



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 5, 2001

MEMORANDUM TO: Susan F. Shankman, Deputy Director
Licensing and Inspection Directorate
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

FROM: Christopher P. Jackson, Project Manager
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

SUBJECT: SUMMARY OF FEBRUARY 21, 2001, MEETING WITH
THE NUCLEAR ENERGY INSTITUTE ON THE STANDARD
TECHNICAL SPECIFICATIONS

On February 21, 2001, representatives of the Nuclear Regulatory Commission (NRC) and the Nuclear Energy Institute (NEI) met to discuss the comments on the draft dry cask storage standard technical specifications (TS). The NRC and NEI had been working on developing a set of standard technical specifications for dry storage casks and the NRC had forwarded a set of dry cask standard technical specifications to NEI for comment on December 21, 2000. An attendance list is included as Attachment 1. Attachment 2 includes the NEI draft final comments on the standard technical specifications which were used as discussion points during the meeting. This meeting was noticed on February 8, 2001.

The meeting commenced with Christopher Jackson, the NRC project manager for this effort, providing a brief introduction, and describing the purpose of the meeting. NEI had committed to providing a consolidated set of industry comments on the standard TS, issued on December 21, 2000. The meeting was held to provide NEI and other industry representatives an opportunity to discuss potential concerns with standard TS, prior to finalizing the comments. A draft final set of comments, provided by NEI, were used as talking points during the meeting.

Following the introductory statements by the NRC, discussions were held on potential NEI comments. Some of the discussions focused on how evaluation methodologies would be submitted for NRC review and whether a standard format should be used. The NRC agreed that consistent and uniform industry guidance would be helpful, and encouraged the industry to take the lead in developing guidance on evaluation methodology applications. The discussions between the NRC and industry representatives resulted in a better understanding, by all, of the important issues. As a result of the discussions, NEI indicated that some of their comments may be modified or removed and would subsequently be formally submitted to the NRC.

March 5, 2001

S. Shankman

-2-

During the course of the meeting, the staff made no determination regarding the acceptability of the recommendations made by NEI and industry, and no regulatory decisions were made.

- Attachments: 1. Attendance List
2. NEI Draft Final Standard TS Comments

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EEaston SGagner, OPA NRC Attendees

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*See previous concurrence

OFC	SFPO	E	SFPO	E	SFPO	U		
NAME	CJackson	CJ	EZiegler	EZ	McGraw			
DATE	3/1/2001		3/2/01		3/5/01			

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-2-

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Attachments: 1. Attendance List
2. NEI Draft Final Standard TS Comments

February 21, 2001, Meeting between the Nuclear Energy Institute
and Nuclear Regulatory Commission

ATTENDANCE LIST

<u>Name</u>	<u>Affiliation</u>
Wayne Hodges	NRC/SFPO
Earl Easton	NRC/SFPO
Jack Guttmann	NRC/SFPO
Christopher Jackson	NRC/SFPO
Bernie White	NRC/SFPO
Ken Erwin	NRC/SFPO
Carl Withee	NRC/SFPO
Randy Hall	NRC/SFPO
Henry Lee	NRC/SFPO
Alan Nelson	NEI
Bill Lee	NAC
Brian Gutherman	Holtec
George Jobson	GNSI
Randy Robins	Dominion, Va. Power
John Vorees	BNFL Inc.
Keith Waldrop	Duke Power
Rick Plasse	Entergy

**February 21, 2001, Meeting between the Nuclear Energy Institute
and Nuclear Regulatory Commission**

NEI Draft Final Standard TS Comments

Comments on Standardized Technical Specifications
For the NRC Sample Storage Cask
February 20, 2001

General Comments

The STS appear specific to steel "container systems." In particular the general descriptions and the definitions could not be applied to CASTOR/CONSTOR dual use casks. It is requested that the NRC make the introductory sections more generic (e.g. formally recognizing that other systems exist to which the same specifications can be applied) so as not to exclude other technical approaches, especially those meeting the same basic requirements but adding more features.

