

MAY 6 1986

MEMORANDUM FOR: F. J. Miralgia, Jr., Director, Division of Pressurized Water
Reactor Licensing B, NRR
E. L. Jordan, Director, Division of Emergency Preparedness
and Engineering Response, IE

FROM: Charles E. Norelius, Director, Division of Reactor Projects,
Region III

SUBJECT: LOSS OF FEEDWATER EVENT STATUS - DAVIS-BESSE

Attached for your information is our monthly status report of activities at Davis-Besse relating to the Loss of Feedwater Event on June 9, 1985.

Activities relating to corrective actions on equipment that malfunctioned on June 9, 1985, are continuing. Additionally, as a result of identified problems with the Reactor Coolant Pump (RCP) shafts, the licensee is continuing to develop schedules for repairs of the RCPs. A spare RCP shaft has been installed and a shaft with crack indications has been sent to the B & W Research Center for further testing. The most recent NDE test results are inconclusive but indicate that the shaft may not be cracked. Final results of these findings may impact the licensee's restart schedule. The NRC Restart Test Review Group has been on site reviewing the licensee's restart program and observing testing activities.

If you have any questions, please call me or Nick Jackiw of my staff (FTS 388-5697).

"Original signed by C.E. Norelius"

Charles E. Norelius, Director
Division of Reactor Projects

Attachment: Status Report
as of May 2, 1986

See Attached Distribution

R III

Norelius/jp

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REGION III
STATUS REPORT

DAVIS-BESSE LOSS OF FEEDWATER EVENT
MAY 2, 1986

Plant Status

The plant remains in cold shutdown. Primary system fill and vent activities are in progress.

Restart Activities

The NRC maintenance survey inspection was conducted on March 24-28 to follow up on previous findings and to evaluate the licensee's actions concerning management practices as they relate to the maintenance area. No significant problems were identified during this inspection.

MOVATS testing, environmental qualification work and other maintenance activities continue on the 167 safety-related motor-operated valves onsite. The licensee has completed all planned work on 101 valves and returned them to service.

The NRC test review team continues to provide coverage of licensee testing activities. Due to the delay in the test schedule associated with the replacement of the reactor coolant pump shafts, this coverage has been decreased to alternate weeks. As a result of reviewing the testing requirements associated with the System Review and Test Program (SRTP), the licensee has identified a test program consisting of 278 tests of which 27 will be performed following criticality. This program consists of 172 existing, or modified, surveillance tests and 106 new test procedures. Forty-one tests were performed this month and 98 tests have been performed to date. During the week of April 14, 1986, the inspectors monitored the initial running and overspeed testing of the auxiliary feedwater pumps with satisfactory results. Future auxiliary feedwater system testing will also be closely monitored.

Other Activities

In response to a reactor coolant pump (RCP) shaft failure and impeller/shaft capscrew failures at Crystal River, reported by NRC Information Notice 86-19, Toledo Edison has initiated an inspection and evaluation of its similarly designed pumps at Davis-Besse. In situ ultrasonic testing of all four RCP shafts identified apparent cracks in all four shafts 52 inches from the motor coupling end. Pump 2-1 rotating assembly was removed and sent to Babcock and Wilcox in Lynchburg, Virginia, for further examination.

As of May 1, 1986, dye penetrant testing and 50X microscopic visual examination has not revealed any shaft cracking in the area of concern. The ultrasonic signature of the shaft has also changed so that the crack indication by this technique no longer appears. Toledo Edison is continuing to evaluate these recent findings which indicate that perhaps none of the PCP shafts are cracked as thought from the original ultrasonic testing. The shafts now installed may be accepted "as is", which would shorten the plant startup schedule, dependent on the RCP impeller/shaft capscrew changes that remain.

Examination of the four capscrews that attach the RCP impeller to the shaft indicated that one bolt was completely sheared, two showed definite cracks, and one showed an apparent crack. No cracks were identified in the four drive pins during the initial examination. Toledo Edison intends to replace all sixteen capscrews, four per pump, with bolts of better design, using Inconel X-750 HTH material instead of the A-286 material which had been used. A final decision on changeout of the drive pins is pending additional testing of the pump 2-1 pins and further engineering evaluation.

Service Water Pump 1-1, one of three pumps in the system is inoperable due to a sheared shaft and severe scoring of several shaft bearing surfaces. The pump is a Goulds, two stage, centrifugal, deep-draft design. Parts have been ordered and repairs are in progress.

The licensee's repair, replacement and engineering review of items requiring environmental qualification (EQ) is continuing. Although the NRC EQ inspection team identified no significant deficiencies, further inspection is planned prior to restart.

One of the plants four essential batteries is inoperable and the licensee has determined that two of the batteries require replacement. Receipt and installation of the new batteries may impact the startup schedule.

Miscellaneous

On April 3, 1986, Commissioner Bernthal toured the site and met with the licensee and members of the NRC staff.

Toledo Edison Company announced the selection of Donald C. Shelton as Vice President-Nuclear. Mr. Shelton will replace Admiral Williams.