

NRCREP - Comments on Proposed Generic Letter: Managing Gas Intrusion in Emergency Core Cooling, Decay Heat Removal and Containment Spray Systems

From: "RILEY, Jim" <jhr@nei.org>
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Subject: Comments on Proposed Generic Letter: Managing Gas Intrusion in Emergency Core Cooling, Decay Heat Removal and Containment Spray Systems

July 23, 2007

Chief, Rules and Directives Branch
 U.S. Nuclear Regulatory Commission
 Mail Stop T6-D59
 Washington, DC 20555-0001

Subject: Comments on Proposed Generic Letter: Managing Gas Intrusion in Emergency Core Cooling, Decay Heat Removal and Containment Spray Systems

Project Number: 689

On May 23, 2007, the Federal Register published for comment a proposed generic letter requesting an evaluation of ECCS, DHR system, and containment spray system designs, operation, and test procedures to assure that gas intrusion is minimized and monitored in order to maintain system operability and compliance with the requirements of Appendix B to 10CFR50 (FRN page 29010).

The Nuclear Energy Institute (NEI) offers the following comments on the proposed generic letter.

An industry review of the proposed generic letter was conducted and it has been determined that while the proposed Requested Actions may address ECCS gas intrusion, the proposed text could be misinterpreted.

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The Nuclear Energy Institute (NEI)¹ offers the following comments on the proposed generic letter.

An industry review of the proposed generic letter was conducted and it has been determined that while the proposed Requested Actions may address ECCS gas intrusion, the proposed text could be misinterpreted. The intent of the Requested Actions to confirm system operability is understood; however, the choice of words ("minimized" and "monitored") could lead to unreasonable interpretations in light of the examples provided within the Discussion section of the proposed generic letter. Generally "minimized" means striving to the absolute minimum amount; this is not necessary. Likewise "monitored" could imply continuously recording; this is beyond the frequency necessary to confirm operability. The following illustrates our concerns:

¹ NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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- The proposed generic letter implies in some areas that the piping in the subject systems must be "full of water" and air intrusion must be "precluded" to satisfy the systems design basis. The Discussion section, page 13, item (2) implies that the accumulation of gas is an unacceptable condition; however, the Technical Specification bases for the referenced Surveillance Requirements from the BWR 6 Standard Technical Specification (NUREG 1434) states:

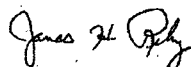
"The 31 day Frequency is based on operating experience, on the procedural controls governing system operation, and on the gradual nature of void buildup in the ECCS piping."

Similar words are in each standard Technical Specifications. This recognizes that some accumulation of gas is expected. Since systems are capable of accepting some amount of gas with negligible effect on their function, use of the absolute limits implied are unnecessary and may not be possible to achieve. The ability of a piping and pumping system to pass some gas acceptably can be a function of the specifics of a plant's pump and piping system; therefore, the system's ability can be open to interpretation.

- Also, in the Discussion section, it appears that the Staff is expecting that every venting performed by the plant needs to be documented even when the venting is preventive in nature. The quantity of gas vented could be difficult to quantify and may not be of much value in most cases. As discussed in the proposed generic letter and the NRC memorandum referenced on page 15, (Technical Considerations for Reasonably Assuring Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems Operability, ML071030382, April 17, 2007), the measurement of air volume is not straightforward and the effect of air in the system is uncertain. Periodic venting that results in gas in amounts that do not affect the operability of the system should only be tracked for trending purposes, not established as absolute limits or repeatedly minimized.

We suggest that the Requested Action section be re-written to be more precise and the Discussion section be revised to be consistent with the above comments. Thus, the proposed generic letter would ask licensees to confirm that gas intrusion is maintained less than the amount that challenges operability and that it is validated, as necessary, to confirm operability. If any further discussion is desired, please contact me at (202) 739-8137; jhr@nei.org or Gordon Clepton at (202) 739-8086; gac@nei.org.

Sincerely,



James H. Riley