



State of New Jersey

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Robert C. Shinn, Jr.  
Commissioner

July 27, 2001

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001  
Attn: Rulemaking and Adjudication's Staff

Subject: "List of Approved Spent Fuel Storage Casks: Standardized  
NUHOMS-24P and 52B Revision" (June 29, 2001 Federal  
Register Notice)

The U.S Nuclear Regulatory Commission (NRC) is in the process of amending 10 CFR Part 72 to include a revision to the Standardized NUHOMS 24P and 52B, which stores high level radioactive waste, to include a new dry storage cask – the 61BT. This new design stores more high level radioactive waste than the 52B and the new design can be used to transport high level radioactive waste, something that the previous design could not. In light of the federal register notice and having the benefit of knowing that this cask design may be used at Oyster Creek, we undertook a review of the NRC's Safety Evaluation Report (SER) for the 61BT, a review of the Transnuclear's Safety Evaluation Report submitted to the NRC for the 61BT, and a review of the NUHOMS Final Safety Analysis Report.

As part of our review, we met with staff from AmerGen, Exelon, and Transnuclear to discuss the 61BT dry storage cask and NUHOMS system. They provided us with important feedback and information regarding our questions, comments, and concerns from a user and licensee point of view. However, another important part of our review includes discussions with the relevant personnel from the NRC.

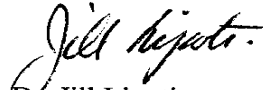
We are working with the staff of the Spent Fuel Project office to set up a meeting of the correct individuals from the NRC staff, however, a meeting with the NRC prior to the federal register notice deadline of July 30, 2001 seems unlikely. We therefore are requesting an extension to the deadline in order to meet with the NRC to discuss our questions, comments, and concerns.

The storage of high level radioactive waste is an important issue in the State of New Jersey. We have received numerous comments from the public during our annual public hearings at each of the Counties affected by emergency planning around the nuclear power plants. Attached are the State of New Jersey's Bureau of Nuclear

Engineering's general and specific comments developed so far regarding the TN61BT cask. If we are able to meet with the relevant NRC staff, we have confidence that we will be able to have most, if not all, of our questions answered. The ensuing discussion may raise additional questions, but we believe it will be a beneficial discussion for the NRC. However, if an extension to the deadline is not granted, then please consider these questions submitted for the record, and answer them in your response to comment document.

We hope that you can accommodate our request as we prepare for the first-time storage of high level radioactive waste in a dry storage system in the State of New Jersey. Please contact Kent Tosch, Manager, Bureau of Nuclear Engineering at 609-984-7440, if you have any questions or need further clarification.

Sincerely,



Dr. Jill Lipoti  
Assistant Director  
Radiation Protection Programs  
NJ DEP

c: Distribution

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**New Jersey Department of Environmental Protection  
Items for Discussion with NRC Regarding TN 61 BT  
Canister**

GENERAL

1. We would like to discuss the NRC's Role and Division of Responsibility now, and through loading of spent fuel. Includes division of responsibility amongst Headquarters, Region, NRR, NMSS, and Resident Inspectors.
2. We would like to discuss the NRC expected involvement during the dry storage process commencing at Oyster Creek. We understand that the NRC conducted an inspection of the QA program of Transnuclear West, the licensee of the TN61BT, located in San Jose, CA. We also understand that the NRC will not inspect the fabrication facility in Japan.
3. We would like to discuss the status of NRC review of the TN 61BT canisters for transportation.
4. When will the NRC make available the NRC Safety Evaluation Report for the transportation license review?
5. We would like to discuss why damaged fuel will not be permitted in the TN61BT.
6. We would like to discuss and establish NRC/NJ DEP interface for current and future issues and questions regarding the TN 61BT canisters, the NUHOMS modules and other issues that arise during this important project.
7. We would like to discuss the requirement for the first of a kind calculation and monitoring and reporting requirements and NRC response to anomalies, if any occur.
8. Concerning the C of C, the expiration date is listed as 1/23/2015, when is the amendment effective date? Does it start when it is fabricated, stored or when it has fuel in it? And similar questions about the timing of different components during the high level radioactive waste dry storage process.

