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BNFL Fuel Solutions

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September 22, 2000
BFS/NRC 00-071
Docket No. 72-1026
File No. CMPC.0006.2

Secretary
US Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Attention: Rulemakings and Adjudications Staff

Subject: Rulemaking Comments on the FuelSolutions™ Spent Fuel Storage System

References:
1. Proposed Rule: List of Approved Spent Fuel Storage Casks: FuelSolutions™ Addition, Federal Register 65FR42647, dated July 11, 2000
2. Safety Analysis Reports for the FuelSolutions™ System, Revision 4 (Docket No. 72-1026)

The purpose of this letter is to provide comments from BNFL Fuel Solutions (BFS) and our FuelSolutions™ utility customer, Consumers Energy, on the Reference 1 Proposed Rulemaking for the FuelSolutions™ Storage System.

The comments provided in Attachment 1 request changes to the draft Certificate of Compliance (CoC) including the Technical Specifications and the preliminary Safety Evaluation Report (SER).

Attachment 2 provides comments regarding editorial corrections to the Reference 2 SARs.

We look forward to prompt completion of Rulemaking activities and issuance of a final SER/CoC for this system.

Should the NRC Staff have any questions, please contact me at (831) 430-5220.

Sincerely,

Robert D. Quinn
Manager of Operations

Template = SECY-067

SECY-02

cc: Ms. Mary Jane Ross-Lee, NMSS
Mr. John Broschak – Consumers Energy
Ms. Suzanne Leblang – Consumers Energy (Palisades)
Mr. Michael Bourassa – Consumers Energy (Big Rock Point)

Attachment 1

Comments on FuelSolutions™ Draft Certificate of Compliance
(including Technical Specifications and preliminary Safety Evaluation Report)

Draft Certificate of Compliance

In 1.b, 2nd paragraph, it is requested that the statement "The ten unfueled guide tube positions are mechanically blocked to prevent loading in these positions" be revised to read "The ten unfueled cell locations are mechanically blocked to prevent loading in these positions." This terminology agrees with that in the previous sentence, and reflects the fact that there are no guide tubes in the unfueled cell locations.

Technical Specification for the FuelSolutions™ W21 Canister

1. It is requested that LCO 3.3.2 (Storage Cask Temperatures During Storage) be revised to modify REQUIRED ACTION B.2 to allow for the use of alternative means to be developed by the licensee to bring the CASK into compliance with the LCO. Alternatively, REQUIRED ACTION B.2 should be deleted and replaced with a requirement for the licensee to develop the means to meet the LCO and notify NRC of the action taken. The specification of a specific method to meet the LCO when there are other alternatives available is overly restrictive and may not be feasible in some conditions. This will permit decommissioning facilities to meet the LCO in the absence of a spent fuel pool. In addition, the additional flexibility can better satisfy ALARA by mitigating the personnel exposure associated with the removal of spent fuel from the CANISTER.
2. It is requested that LCO 3.3.3 (Storage Cask Temperatures During Horizontal Transfer) be revised to modify REQUIRED ACTION C.1 to allow for the use of alternative means to be developed by the licensee to bring the CASK into compliance with the LCO. Alternatively, REQUIRED ACTION C.1 should be deleted and replaced with a requirement for the licensee to develop the means to meet the LCO and notify NRC of the action taken. The specification of a specific method to meet the LCO when there are other alternatives available is overly restrictive and may not be feasible in some conditions. This will permit decommissioning facilities to meet the LCO in the absence of a spent fuel pool. In addition, the additional flexibility can better satisfy ALARA by mitigating the personnel exposure associated with the removal of spent fuel from the CANISTER.

Technical Specification for the FuelSolutions™ W74 Canister

1) It is requested that LCO 3.3.2 (Storage Cask Temperatures During Storage) be revised to modify REQUIRED ACTION B.2 to allow for the use of alternative means to be developed by the licensee to bring the CASK into compliance with the LCO. Alternatively, REQUIRED ACTION B.2 should be deleted and replaced with a requirement for the licensee to develop the means to meet the LCO and notify NRC of the action taken. The specification of a specific method to meet the LCO when there are other alternatives available is overly restrictive and may not be feasible in some conditions. This will permit decommissioning facilities to meet the LCO in the absence of a spent fuel pool. In addition, the additional flexibility can better satisfy ALARA by mitigating the personnel exposure associated with the removal of spent fuel from the CANISTER.

