



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 1 1983

Docket Nos.: 50-329/330

MEMORANDUM FOR: Darrell G. Eisenhut, Director
Division of Licensing

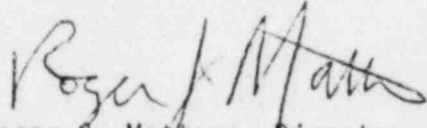
FROM: Roger J. Mattson, Director
Division of Systems Integration

SUBJECT: BOARD NOTIFICATION ON MIDLAND NUCLEAR UNITS 1 & 2

Recently, information was received from the Applicant relating to the design basis accident (DBA) evaluation of the steam generator tube rupture event. This information is directly related to a previous Board Notification, BN-83-47. In accordance with the criteria for Board Notification outlined in NRR Office Letter No. 19, Revision 2, dated October 1, 1982, I recommend that you notify the Midland ASLB since the information may cast a new light on the ASLB consideration of Midland. A summary of the relevant issues is enclosed (Enclosure 1) in the format specified by the Office Letter.

In Amendment 47 to the FSAR, the applicant has presented a design basis scenario for the steam generator tube rupture (SGTR) that includes the steaming of the affected steam generator until the plant could switch to the decay heat removal system. In prior amendments, the applicant has stated that the affected steam generator would be isolated at 30 minutes and that plant cooldown to initiation of the decay heat removal system would be accomplished using only the unaffected steam generator. Steaming the damaged generator, as proposed, would result in offsite doses greater than those presently identified in the staff safety evaluation report and may exceed the acceptance criteria of the staff Standard Review Plan. Therefore, we have determined that a reanalysis of the radiological consequences following a SGTR accident is required. Enclosure 2 identifies the information requested by the staff to complete its review of the revised SGTR design basis event.

XA Copy Has Been Sent to PDR


Roger J. Mattson, Director
Division of Systems Integration

Enclosures:

As stated

cc: T. Novak M. Miller
 R. Houston B. Sheron
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Enclosure 1

Item Recommended For Board Notification
Midland Nuclear Units 1 & 2

- a) It is recommended that the ASLB Hearing Board for the Midland Nuclear Units 1 and 2, Docket Nos. 50-329/330 be informed that the applicant has proposed a change in the design basis for the steam generator tube rupture (SGTR) which invalidates the staff's evaluation of the SGTR event in the Midland safety evaluation report.
- b) In BN-83-47, the Board was notified that the Midland applicant had recently submitted a revised SGTR analysis which was taking into account the potential for prolonged primary to secondary leakage and the associated offsite radiological consequences. In their analysis, the applicant has modified their design basis SGTR accident analysis to include the steaming of the damaged steam generator until the plant can switch to the decay heat removal system. The applicant's previous analysis and the staff's Safety Evaluation were both based upon a SGTR accident in which the damaged steam generator would be isolated after 30 minutes and the plant cooldown would be performed using the undamaged steam generator. The use of both steam generators following the accident would result in a symmetric plant cooldown, which, the applicant believes, is less likely to involve an operator error. However, the proposed design change would increase the offsite radiological consequences above the values currently presented in the safety evaluation report. We have determined that a reanalysis of the design basis SGTR accident is necessary to assure that the offsite dose acceptance criteria of the staff's Standard Review Plan will be met as identified in the Muller to Novak memo of July 6, 1983 (enclosed).
- c) The staff considers this item to be relevant and material in as much as the calculated thyroid doses would be greater than those presently cited in the SER, and may exceed the acceptance criteria of the staff's Standard Review Plan for this accident.
- d) The Midland plant is the first plant for which accident analysis assume steaming the affected steam generator as a means of mitigating the design basis steam generator tube rupture accident. For all previous PWR's, the staff and applicants have assumed that the affected steam generator would be isolated within 30 minutes following the accident and that no additional releases from the damaged generator would occur.
- e) The previous board notification related to this situation, BN-83-47, recognized that in at least one other B&W, PWR, TMI-1, emergency procedures instructed the operator to steam the effected OTSG to control its level. However, the TMI-1 procedures restricted this steaming to ensure the offsite doses remain below 10 CFR 20 limits, and ensured the RWST inventory remained sufficient for continued RCS

makeup. Steaming from the damaged OTSG was stopped if either these conditions were not met, and the OTSG was allowed to fill.

- f) The staff perceives this item to be of slight to moderate significance. The reanalysis of the design basis SGTR would produce calculated offsite radiological consequences which are greater than those presently reported in the SER, and may result in calculated offsite radiological consequences which exceed the acceptance criteria of the staff's Standard Review Plan.
- g) If the staff's reanalysis of the design basis SGTR at Midland identifies offsite radiological consequences which exceed the acceptance criteria of the Standard Review Plan, the staff could take action to reduce the technical specifications for primary and secondary system iodine activity to values which would assure that the acceptance criteria of the Standard Review Plan are met. The results and conclusions from the staff's reanalysis will be reported in a Supplement to the SER.
- h) The staff is not aware of any relationship this particular item has with any of the issues before the Board.
- i) The item identified above could potentially apply to all Babcock and Wilcox pressurized water reactors which are in the licensing process. More specifically, WNP1, Docket No. 50-460 and Bellefonte Docket No. 50-438/439.