

August 9, 2000

Mr. William A. Eaton
Vice President, Operations GGNS
Entergy Operations, Inc.
P. O. Box 756
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 - REQUEST FOR ADDITIONAL
INFORMATION RE: AMENDMENT REQUEST FOR IMPLEMENTATION OF
THE ALTERNATE SOURCE TERM (TAC NO. MA8065)

Dear Mr. Eaton:

The staff is reviewing your license amendment request dated January 21, 2000, for full scope implementation of the alternate source term described in NUREG-1465, "Accident Source Terms for Light Water Nuclear Power Plants." Based on this review and on the technical discussions during the telephone conference on July 12, 2000, the staff has developed the enclosed request for additional information (RAI). These additional three questions supplement the fourteen questions enclosed with the RAI letter dated May 9, 2000, and result from the discussion of your partial response, i.e., response to questions 1 through 9, of the May 9, 2000, RAI.

As discussed in the July 12, 2000, telephone conference, the Grand Gulf Nuclear Station staff is preparing a supplemental submittal in response to RAI questions 10 through 14 of the May 9, 2000, RAI. The supplemental submittal will include revised calculations for correction of meteorological data, replacing the erroneous data attached to the original license amendment request. The completion date identified by your staff for the supplemental submittal is August 31, 2000. Mr. Lonnie Daughtery of your staff agreed that the response to the three additional RAI questions, enclosed with this letter, will also be completed by August 31, 2000, and will be included with your supplemental submittal.

If you have any questions regarding this issue, please call me at 301-415-2623.

Sincerely,

/RA/

S. Patrick Sekerak, Project Manager, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure: RAI questions

cc w/encl: See next page

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SECOND REQUEST FOR ADDITIONAL INFORMATION
GRAND GULF LICENSE AMENDMENT REQUEST FOR
FULL-SCOPE APPLICATION OF ALTERNATIVE SOURCE TERM
(TAC NO. MA8065)

In order to complete our review and evaluation of the subject license amendment request, the Nuclear Regulatory Commission staff requests the following additional information (in addition to the fourteen questions included with the first request for additional information dated May 9, 2000):

15. You used Equation 3-5d in page 10 of Attachment 7 to calculate the concentration of $(H^+)_{final}$ ions in the suppression pool. This equation is approximately correct at 25⁰ C. The concentration of H⁺ increases with water temperature, lowering the pH. State the maximum expected suppression pool water temperature following a design basis accident. Provide potential reduction in calculated pH values at the maximum pool water temperature within the expected pH ranges.
16. In Section 3.3, "Hydrochloric Acid Production" of Attachment 7, you used the model which, although based on NUREG/CR-5950, differed in that instead of expressing the energy for production of hydrochloric acid in terms of the radiative surface flux to the surface of Hypalon, you used average radiation doses absorbed by this material. Using this methodology may cause some underestimation of the absorbed beta energy and, consequently, generation of hydrogen chloride. In order to clarify the issue, we would like you to calculate generation of hydrogen chloride using the methodology described in NUREG/CR-5950.
17. In Section 5.4 of Attachment 8, you calculated post-loss of coolant accident nitric acid production in the suppression pool water using the integrated radiation dose in the pool. The staff finds that you have not included beta radiation dose, in Section 5.1 of Attachment 8, as a radiation source term and therefore, the staff assumes that you have not considered suppression pool beta dose in production of nitric acid. Revise your pool water dose calculation to include both gamma and beta radiation to determine the associated impact on the suppression pool water pH transient.

Enclosure

Grand Gulf Nuclear Station

cc:

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May 1999