

PRELIMINARY NOTIFICATION - REGION III

June 29, 2010

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE - PNO-III-10-011

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. Some of the information may not yet be fully verified or evaluated and is basically all that is known by the Region III staff on this date.

Facility

Davis-Besse Nuclear Power Station
First Energy Nuclear Operating Company
Oak Harbor, Ohio
Docket: 50-346
License: NPF-3

Licensee Emergency Classification

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

SUBJECT: DAVIS-BESSE START-UP FOLLOWING REPAIRS OF CONTROL ROD DRIVE MECHANISM NOZZLE FLAW INDICATIONS

DESCRIPTION:

Nuclear Regulatory Commission (NRC) resident inspectors and managers from the NRC's Region III office monitored startup activities at the Davis-Besse nuclear power plant, which shut down for a refueling outage on February 28 and remained shut down due to the discovery of cracks in multiple Control Rod Drive Mechanism (CRDM) nozzles. Following completion of nozzle repairs, the utility has addressed all NRC questions related to the safe operation of the plant prior to start-up. The reactor was made critical at 1:31 a.m. (EDT) on June 28, 2010.

On June 23, 2010, the NRC issued a Confirmatory Action Letter that confirms commitments by First Energy Nuclear Operating Company (FENOC) regarding the identification of cracks in multiple CRDM nozzles and reactor pressure boundary leakage from the Davis-Besse Reactor Pressure Vessel (RPV) head. These commitments were agreed upon by FENOC and the NRC, and included a commitment to shut down the unit no later than October 1, 2011, and replace the RPV head.

Earlier in June, the NRC held a public meeting near the plant in Port Clinton, OH. In this meeting, FENOC discussed the results of their examinations and repairs of the RPV head and answered NRC technical questions regarding the basis for their decision to start up the plant.

As discussed in previous Preliminary Notifications, PNO-III-10-003 and PNO-III-10-003A, while performing NRC required inspections on March 12, 2010, utility workers identified potential cracks in some of the CRDM nozzles inspected. At the time, utility workers were conducting planned ultrasonic (UT) examinations on the CRDM nozzles. On March 17, 2010, the NRC dispatched a Special Inspection Team (SIT) to Davis-Besse to review the circumstances surrounding the discovery of crack indications in multiple CRDM nozzles and to evaluate the utility's actions to properly analyze the nature of the flaws, its proposed repair methods, and conclusions regarding the mechanism causing the greater than expected indications of nozzle flaws.

First Energy Nuclear Operating Company determined that 24 out of the 69 nozzles needed repairs and concluded that the direct cause of the cracking was primary water stress corrosion cracking (PWSCC). The new head will be manufactured using materials resistant to PWSCC. The SIT monitored and reviewed FENOC's testing methods, analysis of flaws, conclusions concerning the number of nozzles to be repaired, and the repair method the company implemented.

The NRC will hold a public exit meeting when the Special Inspection is complete to discuss its preliminary findings, including the review of the utility's root cause. The SIT inspection report will be issued 30-45 days after the exit meeting.

For additional background information reference Preliminary Notifications PNO-III-10-003 and PNO-III-10-003A. The information presented herein has been discussed with the licensee, and is current as of 11:00 a.m. (CDT) June 29, 2010.

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