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May 28, 2004

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69 FR 16980

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Chief, Rules and Directives Branch
Division of Administration Services
Office of Administration
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Gentlemen:

TENNESSEE VALLEY AUTHORITY (TVA) - COMMENTS ON PROPOSED GENERIC COMMUNICATION - GENERIC LETTER (GL) 2004-XX - FEDERAL REGISTER (FR) VOLUME 69, NO. 62, PAGES 16980-16987 DATED MARCH 31, 2004

On March 31, 2004, NRC issued a notice for public comment on a proposed generic letter (GL) 2004-XX; *Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized Water Reactors (PWR)*. The proposed GL is based upon the potential susceptibility of PWR recirculation sump screens for debris blockage during design bases accidents requiring recirculation operation of the emergency core cooling system or containment spray system. An additional concern is that debris could block the flow paths to the sump that are necessary for recirculation and containment drainage. TVA's comments are provided in the enclosure.

TVA appreciates the opportunity to comment on the proposed GL and if you have any questions, please contact Rob Brown at (423) 751-6673.

Sincerely,

Mark J. Burzynski

Mark J. Burzynski
Manager
Nuclear Licensing

Enclosure

cc (Enclosure):

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R-REDS=ADM-03

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ENCLOSURE

Comments on Draft Generic Letter (GL) 2004-XX;
Potential Impact of Debris Blockage Emergency
Recirculation during Design Basis Accidents
at Pressurized Water Reactors (PWR)

The draft GL addresses the potential susceptibility of PWR recirculation sump screens for debris blockage during design basis accidents and the additional concern that debris could block the flow paths to the sump that are necessary for recirculation and containment drainage.

The proposal will require licensees to submit certain information to NRC regarding the status of compliance with 10 CFR 50.46(b)(5) which requires long-term reactor core cooling availability following a loss of coolant accident.

In response to NRC's request for comments published in the *Federal Register* (69 FR 16980) on March 31, 2004, TVA offers the following comments on the draft GL:

Comment 1

TVA considers that the GL should identify that new research information has identified that the current licensing basis for sump blockage should be re-evaluated and substituted with a more rigorous evaluation. The new methodology, currently being proposed by NEI, would become the new licensing basis once completed and modifications implemented, if they are required.

Therefore, the need for PWRs to evaluate operability for a degraded or non-conforming condition in accordance with GL 91-18 as provided in this draft GL is inappropriate because there is no deviation at this time from the current licensing basis. If a plant fails to conform to its current licensing basis, then using GL 91-18 would be appropriate. However, it is difficult to envision how a plant would deviate from the current 50 percent sump blockage assumption which is the basis for most sump designs and which is implicit compliance with 10 CFR 50.46 and the associated general design criteria of Appendix A are based on analyses and assumptions that have NRC approval and are part of the plant licensing basis. However, for an evaluation of sump performance using new regulatory requirements, assumptions, and analyses that have not been approved by the NRC on a plant-specific basis is beyond the requirements of GL 91-18. The changes in analytical techniques and assumptions and some of the physical modifications that have been discussed are likely to require NRC approval before such changes can be implemented. As noted earlier, when the new analyses are approved and the modifications installed, they become the new licensing basis and then fall under the provisions of GL 91-18.

NRC should note that this GL identifies potential problems with the original licensing basis. That is, original design assumptions may need to be re-evaluated in light of new information. As such, new design assumptions would be backfitted into the licensing basis of operating reactors. While this may be warranted in light of current research and operational data, it is important that the transition be properly managed to avoid improper assessment of emergency core cooling system (ECCS) systems operability. New design assumptions, more conservative than those used during the original design, may prompt design modifications to current systems and structures. However, those assumptions should not come into consideration until after the design modifications are implemented.

Comment 2

In section 2(b) of requested information, the GL asks for a justification for any corrective actions that will not be completed by the end of the first refueling outage after April 1, 2005. Is the intent of this for a plant entering a refueling outage on March 1, 2005, and scheduled to start up in early April 2005 to have corrective actions complete prior to start up, or would the corrective actions be tied to the first refueling outage started after April 1, 2005?

Comment 3

In section 2(c) of requested information, the GL states that "the submittal may reference a guidance document (e.g., Regulatory Guide 1.82, industry guidance, or other methodology previously submitted to the NRC.)" The current industry guidance is very conservative so that it is unlikely that many, if any, plants could show acceptable ECCS performance using that guidance alone. The GL needs to have a provision to allow plant-specific analyses based on the technical considerations and assumptions presented in that analysis as a new license amendment. Plants should not be constrained to previously approved methodologies.

Comment 4

It is our understanding that the NRC intends to issue this GL in final form in August 2004. For plants that have outages in the spring of 2005, but starting after April 1, 2005, there is a very short time window to complete the analysis, design the modifications, receive NRC approval for the modifications and changes to the analysis techniques, and install the modification. Typically, modifications planned for an outage are design complete six months prior to the outage. TVA does not believe that it is realistic that this can be accomplished in the nine to ten months between August 1, 2004, and May 30, 2005. It is likely to require at least six months getting NRC approval of the analysis and design change, even considering an expedited review. Utilities will be hesitant to start manufacture of new sump screens until such a time as they have at least a reasonable confidence that the available screen area and screen design will be acceptable to the NRC. Instead, NRC should consider requesting plant schedules that complete closure of this generic issue by 2007.

Comment 5

Contrary to the backfit discussion which state that no backfit is intended or approved, the draft GL constitutes a major backfit. Specifically, the letter states that applicants may use the guidance in Regulatory Guide 1.82, Revision 3, to determine compliance or not yet issued industry guidance. Revision 3 was issued in 2003. Since all operating PWR plants received operating licenses years before the issuance of this regulatory guide, the use of the requirements in that regulatory guide constitute a backfit. A similar argument applies to the forthcoming industry guidance. There have been discussions in public meetings and in correspondence between the NRC and NEI of positions relative to dynamic effects, application of pipe break rules, and other regulatory positions that are different from those currently approved in plant licensing and design bases. Each of these constitutes a backfit.

Comment 6

The estimate of 1000 hours per response for the burden to the public is very low. TVA's estimate for in-house work, not including major physical modifications is approximately 5000 man-hours. Considering contractor costs as a man-hour equivalent, we estimate that the project will require 10,000 man-hours per site, not including the cost and installation of a new sump screen design.

Comment 7

If NRC is considering a risk-informed solution to this original design concern, it is important that the timing of such solution is properly integrated into the proposed solutions options. Licensees should be able to allocate resources to implement a risk-informed solution before it invests in a deterministic only solution. Otherwise, it will not be cost effective to implement a risk-informed solution. That is, a risk-informed solution is only viable if it can be chosen during the early planning stages. Both options should be on the same schedule.