

MANAGER, LICENSING, NRC
(CC: QUALITY ASSURANCE)
R.C. Jones, Jr.

SIGNIFICANT DEFICIENCY

JOB NO. FSC 10-734

SUBSTANTIAL SAFETY HAZARD

FILE NO. T4.1

MISC. REPORTABLE ITEM

CONTRACT NO.

DESCRIPTION: ECCS Analysis

PAGE 1 OF _____

DATE AND IDENTIFY, BY PAGE NUMBER, ANY SUPPORTING INFORMATION/DOCUMENTS

HOW AND ON WHICH PLANT WAS THE SAFETY CONCERN IDENTIFIED?

April 7, a 0.04-ft² small break analysis at pump discharge on the SMUD plant was conducted. 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 _____

AFFECTED CONTRACTS (CUSTOMER NAME AND LOCATION)

Units 1, 2, and 3 (Duke Power Corp.), Crystal River 3 (Florida Power Corp.), TMI-1 (Ed.), TMI-2 (JCP&L), ANO-1 (Arkansas P&L), Midland 1 & 2 (Consumer's Power)

DESCRIPTION OF SAFETY CONCERN-IDENTIFY AFFECTED COMPONENT(S), SYSTEM(S) OR ACTIVITY/SUPPLIER, AND IMPACT ON PLANT OPERATIONS

Small breaks at the pump discharge on the 177-FA Lowered Loop Plants (identified as such), 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 0 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 pumps until ~8200 seconds. Thus, the inadequate level at 2400 seconds is not even the minimum level that will be reached during the accident.

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POOR ORIGINAL

DATE CORRECTIVE ACTION COMPLETED/TO BE INITIATED

Fully Q/A the results. Identify and analyze hardware fixes (it is expected that cross-connecting each HPI to all four cold legs will result in an acceptable fix). Report and document results to the NRC.

8001170 864

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DATE UNIT ECCS Analysis, Fluid Systems Analysis, Plant Integration

DATE AND TIME

R.C. Jones, Jr. 4/7/78

Bechtel 4/7/78

Edward R. Kane

DISTRIBUTION

J. H. TAYLOR - MANAGER, LICENSING (2817)

Edward R. Kane

BOS 663.5

File No. 205 T4.4
or Ref. PSC 10-78

PRELIMINARY REPORT OF SAFETY CONCERN
PSC 10-78

Date APRIL 12, 1978

This letter to cover one customer and one subject only.

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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

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