

B-2383

From: PN1
To: EVENTS; FRONT; PN1
Date: 3/18/02 1:28PM
Subject: PN302006A; Davis-Besse - Update - Significant Metal Loss in Reactor Vessel Head

Attached is PN302006A involving Davis-Besse; Update - Significant Metal Loss in Reactor Vessel Head (AIT).

Please distribute.

Thanks,
Kathy Gray

OC10-045

UPDATE

March 15, 2002

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

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 Nuclear Power Plant
FirstEnergy Corporation
Oak Harbor, Ohio
Docket: 50-346

Licensee Emergency Classification

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

SUBJECT: SIGNIFICANT METAL LOSS IN REACTOR VESSEL HEAD (UPDATE)

DESCRIPTION:

On March 8, 2002, the licensee reported that it had discovered significant metal loss from the reactor vessel head, adjacent to the No. 3 vessel head penetration nozzle where cracking had been identified. The metal loss was discovered during repairs to the nozzle.

The plant has been safely shut down since February 16 for refueling and maintenance.

The reactor vessel head is fabricated from low-alloy steel, approximately 6 inches thick, with an inner cladding of stainless steel, about 1/4 to 3/8 inches thick. The eroded area of the vessel head is 4 to 5 inches across and completely penetrates the low-alloy steel to the stainless steel cladding. In addition, the licensee has identified some further undercutting of the low-alloy steel along the stainless steel cladding. The licensee estimates that the eroded volume contained about 40 pounds of steel.

Examination of the reactor vessel head adjacent to a second vessel head penetration nozzle (No. 2) has found a much smaller area of erosion. This area is up to 3/16 inch from the nozzle and about 1 1/2 inches across.

The licensee has formed a root cause team to investigate the cause of this phenomenon and a second team to review vessel head repair or replacement options.

On March 12, 2002, an NRC Augmented Inspection Team began its review of the circumstances surrounding the reactor vessel head damage. The team is focusing on previous evidence of reactor cooling system leakage and vessel head condition and on the possible causes of the metal loss.

On March 13, Region III (Chicago) issued a Confirmatory Action Letter, documenting the licensee's agreement to quarantine affected reactor vessel components needed to address the root cause of the damage; determine the root cause of the reactor pressure vessel damage and promptly meet with the NRC to discuss it; obtain NRC review and approval of repair or modification plans; and, prior to resuming operations, meet with the NRC to obtain restart approval.

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

Both the NRC and the licensee have issued news releases on the vessel head damage and

subsequent activities.

This information is current as of 12 noon on March 15, 2002.

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