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10 CFR 72.7
L-2011-025

JAN 19 2011

ATTN: Document Control Desk
Director, Spent Fuel Project Office
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Turkey Point Nuclear Plant
Independent Spent Fuel Storage Installation
Docket No. 72-62
Response to Request for Supplemental Information Dated December 22, 2010

- References:
- 1) Florida Power and Light Company Letter L-2010-256 dated November 5, 2010, Request for Exemptions from 10 CFR 72.212(b)(2)(i)(A), and 10 CFR 72.212(b)(7) requiring compliance with NUHOMS® HD Certificate of Compliance No. 1030 Amendment No. 0 for Spent Fuel Storage Casks, 10 CFR 72.48, 10 CFR 72.212(a)(2) and 10 CFR 72.214
 - 2) NRC Letter dated December 22, 2010, Request for Exemptions from Certain Requirements in 10 CFR Part 72 for the Turkey Point Nuclear Plant Independent Spent Fuel Storage Installation – Supplemental Information Needed

Florida Power and Light Company (FPL) requested exemptions from the requirements specified in 10 CFR 72.212, Conditions of general license issued under 10 CFR 72.210 in Reference 1. The NRC staff requested supplemental information in Reference 2. This letter responds to the Reference 2 request. The response is attached.

If you have any questions concerning this matter, please contact Mr. Robert Tomonto at 305-246-7327.

Very truly yours,

Michael Kiley
Vice President
Turkey Point Nuclear Plant

Attachment: Response to Request for Supplemental Information Dated December 22, 2010

cc: Regional Administrator, USNRC Region II
USNRC Senior Resident Inspector – Turkey Point Nuclear Plant

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Attachment
Response to Request for Supplemental Information Dated December 22, 2010

NRC Request for Supplemental Information

The November 5, 2010, exemption request states that Florida Power & Light Company (FPL) is planning to utilize the Transnuclear, Inc. NUHOMS HD-32PTH dry cask storage system (Certificate of Compliance (CoC) 72-1030, Amendment No. 0) for storage of spent fuel at the Turkey Point Nuclear Plant Independent Spent Fuel Storage Installation (ISFSI). The request also states that CoC 72-1030, Amendment No. 0 does not include the “necessary provisions and specific wording and clarifications” required for FPL’s upcoming initial fuel loading campaign at Turkey Point, but that the proposed Amendment No. 1 to CoC 72-1030 (which is not yet an approved amendment to a cask system in 10 CFR Part 72) does contain these necessary provisions and clarifications. No further explanation is provided as to what are these “necessary provisions and specific wording and clarifications”; thus, it is not clear to the staff why this exemption to allow use of CoC 72-1030, Amendment No. 1 before it is an approved amendment to a cask system in 10 CFR Part 72, is warranted.

Please provide further justification for FPL’s request for exemption, specifically addressing what are the “necessary provisions and specific wording and clarifications” in the proposed Amendment No. 1 to CoC 72-1030, and why they are needed for the upcoming initial fuel loading campaign at Turkey Point.

FPL Response to Request for Supplemental Information

The primary provision of Amendment 1 associated with “necessary provisions and specific wording and clarifications” needed for the upcoming initial fuel loading campaign at Turkey Point is related to Technical Specification (TS) Limiting Condition for Operation (LCO) 3.1.3 as follows:

In Transnuclear Inc (TN) letter E-25747, Robert Grubb to U.S Nuclear Regulatory Commission, “Application for Amendment 1 of the NUHOMS HD Certificate of Compliance No. 1030 for Spent Fuel Storage Casks, Revision 0, dated November 1, 2007, Enclosure 2, Section 2.1 Changes to the NUHOMS CoC 1030 Technical Specifications with Justification, page 2 of 9, bullet 7, TN explained that the Technical Specification LCO 3.1.3 and associated ACTIONS were being changed “ to clarify the time limits for the transfer cask cavity backfill operation based on “time of draining of the annulus water”, consistent with the thermal analysis in Chapter 4 [of the UFSAR]. The FREQUENCY requirements are revised to be consistent with the SURVEILLANCE requirements”. A more detailed explanation of this change is provided below.

TS LCO 3.1.3 of Appendix A to Certificate of Compliance (CoC) No. 1030 Amendment 0, states:

“OS187H transfer cask cavity/annulus helium backfill shall be initiated within 9 hours after completion of 32PTH DSC helium backfill for loading....” The REQUIRED ACTION if the helium backfill cannot be initiated within 8 hours of 32PTH DSC helium backfill completion is to flood the transfer cask cavity/annulus with water.

