



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

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Rules and Directives Branch  
Office of Administration  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

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Gentlemen:

**NUCLEAR REGULATORY COMMISSION (NRC) - COMMENTS ON PROPOSED  
GENERIC COMMUNICATION - REQUIREMENTS FOR STEAM GENERATOR (SG)  
TUBE INSPECTIONS (VOL. 68, NO. 93, FEDERAL REGISTER 6825909, DATED  
MAY 14, 2003)**

TVA appreciates the opportunity to comment on the proposed Generic Letter (GL) regarding SG tube inspection practices. The GL questions whether current inspection practices meet existing Technical Specification (TS) requirements. The issue being addressed in the draft GL stems from information obtained from supplemental eddy current inspections performed by licensees using newer eddy current technologies. TVA agrees that the regulatory implications of the new inspection technology and inspection information must be addressed. However, TVA disagrees with the proposed approach of reinterpreting the current TS requirements to address the new technologies. Instead, TVA believes that the proper solution is to modify the current TSs using the generic TS change process. TVA believes there is sufficient time to pursue the generic TS change process, since analysis of data collected to date for tubesheet indications confirms that there is no compelling safety concern.

The proposed GL concludes that current TSs require that tube inspections use modern eddy current technology to meet original plant licensing TS. This contradicts a basic regulatory concept: a license amendment is required to change the meaning of a TS. The eddy current inspection technology (bobbin coil) accepted during initial plant licensing should remain as the accepted compliance technique for the current TS requirements until they are modified by a license amendment. It is unprecedented to consider that the licensing basis of a plant changes over time simply by the development of new technology. Instead, TVA believes that NRC's concern with the new inspection technology is better treated as a "broken" TS and handled in accordance with Administrative Letter (AL) 98-10.

F-EDS = ADM-23

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The basis for current TS remains rooted in Regulatory Guide 1.83, "Inservice Inspection of Pressurized Water Reactor Tubes." The exception to this rule is additional inspection provisions for certain regions of the SGs that licensees have explicitly committed to in order to obtain alternate repair criteria or other SG license amendments. This Regulatory Guide establishes a relationship between the baseline inspections and subsequent inspections. Therefore, given that the tubes in the SGs were inspected with bobbin coil eddy current probes to establish a baseline, the same eddy current technique should be the minimum requirement for subsequent inspections.

Also, the proposed GL undermines a stated objective of GL 95-05, "Voltage Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking." It indicates that:

This action [GL 95-05 ] should not be construed to discourage licensees from using better or further refined data acquisition techniques, eddy current technology, and eddy current data analysis techniques as they become available. The Staff strongly encourages the industry to continue its efforts to improve the nondestructive examination (NDE) of steam generator tubes and continues to believe that inspection methods and repair criteria based on physical dimensions (e.g., length and depth) of defects are the most desirable when they can be achieved.

To construe that these new techniques are de-facto methods of compliance would have the unintended consequence of discouraging future refinements in technology.

In the draft GL, the Staff discusses current industry practice to supplement the bobbin probe inspection. These inspections have been based on engineering judgment, and guidance is contained in the Electric Power Research Institute (EPRI) Steam Generator Examination Guidelines. It is not clear by this discussion that the Staff approves of this guidance in the EPRI guideline for determining "potential" degradation (Degradation Assessment).

The draft GL discusses in detail the tubesheet inspection issue, but raises other issues within the body of the letter: tube geometry variations, small radius U-Bends, dents and dings, deposits, structures, probe wobble, cold working, permeability variations, and noise. It is not clear if the Staff is requesting safety assessments on inspection for these other areas.

The Staff should clarify that they approve of the current methodology in the EPRI guidelines for performing a degradation assessment and sampling critical areas where degradation is not currently active, but is a potential. The Staff should also clarify that their concern is with cases where degradation is known to exist, the utility has documentation that there is no structural or leakage concerns associated with the degradation, but has not submitted the documentation to NRC for their review. The Staff should clarify that they are requesting safety assessments on tubesheet inspections.

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If the subject of the letter is tubesheet inspections, TVA suggests that the technical insights derived from inspections and analysis to date be used to modify the existing TS definition of tube inspections in the tubesheet region. It should read: "Tube Inspection means an inspection of the steam generator tube from the point of entry (hot leg side) completely around the U-bend to the top support of the cold leg excluding the portion of the tube within the tubesheet below XX inches (as measured from the top of the tubesheet)." The exclusion length (XX) would be established based on SG model and physical characteristics. This revision will remove any ambiguity.

In summary, TVA considers that the issue raised by the Staff does not affect compliance with existing TS requirements and can be resolved with a simple generic TS change that is supported by data and analysis performed to date. In the interim, licensees should control the augmented inspections in accordance with the guidance of AL 98-10, "Disposition of Technical Specifications That Are Insufficient to Assure Plant Safety."

If you have any questions, please contact Terry Knuettel at (423) 751-6673.

Sincerely,



*for* Mark J. Burzynski  
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