



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

February 5, 2009

Vice President, Operations
Entergy Operations, Inc.
Waterford Steam Electric Station, Unit 3
17265 River Road
Killona, LA 70057-3093

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - REQUEST FOR
ADDITIONAL INFORMATION RE: REQUEST FOR ALTERNATIVE W3-ISI-006
TO EXTEND THE SECOND 10-YEAR INSERVICE INSPECTION INTERVAL
AND LICENSE AMENDMENT REQUEST NPF-38-280 TO SUPPORT
REQUEST FOR ALTERNATIVE W3-ISI-006 (TAC NOS. MD9671 AND MD9669)

Dear Sir or Madam:

By application dated September 18, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082660040), to the U.S. Nuclear Regulatory Commission (NRC), Entergy Operations, Inc. (Entergy, the licensee), proposed an alternative to the requirements of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI, paragraph IWB-2412, "Inspection Program B," for Waterford Steam Electric Station, Unit 3 (Waterford 3). Pursuant to paragraph 50.55a(a)(3)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR), the request for alternative W3-ISI-006 proposes to extend the second interval for reactor vessel pressure retaining welds, Category B-A and B-D, until 2015, plus or minus one refueling cycle, for the subject examinations.

By letter dated September 17, 2008 (ADAMS Accession No. ML082660037), Entergy requested an amendment to the Waterford 3 operating license, concurrent with the above proposed alternative, as required by "Final Safety Evaluation for Pressurized Water Reactor Owners Group (PWROG) Topical Report (TR) WCAP-16168-NP, Revision 2, Risk-Informed Extension of the Reactor Vessel In-Service Inspection Interval (TAC No. MC9768)," dated May 8, 2008. This provides the NRC staff with the information and analyses requested in Section (e) of the final rule for 10 CFR 50.61a (proposed rule published in the *Federal Register* on October 3, 2007; 72 FR 56275), following completion of each ASME Code, Section XI, Category B-A and B-D weld inspections.

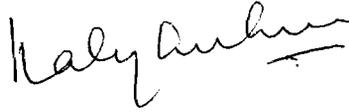
The NRC staff has reviewed both submittals and determined that additional information contained in the enclosure is needed to complete the review.

NRC staff discussed the additional information needed with Mr. R. Williams of the Entergy staff on February 3, 2009. Mr. R. Williams agreed to provide a response within 30 days of the receipt of this letter.

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If you have any questions, please contact me at (301) 415-1480 or by electronic mail at kaly.kalyanam@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "N. Kalyanam", with a horizontal line underneath the name.

N. Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure:
As stated

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OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST FOR ADDITIONAL INFORMATION
WATERFORD STEAM ELECTRIC STATION, UNIT 3
REQUEST FOR ALTERNATIVE W3-ISI-006 TO EXTEND THE
SECOND 10-YEAR INSERVICE INSPECTION INTERVAL AND
LICENSE AMENDMENT REQUEST NPF-38-280 TO SUPPORT
REQUEST FOR ALTERNATIVE W3-ISI-006

By application dated September 18, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082660040), to the U.S. Nuclear Regulatory Commission (NRC), Entergy Operations, Inc. (Entergy, the licensee), submitted the Request for Alternative W3-ISI-006, "Proposed Alternative to Extend the Second 10-Year Inservice Inspection Interval for Reactor Vessel Internal Weld Examinations." By letter dated September 17, 2008 (ADAMS Accession No. ML082660037), Entergy submitted License Amendment Request NPF-38-280, "License Condition to Support Implementation of Extended In-Service Inspection Interval," concurrent with the above proposed Request for Alternative.

The NRC staff has reviewed the submittals and determined that additional information as detailed below is needed to complete the review.

In Section 3.4 of the final safety evaluation report of the Topical Report (TR) WCAP-16168-NP, Revision 2, "Risk-Informed Extension of the Reactor Vessel In-service Inspection Interval," issued May 8, 2008 (ADAMS Accession No. ML081060045), the staff notes that licensees which submit a request for an alternative based on the TR must submit the following plant-specific information:

Licensees must demonstrate that the $RT_{\max-x}$ [a material property which characterizes the reactor vessel's resistance to fracture initiating from flaws in welds, plates, and forgings] and the shift in the Charpy transition temperature produced by irradiation defined at the 30 ft-lb energy level, ΔT_{30} , must be calculated using the latest approved methodology documented in Regulatory Guide 1.99, "Radiation Embrittlement of Reactor Vessel Materials," or "other NRC-approved methodology."

"Other NRC-approved methodology" includes equations 5, 6, and 7 as described in paragraph (g) of the proposed Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.61a rule as published in the *Federal Register*, Vol. 72, No. 191, dated October 3, 2007 (72 FR 56275). Paragraph (f)(6) of proposed rule 10 CFR 50.61a contains a prescriptive approach to determining the validity of implementing equations 5 through 7 of paragraph (g) for the calculation of ΔT_{30} values. Proposed rule paragraph 10 CFR 50.61a(f)(6)(i) states that the licensee shall evaluate the results from a plant-specific or integrated surveillance program if the surveillance data has been deemed consistent as judged by the criteria set forth in 10 CFR 50.61a(f)(6)(i) through (f)(6)(iv).

Enclosure

The licensee has implemented the use of the equations prescribed in proposed rule 10 CFR 50.61a(g) to determine ΔT_{30} values for the Waterford Steam Electric Station, Unit 3 (Waterford 3) beltline materials. However, the licensee did not provide justification of the applicability of the 10 CFR 50.61a(g) equations to Waterford 3, through the performance of surveillance checks as described in 10 CFR 50.61a(f)(6). Therefore, the staff requests the licensee to submit information consistent with the requirements of proposed rule 10 CFR 50.61a(f)(6) that establishes the applicability of equations 5 through 7 as given in proposed rule 10 CFR 50.61a(g) for calculating ΔT_{30} values for the Waterford 3 beltline materials.

February 5, 2009

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If you have any questions, please contact me at (301) 415-1480 or by electronic mail at kaly.kalyanam@nrc.gov.

Sincerely,

/RA/

N. Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure:
As stated

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*Minor editorial changes only from staff provided RAI

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DATE	2/4/09	1/28/09	1/23/09	2/4/09	2/5/09

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