9. Assuming that the high level radioactive waste remains at Oyster Creek for more than the licensed life of the canister, what is the process for license extension of the canister?
10. We would like to discuss retrievability and the process for knowing when something is wrong.

Specific Discussion of NRC's Evaluation of TN61BT:

1. Principal Design Features
  - a. We would like to discuss the leak tightness of the 61BT canister. Especially, how it is assured for 20 years and, possibly beyond?
  - b. We would like to discuss the similarities and differences between the 52B canister and the 61BT canister. Especially from a design and analysis perspective.
  - c. We would like to discuss the June 29, 2001 federal register notice statement that the 61BT does not reduce the safety margin and the changes do not pose an increased risk to the public health and safety.
  - d. In light of the results of the inspection of the CASTOR canisters, are there lessons learned that could improve the TN 61BT?
  - e. Has the NRC looked into any coatings that may be used on the canister or storage building that may be used during the process of storing high level radioactive waste at Oyster Creek?
2. Structural Capabilities
  - a. We would like to understand the structural elements "important to safety." It outlined all of the elements in the cask and basket.
  - b. Page 3-8 of the NRC SER outlines analysis margins of 1%, 12%, and 30%. We would like to discuss the uncertainty in the structural evaluation under normal conditions.
  - c. On page 3-10 of the NRC SER, the accident analysis results outline margins of 5%, 5% and 20%. We would like to discuss the uncertainty in the structural analysis under accident conditions.

- d. How would the analysis change if the spent fuel went critical?

3. Thermal

- a. We would like to understand why the limit of 18.3 kW per canister was selected for the design thermal limit.
- b. Is there any reason for selecting 40 hours for a blocked vent?
- c. On page 4-2 of the NRC SER, it outlines three allowable fuel temperature limits. We would like to discuss this further.

4. Shielding

- a. On page 5-2 of the NRC SER, it states that axial peaking factors are taken from the TN-68 FSAR. What is the status of this? Have these been reviewed and accepted and, if not, how can they be used here?
- b. On page 5-5 of the NRC SER, it states that the staff (NRC) has reasonable assurance that compliance with 10 CFR 72.104(a) can be achieved by the general licensees. We are trying to understand the basis for this conclusion.
- c. Further in the same paragraph, the NRC states that the general licensee must perform a site-specific evaluation, as required by 10 CFR 72.212(b), to demonstrate compliance. What does the NRC do with this analysis and how is compliance confirmed by the NRC?
- d. On page 5-6 of the NRC SER, it states that any general licensee using an engineered feature for radiological protection such as a berm are considered important to safety and must be evaluated to determine the applicable Quality Assurance Category. We want to understand who evaluates this and when and we want to better understand the use of a berm in this analysis.
- e. Page 5-2 of the NRC SER explains the use of scaling factors. We would like to discuss this further.
- f. On the same page, the NRC SER states that cobalt impurities can vary. We would like to discuss how the assumed values are reasonable and acceptable.
- g. We would like to discuss the variability and uncertainty in the shielding analysis used by the

NRC to confirm the shielding evaluations for normal, accident and off-site dose calculations.

5. Criticality

a. We would like to discuss the section on benchmark comparisons on page 6-5 of the NRC SER. We are trying to better understand the level of conservatism and uncertainty of the analysis.

6. Radiation Protection

a. The 61BT represents a significant increase in source term, simply from the fact that more fuel is being stored in the same amount of space as compared to the 52B. How did the NRC verify the offsite dose calculations? Were independent calculations conducted?

7. Accident Analysis

a. We would like to discuss the potential accident conditions which this canister was evaluated to better understand possible scenarios.

8. Quality Assurance

a. We would like to understand how the review of a QA program in San Jose, CA assures that the canister which is being built in Japan is fabricated correctly.

Other questions, comments, and concerns may arise during our discussion with the NRC. This list was compiled in short order at the request by the NRC.