Entergy

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Michael A. Krupa
Director
Nuclear Safety & Licensing

September 15, 2000

U. S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Mail Stop OP1-17
Washington, DC 20555-0001

Subject: Entergy Operations, Inc.
Request for Use of ASME Code Case N-616

Waterford Steam Electric Station – Unit 3
Docket No. 50-382
License No. NPF-38

CNRO-2000-00030

Ladies and Gentlemen:

Pursuant to 10CFR50.55a(a)(3)(i), Entergy Operations, Inc. (Entergy) requests authorization to implement ASME Code Case N-616. As documented in Request for Alternative PWR-ISI-001, Rev. 0 (see attachment), Entergy plans to use this code case in lieu of removing insulation for VT-2 visual examinations of bolted connections in ASME Code Class 1, 2, and 3 systems borated for the purpose of reactivity control during system pressure tests, as required by IWA-5242(a).

This request applies to Waterford Steam Electric Station – Unit 3. The NRC is in the final stages of approving a similar request for South Texas Project (RR-ENG-2-15).

Entergy understands the NRC staff has developed positions over the years on the use of AISI Type 17-4 PH stainless steel (SA-564 Grade 630), AISI Type 410 stainless steel (SA-193 Grade 6), and A-286 stainless steel (SA-453 Grade 660) fasteners. To address its positions, the NRC has placed certain conditions on the use of these types of stainless steel alloys. Entergy has included these conditions, in advance, as part of the proposed alternative to facilitate dispositioning this request.

Entergy requests the NRC approve PWR-ISI-001, Rev. 0 prior to the beginning of the upcoming fall refueling outage at Waterford-3, which begins on October 14, 2000.

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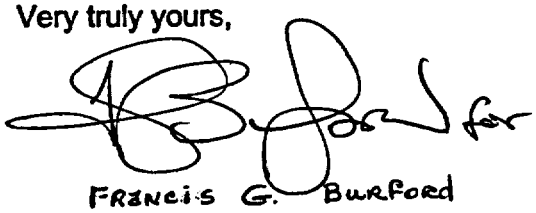
This letter contains no commitments.

Should you have any questions regarding this submittal, please contact Guy Davant at (601) 368-5756.

Very truly yours,



FRANCIS G. BURFORD

MAK/GHD/baa
attachment
cc: Mr. C. M. Dugger (W-GSB-300)
Mr. G. J. Taylor (M-ECH-65)

Mr. T. R. Farnholtz, NRC Senior Resident Inspector (W3)
Mr. N. Kalyanam, NRR Project Manager (W3)
Mr. E. W. Merschoff, NRC Regional Administrator, Region IV

REQUEST FOR ALTERNATIVE
PWR-ISI-001, Rev. 0

Component/Number:	Bolted connections in systems borated for controlling reactivity
Code Classes:	1, 2, and 3
References:	ASME Section XI, 1992 Edition, IWA-5242(a) ASME Code Case N-616
Examination Category:	B-P, C-H, D-B
Item Number:	All
Description:	System pressure test for insulated bolted connections
Unit / Inspection Interval Applicability:	Waterford-3 – second (2nd) 10-year interval

I. Code Requirement(s)

ASME Section XI Subarticle IWA-5242(a) states that for systems borated for the purpose of controlling reactivity, insulation shall be removed from pressure-retaining bolted connections for a direct VT-2 visual examination.

II. Requested Authorization

Pursuant to 10 CFR 50.55a(a)(3)(i), Entergy proposes to implement ASME Code Case N-616 in lieu of removing insulation for VT-2 visual examinations of bolted connections in ASME Code Class 1, 2, and 3 systems borated for the purpose of reactivity control during system pressure tests, as required by IWA-5242(a).

III. Basis for Alternative

The intent of the insulation removal requirement was to look for evidence of leakage due to the specific concern of boric acid corrosion of bolting materials. It is not required for non-borated systems since there is no borated water degradation mechanism present. Similarly, it should not be required for connections in borated systems having non-susceptible bolting materials (no boric acid degradation mechanism).

Insulation removal was prescribed primarily because boric acid corrosion is a concern for low chromium steels (< 10%). In instances where higher chromium steels are used, Entergy believes insulation removal is inappropriate since the degradation mechanism (boric acid corrosion) is not present or occurs at a greatly reduced rate. The bolting material typically used in the subject areas at Waterford-3 is shown in the table below.

Bolting Material

MATERIAL	GRADE
SA-193	B8
	B8M
	B16
SA-194	6
	B8
	B8M
SA-453	660
SA-564	630

Entergy maintains removing insulation to inspect for corrosion of bolting material that was specifically installed due to its corrosion-resistant properties is unwarranted. Such actions add unnecessary radiation exposure and waste resources needed to erect and remove scaffolds and remove and install insulation. Entergy believes these actions do not enhance the safety or quality of the plant.

IV. Proposed Alternative Criteria

Where insulation is not removed from bolted connections in systems borated for the purpose of controlling reactivity, Entergy proposes to use Code Case N-616, "Alternative Requirements for VT-2 Visual Examination of Classes 1, 2 and 3 Insulated Pressure retaining Bolted Connections," as an alternative to IWA-5242(a). In addition to Code Case N-616, Entergy will continue to remove insulation, as discussed in Relief Request CEP-ISI-002[1], at connections that have the following material conditions:

1. 17-4 PH stainless steel or 410 stainless steel studs or bolts aged at a temperature below 1100°F or with hardness above Rc 30;

2. A-286 stainless steel studs or bolts with the preload above 100 ksi.

Entergy will continue to follow ASME Section XI IWA-5213, which specifies test condition hold times after pressurization.

[1] Entergy Letter CNRO-2000-00027, "Alternative to ASME Code Requirements," dated August 24, 2000

V. Conclusion

10CFR50.55a(a)(3) states:

"Proposed alternatives to the requirements of (c), (d), (e), (f), (g), and (h) of this section or portions thereof may be used when authorized by the Director of the Office of Nuclear Reactor Regulation. The applicant shall demonstrate that:

(i) The proposed alternatives would provide an acceptable level of quality and safety, or

(ii) Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety."

Entergy believes the proposed alternative examinations presented above provide an acceptable level of quality and safety for ensuring the integrity of bolted connections in systems borated for reactivity control. Therefore, we request the proposed alternative be authorized pursuant to 10CFR50.55a(a)(3)(i).