

Mr. Charles M. Dugger
Vice President Operations
Entergy Operations, Inc.
P. O. Box B
Killona, LA 70066

August 27, 1999

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3- REQUEST FOR
ADDITIONAL INFORMATION RE: INDIVIDUAL PLANT EXAMINATION OF
EXTERNAL EVENTS SUBMITTAL (TAC NO. M83692)

- REFERENCE: 1. Entergy Operations, Inc. letter No. W3F1-98-0030 from E. C. Ewing to the
USNRC, dated February 23, 1998.
2. Electric Power Research Institute (EPRI) Report "Guidance for Development
of Response to Generic Request for Additional Information on Fire Individual
Plant Examination for External Events (IPEEE)," dated May 1999.

Dear Mr. Dugger:

We have reviewed your response (Ref. 1) to our previous request for additional information
(RAI) on the IPEEE, Generic Letter (GL) 88-20, Supplement 4, dated June 28, 1991. Based
upon our review of your response, we are unable to conclude at this time that you have met the
intent of Supplement 4 to GL 88-20. Therefore, your response to the enclosed follow-up
questions, considering the recently developed EPRI guidance provided in Reference 2, is
necessary to complete our review.

It is requested that you provide a response to the enclosed RAI within 90 days of your receipt of
this letter. If you have any questions regarding this matter, please call me at 301-415-3025.

Sincerely,

ORIGINAL SIGNED BY

Chandu Patel, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

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Docket No. 50-382

Enclosure: As stated

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Waterford Generating Station 3

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May 1999

Waterford Steam Electric Station, Unit 3 (Waterford 3)

Supplemental Request for Additional Information

Based on our review, the Waterford 3 response dated February 23, 1998 (Ref. 1) to the NRC's request for additional information (RAI) dated October 27, 1998, does not address the issues raised in the Individual Plant Examination for External Events (IPEEE) fire analysis-related RAI questions. A revised response to the following supplemental RAI is necessary for the NRC to complete its review of the Waterford 3 IPEEE submittal. The fire analysis guidance documented in Reference 2 should be used to address the issues raised in the original RAI questions. Please provide a revised response to the following supplemental RAI questions.

Fire events

1. The licensee's response to RAI Question 1 relating to the assumed heat release rates (HRR) from electrical cabinet fires is not acceptable. The licensee's response to RAI Question 1 reiterates information provided in the submittal and/or traceable to the EPRI Fire PRA [probabilistic risk assessment] Implementation Guide (FPIG), without responding to the issues of the question. During the period between the review of the submittal and the licensee's response to this RAI, the issue of higher HRR has been under discussion between the NRC research (RES) staff and the Nuclear Electric Institute (NEI) staff. Based on such discussions, Reference 2 has been developed by the industry that provides specific guidance on modeling of appropriate HRR for control cabinets and switchgear enclosures. Please consider the new guidance provided in Reference 2, and submit a revised response addressing the issues of RAI Question 1.
2. The licensee's response to RAI Question 2 relating to the treatment of fires involving transient combustible (TC) sources is not acceptable. NUREG-1407 notes that the fire-induced vulnerability evaluation (FIVE) methodology, which the licensee cites, was an acceptable methodology for IPEEE fire analysis submittals. The FIVE methodology clearly states that TC fires should be modeled for its impact on the overall fire core damage frequency (CDF) and included in the submittal. The licensee's response to RAI Question 2 reiterates information provided in the submittal and/or traceable to the EPRI FPIG, without responding to the issues of the question. Reference 2 provides recently developed industry guidance on explicit treatment of TC sources. Please consider the guidance provided in Reference 2, and submit a revised response addressing the issues of RAI Question 2, including the impact of TC sources on overall fire CDF.
3. The licensee's response to RAI Question 5 relating to the assumed heat loss factor (HLF) is not acceptable. The licensee's response to RAI Question 5 reiterates information provided in the submittal and/or traceable to the EPRI FPIG, without responding to the issues of RAI Question 5. In particular, the use of HLF (0.85) in some fire areas where the resulting temperature rise is 0.88 - 0.99 of that required for damage is suspect. Also of interest are those fire areas that were screened when a value of 0.85 was assumed, and the HLF values assigned to the fire analysis of the charging pump room. During the period between the review of the submittal and the licensee's response to this RAI, the issue of lower HLF has been under discussion between the RES staff and the NEI staff. Based on such discussions, Reference 2 has been

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developed by the industry that provides guidance on the assignment of appropriate HLF to fire areas. Please consider the guidance in Reference 2, and submit a revised response addressing the issues of RAI Question 5, including the impact of potential use of lower HLF values for 10 fire scenarios on overall fire-induced CDF.

Seismic events

There are no RAIs in this area.

High wind, floods and other external events

There are no RAIs in this area.