

SUNI Review
Complete
Template=ADM-013
E-RIDS=ADM-03
ADD: Ramon Gascot
Lozada, Bridget
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Comment (4)
Publication Date:
11/17/2022
Citation: 87 FR 69052

As of: 12/20/22, 2:39 PM
Received: December 19, 2022
Status: Pending_Post
Tracking No. lbv-92bp-ft3w
Comments Due: December 19, 2022
Submission Type: Web

PUBLIC SUBMISSION

Docket: NRC-2022-0063
Performance-Based Containment Leak Test Program

Comment On: NRC-2022-0063-0001
Performance-Based Containment Leak Test Program

Document: NRC-2022-0063-DRAFT-0004
Comment on FR Doc # 2022-24998

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General Comment

See attached file(s)

Attachments

12-19-22_NRC_Industry Comments on DG-1391

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December 19, 2022

Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Program Management, Announcements and Editing Staff

Project Number: 689

Subject: NEI Comments on Draft Regulatory Guide DG-1391 Performance-Based Containment Leak-Test (Docket ID NRC-2022-0063)

Submitted via Federal rulemaking website (<https://www.regulations.gov>)

Dear Rulemakings and Adjudications Staff,

The Nuclear Energy Institute (NEI)¹, on behalf of our members, appreciates the opportunity to comment on draft regulatory guide DG-1391 (RG 1.163, Rev. 1).² NEI appreciates the endorsement of the latest edition of NEI 94-01, which could simplify the development of licensee requests to use the performance-based approach to leakage-rate testing currently permitted by Appendix J to 10 CFR Part 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," (i.e., "Option B" under Appendix J). While we believe the endorsement provided in DG-1391 presents an opportunity to facilitate the use of a performance-based approach to leakage-rate testing, we have several comments regarding condition 3 in Section C of the draft regulatory guide.³ Specifically, as written, condition 3 is vague, potentially overbroad, and raises potential forward-fitting concerns that have not been addressed in DG-1391.

Condition 3 begins by stating, "The LAR should address the areas of the containment structure potentially subject to degradation." This requirement is overbroad because it would apply to almost any and every structure, no matter the likelihood and severity of any such degradation and its safety significance. Inspections of structures or components susceptible to minor to almost no degradation, or that perform no safety function would provide no safety benefit and impose significant costs on licensees and applicants.

¹ The Nuclear Energy Institute (NEI) is responsible for establishing unified policy on behalf of its members relating to matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include entities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect and engineering firms, fuel cycle facilities, nuclear materials licensees, and other organizations involved in the nuclear energy industry.

² Draft Regulatory Guide DG-1391 (Proposed Revision 1 to Regulatory Guide 1.163), "Performance-Based Containment Leak-Test Program," (Nov. 2022)(["DG-1391"](#)).

³ *Id.*, at pg. 8.

The condition goes on to state that “the licensee should identify inaccessible areas of containment and describe consideration of inspections or viable, commercially available nondestructive examination (NDE) to monitor these areas for degradation.” It is not clear if the agency considers all inaccessible areas as subject to degradation and, thus, requiring inspection or nondestructive testing; or whether the agency is referring to only those inaccessible areas that have a potential for degradation. The former is beyond the current requirements in 10 CFR 50.55a, which have proven for decades to provide reasonable assurance of adequate protection in maintaining the integrity of the containment structures.

The draft regulatory guide then further specifies that, “[s]pecific areas identified that should be addressed include a number of containment pressure-retaining boundary components (e.g., seals and gaskets of mechanical and electrical penetrations, bolting penetration bellows) and a number of the accessible and inaccessible areas of the containment structures (e.g., moisture barriers, steel shells, and liners backed by concrete, inaccessible areas of ice-condenser containments that are potentially subject to corrosion).” But the draft guide does not recognize that many of these specified components are inaccessible for the purpose of protecting them (e.g., via guard pipes or permanent insulation) and that actions to facilitate inspections of such structures and components could have more negative safety consequences, than the actual safety benefit of the inspection.

The vagueness and overbreadth of condition 3 also raises forward fitting concerns that are not addressed in DG-1391. Specifically, Management Directive 8.4 defines a forward fit as:

[T]he imposition of a new or modified requirement or regulatory staff interpretation of a requirement that results in the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility as a condition of approval by the NRC of a licensee-initiated request for a licensing action when the underlying request did not propose to comply with the new or revised requirement or interpretation.⁴

Management Directive 8.4 goes on to state:

NRC may condition its approval of such a licensing action on the use of a new or modified regulatory staff position only if: (1) there is a direct nexus to the licensee’s request, and (2) the imposition of the new or modified requirement or regulatory staff position is essential to the NRC staff’s determination of the acceptability of the licensee’s request. Staff must address these two elements in its analysis and adequately justify why each one is independently met.⁵

The vague and overbroad nature of condition 3 creates the potential for the imposition of forward fits during implementation of the guidance. If the NRC intends the guidance provided in condition 3 to be interpreted

⁴ MD 8.4 “Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests,” (Sept. 20, 2019)(“MD 8.4”), at Handbook pg. 6.

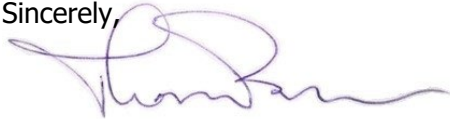
⁵ *Id.*

broadly to include the assumption that all inaccessible areas are subject to degradation and, thus, must be subject to inspection or nondestructive testing, then the implementation of that guidance will likely involve forward fitting. In that case, the "direct nexus" and "essentiality" factors described in MD 8.4 must be addressed. In addition, unless the forward fit is necessary to ensure adequate protection, some consideration of cost would be required.⁶

NEI recommends the NRC consider removing condition 3 from DG-1391, or significantly modifying it to provide more assessment criteria for those structures and components that should be inspected, particularly those structures categorized as inaccessible.

We appreciate the NRC's effort in endorsing the latest editions of the NEI document and encourage your consideration of this stakeholder comment prior to finalizing and publishing the regulatory guide. Please contact me at tbb@nei.org or (484) 366-7534 with any questions or comments.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Thomas Basso', with a large, stylized initial 'T'.

Thomas Basso

c: Brian Lee, NRR, NRC
Kyle Song, NRR, NRC

⁶ *Id.* at Handbook pgs. 6-7.