



Docket No. 50-346

License No. NPF-3

Serial No. 1320

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JOE WILLIAMS, JR.  
Senior Vice President—Nuclear  
(419) 249-2300  
(419) 249-5223

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Gentlemen:

This letter discusses Toledo Edison's resolution of the following commitment in the Davis-Besse Nuclear Power Station Course of Action (COA) document, Appendix C.2.1, page 5 (Serial No. 1182):

"Procedurally direct manual control of steam generator level once automatic control has established a suitable level using Auxiliary Feedwater."

This commitment, which was not included in the Safety Evaluation Report Related to the Restart of Davis-Besse Nuclear Power Station (Log No. 2020), is being tracked as Toledo Edison Licensing Commitment Tracking System (LCTS) No. 1377.

The existing Auxiliary Feedwater (AFW) Steam Generator (SG) level control system varies only the Auxiliary Feedwater Pump Turbine (AFPT) speed, via a governor, to alter the SG level. This single element control system tends to move the AFPT governor to either the high or low speed stop, in response to the SG level demand. The resultant intermittent AFW flow produces thermal cycling of SG AFW nozzles, SG level swings within an error band and primary system pressure swings.

The existing emergency procedure, EP 1202.01, RPS, SFAS, SFRCS Trip or SG Tube Rupture, addresses these concerns with recommended manual action. Per EP 1202.01, Revision 5, Section 14, Specific Rule 3.5:

"If using AFW, due to the level error band of AFW level control, it may be necessary to place the AFPT controls in manual to control SG level in a narrower band to reduce RCS pressure swings."

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This procedure allows the operator to manually control the SG level. However, due to the difficulty of precise AFW flow control, intermittent AFW cycling and SG level oscillations may still result, despite manual operator actions.

The COA requirement for the operator to take manual control and prevent any thermal cycling was discussed in the System Review and Test Program (SRTP) with the Independent Process Review Committee and determined to be of limited effectiveness and a burden on the operator. The operator should be allowed the flexibility of maintaining the safety grade automatic control system in the automatic mode. If required to place the system in manual, he would have to devote full attention to manual control, and it is unlikely all thermal cycling on the SG AFW nozzles would be prevented. This could also unnecessarily limit the operator's flexibility in a post-accident situation. As a result of further review, Toledo Edison considers the guidance provided by the existing procedure adequate and does not intend to revise procedure EP 1202.01 to address this commitment.

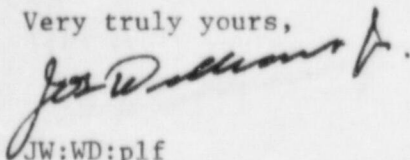
Consistent with SRTP problem ID No. AF-RR-006, Toledo Edison has taken the following steps, this outage, to improve AFW SG level control:

1. To make the AFW Pumps more responsive to SG demand, the AFPT low speed stop has been raised to 1950 rpm. This will reduce the time delay to establish AFW flow to the SG.
2. The AFW pump speed control pulser SG level setpoints have been raised and the pulser's deadband has been decreased. These changes are intended to increase the SG water inventory and decrease the thermal cycling of the SG AFW nozzles.

Toledo Edison is also evaluating long-term upgrades of this system. Proposals for long-term improvements to the AFW SG level control system are being evaluated by Facility Change Request 86-0330 pursuant to SRTP problem ID No. AF-RR-006. Several designs which may include flow control valves or a multi-element control system are currently being evaluated. This commitment to the NRC is being tracked as LCTS No. 2859 and is scheduled for disposition by the fifth refueling outage. Toledo Edison intends to supersede LCTS No. 1377 with this long-term commitment, LCTS No. 2859.

We have discussed this matter on October 17, 1986 with Mr. A. DeAgazio of your staff and on November 6, 1986, with the Davis-Besse NRC Senior Resident Inspector, Paul Byron. In each case, there was no disagreement with the proposed resolution.

Very truly yours,



JW:WD:plf

cc: DB-1 NRC Resident Inspector  
J. G. Keppler, Regional Administrator (2 copies)