Certificate of Compliance

Paragraph 2 of the sample Certificate of Compliance, Operating Procedures, omits mention of the procedures for unloading, while Paragraph 8, Pre-Operational Testing and Training Exercise, requires a dry run of unloading operations. The two paragraphs should be consistent.

Section 1.1 DEFINITIONS

- a. Several terms are unique to the type of Dry Storage System being licensed (i.e., vendor used) and should be bracketed and left to be defined by the vendor. Examples are:

Overpack
Canister
Transfer Cask
- b. Some terms are already defined and used in 10 CFR 72 (e.g., SFSC) and should not be redefined in the Technical Specifications. A note stating this should be provided at the beginning of the **DEFINITIONS** Section.
- c. A definition for "**OPERABLE, OPERABILITY,**" should be provided consistent with 10 CFR 50 STS.
- d. The definition for **INTACT FUEL ASSEMBLY** should be modified as follows to allow for those assemblies that never had fuel rods in certain locations (that appear to be missing fuel rods) to be considered intact fuel assemblies, and those fuel assemblies that are supposed to have fuel rods in a specific location but don't need the dummy rods:

"An **INTACT FUEL ASSEMBLY** is a fuel assembly ... means. A fuel assembly without fuel rods in fuel rod locations shall not be classified as an **INTACT FUEL ASSEMBLY** unless solid Zircaloy or stainless steel rods are used to displace an amount of water greater than or equal to that displaced by the fuel rod(s), or the missing rods have been properly and safely addressed."

- e. The definition of **OVERPACK**, if used, should be revised to delete, "... ventilated air flow to promote ...," because not all overpacks are ventilated. The use of **OVERPACK** should be reconsidered since it is redundant with SFSC as discussed above.

Section 2.0 **APPROVED CONTENTS**

This is a much more appropriate title for this section and much improved method for dealing with fuel parameters. The SAR is the correct document for specifying the fuel parameters, and permitting changes with NRC approval outside of rulemaking certainly improves the process. There are some concerns with this section that should be clarified. For example:

- a. It would be helpful if the basis for and level of detail of each parameter be provided as described by the Staff in the meeting on January 23, 2001. A detailed basis is not required, for example stating that the parameter is used in criticality analyses, source term determination, or thermal calculations would be appropriate.
- b. If a separate document is to be used to control fuel parameters, the requirements for that document and the controls on changes to it should be clearly identified.

Section 3.0 **LIMITING CONDITIONS FOR OPERATION (LCO) APPLICABILITY**

Deletion of **LCO 3.0.6** and **LCO 3.0.7** because they are not applicable but not deleting **LCO 3.0.5** is inconsistent. However, **LCO 3.05** should be included and indicated as being applicable since there could be cases where equipment must be returned to service under administrative control to demonstrate compliance with **SURVEILLANCE REQUIREMENTS (SR)** or an **LCO**. Without implementation of **LCO 3.0.5**, this would be considered a violation of technical specifications.

Several of the **ACTION CONDITIONS B** state, "Required Action A.1 OR A.2 and associated Completion Time not met." In order to meet the goal of closely replicating the format of the Part 50 standard technical specifications (such as NUREG-1432 for CE plants), it is recommended that these **CONDITIONS** be

reworded as follows: "Required Action and associated Completion Time not met" (as in the reactor STS). Most of the users of the cask technical specifications will be 10 CFR 50 licensees, and many of these licensees have converted to reactor standard technical specifications, and therefore a consistent format would enhance human performance.

Section 3 LCOs

- a. In general, the **LCOs** present several difficulties in interpretation and implementation. Most requirements identified in the **LCOs** in the draft NUREG are design and/or fabrication endpoints, are not conducive to **LCOs**, and are more appropriately addressed by programs since corrective actions within an identified time frame are not necessary nor practical. Although there are notes at the beginning of many of the **LCOs** stating that they may be moved to programs, there is no discussion of the bases or criteria for such a relocation. In addition, many of the **SURVEILLANCE REQUIREMENTS (SRs)** can not be performed until the actions addressed by the **LCO** are completed which conflicts with **SR 3.0.4**. This would require a licensee to immediately enter an **ACTION CONDITION** whenever the **APPLICABILITY** was entered. A specific example follows:

LCO 3.1.1 and LCO 3.1.2: SR 3.0.4 requires the **LCO** to be met prior to entry into the applicable mode (**APPLICABILITY**). Compliance with the **LCO** is demonstrated by performance of the **SR**. However, based upon the definition of **LOADING OPERATIONS**, the **SR** cannot be performed until **LOADING OPERATIONS** is well underway rather than before for both of these **LCOs**.

