

September 10, 2002

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-III-02-036

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: 050-00346

**Licensee Emergency Classification**

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

SUBJECT: CRACK IDENTIFIED IN VESSEL HEAD STAINLESS STEEL LINER

DESCRIPTION:

On September 9, 2002, the licensee informed Region III (Chicago) that the metallurgical laboratory performing analysis of the damaged portion of the reactor vessel head had identified a crack in the surface of the stainless steel liner of the head.

After the reactor was shut down February 16, 2002, the licensee found a cavity in the reactor vessel head where the carbon steel head material was corroded. The resulting cavity was about 4 inches by 5 inches and approximately 6 inches deep, leaving only the stainless steel liner intact.

A 17-inch diameter portion of the reactor vessel head, including the cavity, was cut from the head for further analysis.

The licensee informed Region III that the laboratory analysis had identified a crack about 3/8 inch long in the surface of the liner. The crack was found in the outside surface of the stainless steel liner where it originally met the carbon steel of the head, near the center of the cavity.

The depth of the crack is not known, but there are no indications that it is through the wall of the liner. The laboratory is performing further characterization of the crack.

The laboratory also determined that the average thickness of the liner in the sample was 0.256 inches, ranging from a minimum of 0.202 inches to a maximum of 0.314 inches. The minimum dimension is less than previously known.

The new information concerning the crack and the liner thickness will be considered in the NRC's ongoing review of the safety significance of the reactor vessel head damage.

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

There has been news media interest in the metallurgical findings.

The licensee has submitted photographs of this area of the cladding, which are available on the NRC's web site at <http://www.nrc.gov/reactors/operating/ops-experience/vessel-head-degradation/news.html>, under the images link.

This information is current as of 1 p.m. CDT on September 10, 2002.

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