

B-2384

**From:** PN1  
**To:** ASIB; EVENTS; FRONT; PN1  
**Date:** 4/5/02 12:02PM  
**Subject:** PN302006B; Davis-Besse - Reactor Vessel Head Degradation (2nd Update)

Attached is PN3-02-006B involving Davis-Besse - Reactor Vessel Head Degradation (Second Update)

Please distribute.

Thanks,  
Kathy Gray

0C10-045

April 5, 2002

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-III-02-006B

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region III staff on this date.

Facility

Davis-Besse  
FirstEnergy Nuclear Operating Co.  
Oak Harbor OH  
Docket: 50-346

Licensee Emergency Classification

Notification of Unusual Event  
 Alert  
 Site Area Emergency  
 General Emergency  
 Not Applicable

SUBJECT: REACTOR VESSEL HEAD DEGRADATION (SECOND UPDATE)

DESCRIPTION:

The NRC's Augmented Inspection Team presented the preliminary findings of its review of the reactor vessel head degradation at the Davis-Besse plant in a meeting with the licensee on April 5, 2002, in Oak Harbor, Ohio. The AIT began the inspection on March 12, 2002, after the utility reported that significant corrosion damage had been found while repairs were being made to a control rod drive nozzle in the reactor vessel head.

The team found that evidence of the corrosion damage was present at least as early as 1998 and that the utility missed several opportunities to identify the problem prior to the current refueling outage.

Beginning in 1999, the plant staff observed a gradual increase in the frequency of filter changes required for the containment radiation monitor filter from monthly to every other day. The filter changes were required because of clogging by material identified as corrosion products from reactor cooling system leakage. Boric acid and corrosion product deposits on the containment air coolers also increased.

The utility also failed to properly implement the NRC-required boric acid control program in that reactor vessel head boric acid deposits were not properly removed and indications of reactor vessel head corrosion were not recognized or evaluated. In the 2000 refueling outage significant deposits of boric acid -- different in color and consistency previously associated with reactor cooling system leaks -- were found on the reactor vessel head.

The utility is continuing its review of the root cause of the reactor vessel head damage. The Augmented Inspection Team concurred with the utility's preliminary evaluation that the reactor vessel wastage was caused by corrosion associated with leakage of primary cooling water containing boric acid due to cracks in the No. 2 and No. 3 control rod drive nozzles. Additional issues remain to be addressed, however, in the utility's root cause evaluation, including factors affecting the rate at which the cracks and corrosion progressed, the role of deposits left on the reactor vessel head, and a determination of the chemical process involved in the corrosion. The utility's evaluation will be presented to the NRC and made publically available when it is completed.

PNO-III-02-006B

-2-

The State of Ohio will be notified. The information in this preliminary notification has been reviewed by licensee management.

This information is current as of 9:00 a.m. (Eastern Time) on April 5, 2002.

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