



***NRC Presentation
December 5, 2006***

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Meeting Agenda

- ▶ **Background for Amendment 11 to CoC 1004**
- ▶ **Proposed Content of Amendment**
- ▶ **Discussion of Amendment 11 Timeline**
- ▶ **Identification of Action Items**
- ▶ **Public Questions**
- ▶ **Closing Remarks**

Background for Amendment 11

- ▶ **TN added a lightweight transfer cask, OS197L TC, to the NUHOMS® UFSAR under the provisions of 10CFR 72.48 (LR 721004-321, Rev.1)**
- ▶ **NRC performed an inspection of LR 721004-321 and identified one level IV violation of 10CFR 72.48(c)(1), based on violation of 3 Technical Specifications (TS) listed below (Ref. Inspection Report No. 72-1004/2006-204):**
 - ◆ **TS 1.2.17a –32PT DSC Vacuum Drying Duration Limit,**
 - ◆ **TS 1.2.11 –Transfer Cask Dose Rates with a Loaded 24P, 52B, 61BT, 32PT DSC, and**
 - ◆ **TS 1.2.1 –Fuel Specification.**

Background for Amendment 11 (Continued)

- ▶ ***In addition, the NRC identified two issues related to 10CFR 72.48(c)(2)(viii), that would have constituted a violation had the OS197L TC been used at Ft. Calhoun without an exemption:***
 - ◆ *Use of FLUENT code to perform thermal analysis of OS197L inside the trailer shielding is a “departure in methodology of evaluation”, and*
 - ◆ *Change in the sequence of loading operations (draining DSC cavity water before lifting a loaded TC/DSC from the spent fuel pool) changed the assumption used to support TS 1.2.17a and thus is a “departure in method of evaluation”.*

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Background for Amendment 11 (Continued)

- ▶ ***Finally, the NRC identified four weaknesses in TN 72.48 evaluation and technical bases that led TN to conclude that OS197L TC could be implemented without a CoC amendment:***
 - ◆ *Documentation of Change in Shielding Methodology,*
 - ◆ *Documentation of Evaluation Regarding TS 1.2.17a,*
 - ◆ *Documentation of Evaluation Regarding TS 1.2.11, and*
 - ◆ *Documentation of Evaluation Regarding TS 1.2.1.*

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Background for Amendment 11 (Concluded)

- ▶ *TN's position on these issues was communicated to NRC during the inspection. However, TN accepts the violation and other issues cited in the NOV*
- ▶ *Corrective actions and actions to prevent recurrence to address all the issues identified in IR are in process*
- ▶ *TN is in the process of revising LR 721004-321, Rev.1 to reflect the above and document in the LR that "the addition of OS197L TC to the NUHOMS UFSAR cannot be implemented by a general licensee until the NRC has approved an Amendment to CoC 1004". This revised LR will also address documentation and technical weaknesses identified in para 5 of the IR.*
- ▶ *TN plans to submit Amendment 11 to CoC 1004 which completely resolves the issues noted in para 3 and 4 of the IR*

Proposed Content of Amendment –Change 1

- ▶ **Change No.1: Convert CoC 1004 and its associated Technical Specifications to the "Improved Technical Specification" format consistent with NUREG 1745**
 - ◆ *This change will remove the bases of the TS from the technical specification and transfer them to Chapter 12 of the UFSAR*
 - ◆ *Change No.1 will also address the violation of TS 1.2.1 bases noted in the IR*

Proposed Content of Amendment –Change 2

- ▶ **Change No. 2: Delete TSs 1.2.11, 1.2.11a, 1.2.11b and 1.2.11c related to Dose Limits of a loaded TC/DSC.**
 - ◆ *This TS is redundant to TS 1.2.7 which regulates dose limits for a loaded DSC when stored inside a HSM, where a payload resides during its 20 year licensed life span. The fuel resides in the TC for a period of a few hours only out of its 20 year licensed life span.*
 - ◆ *This TS is for ALARA only and not for detecting misloaded fuel despite the stated objective. The current objective is not supported by any analysis. TS 1.2.1 will ensure that appropriate fuel is being loaded.*
 - ◆ *The NRC has agreed in the past that fuel misload can be prevented via licensee administrative controls during loading (Ref. RAI 11-2 for the 32PT Amendment No. 5 to CoC 1004).*
 - ◆ *This TS merely ensures that dose rates during loading are ALARA and thus does not meet NUREG 1745 criteria for inclusion in the TS.*
 - ◆ *Change No. 2 will address the second TS identified in the IR violation.*

Proposed Content of Amendment –Change 3

- ▶ **Change No. 3: Revise TS 1.2.17, 1.2.17a, 1.2.17b and 1.2.17c related to various DSC Vacuum Drying Duration Limits to allow the use of either air or helium for DSC blowdown**
 - ◆ *Restrict the use of air for DSC blowdown only when fuel with no hairline cracks or pinholes in the fuel cladding is being loaded. For all other cladding conditions, modify the TS to restrict to the use of helium as a DSC blowdown medium which is consistent with ISG-22.*
 - ◆ *Clarification will be provided for the start of Vacuum Drying time limit*
 - ◆ *The time limits shown in the above TS are based on the use of air and/or application of ISG-11 Revision 2 criteria. Accordingly, the DSC vacuum drying time limits stated in the TS will not be applicable when using helium as a DSC blowdown medium.*
 - ◆ *Change No.3 will address the third TS identified in the IR violation.*

Proposed Content of Amendment –Change 4

► **Change 4: Submit changed UFSAR pages in support of Amendment 11, including the FLUENT code based thermal analysis of a loaded OS197L TC inside a supplemental trailer shield.**

- ◆ *The thermal analysis and methodology is essentially identical to the OPPD exemption reviewed by the staff, except it will be for the design basis fuel and design basis DSC heat load of 24 kW.*
- ◆ *Change 4 will address the 10CFR 72.48(c)(2)(viii) “Departure of Methodology” issue noted in the IR.*

Proposed Content of Amendment –Change 5

► **Change 5: Submit affected changed UFSAR pages in support of changes requested in Amendment 11:**

- ◆ *Clarification changes to the UFSAR thermal analysis of the various DSC Vacuum Drying Operations that transient analysis based time limits apply ONLY when air is used for DSC blowdown.*
- ◆ *Use of Helium during blowdown allows a change to the sequence of loading/unloading procedures in the UFSAR (allow a complete draindown of the TC/DSC prior to leaving the spent fuel pool).*
- ◆ *Changes 3 and 5 resolve the 10CFR 72.48(c)(2)(viii) “Departure of Methodology” issue noted in the IR.*

Proposed Content of Amendment –Change 6

- ▶ **Change No. 6: Miscellaneous Changes to CoC/TS**
 - ◆ *Consolidate to simplify Fuel Qualification Tables (FQTs) such that only the data for limiting PWR/BWR assemblies are shown.*
 - ◆ *Consolidate to simplify a specific TS for various DSCs into a single TS.*
 - ◆ *Revise the entire technical specification to comply with NUREG 1745, by segregating the LCOs from the Design and Administrative TSs.*

Amendment 11 Timeline

- ▶ ***TN submits Amendment 11 in March, 2007***
- ▶ ***NRC issues RAI if required in August, 2007***
- ▶ ***TN submits RAI response within 30 days September, 2007***
- ▶ ***NRC issues Preliminary CoC/SER in November, 2007***
- ▶ ***NRC publishes direct final rule in December, 2007***
- ▶ ***Public comment period ends in January, 2008***
- ▶ ***If no significant adverse public comments, Amendment 11 becomes effective March, 2008***



Action Items, Questions