

August 8, 2001

Mr. Robert M. Grenier
President and Chief Operating Officer
Transnuclear West Inc.
39300 Civic Center Drive
Suite 280
Fremont, CA 94538

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING APPROVAL TO
STORE SPENT NUCLEAR FUEL IN THE ADVANCED NUHOMS® STORAGE
SYSTEM (TAC NO. L23203)

Dear Mr. Grenier:

By letter dated September 29, 2000, as amended, Transnuclear West Inc. (TN West) submitted an application for a Certificate of Compliance to store spent nuclear fuel in the Advanced NUHOMS® Storage System. On March 5, 2001, the staff requested additional information (RAI) to assess compliance of the application with 10 CFR Part 72. On May 18, 2001, TN West replied to the RAI. However, while performing confirmatory analyses, the staff identified additional questions regarding the assumptions used by TN West in its thermal evaluation of the system. Therefore, the staff must issue a second RAI in an effort to resolve these concerns. Per a discussion with your staff it is my understanding that TN West intends to respond to this RAI no later than August 17, 2001.

The staff's original schedule for review of this application was to issue the draft safety evaluation report (SER) and Certificate of Compliance (CoC) for rulemaking by August 13, 2001. However, additional clarifications were required by the staff regarding the TN West response to the first RAI. These clarifications resulted in the staff postponing issuing the draft SER and CoC until September 3, 2001, as acknowledged in your letter dated July 20, 2001. However, since a second formal RAI is required for the staff to assess the concerns with the thermal evaluation, the staff must once again reschedule the completion of its review and issuance of the draft SER and CoC. Provided TN West meets the August 17, 2001, date to respond to this RAI, the staff will issue the draft SER and CoC no later than September 17, 2001. This will allow the staff sufficient time to evaluate your response to the second RAI.

If you are unable to meet the August 17, 2001, milestone, you must notify us in writing as soon as possible of your new response date and the reasons for the delay. The staff will then assess the impact of the new response date and issue a revised schedule. Please reference Docket No. 72-1029 and TAC No. L23203 in future correspondence related to this request.

If your response contains proprietary information please include a complete separate non-proprietary version of the response. Please direct any questions concerning this request to me at 301-415-8538.

Sincerely,

Timothy J. Kobetz, Project Manager
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Docket No. 72-1029

Enclosure: Request for Additional Information

cc: Service List

R. Grenier

-2-

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Sincerely,

Timothy J. Kobetz, Project Manager
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Spent Fuel Project Office
Office of Nuclear Material Safety
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cc: Service List

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**TRANSNUCLEAR WEST INC.
DOCKET NO. 72-1029
TAC NO. L23203**

REQUEST FOR ADDITIONAL INFORMATION

This document, titled Request for Additional Information (RAI), contains additional information requirements identified by the U.S. Nuclear Regulatory Commission (NRC) staff during its review of Transnuclear West Inc. (TN West) application to store spent nuclear fuel in the Advanced NUHOMS® Storage System.

This RAI describes information needed by the staff for it to complete its review of the application and determine whether TN West has demonstrated compliance with the regulatory requirements. Where an individual RAI relates to TN West's apparent failure to meet one or more regulatory requirement or where an RAI specifically focuses on compliance issues associated with one or more specific regulatory requirement (e.g., specific design criteria or accident conditions), such requirements will be specified in the individual RAI.

Note that RAI items may refer to the Spent Fuel Project Office's (SFPO) Interim Staff Guidance (ISG). The ISG was developed as a result of management decisions on several key issues related to the review and approval of spent fuel storage systems and represents positions discussed in meetings with the Nuclear Energy Institute. The ISG will be incorporated into the next revision of NUREG-1536, "Standard Review Plan for Dry Cask Storage Systems (SRP)."

Chapter 4 Thermal

The staff's independent analysis did not confirm the thermal performance of the Standardized Advanced NUHOMS System as described in Section 4 of the safety analysis report (SAR). The staff found that long term fuel cladding temperature limits may be exceeded during normal conditions of storage. Specifically, Table 1 provides the results of the staff's analysis which indicate that the peak cladding temperatures, under normal conditions, exceed those provided in Table 4.1-3 of the SAR. The independent analysis was performed using nominal gap dimensions and material properties for the 24PT1 dry shielded canister (DSC) as provided in the SAR. The staff performed the analysis using a heat load of 16 kW to match that used by the applicant in its analysis. Figure 1 provides the temperature profile for the 24PT1 DSC as determined by the independent analysis.

Table 1

| | |
|---------------------------------|-------|
| Decay Heat | 16 kW |
| DSC Shell Temperature | 332°F |
| Max Spacer Disk Temperature | 642°F |
| Guidesleeve Maximum Temperature | 650°F |
| Peak Cladding Temperature | 673°F |

- 4-1. Provide a radial temperature profile through the container for the normal storage condition case at 14 kW or a higher heat load that bounds 14 kW.