2) It is requested that LCO 3.3.3 (Storage Cask Temperatures During Horizontal Transfer) be revised to modify REQUIRED ACTION C.1 to allow for the use of alternative means to be developed by the licensee to bring the CASK into compliance with the LCO. Alternatively, REQUIRED ACTION C.1 should be deleted and replaced with a requirement for the licensee to develop the means to meet the LCO and notify NRC of the action taken. The specification of a specific method to meet the LCO when there are other alternatives available is overly restrictive and may not be feasible in some conditions. This will permit decommissioning facilities to meet the LCO in the absence of a spent fuel pool. In addition, the additional flexibility can better satisfy ALARA by mitigating the personnel exposure associated with the removal of spent fuel from the CANISTER.

Draft Safety Evaluation Report

1) It is requested in Section 4.1, under BFS Methodology for Calculating Maximum Allowable Cladding Temperature, that a clarifying statement be added, stating that for PWR and BWR fuel assemblies with burnups under 45,000 MWD/MTU cladding oxide thickness measurement is not required. The last sentence in the 6th paragraph of this section notes that the strain limit is defendable for spent fuels having oxide thicknesses less than 70 micrometers, irrespective of burnup. The last paragraph of this section states that for fuel with burnups between 45,000 and 60,000 MWD/MTU the cladding thickness must be measured. A statement that this is not required for fuels with burnups less than 45,000 MWD/MTU would clarify the requirements for lower burnup fuels.

2) Editorial clarification – in Section 5.1.1, 1st sentence of the 1st paragraph, the term "steel-lead-water-steel" includes a redundant term "steel." The composite shielding of the transfer cask includes the three materials listed (i.e., steel-lead-water).

3) Editorial clarification – in Section 5.3.1, under Adjoint Model, the word "discrete" is misspelled.

4) In Section 8.1.4, the time values listed in the 5th, 6th and 7th sentences are for the W21 canister. The values for the W74 canister are seven hours, four hours, and four hours, respectively. It is requested that the SER be revised either to clarify that the values shown are for the W21 canister or to report the values for both canisters explicitly.

5) In Section 8.3, the general actions for canister unloading listed in the 2nd sentence are not in the actual sequence of operations as reported in the WSNF-200 SAR, Section 8.2.3. To avoid confusion, it is requested that the sentence be revised to list the actions in sequence, as follows:

   a) Move the action "lowering the cask into the pool" to after the action "removing the canister lid"

   b) Change "removing the canister lid" to "removing the canister lids" (note that there are two lids – inner and outer)

   c) Add "removing the shield plug" before "and removing the fuel assemblies from the storage basket"

6) Editorial clarifications - in Section 10.3.2, 3rd paragraph, note the following:

   a) 4th sentence – per WSNF-200 SAR Table 10.4-8, the dose rate listed is calculated for one year. The dose for 30 days would need to be factored from the values presented as follows: take 1/12 of the 64 cask accident direct and of the 63 cask normal release, then add the 1 cask accident release (approx. 931 mrem for 30 days). This comment also affects the conclusion statement in the 8th sentence.

   b) 5th sentence – per WSNF-200 SAR Section 10.4.3, the maximum transfer cask loss of neutron shield accident dose is 25.3 mrem per 24 hours, not per hour.

   c) 6th sentence – delete the words "of the WSNF-200 SAR" from the end of the sentence. The staff's review is documented in the SER, not the WSNF-200 SAR.

   d) 7th sentence – the 751 mrem dose was calculated for the bone, not the lung.

Attachment 2

Comments on FuelSolutions™ Storage System Safety Analysis Report

1) Editorial comment – In WSNF-200 SAR Table 12.1-1, revise the following references to the Technical Specifications:
   a) Under Radiological Protection, 3.4.1 should be 5.3.5, and 3.6.1 should be 3.5.1.
   b) Under Structural Integrity, 3.5.1 should be 3.4.1.