

NOTICE OF VIOLATION

Entergy Operations, Inc.
Arkansas Nuclear One

Dockets: 50-313; 50-368
Licenses: DPR-51; NPF-6
EA 97-382

During an NRC inspection conducted on May 27 through August 8, 1997, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

- A. Criterion IX of Appendix B to 10 CFR Part 50 states, in part, "Measures shall be established to assure that special processes, including. . . nondestructive testing, are controlled and accomplished. . . using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements."

Unit 1 Technical Specification 4.18.2a. states, in part, "Inservice inspection of steam generator tubing shall include nondestructive examination by eddy-current testing or other equivalent. . . ." Technical Specification 4.18.5b, through Amendment No. 134 to Facility Operating License No. DPR-51, states, in part, "The steam generator shall be determined operable after completing the corresponding actions (plug or sleeve all tubes exceeding the plugging limit and all tubes containing through-wall cracks) required by Table 4.18-2. . . ." Table 4.18-2 requires defective tubes to be plugged or sleeved. Technical Specification 4.18.5a defines a defect as an imperfection which exceeds the plugging limit, a defective tube as one containing a defect in its pressure boundary, and the plugging limit as equal to 40 percent of the nominal tube wall thickness.

Unit 2 Technical Specification 4.4.5.0 requires that each steam generator shall be demonstrated operable by performance of an augmented inservice inspection program. Technical Specification 4.4.5.2 states, in part, ". . . the inspected tubes shall be verified acceptable per the acceptance criteria of Specification 4.4.5.4. . . ." Technical Specification 4.4.5.4b. states, in part, "The steam generator shall be determined operable after completing the corresponding actions (plug or repair all tubes exceeding the plugging or repair limit and all tubes containing through-wall cracks) required by Table 4.4-2. . . ." Table 4.4-2 requires defective tubes to be plugged or sleeved. Technical Specification 4.4.5.4a. defines a defect as an imperfection which exceeds the plugging limit, a defective tube as one containing a defect, and the plugging limit as equal to 40 percent of the nominal parent tube wall thickness.

1. Contrary to the above, from October 25, 1996 (the date of return to power operations following outage 1R13) through April 9, 1997 (the date of approval of enforcement discretion), eddy current examinations of Unit 1 steam generator tubes performed during Unit 1 Refueling Outage 1R13 were not appropriately controlled and accomplished to identify tube defects in Unit 1 steam generator tubes that could have exceeded the technical specifications

plugging limit. Specifically, the licensee inadequately controlled its eddy current testing and sizing technique used during Unit 1 Refueling Outage 1R13 to measure the depth of intergranular attack present in steam generator tubing at locations within the upper tube sheet. All tubes that were found by use of this technique to contain intergranular attack with a depth less than 40 percent of the nominal tube wall thickness were allowed to remain in service on return to power operations on October 25, 1996. Subsequent metallographic examination of three tubes exhibiting upper tube sheet intergranular attack, which were removed from Steam Generator B during the refueling outage, found actual flaw depths that exceeded the depths predicted by the sizing technique. This created the potential for flaws being left in service up to April 9, 1997 (i.e., the date of enforcement discretion approval) that exceeded the plugging limit of the Technical Specifications. (01013)

2. Contrary to the above, from January through May 1997, adequate measures were not taken to assure that inservice inspections of Unit 2 steam generators tubes were controlled and accomplished to identify defects exceeding the plugging limit. Reevaluation, in May 1997, of data obtained during Unit 2 Outage 2F96-1 bobbin coil examination (performed before January 1997) identified 76 tubes in Steam Generator A and 122 tubes in Steam Generator B that had defects in excess of the plugging limit of the Technical Specifications. (01023)

These violations represent a Severity Level III problem (Supplement I) (50-313/9714-01).

- B. Criterion XVI of Appendix B to 10 CFR Part 50 states, in part, "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. . . ."

Contrary to the above, in November 1995, the licensee failed to take adequate corrective actions, during Refueling Outage 2R11, after identifying defects in welded sleeves in Unit 2 steam generators tubing, and prior to returning these potentially defective Unit 2 sleeved tubes to service. Although the licensee performed additional testing (ultrasonic and visual testing), these were inadequate to evaluate defects that existed at the time, and the licensee did not perform an operability assessment at that time. (02014)

This is a Severity Level IV violation (Supplement I) (50-368/9714-03).

Pursuant to the provisions of 10 CFR 2.201, Entergy Operations, Inc. (Licensee) is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555 with a copy to the Regional Administrator, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas

76011, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violations, or, if contested, the basis for disputing the violation, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.790(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Dated at Arlington, Texas
this 18th day of November 1997