UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 15, 2012

LICENSEE: Entergy Operations, Inc.

FACILITY: Grand Gulf Nuclear Station

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON MAY 15, 2012, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ENTERGY OPERATIONS, INC., CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE GRAND GULF NUCLEAR STATION, LICENSE RENEWAL APPLICATION (TAC. NO. ME7493)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Operations, Inc. (Entergy or the applicant) held a telephone conference call on May 15, 2012, to discuss and clarify the staff's requests for additional information (RAIs) concerning the Grand Gulf Nuclear Station, license renewal application. The telephone conference call was useful in clarifying the intent of the staff's RAIs.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a listing of the RAIs discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

Nathaniel B. Ferrer, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 05-416

Enclosures:
As stated

cc w/encls: Listserv

TELEPHONE CONFERENCE CALL
GRAND GULF NUCLEAR STATION
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
MAY 15, 2012

PARTICIPANTS	AFFILIATIONS
Nate Ferrer	U.S. Nuclear Regulatory Commission (NRC)
Jim Medoff	NRC
Jim Gavula	NRC
Jeff Seiter	Entergy Nuclear Operations, Inc. (Entergy)
Ted Ivy	Entergy
Andy Taylor	Entergy
Stan Batch	Entergy
Alan Cox	Entergy
Kirk Ehren	Entergy

REQUESTS FOR ADDITIONAL INFORMATION (SET 18)

LICENSE RENEWAL APPLICATION
MAY 15, 2012

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Operations, Inc. held a telephone conference call on May 15, 2012, to discuss and clarify the following requests for additional information (RAIs) concerning the license renewal application (LRA).

Draft RAI 4.1-2

Background. LRA Table 4.1-2 identifies that the CLB does not include an analysis for the polar crane that needs to be identified as a TLAA. The applicant stated that the relevant analysis of the polar crane is not based on time-dependent assumptions defined by the life of the plant; therefore, does not meet the definition of a TLAA in 10 CFR 54.3. UFSAR Section 9 identifies that the facility is designed with four types of cranes: (1) a polar crane; (2) a containment hatchway crane; (3) a spent-fuel cask crane; and (4) a new fuel handling crane. UFSAR Chapter 9 identifies that the polar crane was designed and analyzed to a CMAA-70 design specification.

Issue. The UFSAR does not specify the design specifications used for the containment hatchway crane, spent-fuel cask crane, or new fuel handling crane. In addition, the staff needs clarification as to whether the design for the containment hatchway, spent-fuel cask, and new fuel handling cranes, and the polar crane established a limit on the number of times the cranes could be used to lift their limiting loads. The staff needs this clarification on the design specifications for these cranes to determine if there is an associated analysis that needs to be identified as a TLAA in accordance with 10 CFR 54.21(c)(1).

Request.

a. Identify the design specifications that were used for the design and analysis of the containment hatchway, spent-fuel cask, and new fuel handling cranes.

b. Clarify whether the design for the containment hatchway, spent-fuel cask, and new fuel handling cranes, and the polar crane established a limit on the number of times the cranes could be used to lift their limiting loads.

c. If the design of these cranes established a limit on the number of crane lifts, justify why these analyses for the cranes do not need to be identified as TLAAs in accordance with 10 CFR 54.21(c)(1).

Discussion: The applicant stated that the background section of this question is unclear because of the description of the design specifications for the polar crane. The staff was referencing the description of the design specification described in the UFSAR and will reword the background section of this question as follows:

> Background. LRA Table 4.1-2 identifies that the CLB does not include an analysis for the polar crane that needs to be identified as a TLAA, The applicant stated that the relevant evaluation of the polar crane is not based on time-dependent assumptions defined by the life of the plant; therefore, does not meet the definition of a TLAA in 10 CFR 54.3. UFSAR Section 9 identifies that the

facility is designed with four types of cranes: (1) a polar crane; (2) a containment hatchway crane; (3) a spent-fuel cask crane; and (4) a new fuel handling crane, and UFSAR Chapter 9 identifies that the polar crane generally conforms to a CMAA-70 design specification.

The staff will issue the revised question as a formal RAI.

Draft RAI 4.1-5

Background. LRA Section 4.1 identifies that there are no regulatory exemptions that have been approved in accordance with the exemption request acceptance criteria in 10 CFR 50.12 and are based on or predicated on a TLAA.