Include all temperatures of all components along the radial line, including inner and outer DSC shell, guidesleeve, boral plate, and oversleeve, as well as temperatures in the spacer disc and multiple fuel cladding temperatures across each fuel assembly traversed by the radial line. The fuel cladding temperatures in the plot should include the peak cladding temperature in each fuel assembly in the plot. The staff requires this information to assess compliance with 10 CFR 72.122(h)(1).

- 4-2. Provide the values specified for the width of the gap between the spacer disc and the DSC shell, and all other gaps in the HEATING7 model used to determine the DSC radial temperature profile requested in Question 4-1 above.

This should include a justification for the gaps used in the HEATING7 thermal model based on using the most conservative design basis tolerances. The staff requires this information to assess compliance with 10 CFR 72.122(h)(1).

- 4-3. Provide an explanation of how thermal expansion of the materials were taken into account and how the gaps in the model were determined.

The explanation should include: 1) whether the gaps differ from the values reported on the drawings included in the SAR; and 2) a justification of the thermal expansion values for each of the materials involved in the analysis. The staff requires this information to assess compliance with 10 CFR 72.122(h)(1).

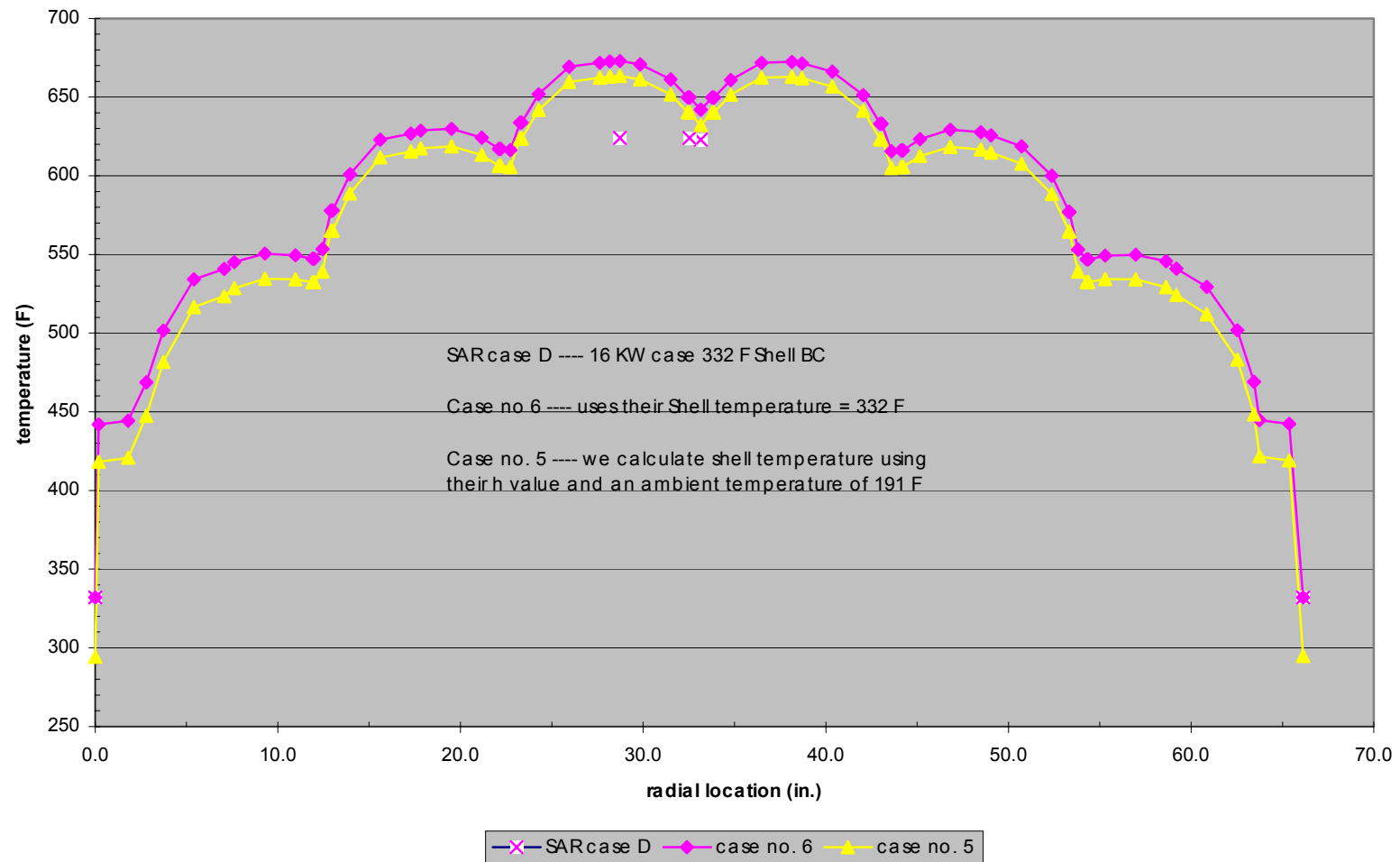


Figure 1

San Onofre Nuclear Generating Station, Units 1, 2, and 3

cc:

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