

Howard W. Bergendahl
Vice President - Nuclear419-321-8588
Fax: 419-321-8337

Docket Number 50-346

License Number NPF-3

Serial Number 1-1265

March 12, 2002

Mr. J. E. Dyer
Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
810 Warrenville Road
Lisle, IL 60532-4351Subject: Commitments for Resolution of Reactor Pressure Vessel Head Material
Degradation Issue

Ladies and Gentlemen:

On February 16, 2002, the Davis-Besse Nuclear Power Station (DBNPS) began its 13th refueling outage that included inspection of the Reactor Pressure Vessel (RPV) control rod drive mechanism (CRDM) nozzles. These inspections identified axial indications in three CRDM nozzles which had resulted in pressure boundary leakage. Specifically, these indications were identified in CRDM nozzles 1, 2, and 3 which are located near the center of the RPV head. These findings were reported to the NRC on February 27, 2002, and supplemented on March 5 and March 9, 2002. These three nozzles, as well as two other nozzles that had indications but had not resulted in pressure boundary leakage, were to be repaired during the refueling outage.

During the repair activities, CRDM nozzle 3 exhibited unexpected movement. To identify the cause of the CRDM nozzle displacement, an investigation into the condition of the RPV head surrounding CRDM nozzle 3 was initiated. This investigation included removing the CRDM nozzle from the RPV head, removing boric acid deposits from the top of the RPV head, and performing ultrasonic thickness measurements of the RPV head in the vicinity of CRDM nozzles 1, 2, and 3. Upon completing the boric acid removal on March 7, 2002, a visual examination of the area was conducted which identified a cavity in the RPV head adjacent to CRDM nozzle 3. Followup characterization by ultrasonic testing indicated degradation of the low alloy steel RPV head material adjacent to the nozzle. The degraded area was found to extend approximately 5 inches from the penetration for CRDM nozzle 3, with a width of approximately 4 to 5 inches at its widest part. The minimum remaining thickness of the RPV head in the degraded area was found

MAR 14 2002

Docket Number 50-346
License Number NPF-3
Serial Number 1-1265
Page 2 of 2

to be approximately 3/8 inch, including the RPV stainless steel cladding. This condition was reported to the NRC on March 8, 2002.

On March 8, 2002, the DBNPS assembled an integrated investigation team of industry experts to investigate and determine the Root Cause of this degradation of the RPV head. As discussed by telephone conversation between the DBNPS Vice President – Nuclear and the NRC Region III management on March 12, 2002, the DBNPS commits to the following activities in resolution of this issue:

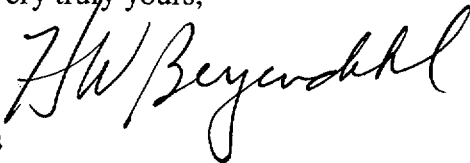
1. Quarantine components or other material from the RPV head CRDM nozzle penetrations that are deemed necessary to fully address the Root Cause of the occurrence of degradation of the leaking penetrations. Prior to implementation, plans for further inspection and data gathering to support determination of the root cause will be provided to the NRC for review.
2. Determine the Root Cause of the occurrence of degradation around the RPV head penetrations, and evaluate and disposition the extent of condition for the Reactor Coolant System prior to restart of the unit.
3. Obtain NRC review of the repair plans and post repair testing of the RPV head degraded area prior to implementation of these repairs.

The DBNPS will meet with the NRC to discuss the conclusions of the root cause evaluation.

An assessment of the safety significance of the RPV head degradation is ongoing. The DBNPS will communicate this assessment to the NRC when it becomes available.

If you have any questions or require further information, please contact Mr. David H. Lockwood, Manager – Regulatory Affairs, at (419) 321-8450.

Very truly yours,


/s

cc: USNRC Document Control Desk
S. P. Sands, DB-1 NRC/NRR Project Manager
C. S. Thomas, DB-1 Senior Resident Inspector
D. J. Shipley, Executive Director, Ohio Emergency Management Agency,
State of Ohio (NRC Liaison)
Utility Radiological Safety Board