of criteria for determining which requirements are appropriate for the Technical Specifications attached to the License or Certificate of Compliance, and which requirements are more appropriate to be under licensee control.



2. Establishing the Technical Specification Bases as a document controlled under 10 CFR 72.48.

3. Enhancing the content, format, and detail of those requirements being retained in the Technical Specifications so as to focus those requirements on operational safety.

4. Ensuring adequate programmatic and procedural controls are in place to address those design features and other requirements of the Casks and ISFSI that are placed under licensee control to ensure they are appropriately addressed.

EXCEL Services Corporation's comments on the Holtec International HI-STAR 100 Cask Systems reflect these important design goals.

EXCEL Services Corporation wishes to emphasis our objection to the inclusion of a list of exceptions to Codes and Standards in Chapter 4.0, Design Features. As stated above, the Technical Specifications should be focused on operational safety, not design and manufacturing details.

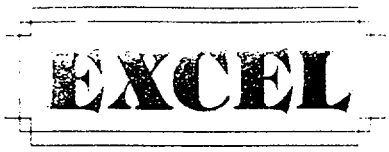
Chapter 1.0 – Use and Application

Several of the Defined Terms are used only in Section 2.0. Standardization could be increased by substituting the definitions where the terms are used or providing explanatory information in the Bases for the terms DAMAGED FUEL ASSEMBLY, DAMAGED FUEL CONTAINER, FUEL DEBRIS, INTACT FUEL ASSEMBLY, and PLANAR-AVERAGE INITIAL ENRICHMENT instead of making them defined terms.

The fact that Holtec had to include design-specific equipment names in the definitions in order to adequately support the remaining Technical Specifications is an example of the need for an industry / NRC effort to standardize ISFSI Technical Specifications. The experience of the nuclear power industry is that plant and design specific definitions interfere with sharing of experience and complicates inspection and enforcement.

There is a problem with the definition of TRANSPORT OPERATIONS. As written, TRANSPORT OPERATIONS are limited to lifting with the transporter. However, the drop analysis is not limited to drops from the transporter and lifting of a cask with other devices is not prohibited. The TRANSPORT OPERATION definition should be revised similar to, "TRANSPORT OPERATIONS include all licensed activities performed on a cask loaded with one or more fuel assemblies when it is being moved. TRANSPORT OPERATIONS do not include cask movement using a lift device governed by 10 CFR Part 50 (e.g., the spent fuel crane)." Changes to the definition of LOADING OPERATIONS and UNLOADING OPERATIONS are also required to reflect the change.

In Examples 1.3-2 and 1.3-3, Required Action B.1 and B.2, the word "action" should be capitalized.



Section 2.0 – Functional and Operating Limits

Many of the restrictions contained in Section 2.0 related to fuel assembly acceptance criteria do not represent "Functional and Operating Limits," but design and analysis limits, and should be moved to the TSAR. The level of detail proposed in Section 2.0 far surpasses that in any existing power plant or ISFSI Technical Specification and is not consistent with the requirements contained in the North Anna ISFSI ITS. 10 CFR 50.36(b) describes the Technical Specifications as, "derived from the analyses and evaluations included in the safety analysis report." The Technical Specifications are not intended to replace the safety analysis report, or in this case, the TSAR, as the controlling safety document. The TSAR contains detailed information on the assumptions made in determine the allowable fuel assembly limits. The licensee is required by 10 CFR 72.212(b) to perform written evaluations that the conditions in the Certificate of Compliance are met, which includes confirmation that the assumptions made in the TSAR are applicable. Therefore, EXCEL Services Corporation recommends that the following information be relocated from the Technical Specifications and controlled in the TSAR:

Table 2.1-1	Initial Enrichment, Maximum Planar-Average Initial Enrichment, Initial Maximum Rod Enrichment, Nominal Fuel Assembly Length, Nominal Fuel Assembly Width, Fuel Assembly weight, Nominal Original Fuel Assembly Length, Nominal Original Fuel Assembly Width, Fuel Debris Weight
Table 2.1-2	In total
Table 2.1-3	In total