Issue. The staff noted that Clause 2.D in Operating License No. NPF-29 identifies that the applicant was granted a number of exemptions from the requirements in (1) 10 CFR Part 50, Appendix A, (2) 10 CFR Part 50, Appendix J and (3) 10 CFR Part 100, which were approved based on the exemption request acceptance criteria in 10 CFR 50.12. However, the staff noted that neither the LRA nor the operating license provide sufficient information on the basis for these exemptions or whether the exemptions were based all or in part on an analysis that needs to be identified as a TLAA.

Request.

a. Summarize in sufficient detail each of the exemptions referenced in Clause 2.D of Operating License, NPF-29, including the basis for requesting the exemption.

b. Clarify whether the basis for requesting these exemptions, prior to their approvals, were based on analyses that would need to be identified as a TLAAs in accordance with 10 CFR 54.21(c)(1).

c. Justify whether the exemptions referenced in Clause 2.D of Operating License, NPF-29, needs to be identified as exemptions that are based on a TLAA and that need to be identified in accordance with 10 CFR 54.21(c)(2).

Discussion: The applicant stated that the request section of this question is unclear because not all of the exemptions are still in effect. The staff was referring to exemptions that are still in effect and will reword the request section of this question as follows:

Request. For the exemptions that are still in effect, provide the following information:

a. Summarize in sufficient detail each of the exemptions referenced in Clause 2.0 of Operating License, NPF-29, including the basis for requesting the exemption.

b. Clarify whether the basis for requesting these exemptions, prior to their approvals, were based on analyses that would need to be identified as a TLAAs in accordance with 10 CFR 54.21(c)(1).

c. Justify whether the exemptions referenced in Clause 2.0 of Operating License, NPF-29, need to be identified as exemptions that are based on a TLAA and that need to be identified in accordance with 10 CFR 54.21 (c)(2).

The staff will issue the revised question as a formal RAI.

Draft RAI 4.7.1-1

Background: LRA Section 4.7.1 refers to UFSAR Section 5.4.4.4, which states that the stainless steel main steam flow restrictors will erode very slowly, and that even with an erosion rate of 0.004 inches per year, the increase in choked flow after 40 years would be no more than 5 percent. The LRA states that the evaluation of the erosion-corrosion rate for the main steam flow restrictors had determined that the expected erosion-corrosion rate, when operating at velocities at extended power uprate conditions, would be much less than the conservative value of 0.004 inches per year in the UFSAR. The LRA also stated that using this rate, the expected total erosion after 60 years would remain less than the conservative total erosion value identified in the UFSAR for 40 years, and that the analysis had been projected through the period of extended operation in accordance with 10 CFR 54.21(c)(ii).

The staff noted that UFSAR Section 5.4.4, "Main Steam Line Flow Restrictors," provides several design criteria for these components which include (a) limiting the loss of coolant from the vessel to the extent that the reactor vessel level remains high enough to provide cooling within the time required to close the main steam isolation valves and (b) limiting the amount of radiological release outside of the drywell prior to main steam isolation valve closure. The UFSAR also states that "restrictor limits the coolant blowdown rate ...to a maximum (choked) flow of 6.91×10^6 pounds per hour at 1025 psig upstream pressure," and that the design "...limits the steam flow in a severed line less than 170 percent rated flow." The UFSAR further states that a 5 percent increase in the radiological dose calculation, due to the 5 percent increase in choked flow rate, is not significant.

Issue: The LRA does not contain information regarding the analysis that demonstrates that the choked flow will remain less than the 170 percent of normal flow or less than 6.91×10^6 pounds per hour at 1025 psig upstream pressure in the event of a main steam line break. In addition, it was unclear to the staff to what value the LRA was referring in the statement "total erosion value identified in the UFSAR for 40 years," since a total erosion value was not given.

The LRA appears to state that the erosion-corrosion rate at extended-power-uprate velocities had been re-evaluated. However, the staff was unable to find any specific information in the correspondence associated with the extended power uprate, to indicate that "the expected erosion-corrosion rate would be much less than the conservative value in the UFSAR."

Request: Provide the results of the projected analysis demonstrating that the intended functions of the main steam flow restrictor are maintained in accordance with the current licensing basis during the period of extended operation. Include the bases for concluding that the expected erosion-corrosion rate would be much less than the conservative value in the UFSAR and the total expected erosion after 60 years would remain less than the conservative total erosion value identified in the UFSAR for 40 years.

Discussion: Based on the discussion between the staff and the applicant, the applicant stated that the question is clear. The staff will issue the question as a formal RAI.

August 15, 2012

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FACILITY: Grand Gulf Nuclear Station

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/RA/

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DATE	8/3/12	7/18/12	8/7/12	8/15/12

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Memorandum to Entergy Operations, Inc. from Nathaniel Ferrer dated August 15, 2012

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