



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

January 3, 2013

LICENSEE: Entergy Operations, Inc.

FACILITY: Grand Gulf Nuclear Station

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON
OCTOBER 9, 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., held a telephone conference call on October 9, 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.

A handwritten signature in black ink, appearing to read "N. Ferrer", with a long horizontal line extending to the right.

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

Docket No. 50-416

Enclosures:
As stated

cc w/encls: Listserv

TELEPHONE CONFERENCE CALL
GRAND GULF NUCLEAR STATION
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
OCTOBER 9, 2012

PARTICIPANTS

AFFILIATIONS

Nate Ferrer	U.S. Nuclear Regulatory Commission (NRC)
Pat Purtscher	NRC
Dan Widrevitz	NRC
Ted Ivy	Entergy Operations, Inc. (Entergy)
Andy Taylor	Entergy
Alan Cox	Entergy
Stan Batch	Entergy
Kirk Ehren	Entergy
Robert Fuller	Entergy
Jacque Lingenfelter	Entergy
Ed Schrull	General Electric-Hitachi (GEH)
Paul Guinn	GEH
Bob Carter	Electric Power Research Institute

REQUESTS FOR ADDITIONAL INFORMATION (SET 39)

LICENSE RENEWAL APPLICATION
OCTOBER 9, 2012

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Operations, Inc., held a telephone conference call on October 9, 2012, to discuss and clarify the following requests for additional information (RAIs) concerning the license renewal application (LRA).

Draft RAI 4.2.4-1

The staff has identified an issue about the applicant's disposition of this TLAA for the circumferential weld inspection relief. SRP-LR Section 4.2.3.1.4 states that if the applicant indicates that relief from circumferential weld examination will be made under 10 CFR 50.55a(a)(3), the applicant will manage this TLAA in accordance with 10 CFR 54.21(c)(1)(iii). In contrast, the applicant dispositioned this TLAA in accordance with 10 CFR 54.21(c)(1)(ii), inconsistent with the SRP-LR. Justify why the TLAA for the circumferential weld inspection relief is dispositioned in accordance with 10 CFR 54.21(c)(1)(ii).

Discussion: The applicant stated that request did not allow for the possibility of a revision of the TLAA disposition. The staff did not intend to preclude a revision to the TLAA disposition and will reword the request as follows:

The U.S. Nuclear Regulatory Commission (NRC or the staff) has identified an issue about Entergy Operations, Inc. (the applicant), disposition of this time-limited aging analysis (TLAA) for the circumferential weld inspection relief. The Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants (SRP-LR) Section 4.2.3.1.4 states that if the applicant indicates that relief from circumferential weld examination will be made under 10 CFR 50.55a(a)(3), the applicant will manage this TLAA in accordance with 10 CFR 54.21 (c)(1)(iii). In contrast, the applicant dispositioned this TLAA in accordance with 10 CFR 54.21 (c)(1)(ii), inconsistent with the SRP-LR. Explain why the TLAA for the circumferential weld inspection relief is dispositioned in accordance with 10 CFR 54.21 (c)(1)(ii). Alternatively, revise the TLAA disposition to be in accordance with 10 CFR 54.21 (c)(1)(iii).

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

Draft RAI B.1.11-2a

The "detection of aging effects" program element of the GALL Report AMPXI.M9 states that portions of the susceptible components determined to be limiting will be inspected as part of the 10 year in-service inspection (ISI) program during the period of extended operation. Furthermore, the sample size should be 100 percent of the accessible component population, excluding components that may be in compression during normal operations. However, during its audit, the staff found that the description of the enhancement to the applicant's BWR Vessels Internals AMP could be taken to be a sampling-based, condition monitoring program where 100 percent of the accessible and susceptible components would not be inspected.

By letter dated June 27, 2012, the staff issued RAI B.1.11-2 requesting that the applicant provide more details so that the nature of the enhancement can be verified by a future license renewal audit.