The titles of Table 2.1-1, 2.1-2, 2.1-3, and 2.1-4 are incorrectly formatted. The correct title format contains the page number and total number of pages and appears on each page of the table in the format:

Table 2.1-1 (page 1 of 3)
Fuel Assembly Limits

Section 3.0 – LCO and SR Applicability

LCO 3.0.3, LCO 3.0.6, and LCO 3.0.7 were changed from "Not applicable to an ISFSI" to "Not applicable to an SFSC system." While changing from "ISFSI" to "SFSC" is a correct distinction, a more generic approach would be to simply state "Not applicable."

Specification 3.1.1 – MPC Cavity Vacuum Drying Pressure, and
Specification 3.1.2 – OVERPACK Annulus Vacuum Drying Pressure

There appears to be no reason to create two specifications for these items. A single specification and two drying requirements, "MPC Cavity Vacuum Drying Pressure" and "OVERPACK Annulus Vacuum Drying Pressure," in Table 3-1 would eliminate the additional specification and allow removal of the manufacturer-specific nomenclature from the specification. This will increase consistency and standardization.

Specification 3.1.5 – MPC Helium Leak Rate, and
Specification 3.1.6 – OVERPACK Helium Leak Rate

There appears to be no reason to create two specifications for these items. A single specification and two leak rate requirements, "MPC Helium Leak Rate" and "OVERPACK Helium Leak Rate," in Table 3-1 would eliminate the additional specification and allow removal of the manufacturer-specific nomenclature from the specification. This will increase consistency and standardization.

Specification 3.1.7 – SFSC Lifting Requirements

Note the proposed change to the definition of TRANSPORT OPERATIONS described in the Section 1.0 comments. This will affect the applicability of Specification 3.1.7.

It is not necessary to state in the LCO that the OVERPACK is "loaded with spent fuel" as the definition of TRANSPORTION OPERATIONS specifies movement of a cask containing spent fuel.

The Frequency of SR 3.1.7.1 is incorrect. As written, the Frequency would apply only when a cask is being moved to or from the ISFSI, and would not apply at other times, such as when moving casks within the ISFSI. However, the drop analysis applies any time the cask is suspended. The Frequency should be revised similar to, "Prior to movement of an SFSC."

Specification 3.1.8 – Fuel Cooldown

This specification contains several conflicts. The LCO contains Applicability information (e.g., "prior to initiation of MPC re-flooding operations.").

The Required Action Completion Time is "Prior to initiating MPC re-flooding operations." The Required Action can only be entered if the LCO has not been met and the LCO applies "prior to initiation of MPC re-flooding operations." Therefore, the Completion Time cannot be met and, as a result, there are no compensatory measures in the ACTIONS. In effect, the ACTIONS simply state, "don't do this."

The Note, "The LCO is only applicable to wet UNLOADING OPERATIONS" is an LCO Note (LCO and Applicability Notes follow the modified section). In the Bases, it is described under Applicability. Also, the wording of the Note should be changed to, "Only applicable during wet UNLOADING OPERATIONS" for consistency with the ITS Writer's Guide (NUMARC 93-03).

Given the complexities of specifying this evolution and the rarity of its use, we recommend eliminating the specification. This information should be specified in the TSAR and included in the implementing procedures for re-flooding cask.

Specification 3.2.1 – OVERPACK Average Surface Dose Rates

The figure should not be included in the specification. The location of measurements is an implementing detail that should be described in the Bases. If necessary, descriptive wording could be added to the LCO, such as, "in limiting locations" with those locations described in the Bases.

Table 3-1 - MPC Model-Dependent Limits

Note 1 of Table 3-1 should be relocated to the Bases of the referenced Specification. Helium purity is an implementing detail that is not appropriate for the Technical Specifications. Also, the footnote format is incorrect. See the power plant ITS NUREGs (1430 - 1434), Table 3.3.1-1 for an example of correct footnote format.

