

UNITED STATES NUCLEAR REGULATORY COMMISSION

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 1

DOCKET NO. 50-313

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO  
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The U.S. Nuclear Regulatory Commission (the Commission or NRC) is considering issuance of an amendment to Facility Operating License No. DRP-51, issued to Entergy Operations, Inc. (the licensee), for operation of Arkansas Nuclear One, Unit 1 (ANO-1) located in Pope County, Arkansas.

This proposed change would amend Technical Specification (TS) 4.18.5.b, "Steam Generator Tubing Surveillance - Acceptance Criteria," to allow tube 110/60 to remain inservice through the current operating cycle (Cycle 16) with two axial indications that have potential through wall depths greater than the plugging limit. The axial indications are located in the roll transition region and are contained within the upper tubesheet.

The licensee requested that this proposed amendment be processed as an exigent request, pursuant to Section 50.91(a)(6) of Title 10 of the *Code of Federal Regulations* (10 CFR). The exigency is created by the inability of ANO-1 to fully comply with TS 4.18.5.b. With ANO-1 operating at 100 percent power, members of the licensee's technical staff generated a condition report (CR) that questioned the integrity of an individual steam generator tube that was currently inservice in the "A" steam generator. This CR documented that during a

review of eddy current data taken during the last refueling outage, it was identified that steam generator tube 110/60 contained two axial indications in the upper roll transition area that exceeded the tube plugging limit. However, the licensee failed to repair this tube through means of either rerolling or plugging. TS 4.18.5.b indicates that the steam generator shall be demonstrated operable following a steam generator inspection after completing repair activities for all tubes that have indications that exceed the plugging limit. As a result, the "A" steam generator was considered inoperable due to the failure to take action after completion of the surveillance and TS 3.1.1.2, "Reactor Coolant System - Steam Generators" was entered. This TS has no associated required action for an inoperable steam generator. Therefore, TS Limiting Condition for Operation (LCO) 3.0.3 was entered, as appropriate, to address this condition. TS LCO 3.0.3 requires, within one hour, that action be taken to place the unit in an operating condition in which the TS does not apply through the initiation of a plant shutdown.

Based on the circumstances described above, the NRC verbally issued a Notice of Enforcement Discretion (NOED) on December 15, 1999. The NOED was documented by letter dated December 17, 1999. The NOED expressed the NRC's intention to exercise discretion not to enforce compliance with TS LCO 3.0.3 and TS 3.1.1.2 until the NRC staff acts on the licensee's exigent TS amendment request to revise TS 4.18.5.b with a footnote to address continued operation during the remainder of this fuel cycle with tube 110/60 inservice. The licensee submitted the exigent TS amendment request on December 16, 1999.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

Pursuant to 10 CFR 50.91(a)(6) for amendments to be granted under exigent circumstances, the NRC staff must determine that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this

means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

An evaluation of the proposed change has been performed in accordance with 10CFR50.91(a)(1) regarding no significant hazards considerations using the standards in 10CFR50.92(c). A discussion of these standards as they relate to this amendment request follows:

**Criterion 1 - Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.**

The OTSGs [Once Through Steam Generators] are used to remove heat from the reactor coolant system (RCS) during normal operation and during accident conditions. The OTSG tubing forms a substantial portion of the reactor coolant pressure boundary. An OTSG tube failure is a violation of the reactor coolant pressure boundary and is a specific accident analyzed in the ANO-1 Safety Analysis Report (SAR).

The purpose of the periodic surveillance performed on the OTSGs in accordance with ANO-1 Technical Specification 4.18 is to ensure that the structural integrity of this portion of the RCS will be maintained. The technical specification plugging limit of 40% of the nominal tube wall thickness requires tubes to be repaired or removed from service because the tube may become unserviceable prior to the next inspection. Unserviceable is defined in the technical specifications as the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an operating basis earthquake, a loss-of-coolant accident, or a steam line break. Of these accidents, the most severe condition with respect to axial cracking in the upper roll transition (URT) of a tube within the tubesheet is a main steam line break (MSLB). During this event the differential pressure across the tube could be as high as 2500 psid [pounds per square inch differential]. The rupture of a tube during this event could permit the flow of reactor coolant into the secondary system thus bypassing the containment.

