

December 4, 1978

File: 0274, M-506, M-538

Babcock & Wilcox Company

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Attention: Mr. A. H. Lazar

Senior Project Manager

Subject: Davis-Besse Nuclear Power Station Unit 1  
Dual Level Setpoints on Steam Generators For  
Auxiliary Feedwater System

Dear Al:

At the meeting on this subject in your office on November 27, 1978,  
it was decided that further analysis is required to support the safety  
evaluation of the proposed dual level control setpoints on the steam  
generators.

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Please provide analysis and required steam generator levels for the  
following conditions:

8001170 822

- (RW) 1) Loss of main feedwater flow with reactor coolant pumps

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(RWW) 2) Loss of offsite power incident and the effects on the

pressurizer level at various power levels.

(RWW) 3) Normal reactor trip at low power.

4) Small breaks requiring high pressure injection pump operation with one reactor coolant pump operating or with one or two reactor coolant pumps per loop operating.

5) Rechecking of small break analysis (BAW-10,075A, Rev. 1), considering interim operation and ultimate operation after the dual setpoint change has been installed.

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11/27/78

10/1

Region 3 <sup>NRC</sup> wants to know why they should be running with their 10' level.

Goal: work plan to show NRC  
(a) short term  
(b) long term

Short term:  
NRC's concern: Simeriv/Kresswell

During Operational Transients  
(1) will lose PZR level  
(2) will get steam into hot leg (Steam-bound) <sup>well & with no pumps</sup>

ST - 10' = no pumps ECCS  
1650 psi HPI injection & no flow until 1400 psi  
B&W - PZR level

Long term:

NRC asked - is PZR level important during a LOCA - No  
B&W has No ECCS analysis for S&B & all pumps running

TECO: One other thing  
what will be our short term & long term fixes

NRC asks: CA → list transients that keep & lose PZR level  
TT, Rx, LOEL, LOOP, etc  
NRC asks: Does covered setpoint have any unreviewed safety concerns  
LOECF, LOFWP,

\* what transients are covered in PZR design - ...

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TECC needs answer for following case:

- 1. SG working other empty
- ESFAS - 1600 psi → 1500 psi
- no HP - ∴ no boron addition
- what level in CTSS is required
- acc in small SLB -

Another problem is desire to lower RC pressure trip of 19xx psi (Not like SHUD) what do we do to be consistent for 2772 UO plants?

Shm - Term:

if we can assume no Per draining  
NR3 will accept Site Instruction if Analysis is complete

CAU to do:

- ① ordinary Rx trip: Per level okay - 2' low level on HFW  
→ (Winks to provide core showing it)
  - ② LOOP/LOHFW - AFW  $\frac{900}{h}$  → 10' (This will be controlled by Site Instruction to Operators)  
AFW → 3' Until Core Test Data
- This is Condition 2 and we do not want ESFAS due to low RC pressure ~1600 psi

③ SLB cooler severe Chap 15 events = Cond III & IV

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Logic Time for RAR

- ① time it takes does not lose "indication"
- ② Do a LOOP for Indigo for level (no R pumps running)
- ③ what <sup>operational</sup> transients do we need to review for new 35" level
- ④ LOFW - AFW <sup>to</sup> from 5% power level?
  - ↳ tip from 50%
  - ↳ tip from 100%
- ⑤ S/G overfilling at Partial Power?
  - T=EO: is it bounded by SL Break? SA Unit
- ⑥ Can we stay on scale for LOFW with RC pumps running and 35" level using <sup>or</sup> LOOP AFW?
- ⑦ Make plot of RC pressure vs Time for 3B-

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Long Term Fix

Equal Setpoint

imposed

CAJ (a) submit 2 setpoints for next transient

ESS work

SA (Cases to look at): 10' level in OTSG vs Chap 15

★ I would like to be at JB-1 for these 2 tests