The title of Table 3-1 is incorrectly formatted. The correct title format contains the page number and total number of pages and appears on each page of the table in the format:

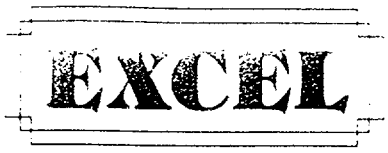
Table 3-1 (page 1 of 1)
MPC Model-Dependent Limits

Chapter 4.0 - Design Features

Sections 4.1 and 4.2 should be eliminated. They contain no useful information.

EXCEL Services Corporation believes that Section 4.3, Codes and Standards, is inappropriate for the Technical Specifications and strongly encourages the NRC to eliminate the Section from the Technical Specifications. 10 CFR 72.48(c)(4) defines Design Features. It states, "Design Features include items that would have a significant effect on safety if altered or modified, such materials of construction and geometric arrangements." The Technical Specifications apply to the user of a cask, not to the manufacturer. The user of a cask cannot "alter or modify" the items described in the exceptions to Codes and Standards. This information is appropriate to the TSAR, not the operating limits applied in the Technical Specifications.

Section 4.4, Site Specific Parameters and Analysis, should be eliminated. 10 CFR 72.212(b)(3) requires the user of the cask to review the SAR and the NRC Safety Evaluation Report to



determine whether or not the reactor site parameters envelope the cask design bases. 10 CFR 72.212(b)(2) requires written evaluation of the storage pads and areas. The information in Section 4.4 is a duplication of these existing regulatory requirements and should not be included in the Technical Specifications.

Section 4.5, Design Specifications, should be eliminated. These parameters are under the control of the manufacturer, not the operator of the cask and most cannot be verified in the field. These design parameters are appropriate for the TSAR, not the operational limitations in the Technical Specifications.

Section 4.6, Training Module, should be eliminated. First, this information is not a Design Feature, but an administrative requirement appropriate for an Administrative Controls chapter. Further discussion of the Administrative Controls is below. However, as stated in the first sentence of the section, a training program is required under 10 CFR 72.212(b)(6). Repeating that information in the Technical Specifications adds no value and it is unclear why only training was selected for detailed description in the Technical Specifications when 10 CFR 72.212(b)(6) also describes the emergency plan, quality assurance program, and radiation protection program.

Section 4.7, Pre-Operational Testing and Training Exercises should be eliminated. First, this information is not a Design Feature, but an administrative requirement appropriate for an Administrative Controls chapter. Further discussion of the Administrative Controls is below. In addition, these one-time tasks are appropriate to the TSAR, not the operational restrictions of the Technical Specifications. Pre-operational testing and training exercises do not have a direct effect on safety, as the cask used does not contain fuel.

Section 4.8, Special Requirements for First System in Place, should be moved to the Administrative Controls.

Administrative Controls

Administrative Controls are required in all Technical Specifications in accordance with 10 CFR 72.44(c) and 10 CFR 72.44(c)(5). Administrative Controls include the organization and management procedures, recordkeeping, review and audit, and reporting necessary to assure that the operations involved in the storage of spent fuel in an ISFSI are performed in a safe manner. Previous versions of the Technical Specifications proposed by Holtec, for example, Draft Revision 8, contained Administrative Controls which are appropriate, except as noted below.

Two items must be included in Administrative Controls.

- The Technical Specifications must state how the requirements in 10 CFR 72.44(d) are met. 10 CFR 72.44(d) requires that there be Technical Specifications on radioactive effluents. This is satisfied in Holtec Draft Revision 8 with Section 5.5.2, Radioactive Effluent Control Program. Without such a section, the proposed Technical Specifications would not satisfy the requirements of 10 CFR 72.44(d).

- The Technical Specifications must state how the Bases are controlled. The Technical Specification Bases Control Program contained in the Administrative Controls of the power plant ITS (NUREGs 1430 - 1434) should be adapted to the ISFSI Technical Specifications. This information was not included in Holtec Draft Revision 8 and should be added. Clear guidance must be provided on the modification of the expanded Technical Specifications Bases.