From testing performed on simulated flaws within the tubesheet it has been shown that the axial indications within the upper tube sheet left in service during cycle 16 do not represent structurally significant flaws which would increase probability of a tube failure beyond that currently assumed in the ANO-1 SAR.

Burst tests were conducted on tubing with simulated flaws within the tubesheet. In these tests, through-wall holes of varying sizes up to 0.5 inch in diameter were drilled in test specimens. The flawed specimen tubes were then inserted into a simulated

tubesheet and pressurized. In all cases the tube burst away from the flaw in that portion of the tube that was outside the tubesheet. The size of these simulated flaws bound the indications left in service within the upper tubesheet during 1R15 [refueling outage following the completion of operating cycle 15]. These tests demonstrate for flaws similar to the axial indications in the ANO-1 upper tubesheet that the tubes will not fail at this location under accident conditions.

The dose consequences of a MSLB accident are analyzed in the ANO-1 accident analysis. This analysis assumes a 1 gpm [gallon per minute] OTSG tube leak and that the unit has been operating with 1% defective fuel. The postulated accident induced leak rate contribution at the end of cycle from these indications is negligible.

Therefore, this change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

Criterion 2 - Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated.

The OTSGs are passive components. The intent of the technical specification surveillance requirements is being met by this change in that adequate structural and leakage integrity will be maintained. The proposed change introduces no new modes of plant operation.

Therefore, this change does not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3 - Does Not Involve a Significant Reduction in the Margin of Safety.

The ANO-1 Technical Specification Bases specify that the surveillance requirements (which includes the plugging limit) are to ensure the structural integrity of this portion of the RCS pressure boundary. The technical specification plugging limit of 40% of the nominal tube wall thickness requires tubes to be repaired or removed from service because the tube may become unserviceable prior to the next inspection. Unserviceable is defined in the technical specifications as the condition of a tube if it leaks or contains a defect large enough to affect its structural integrity in the event of an operating basis earthquake, a loss-of-coolant accident, or a MSLB. Of these accidents the most severe condition with respect to flaws within the tubesheet is the MSLB.

Testing of simulated through wall flaws of up to 0.5 inch in diameter within a tubesheet showed that the tubes always failed outside of the tubesheet. Thus the structural requirement of the bases of the surveillance specification is satisfied.

Leakage under accident conditions would be limited due to the small size of the flaws and would be low enough to ensure offsite dose limits are not exceeded.

Therefore, this change does not involve a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 14 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of the 14-day notice period. However, should circumstances change during the notice period, such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 14-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER a notice of issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room 6D59, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, from 7:30 a.m. to 4:15 p.m. Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC.

The filing of requests for hearing and petitions for leave to intervene is discussed below.

By [insert date 14 days after publication in the Federal Register], the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and accessible electronically through ADAMS Public Electronic Reading Room link at the NRC Web site (<http://www.nrc.gov>). If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition, and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without

requesting leave of the Board up to 15 days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than 15 days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If the amendment is issued before the expiration of the 30-day hearing period, the Commission will make a final determination on the issue of no significant hazards

consideration. If a hearing is requested, the final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, by the above date. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to Nicholas S. Reynolds, Esquire, Winston and Strawn, 1400 L Street, NW., Washington, DC 20005-3502, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated December 16, 1999, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and accessible

electronically through ADAMS Public Electronic Reading Room link at the NRC Web site  
(<http://www.nrc.gov>).

Dated at Rockville, Maryland, this 22nd day of December 1999.

FOR THE NUCLEAR REGULATORY COMMISSION



M. Christopher Nolan, Project Manager, Section 1  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation