

October 17, 2001

Mr. John T. Herron
Vice President Operations
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - CORRECTION TO
AMENDMENT NO. 174 RE: REVISION OF CONTAINMENT INTERNAL
PRESSURE REQUIREMENT (TAC NO. MB0972)

Dear Mr. Herron:

The Nuclear Regulatory Commission issued, on October 10, 2001, Amendment No. 174 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment revises the lower limit of the allowable containment internal pressure in Technical Specification 3.6.1.4, "Containment Systems - Internal Pressure," from 14.375 pounds per square inch, absolute (psia) to 14.275 psia.

Subsequent to the October 10, 2001, issuance, it was brought to our attention that on page 2 of the Safety Evaluation (SE) in the Amendment Package, there was a typographical error. In the paragraph beginning "The instrument uncertainty for the measurement ...," the statement "...the calculated maximum pressure differential increase is less than 0.0001 psi." is incorrect, and should read "... less than 0.001 psi."

I have enclosed the revised page 2 of the SE contained in Amendment No. 174 to NPF-38, with the correction identified by marginal vertical bar. Please replace page 2 of the October 10, 2001, SE with the enclosed revised sheet.

Please call N. Kalyanam, at (301) 415-1480, with any questions you may have.

Sincerely,

/RA/

N. Kalyanam, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure: As stated

cc w/encl: See next page

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annulus atmosphere, (2) the containment peak pressure during either LOCA or MSLB, and (3) the minimum pressure of the ECCS performance analysis.

The design basis event for the design negative differential pressure is an inadvertent actuation of containment spray during normal operation. The actuation of the containment spray system results in a decrease in the containment internal pressure, therefore increasing the differential pressure across the containment boundary. The licensee stated that the current Waterford 3 analysis for this event assumes an initial minimum containment pressure of 14.25 psia, which bounds the proposed TS values of 14.275. Therefore, the proposed change has no effect on the calculated pressure differential, 0.49 psid, which remain less than the design limit of 0.65 psid.

The proposed TS change on the lower limit of containment pressure does not affect the containment peak pressure, which is based on the upper limit of the internal containment pressure.

For ECCS performance, using a lower limit of initial containment pressure results in a higher peak clad temperature and higher clad oxidation during a large break LOCA. The Waterford 3 ECCS performance was previously analyzed in accordance with 10 CFR 50.46, using an initial containment pressure of 14.275 psia. This value is consistent with the proposed TS change. The calculated peak clad temperature of 2177 °F is within the acceptance criteria given in 10 CFR 50.46.

The instrument uncertainty for the measurement of the containment pressure is less than 0.25 psi. The licensee's analysis using GOTHIC code shows that for a decrease in initial containment pressure of 0.25 psi, the calculated maximum pressure differential increase is less than 0.001 psi. This impact of instrument uncertainty on the calculated differential pressure is negligible. The licensee's ECCS sensitivity analysis shows that the peak cladding temperature increases by approximately 20 °F. The licensee indicated that this impact is small compared to the large amount of conservatism required by the 10 CFR 50.46 ECCS Evaluation Model.

The proposed change provides additional operating margin for the CAP system. If the CAP system was initiated during low atmospheric pressure conditions at approximately 14.68 psia, the current TS 3.6.1 limit of 14.375 psia would be reached. Atmospheric pressure less than 14.68 psia are usually associated with short-term weather conditions. Currently, when these conditions do occur, containment purge is delayed until atmospheric pressure increases above 14.68 psia. By reducing the TS lower limit for containment internal pressure, the restriction of the atmospheric pressure at which CAP system can be operated is reduced. Therefore, it provides additional operating stability for the use of the CAP system.

4.0 SUMMARY

Based on the above evaluation, the staff finds the proposed TS change acceptable.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment. The State official had no comments.

Waterford Generating Station 3

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