

February 14, 1996

Mr. Ross P. Barkhurst
Vice President Operations
Entergy Operations, Inc.
P. O. Box B
Killona, LA 70066

SUBJECT: REVISIONS TO TECHNICAL SPECIFICATION 3/4.8.1, "ELECTRICAL POWER SYSTEMS - A.C. SOURCES," FOR THE WATERFORD STEAM ELECTRIC STATION, UNIT 3 (TAC NO. M94052)

Dear Mr. Barkhurst:

The Nuclear Regulatory Commission staff has reviewed your November 7, 1995, submittal requesting to amend the technical specifications (TSs) for the Waterford 3 Steam Electric Station. In order to complete our review of the proposed amendment, we need additional information as discussed in the enclosure. These questions are intended to clarify inconsistencies between your proposed TS changes and the standard TSs. Please provide your response within 30 days of the date of this letter.

This requirement affects nine or fewer respondents and, therefore, is not subject to the Office of Management and Budget review under P.L. 96-511.

Sincerely,

ORIGINAL SIGNED BY: T. Polich for
Chandu P. Patel, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure: Request of Additional Information

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script, appearing to read "Chandu P. Patel".

for Chandu P. Patel, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

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Enclosure: Request of Additional Information

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Mr. Ross P. Barkhurst
Entergy Operations, Inc.

Waterford 3

cc:

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REQUEST FOR ADDITIONAL INFORMATION
WATERFORD STEAM ELECTRIC STATION, UNIT 3
DOCKET NO. 50-382

1. Item 4.8.1.1.2a.4

The proposed change would delete the upper voltage and frequency limits of the diesel generator fast-start test acceptance criteria, and add a note to eliminate the requirement to perform monthly fast-start testing of the diesel generators.

This proposed change is not consistent with standard technical specifications which require a fast-start test of the diesel generators once every 184 days.

The NRC is concerned that by eliminating the requirement for fast-start testing of the diesel generators (except for once every 18 months as required in 4.8.1.1.2d.) and by not monitoring the voltage and frequency responses of the generators during such tests, diesel generator performance could degrade without licensees being aware of the degradation. On the basis of this concern, NRC chose not to completely eliminate fast-start testing when it relaxed diesel generator testing requirements. Standard technical specifications retain a requirement to perform a fast-start test of the diesel generators once every 184 days (6 months), and both an upper and a lower acceptance limit for the generator output voltage and frequency is included. It is assumed by the staff that licensees collect voltage and frequency response data, in addition to other data, to trend the performance of the diesel generators, and that as a result of this trending licensees are able to identify or anticipate problems with the diesel generators.

With regard to the concern identified above, explain: (a) why the proposed change does not contain a requirement to perform a fast-start test of the diesel generators at least once every 184 days and why this requirement should not be included in the proposed change; (b) what, if any, trending of generator performance is used to identify or anticipate problems with the diesel generators; and (c) if closure of the generator output breakers is to be used to verify voltage and frequency limits, the frequency of calibration for the relays which provide diesel generator output breaker permissives and the calibration tolerances permitted in calibrating these relays.

2. Item 4.8.1.1.2c

The proposed change would add "Maintain properties of new and stored fuel oil in accordance with the Fuel Oil Testing Program," and delete all previous information and requirements in this section with the exception of the last sentence in subsection three as modified.

Enclosure

This proposed change is not consistent with standard technical specifications which contain a requirement to test new and stored fuel oil in accordance with the Fuel Oil Testing Program, and specify completion times for restoring fuel oil properties found outside the limits specified in the Fuel Oil Testing Program.

Explain: (a) why the standard words "Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Fuel Oil Testing Program" were not used; (b) why a requirement to test in accordance with the Fuel Oil Testing Program was not incorporated into the proposed change; and (c) why no completion times were proposed to restore fuel oil total particulates to within limits (i.e., 7 days) or fuel oil properties to within limits (i.e., 30 days) similar to those contained in standard technical specifications.

3. Items 4.8.1.1.2d.1 and 4.8.1.1.2d.2

The proposed change would delete "(HPSI pump)" from the 18-month diesel generator partial load rejection test criteria in Section 4.8.1.1.2d.1, and add "an indicated 4000" to the 18-month full-load rejection test criteria in Section 4.8.1.1.2d.2.

These proposed changes are not consistent with standard technical specification testing requirements which specify a power factor at which the load rejection tests should be performed.

The amount of reactive power to be rejected by the diesel generators in both the partial load rejection test and the full-load rejection test is unspecified in the proposed change. The amount of reactive power to be rejected in the partial load rejection test was previously implied by making reference to the HPSI pump. Provide: (a) a description of how these two load rejection tests will be performed in the future if the requested TS change is granted; (b) the amount of reactive load that will be rejected in order to verify proper operation of the voltage regulator and the bases for the amount chosen; and (c) a comparison of these future tests to tests performed in the past so that any changes in the proposed testing method can be readily identified.

4. KW Load of an HPSI Pump and an Essential Chiller

In reviewing the proposed amendment, an apparent discrepancy in the kW load used to represent an HPSI pump and an essential chiller in Table 8.3.1, "Emergency Diesel Generator A Loading Sequence (Steady State)," of the Waterford FSAR was noted. Table 8.3.1 lists the real load of an HPSI pump as 371.50 kW and that of an auxiliary building water chiller compressor as 416.37 kW. These values are different from the values reported on page seven of the proposed amendment. Explain the reason for this apparent discrepancy.