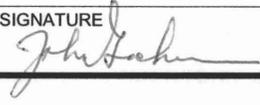


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| NRC FORM 699 (9-2003) | | U.S. NUCLEAR REGULATORY COMMISSION | | DATE 01/20/2010, 1/21/2010 |
| CONVERSATION RECORD | | | | TIME 4:00 PM |
| NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU Pat Furio, Philip Wengloski | | TELEPHONE NO. 301-495-4374 | | TYPE OF CONVERSATION <input type="checkbox"/> VISIT <input checked="" type="checkbox"/> CONFERENCE <input checked="" type="checkbox"/> TELEPHONE <input checked="" type="checkbox"/> INCOMING <input type="checkbox"/> OUTGOING |
| ORGANIZATION Calvert Cliffs Nuclear Plant | | | | |
| SUBJECT ISFSI Amendment 9, RAI 1 | | | | |
| SUMMARY (Continue on Page 2) NRC Participants - John Goshen, Matt Gordon, Jeremy Smith | | | | |
| <p>Discussed the following RAIs with Calvert Cliffs Chapter 4.0 Thermal Evaluation</p> <p>RAI 4-1: Provide the supporting calculation packages and specifications listed as references to "Thermal Analysis of NUHOMS®-32P+ DSC for Vacuum Drying Condition," Document No. NUH32P+.0401, along with the ANSYS input files that support this calculation and the results given within the SAR.</p> <p>Attachment 11, "Transnuclear, Inc. Calculation, "Thermal Analysis of NUHOMS 32P+ DSC for Vacuum Drying Condition," Document No. NUH32P+.0401" refers to two calculation packages: "Thermal Analysis of Vacuum Drying, Calculation No. 1095-57, Rev. 0" and "Design Criteria for the NUHOMS®-32P Storage System for Calvert Cliff Nuclear Plant, Specification No. E-18851, Rev. 7." Constellation Energy should provide these two documents, along with the ANSYS input data files used within the analysis in order for staff to confirm that cladding limits are being met for vacuum drying operations.</p> <p>This information is needed to confirm compliance with 10 CFR 72.122(h) (1) and 10 CFR 72.122 (l).</p> <p>RAI 4-2: Provide a discussion of the impact, including revised calculation results or a sensitivity study, of reduced thermal conductivity of high burn up fuel cladding on the effective thermal conductivity of the fuel calculated as part of the SAR analysis.</p> <p>It is understood by the staff that there can be a decrease of up to 50% in the thermal conductivity of the fuel cladding for assemblies with burnups of greater than 45 GWD/MTU. This effect needs to be addressed in order for the staff to make an assessment of the ability of the fuel cladding to meet the performance requirements in 10 CFR Part 72.</p> <p>This information is needed to confirm compliance with 10 CFR 72.122(h) (1) and 10 CFR 72.122 (l).</p> | | | | |
| Continue on Page 2 | | | | |
| ACTION REQUIRED None | | | | |
| NAME OF PERSON DOCUMENTING CONVERSATION John Goshen | | SIGNATURE  | | DATE 01/21/2010 |
| ACTION TAKEN | | | | |
| TITLE OF PERSON TAKING ACTION | | SIGNATURE OF PERSON TAKING ACTION | | DATE |

CONVERSATION RECORD (Continued)

SUMMARY (Continue on Page 3)

Chapter 5.0 Shielding Evaluation

RAI 5.1 Justify the changes to Technical Specification (TS) 2.1 that establish new neutron and gamma source term limits allowed in each fuel assembly.

Interim Staff Guidance (ISG) - 6 states, "Absent adequate justification acceptable to the staff, the SAR should not attempt to establish specific source terms as operating controls and limits for cask use." The staff believes that it may be more appropriate to eliminate this technical specification altogether and then rely on limiting the maximum assembly burnup, cooling time, enrichment, and decay heat as this methodology is the standard currently used by other applicants. The staff requests Constellation Energy evaluate this option and provide its response.

This information is needed to ensure that the storage system continues to meet the external dose rate requirements of 10 CFR 72.104 and 72.106.

Chapter 8.0 Materials Evaluation

RAI 8.1 The staff requests Constellation Energy evaluate the removal of references to utilization of air during the blow-down of spent fuel from the amendment request along with specifying in the TS that the blow-down of the spent fuel will be done with an inert gas.

The TS permit loading of fuel with pinhole leaks and larger defects (permitted that such defects do not adversely affect fuel handling and transfer). The exposure of spent fuel with pinhole leaks, hairline cracks, or other breaches in the cladding is prohibited due to the potential for oxidation of the fuel pellets and subsequent rod splitting.

This information is needed to evaluate compliance with 72.122(h) & (l).

RAI 8.2 Clarify the proposed contents of the package and provide separate definitions for intact and undamaged fuel in the TS.

The TS specify that the fuel shall be intact but can also include structural defects such as pinhole leaks. These statements are not consistent with the guidance provided in ISG - 1, Revision 2, "Damaged Fuel."

This information is needed to evaluate compliance with 10 CFR 72.122.

Informed Calvert Cliffs that the enclosed RAI response is requested by February 19, 2010. If they are unable to meet the February 19, 2010, milestone, they must notify us in writing, at least two weeks prior to that date, of the new response date and the reasons for the delay. Stated that email notification was satisfactory.

Discussed with Calvert Cliffs that the RSI concerning the structural calc revision was kept separate from this RAI.

TAC - L24350

Docket - 72-7

cc: L Campbell, M Waters, C Cook, E Benner, Furio, Patricia.Furio@cengllc.com

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