

April 18, 2003

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-03-022

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

STP Nuclear Operating Company
South Texas Project Electric Generating Station,
Unit 1
Docket:50-498
License No.: NPF-76

Licensee Emergency Classification

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

SUBJECT: REACTOR VESSEL BOTTOM HEAD PENETRATION LEAKAGE

DESCRIPTION:

On April 12, 2003, during a visual inspection of the instrument penetrations on the bottom head of the Unit 1 reactor vessel, the licensee identified a small amount of residue around the outer circumference of two instrument penetrations. The licensee characterized the amount of residue as being about one-half the size of an aspirin. Subsequent laboratory analysis of the residue revealed that it contained boron, indicating that the source of the residue was fluid from the reactor coolant system. This indicates a potential leak path through the interface between the penetrations and the bottom head of the reactor vessel. At the time of the inspection, Unit 1 was shut down for a planned refueling outage.

The 58 instrument penetrations located on the bottom head, each with an inside diameter of 0.6 inch, are used to house instrumentation for monitoring neutron flux in the reactor vessel. The instrument penetration material is Alloy 600 stainless steel. The instrument penetration is attached to the bottom head using a J-groove weld configuration, and the weld material is Alloy 82/182 stainless steel.

The licensee stated that this was the first time leakage had been identified from any of the bottom head penetrations on either unit. Unit 2 received a similar visual inspection during an outage in October 2002.

During a call between the NRC and the licensee conducted on April 17, 2003, the licensee stated that they were evaluating several options to address the leakage. They committed to determine the cause of the leakage and the extent of the condition, complete necessary repairs, and meet with the NRC to discuss their findings and corrective actions, prior to restarting Unit 1.

The NRC will continue to monitor this issue and will conduct a thorough review of the licensee's root cause evaluation and corrective actions.

The state of Texas has been informed.

The licensee issued a press release on April 18, 2003.

Region IV received notification of this occurrence from the senior resident inspector on April 12, 2003.

This information has been discussed with the licensee and is current as of 1 p.m. (CDT) on April 18, 2003.

Region IV has informed the OEDO, NRR and PAO.

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