



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

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USNRC

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April 26, 1995

Chief, Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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60FR15799
03/27/95
T. Scarbrough
A. Kugler

Dear Sir:

RESPONSE TO NRC'S REQUEST FOR COMMENTS ON NRC PROPOSED GENERIC LETTER, "PRESSURE LOCKING AND THERMAL BINDING OF SAFETY-RELATED POWER-OPERATED GATE VALVES" (VOL. 60 FEDERAL REGISTER 15799, MARCH 27, 1995)

This letter provides TVA's comments on the proposed generic letter (GL), "Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves." The following provides TVA's "General Comments" on the proposed GL:

General Comments

As noted in the proposed GL, pressure locking and thermal binding have been addressed in GL 89-10 and NUREG-1275. NRC expects each licensee to provide a resolution to thermal binding and pressure locking before the design basis phase of GL 89-10 is closed. TVA recommends that NRC continue to address thermal binding and pressure locking for motor-operated valves as part of GL 89-10, and that the proposed GL solely address other power-operated valves (i.e., air-operated or hydraulic-operated).

The proposed GL does not provide adequate criteria for screening valves for these phenomena. For example, Attachment 1 states that the licensee should evaluate valves "having operational configurations that may be susceptible to pressure locking or thermal binding." However, NRC provides no criteria for use in making this determination. Application of specific criteria would improve the industry screening process, enhance future actions, and reduce potential costs.

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The following comments are given using the same headings used by NRC in the proposed GL:

Description of Circumstances

In the proposed GL, NRC states that addressees are expected to evaluate and take actions "to ensure that safety-related power-operated gate valves that may be susceptible to pressure locking or thermal binding are capable of performing their required safety functions." Attachment 1, section 1, of the proposed GL states that the evaluation should include "consideration of the potential for gate valves to undergo pressure locking or thermal binding during surveillance testing." As drafted, the NRC is implying that any scenario which has the potential for pressure locking or thermal binding would be evaluated, regardless of the application. TVA recommends that NRC define the boundaries for when to perform evaluations on gate valves potentially affected by this phenomena.

Discussion

NRC states that the pressure locking and thermal binding phenomena may occur as a result of "valve design characteristics (wedge and valve body configuration, flexibility, and material thermal coefficients)." The 180-day required response timeframe does not allow adequate time to account for vendor support that may be necessary in this area.

Requested Actions

The 60- and 180-day actions are very similar; therefore, TVA recommends that they should be combined into actions required by 180 days. In addition, the 180-day requested action is unrealistic for physical modifications and should be revised to two refueling outages.

50.54 (f) Information Request

TVA recommends that the requested information be restricted to nonmotor-operated gate valves.

The 30-day response time is inappropriate due to the required review and commitments that are requested. TVA recommends that the 180-day required response timeframe be submitted 180 days after the licensee's initial response, in lieu of 180 days after the issuance of the proposed GL. This additional time will allow licensees a full 180 days to evaluate, analyze, and determine the corrective actions required to comply with the proposed GL.

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Attachment 2

The NRC should provide additional guidance on the types of analyses that are acceptable for determining the thrust required to overcome pressure locking or thermal binding. This may be best accomplished by working with the various nuclear industry owners groups and/or NEI.

If you have any questions concerning these comments, please contact Terry Knuettel at (615) 751-6673.

A handwritten signature in cursive script, reading "Patrick P. Carier".

Patrick P. Carier
Manager
Corporate Licensing