In the applicant's July 25, 2012 response to RAI B.1.11-2, the applicant states:

The enhancement stated in LRA Section B.1.11, BWR Vessel Internals, for the management of loss of fracture toughness due to neutron irradiation and thermal aging embrittlement is consistent with the guidance provided in NUREG-1801, Rev. 2, Section XI.M9, BWR Vessel Internals. This guidance establishes the overall parameters of this aspect of the BWR Vessel Internals Program. Details of this aspect of the program remain to be determined, including:

- a. the specific scope of components susceptible to neutron irradiation and thermal aging embrittlement,
- b. the inspection techniques to be used,
- c. sequence of inspections to be conducted, and
- d. the methods for evaluating inspection results and extrapolating those results to inaccessible components.

These details will be developed as part of the implementation of the program enhancement described in LRA B.1.11. No revisions to UFSAR Supplement A.1.11 are warranted.

Based on its review of the applicant's response, the staff needed additional information to find the applicant's program acceptable. The staff requests the applicant to address the following items:

- a. Provide a plant-specific description of the components made from the cast austenitic stainless steel (CASS), X-750 alloy, precipitation-hardened (PH) martensitic stainless steel, and martensitic stainless steel that are exposed to the reactor coolant and neutron flux environment,
- b. Describe if the sample size for the initial inspection of susceptible components will be 100 percent of the accessible components. If only portions of susceptible components will be inspected, provide justification. Revise part (b) of the enhancement, as necessary, consistent with the response.
- c. Clarify if the augmented inspections will be added to the GGNS 10 year ISI program. If they will not be included, provide justification.

Discussion: The applicant stated that it was unclear about request (c) the relation to the ISI program. The staff's concern was related to clarifying if the inspections were to be one-time or periodic. The staff will reword the request as follows:

- a. Provide a plant-specific description of the components made from the cast austenitic stainless steel (CASS), X-750 alloy, precipitation-hardened (PH) martensitic stainless steel, and martensitic stainless steel that are exposed to the reactor coolant and neutron flux environment.
- b. Describe if the sample size for the initial inspection of susceptible components will be 100 percent of the accessible components. If only portions of susceptible components will be inspected, provide justification.

Revise part (b) of the enhancement, as necessary, making it consistent with the response.

- c. Clarify if the augmented inspections will be a one-time inspection or periodic.

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

Draft RAI B.1.38-3a

Background. In the GGNS response to RAI B.1.38-3 dated July 26, 2012, the applicant stated that one dosimetry capsule was pulled at the end of the first operating cycle and the results from that capsule have been used in the fluence evaluations performed through operating cycle 13. Since GGNS has been approved to use the ISP to meet the Appendix H requirements (November 4, 2003), no future withdrawals are planned. With input from the BWRVIP, the first cycle flux wire dosimetry results have been shown to be unreliable for reasonable end-of-license fluence projections. BWRVIP-86, Revision 1, Section 5, includes provisions for ongoing vessel dosimetry for plants that do not have dosimetry capsules tested. The dosimetry activities for the GGNS Reactor Vessel Surveillance Program are adequate and therefore consistent with the GALL Report.

Issue. The staff is concerned that the July 26, 2012, response is not complete.

Request. Justify why the 1st cycle flux wire dosimetry results are considered to be unreliable for reasonable end-of-license fluence projections.

Discussion: The applicant stated that it was unclear what justification the request was seeking. The staff's concern was related to obtaining additional details on the omission of the 1st cycle flux wire dosimetry. The staff will reword the request as follows:

Request. Explain why the 1st cycle flux wire dosimetry results are considered to be unreliable for reasonable end-of-license fluence projections.

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

January 3, 2013

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/RA/

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

Docket No. 50-416

Enclosures:
As stated

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*concurring via email

OFFICE	LA:DLR*	PM:RPB1:DLR	BC:RPB1:DLR	PM:RPB1:DLR
NAME	IKing	NFerrer	DMorey	NFerrer
DATE	12/3/12	12/4/12	12/28/12	1/3/13

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