

February 8, 2008

Mr. Kevin T. Walsh
Vice President of Operations
Entergy Operations, Inc.
17265 River Road
Killona, LA 70057-3093

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - REQUEST FOR
ADDITIONAL INFORMATION RE: REQUEST FOR ALTERNATIVE
W3-R&R-006, PROPOSED ALTERNATIVE TO ASME CODE REQUIREMENTS
FOR WELD OVERLAY REPAIRS (TAC NO. MD5388)

Dear Mr. Walsh:

By letter dated April 26, 2007, Entergy Operations, Inc., submitted an application requesting the U.S. Nuclear Regulatory Commission (NRC) approval of Request for Alternative W3-R&R-006, Proposed Alternative to ASME Code [American Society of Mechanical Engineers Boiler and Pressure Vessel Code] Requirements for Weld Overlay Repairs

After reviewing your request, the NRC staff has determined that additional information outlined in the enclosure is needed to complete the review. We discussed this information with your staff by telephone and they agreed to provide the additional information requested within 30 days of the receipt of this letter.

If you have any questions, please contact me at (301) 415-1480.

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: Request for Additional Information

cc w/encl: See next page

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ADAMS Accession No.: ML080370031

(*)No major change from Staff-provided RAI

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NAME	NKalyanam	JBurkhardt	TChan (*)	THiltz
DATE	2/7/08	2/7/08	1/24/08	2/8/08

OFFICIAL RECORD COPY

Waterford Steam Electric Station, Unit 3

(November 2007)

cc:

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REQUEST FOR ADDITIONAL INFORMATION
WATERFORD STEAM ELECTRIC STATION, UNIT 3
REQUEST FOR ALTERNATIVE W3-R&R-006
PROPOSED ALTERNATIVE TO ASME CODE REQUIREMENTS
FOR WELD OVERLAY REPAIRS
TAC NO. MD5388

By letter dated April 26, 2007, Entergy Operations, Inc. (the licensee), proposed an alternative (W3-R&R-006) to the requirements of American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), for mitigating primary water stress-corrosion cracking on dissimilar metal welds using full structural weld overlays at Waterford Steam Electric Station, Unit 3. To complete its review, the Nuclear Regulatory Commission (NRC) staff is requesting the following additional information:

1. In the April 26, 2007, letter, the licensee requested NRC approval of Request for Alternative W3-R&R-006 to support the spring 2008 refueling outage (RF15). However, the duration of the proposed alternative is not specified in the April 26, 2007, submittal other than for the spring 2008 refueling outage. Please confirm/clarify the duration of the proposed alternative. Include the dates of the current inservice inspection (ISI) interval.
2. In Section V.A.3.c of Request for Alternative W3-R&R-006, the licensee discussed the inspection issues regarding cast austenitic stainless steel (CASS) safe ends as listed in Attachment 1 of the licensee's submittal dated April 26, 2007. The licensee stated correctly that the ultrasonic examination (UT) has not been qualified in accordance with Appendix VIII, Supplement 11 of the ASME Code, Section XI, in the examination of cast austenitic stainless steel. The licensee stated further that a flaw with a depth of 75 percent of pipe thickness and circumference of 360 degrees will be assumed in the crack-growth calculation for the cast stainless steel safe ends. In light of the limiting capability of the current UT technology in the CASS examination, the postulated 75 percent depth flaw may not be adequate to assess the structural integrity of the CASS component. In view of this, the licensee might consider options such as:
 1. Sizing the initial flaw depth at 100 percent through-wall for the crack-growth calculations.
 2. If the 100 percent through-wall flaw is impractical or creates a hardship in the overlay design or installation, assuming an initial flaw with 75 percent through-wall depth in the crack-growth calculation and adjusting inspection frequency for the inspection volume.

The licensee is requested to provide an approach to resolve the CASS issue in Alternative W3-R&R-006.

3. On page 6, second paragraph, of the April 26, 2007, submittal, the licensee stated that it may apply a butter (transitional) layer of austenitic stainless steel filler metal across the austenitic stainless steel base metal.
 - 1, Discuss whether paragraph (e) of Code Case N-504-2 is applicable to the butter layer if austenitic stainless steel filler metal is applied. Paragraph (e) requires existence of certain delta ferrite content in the welded metal when austenitic stainless steel weld metal is used.
 2. Identify the austenitic stainless steel weld filler metal that will be used for the butter layer.
 3. Confirm that the Certified Material Test Report (CMTR) for the austenitic stainless steel filler wire shows a minimum delta ferrite of a specified amount. Please provide the maximum and minimum delta ferrite content for the heat of austenitic stainless steel filler wire to be used, as stated on the CMTR.