

May 6, 1997

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Director
Nuclear Safety & Regulatory
AffairsU.S. Nuclear Regulatory Commission
Mail Stop P1-137
Washington, D.C. 20555-0001

Attention: Document Control Desk

Subject: Submittal of BWROG Report - Prediction of the Onset of Fission Gas
Release from Fuel in Generic BWR
Application of NUREG-1465 Source Terms for Grand Gulf Nuclear
Station Rebaselining StudyGrand Gulf Nuclear Station
Docket No. 50-416
License No. NPF-29

GNRO: 97/00034

Gentlemen:

By this letter, Grand Gulf Nuclear Station is submitting a report, "Prediction of the Onset of Fission Gas Release from Fuel in Generic BWR." The development of this report was sponsored by the Boiling Water Reactors Owners Group (BWROG) to supplement the information given in NUREG-1465, "Accident Source Terms for Light-Water Nuclear Power Plants."

The final report for NUREG-1465, was published in February, 1995. With regard to fission product release, Sections 3.2 and 3.3 discuss the results of calculations to determine a realistic estimate of the shortest time for fuel rod failure and estimated durations for each release phase. The NUREG, which focuses on PWRs only, states that fuel failures may occur significantly later for BWRs; therefore, the coolant activity phase would be expected to last longer than that of a Westinghouse or Babcock & Wilcox plant. However, unless plant specific calculations are made, these shorter durations for the coolant activity phase would be applied to BWRs.

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To further the development of the NUREG, the BWROG has performed the BWR-specific calculations necessary to replace the extremely conservative coolant activity phase times applied to BWRs. The results of these calculations are provided in the attached report.



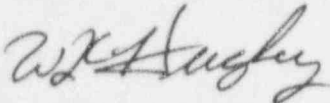
Specifically, the report provides the results of an analysis to determine the minimum time for fuel perforation given a Design Basis Accident Recirculation Line Break with no Emergency Core Cooling System injection assumed and is intended to be generic for BWR plants. Therefore, the limiting plant configuration and fuel type were selected for the analysis. The analysis uses NRC-approved codes to calculate the minimum duration of the coolant activity phase of 121 seconds.

GGNS requests that the information in this report be reviewed to replace the duration of the coolant activity phase currently given in the NUREG. It should be noted that the time of 121 seconds is a limiting value for BWRs and a GGNS-specific analysis would likely justify a longer duration.

While this analysis is important to supplement the information in NUREG-1465 for future implementation of the revised source term for BWRs, it is equally important to be considered in the BWR rebaselining effort underway at Grand Gulf Nuclear Station. We request that this information be used in the calculations to be performed during this effort, as well.

We appreciate the opportunity to participate as the BWR rebaselining plant and look forward to continued cooperation between us and the NRC on this project. We believe this cooperation will lead to timely implementation of the revised source term which is important to the industry and the NRC. If you have any questions concerning this submittal, please contact Sheri Mahoney at 601-437-6552.

Yours truly,



WKH/SBM

attachment:

BWROG Report, "Prediction of the Onset of Fission Gas Release from Fuel in Generic BWR"

cc:

(See Next Page)

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cc:

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Attachment 1
to GNRO-97/00034

Attachment 1

Prediction of the Onset of
Fission Gas Release from
Fuel in Generic BWR