The following procedural steps must be implemented within this 9 hour time limit:

1. Install, weld and examine the siphon and vent port cover welds
2. Install the DSC outer cover plate
3. Install the automatic welding equipment
4. Weld and examine the outer DSC cover plate weld
5. Remove the automatic welding equipment
6. Remove the annulus seal
7. Install the transfer cask cover
8. Drain the transfer cask annulus water
9. Torque transfer cask bolts
10. Evacuate transfer cask annulus (vacuum)
11. Start helium backfill of transfer cask cavity/annulus

Based on FPL experience in loading 20 32PTH DSCs, the completion of these steps requires 20 hours or more. Entry into the REQUIRED ACTION is therefore required. The REQUIRED ACTION in Amendment 0 for TS LCO 3.1.3 is to flood the transfer cask cavity/annulus. However, this annulus is already flooded with water and therefore the proper subsequent actions are not clearly defined.

The proposed Amendment 1 to CoC 1030 (which is the basis for the exemption request) increases the time limit imposed, decreases the steps associated with the time limit, and provides clear and determinant actions in the REQUIRED ACTION section. Amendment 1 TS LCO 3.1.3 allows for up to 28 hours after drainage of the transfer cask cavity annulus (step 8 above) to initiate transfer cask cavity/annulus helium backfill (step 11 above). The major procedural steps to the LCO and ACTIONS in Amendment 1 are:

1. Drain the transfer cask annulus water
2. Torque transfer cask bolts
3. Evacuate transfer cask annulus (vacuum)
4. Start helium backfill of transfer cask cavity/annulus

Amendment 1 TS LCO 3.1.3 is clear. The applicable time limit for the operation is achievable. The REQUIRED ACTION in Amendment 1 LCO 3.1.3 should therefore not be necessary. However if it is, the action is to re-flood the transfer cask annulus with water and then perform steps 1 through 4 again.

There are additional provisions in CoC 1030 Amendment 1 that will facilitate the Turkey Point initial loading campaign. A few examples from TN letter E-25747, Robert Grubb to U.S Nuclear Regulatory Commission, "Application for Amendment 1 of the NUHOMS HD Certificate of Compliance No. 1030 for Spent Fuel Storage Casks, Revision 0, dated November 1, 2007, Enclosure 2, Section 2.1 Changes to the NUHOMS CoC 1030 Technical Specifications with Justification are reproduced below:

- Revise Technical Specification title for 3.1.1, including LCO 3.1.1 and associated ACTIONS and SURVEILLANCE REQUIREMENTS to use only Helium for drainage of bulk water. This also eliminates the need to use the three vacuum drying procedures. This revision is justified to enable compliance with ISG-21 and to limit the fuel oxidation. The revised ACTIONS allow for the repair and or replacement of the vacuum drying system components to complete the vacuum drying operations.
- Clarify the Applicability for LCO 3.1.2 and revise associated ACTIONS and SURVEILLANCE REQUIREMENTS to allow for the repair and or replacement of the vacuum drying system components to complete the backfill operations.
- Revise LCO 3.2 and APPLICABILITY and ACTIONS of LCO 3.2 and associated REQUIRED ACTIONS and COMPLETION TIMES to clarify the requirements for boron concentration measurements and the option to add boron to maintain the required minimum soluble boron concentration in the pool water.
- Revise Technical Specification 5.2.5 to allow for an alternate method to monitor the HSM-H thermal performance. Thus, any one of the two surveillance activities - Daily visual inspection (5.2.5b) or direct temperature measurements (new 5.2.5c) can be performed. This is justified because both these activities are equivalent and provide the required verification of the thermal performance of the HSM-H.

As discussed above, use of Amendment 1 to CoC 1030 for the initial use of the NUHOMS HD spent fuel dry storage system at Turkey Point will provide operational benefits resulting in clearer requirements and enhanced options for certain critical processes.

Observation

During the staff's acceptance review of the November 5, 2010, exemption request, staff identified a needed clarification that may require a request for additional information during the detailed technical review. FPL may choose to provide the clarification in its response to this Request for Supplemental Information.

Attachment 2 of the November 5, 2010, request notes: "Transfer of fuel assemblies from the SFP [spent fuel pool] to the ISFSI according to the planned 2011 schedule would also afford FPL flexibility for fuel storage options to address issues or recommendations resulting from security aspects of spent fuel storage." It is not clear to staff what is meant by this statement. Please clarify what is meant by this statement.

FPL Response

Turkey Point's fuel assembly and insert shuffle procedure has steps which address a July 29, 2004 NRC letter, Issuance of Spent Fuel Pool Mitigative Measures, which is safeguards information concerning actions for spent fuel pools in addressing large fires and explosions. In particular, placing higher decay power discharged fuel next to other higher decay power fuel is minimized to the extent practical. Therefore, by transferring fuel assemblies from the SFP to dry storage, additional empty cells are made available thereby affording additional flexibility for storage of higher decay power discharged fuel.