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

Peter (9)

MAY 20 1983

MEMORANDUM FOR: S. A. Varga, Chief, Operating Reactors Branch #1, DL

FROM: B. W. Sheron, Chief, Reactor Systems Branch, DSI

SUBJECT: BEAVER VALLEY UNIT 1, N-1 LOOP OPERATION, REQUEST FOR ADDITIONAL INFORMATION

Please transmit to the licensee the enclosed question concerning steam generator tube ruptures during N-1 loop operation.

M Wayne Hodges
for

Brian W. Sheron, Chief
Reactor Systems Branch
Division of Systems Integration

Enclosure:
As stated

cc: R. Mattson
R. W. Houston
P. Tam
L. Marsh

CONTACT: R. Barrett,
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8306030378
XA

REQUEST FOR ADDITIONAL INFORMATION

BEAVER VALLEY UNIT 1

N-1 LOOP OPERATION

RSB-1
(SRP 15.6.3, P. 15.6.3.3)

Your response to question 3 in reference 1 concerning a Steam Generator Tube Rupture (SGTR) during N-1 loop operation has been found to be inadequate. No quantitative basis was provided to substantiate your assertion that a SGTR while in the N-1 loop mode would be bounded by the FSAR calculation of a SGTR while in the N loop mode. Further, you have not provided suitable justification that the 30-minute (time to equalize RCS and faulted SG pressures) assumption in the FSAR can be met while in the N-1 loop mode. If suitable quantified bases cannot be provided, you should recalculate a SGTR in the N-1 loop mode, including an analysis of offsite does consequences. Your analysis should specifically address the following:

1. Assumption of loss of offsite power per GDC-17
2. Justification for relying on non-safety related equipment for mitigation of the event (e.g., primary PORV, ADV's) should be provided.

The timing of actions taken by the operator should be justified on the basis of current or proposed procedures. The time response criteria of ANSI N660 (reference 2) should be taken into account.

Your response should contain calculated time variations of upper plenum pressure and temperature, saturation temperature, pressurizer level, level in the faulted steam generator, secondary relief and safety valve flows, and secondary temperature and pressure for each steam generator.

Please alsc provide a chronological listing of automatic actuations and operator actions, justified on the basis of current or proposed emergency procedures. If the 30-minute criterion assumed in the FSAR cannot be met, please provide justification for the current FSAR, N-loop operation SGTR analysis assumption.

References

1. Carey, J. J. (Duquesne Light) to S. A. Varga (NRC), "Response to NRC Letter Dated January 7, 1983" (March 4, 1983.
2. Mills, R.R., et al., "Time Response Design Criteria For Safety-Related Operator Actions," American National Standard ANSI N660 (March 1981).