

GPU 2431

✓
THE BASCOCK & WILCOX COMPANY
POWER GENERATION GROUP

DISTRIBUTION

From	J. H. TAYLOR - MANAGER, LICENSING (2317) <i>Edward R. Long</i>	105 662-1
Cust.		File No. 205 T4.4 or Ref. PSC 10-78
Subj.	PRELIMINARY REPORT OF SAFETY CONCERN PSC 10-78	Date APRIL 12, 1978

This letter is cover and customer and are subject only.

DISTRIBUTION

R. C. Jones
B. M. Dunn
A. L. MacKinney
J. P. Jones
W. A. Cobb
B. A. Karrasch
B. B. Cardwell
D. W. Berger

J. C. Deddens
J. J. Stewart
G. M. Olds
D. H. Roy
A. H. Lazar
E. G. Ward
L. J. Stanek
J. D. Phinney

C. D. Russell
R. C. Luken
J. T. Janis
G. T. Fairburn
F. J. Levandoski
E. R. Kane
H. A. Bailey
D. Mars
Record Center

In accordance with procedure NPG-1707-01, "Processing of Safety Concerns," I am forwarding a reported concern relating to small breaks at the pump discharge on the 177FA Lowered Loop Plants. PSC 10-78 has been assigned as the PSC number for this case.

A preliminary indication is that this concern will be reportable to the NRC under the requirements of 10 CFR 21. Effort is now in progress on preparing an evaluation and on recommendations for possible corrective action. When my staff has completed its evaluation report, I will communicate their findings to you.

The point of contact within Licensing on this case is H. A. Bailey, Ext. 2678.

JHT:dsf
Attachment

305 0286

E15 4-14

BADCOCK & WILCOX
PRELIMINARY REPORT OF SAFETY CONCERNS

SWKP-20208-1(10-77)

TO: MANAGER, LICENSING, NRC (CCS QUALITY ASSURANCE) BY: R.C. Jones, Jr. ORGANIZATION: ECCS Analysis ATTACH AND IDENTIFY, BY PAGE NUMBER, ANY SUPPORTING INFORMATION/DOCUMENTS	☒ SIGNIFICANT DEFICIENCY LOG NO. <u>PSC 10-78</u> ☒ SUBSTANTIAL SAFETY HAZARD FILE NO. <u>T4.4</u> ☒ MISC. REPORTABLE ITEM CONTRACT NO. _____ PAGE 1 OF _____
2 WHEN, HOW AND ON WHICH PLANT WAS THE SAFETY CONCERN IDENTIFIED? On April 7, a 0.04-ft² small break analysis at the pump discharge on the SMUD plant was completed. Results show substantial core uncover.	3 TO YOUR KNOWLEDGE IS CUSTOMER AWARE? ☐ YES ☒ NO WHEN & HOW _____ 4 TO YOUR KNOWLEDGE IS NRC AWARE? ☐ YES ☒ NO WHEN & HOW _____
5 OTHER AFFECTED CONTRACTS (CUSTOMER NAME AND LOCATION) Oconee 1, 2, and 3 (Duke Power Corp.), Crystal River 3 (Florida Power Corp.), TMI-1 (Met. Ed.), TMI-2 (JCP&L), ANO-1 (Arkansas P&L), Midland 1 & 2 (Consumer's Power)	
6 DESCRIPTION OF SAFETY CONCERN-IDENTIFY AFFECTED COMPONENT(S), SYSTEM(S) OR ACTIVITY/SUPPLIER, AND IMPACT ON SAFETY OF PLANT OPERATIONS For small breaks at the pump discharge on the 177-FA Lowered Loop Plants (identified above), the HPI pumps are inadequate to control the accident to the criteria of 10 CFR 50.46. The analysis performed for a 0.04-ft² break at the pump discharge shows core uncover starting at ~1700 seconds. The mixture level in the core at .00 seconds is less than 4.0 ft. This level is inadequate to maintain cladding temperatures below 2200F. Long term cooling will not be established by the HPI pump until ~8200 seconds. Thus, the inadequate level at 2400 seconds is <u>not</u> even the minimum level that will be reached during the accident.	
7 DESCRIBE CORRECTIVE ACTION COMPLETED/TO BE INITIATED 1. Fully Q/A the results. 2. Identify and analyze hardware fixes (it is expected that cross-connecting each HPI to all four cold legs will result in an acceptable fix). 3. Report and document results to the NRC.	
RESPONSIBLE UNIT: ECCS Analysis, Fluid Systems Analysis, Plant Integration	
8 SIGNATURE AND DATE <u>R.C. Jones, Jr.</u> <u>4/7/78</u> ORIGINATOR DATE	<u>Bert J. Dusen</u> <u>4/7/78</u> _____ DATE

305 0287

E15 4419