

Enclosure 2
JUL 06 1983

Bucket Nos.: 50-329, 330

MEMORANDUM FOR: Thomas H. Novak, Assistant Director
for Licensing
Division of Licensing

FROM: Daniel R. Muller, Assistant Director
for Radiation Protection
Division of Systems Integration

SUBJECT: MIDLAND UNITS 1 & 2 STEAM GENERATOR TUBE RUPTURE
ANALYSIS (SGTR)

The current Midland Safety Evaluation Report concludes that the radiological consequences following a SGTR are within the acceptance criteria of Standard Review Plan (SRP) Section 15.6.3. However, in FSAR Amendment 47 (December 1982) the applicant presented an accident scenario which included steaming the affected steam generator until the unit was able to switch to the decay heat removal system. This is the first plant of any reactor type to present an accident scenario which includes steaming of the affected steam generator as a means of mitigating the SGTR accident. Because the assumed plant response is a significant departure from the previous applicant assumptions of isolating the affected steam generator as rapidly as possible, we conclude that we need more information about the system response in order to evaluate the potential offsite radiological consequences. Therefore, please forward the request for additional information contained in the enclosure to the applicant.

In a memo dated June 29, 1983 from R. W. Houston to T. H. Novak, RSB also requested additional information about the Midland SGTR. In this memo, RSB also requested that the applicant provide a dose analysis of the SGTR with a loss of offsite power and any additional single failure. It should be noted that the single active failure assumption was not rigorously enforced on past application reviews due to the lack of a detailed systems review coincident with the radiological review. While the single failure assumption in conjunction with the use of the 10 CFR Part 100 dose guideline values is an extension of the current SRP review procedures, it is entirely consistent with current and past staff review practices for all events categorized as postulated design basis accidents. As part of the evaluation of such events, it will be necessary for AED to evaluate the offsite radiological consequences. Therefore, the enclosure also includes a request for additional information concerning important radiological parameters.

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ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION CONCERNING THE RADIOLOGICAL
CONSEQUENCES FOLLOWING A POSTULATED STEAM GENERATOR TUBE RUPTURE
ACCIDENT AT MIDLAND UNITS 1 & 2

1. For a postulated design basis steam generator tube rupture accident (SGTR) as prescribed in Standard Review Plan Section 15.6.3, provide the following information until such time as releases from the affected steam generator terminate:

a. A description of the sequence of events which includes an identification of all operator actions and when these actions are expected to occur. Also include descriptions of the automatic initiations and actuations as they occur chronologically.

b. The following parameters as a function of time:

- 1) the primary system pressure;
- 2) the tube rupture flow rate and integrated tube rupture flow;
- 3) the secondary liquid water mass and level in both steam generators;
- 4) the primary system liquid mass;
- 5) the secondary system pressure in both steam generators;
- 6) the integrated mass released out of the atmospheric relief valves or safety valves for both the affected and unaffected steam generators;