

NUCLEAR REGULATORY COMMISSION
Notice of Clarification to Steam Generator Tube Integrity Event Reporting Guideline in
NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73"

AGENCY: Nuclear Regulatory Commission

ACTION: Notice of clarification in reporting guideline for steam generator tube integrity event

SUMMARY: The U.S. Nuclear Regulatory Commission plans to make a clarification in the reporting guideline for serious steam generator tube degradation contained within Revision 2 to NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73." The NRC intends to issue an errata to NUREG-1022, Revision 2. The purpose of this clarification is to ensure that the NRC receives timely notification of serious steam generator tube degradation.

SUPPLEMENTARY INFORMATION: In NUREG-1022, Revision 2, "Event Reporting Guidelines 10 CFR 50.72 and 50.73", steam generator tube degradation is characterized in Section 3.2.4(A)(3) as being seriously degraded if the tubing fails to meet the following two performance criteria: (A) Steam generator tubing shall retain structural integrity over the full range of normal operating conditions (including startup, operation in the power range, hot standby, and cooldown and all anticipated transients included in the design specification) and design basis accidents. This includes retaining a margin of 3.0 against burst under normal steady state full power operation and a margin of 1.4 against burst under the limiting design basis accident concurrent with a safe shutdown earthquake. (B) The primary to secondary accident induced leakage rate for the limiting design basis accident, other than a steam generator tube rupture, shall not exceed the leakage rate assumed in the accident analysis in terms of total leakage rate for all steam generators and leakage rate for an individual steam generator. The licensing basis accident analyses typically assume a 1 gallon per minute primary to secondary leak rate per steam generator, except for specific types of degradation at specific

locations where the tubes are confined, as approved by the NRC and enumerated in conjunction with the list of approved repair criteria in the licensee's design basis documents. The first performance criteria is commonly referred to as the structural integrity performance criteria and the second criteria is commonly referred to as the accident induced leakage performance criteria. As written, NUREG-1022, Revision 2 implies that the principal safety barrier (i.e., the steam generator tubes in this case) would not be considered seriously degraded if it had either structural or leakage integrity. This is contradictory to existing NRC regulations which require, in part, that the reactor coolant pressure boundary (which includes the steam generator tubes) be designed to permit periodic inspection and testing of important areas and features to assess both their structural and leak-tight integrity (refer to General Design Criterion 32 of Appendix A to 10 CFR Part 50) and be designed and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture (refer to General Design Criterion 14 of Appendix A to 10 CFR Part 50). The regulations, therefore, indicate that both structural and leakage integrity criteria must be satisfied and not meeting either one of the two performance criteria should constitute serious degradation of the principal safety barrier. Accordingly, steam generator tube degradation should be considered serious if either of the two criteria specified in Section 3.2.4(A)(3) of NUREG-1022, Revision 2, are not satisfied.

The intended clarification involves changing the wording in Section 3.2.4(A)(3) of NUREG-1022, Revision 2 (page 39) from "Steam generator tube degradation is considered serious if the tubing fails to meet the following two performance criteria" to "Steam generator tube degradation is considered serious if the tubing fails to meet either of the following two performance criteria."

The NRC will consider any comments it receives pertaining to this intended change in NUREG-1022, Revision 2.

DATES: Comment period expires [30 days after FRN is published]. Comments submitted after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except for comments received on or before this date.

ADDRESS: Submit written comments to the Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Mail Stop T6-D59, Washington, DC 20555-0001, and cite the publication date and page number of this Federal Register notice. Written comments may also be delivered to NRC Headquarters, 11545 Rockville Pike (Room T6-D59), Rockville, Maryland, between 7:30 am and 4:15 pm on Federal workdays.

FOR FURTHER INFORMATION, CONTACT: Samuel Lee at (301) 415-1061 or by E-mail to ssl@nrc.gov, or Ken Karwoski at (301) 415-2752 or by E-mail to kjk1@nrc.gov.

Dated at Rockville, Maryland, this 10th day of February 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

William D. Beckner, Chief
Reactor Operations Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

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