- b. The numbering of **SRs 3.1.1** and **3.1.2** should be **3.1.1.1** and **3.1.2.1**, respectively.
- c. The surveillance for **SR 3.1.1.1** and **3.1.2.1** should be changed from, "... shall not exceed [x] days," to, "... is \leq [x] days."
- d. For **LCOs 3.1.1, 3.1.2, 3.1.3, 3.2.1, and 3.3.2**, Required Actions B.1 should state "Place **CANISTER** in [the safe condition]" with a Completion Time of Immediately. As presently worded, the Required Actions imply that a licensee would only have to begin these actions immediately which may not result in a safe condition. In addition, the use of the phrase, "in a planned and orderly fashion," is redundant with the definition of immediately.

e. Although **LCO 3.3.1** is required only for those casks that take credit for boron for criticality control, there are several problems with the present wording.

- (1) The **LCO** contains the specific words, "During loading and while loaded, ..." which are duplicative of the **APPLICABILITY**. It is recommended these words be deleted from the **LCO**.
- (2) Replace "at least" in the **LCO** with " \leq " and replace "ppm" with "ppmb."
- (3) The first **CONDITION** of the **ACTIONS** should be A, not B.
- (4) Required Action A.1 should be broader, such as "Suspend fuel movement and other reactivity additions." Required Action A.2 should be "Restore boron concentration to within the limit" and the Completion Time should be "Immediately." Removal of fuel assemblies is not always the safe action; sometimes removal of a fuel assembly can add reactivity since it is replaced with water when it is removed.
- (5) The Frequency for **SR 3.3.1.1** and **SR 3.3.1.2** should be revised to: "every 48 hours thereafter while water and at least one fuel assembly are in the canister."
- (6) Replace the current Applicability with: "During **LOADING OPERATIONS** and **UNLOADING OPERATIONS** with water and at least one fuel assembly in the [**CANISTER**]."

f. **LCO 3.3.2** contains the words, "In a water filled condition, ..." which are duplicative of the **APPLICABILITY**. It is recommended these words be deleted from the **LCO**.

g. **LCO 3.3.2 ACTIONS:**

- (1) **REQUIRED ACTION A.1** contains two actions but only one is specified as a limit in the **LCO**, i.e., water temperature. If the water temperature is restored to within the limit, the **LCO** is met. It is recommended that "establish water circulation in the canister" be deleted.
- (2) **REQUIRED ACTION B.1** implies that the licensee only has to begin steps to return the canister to a safe condition when the action should be simply to return the canister to a safe condition. It is recommended that "Begin steps to" be deleted.

Section 4.0 DESIGN FEATURES

Items 4.1.1, 4.1.2, and 4.3 are inappropriate for the Technical Specifications and should be provided only in the SAR.

Section 5.0 ADMINISTRATIVE CONTROLS

Section 5 should contain the requisite program requirements, and can include the NRC-approved methodology for determining the site-specific numerical limits for such parameters as vacuum drying time, helium leakrate limit, etc. An applicant or licensee wanting to remove the numerical limits from their LCOs must establish them as programs and obtain NRC approval of the method via 10 CFR 72.48 process.

Section 5.1.1 requires that a program shall be established that includes the implementation of the requirements of 10 CFR 72.44(d). However, according to 10 CFR 72.13, the requirements of 10 CFR 72.44(d) do not apply to general licensees. This proposed standard technical specification requirement should be bracketed and identified as only needed for a specific licensee's ISFSI technical specifications.

In addition, if a Cask is considered to be leaktight, an effluent monitoring program is unnecessary.