

January 31, 2002

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-02-007

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 IV staff on this date.

Facility

Union Electric Company
Callaway Plant

Docket: 50-483
License: NPF-30

Licensee Emergency Classification

Notification of Unusual Event

- ☐ Alert
- ☐ Site Area Emergency
- ☐ General Emergency
- ☒ Not Applicable

SUBJECT: AUGMENTED INSPECTION TEAM TO EVALUATE A FAILURE OF AN AUXILIARY
FEEDWATER PUMP AT THE CALLAWAY PLANT

DESCRIPTION:

On December 3, 2001, the licensee for the Callaway Plant was shutting down the plant to repair a main generator stator cooling water leak. During the plant shutdown, high vibration was identified in the main turbine. To expedite the turbine shutdown, condenser vacuum was broken and the main feedwater pump tripped as expected. Motor-driven auxiliary feedwater (AFW) Pumps A and B had been started to provide cooling to the four steam generators. Although the B Train AFW pump started and ran successfully, the A Train AFW pump flow and discharge pressure dropped after 14 seconds of operation. The licensee manually stopped the A Train AFW pump and started the turbine-driven AFW pump to provide necessary cooling flow to the steam generators. Region IV scheduled a Special Inspection Team, commencing January 28, 2002, to review this event.

While investigating the failure of the A Train AFW pump, the licensee found a small piece of foam material blocking the restricting orifice in the packing lube water line of the pump. Laboratory analysis of the foam revealed that it had the same consistency of the materials used in the seal of the floating diaphragm covering the condensate storage tank. This covering is composed of a polyurethane foam encased in a Teflon-coated fiberglass fabric. On January 27, 2002, the licensee found that a 3-foot section near the edge of the tank was missing, and also found another 2-foot section was partially dislodged and hanging from the seal. The licensee also found foam particles at the bottom of the condensate storage tank. On January 28, the licensee informed the NRC Special Inspection Team, which is currently onsite, of the results of the condensate storage tank inspection. The licensee postulated that the foam material could have been drawn from the bottom of the condensate storage tank into the A Train AFW pump, producing turbulence within the casing of the pump and causing enough entrained air or nitrogen to come out of solution to air-bind the pump. As of 11:20 a.m. (CST), on January 31, 2002, the licensee was in the process of shutting down the plant to remove the condensate storage tank diaphragm. Additionally, the licensee is continuing to investigate the root cause of the pump failure.

This event is considered to involve a potential common-cause failure mechanism that could have resulted in the multiple failure of pumps designed to remove heat from the reactor plant. As a result of the potential for common-cause failure, including the associated potential increase in risk, Region IV will upgrade the ongoing Special Inspection Team to an Augmented Inspection Team on January 31, 2002. The team will review the licensee's assessment and evaluate the overall implications of this event.

The state of Missouri will be notified.

Region IV received initial notification of this occurrence by telephone from the SRI on December 4, 2001. Region IV has informed the EDO, NRR, and PA.

This information has been discussed with the licensee and is current as of 11:20 a.m. on January 31, 2002.

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