
From: Brian Magnuson <magnuson28@msn.com>
Sent: Tuesday, May 02, 2023 10:40 PM
To: Kevin Folk; Jennifer Davis
Cc: Karen Gray; Jack Kolar; Gabrielle DeStefano; Brian Magnuson
Subject: [External_Sender] Docket ID NRC-2018-0296 – Draft NUREG-1437 Revision 2 - Magnuson Public Comments (Comment Tracking Number lh7-2s93-23io)

RE: Docket ID NRC-2018-0296 – Draft NUREG-1437 Revision 2

Comments by Brian Magnuson
Lead Emergency Management Specialist at Constellation Energy Corporation
Former Reactor Operator, Senior Reactor Operator and, Operations Shift Manager at Quad Cities Nuclear Power Plant
—I submit these comments as a member of the public.

May 2, 2023

Dear NRC Staff:

As stated in my May 1, 2023 comments, I found the referenced studies of Draft NUREG-1437, Revision 2, Section E.3.7 do not support its assumptions and conclusions.

As required by Public Law 112-074, the NRC required² each nuclear plant to evaluate plant components, including SFP gates, to ensure they would not fail in the event of a beyond-design-basis earthquake. However, after issuing the March 12, 2012 §50.54(f) letter, the NRC circumvented PL 112-0074 by endorsing EPRI Report 1025286, which allowed nuclear power plants to simply assume that SFP gates will not fail in a beyond-design-basis seismic event.

This assumption (concession) appears unlawful and conflicts with the actual performance of SFP gates under non-seismic conditions (NUREG-1275) and direct observations from the seismic accident at Fukushima published by the National Academy of Sciences¹:

“ . . . the damage observed in the Unit 3 gates (Figure 2.9) demonstrates a pathway by which a severe accident could compromise spent fuel pool storage safety: drainage of water from a spent fuel pool through a damaged gate breach into an empty volume such as a dry reactor well or fuel transfer canal. A gate breach could drain a spent fuel pool to just above the level of the racks in a matter of hours, and the resulting high radiation fields on the refueling deck could hinder operator response actions.”

“Assessment of spent fuel pool performance, including gate leakage, is not a new topic for the USNRC. A review of historical data in 1997 (USNRC, 1997c) documented numerous instances of significant accidental drainage of pools in pressurized water reactor and BWR plants due to various failures including gate seals. . . .the report goes on to identify the most prevalent reason for loss of pool inventory was leaking fuel pool gates. Given the potential for gate leakage under normal operations it is not surprising that it is also an issue under severe accident conditions.” [emphasis added]

Given this information, it appears the NRC is ignoring their own research. The NRC has not taken a “hard look” and the environmental impacts of SFP accidents.

Sincerely,
Brian Magnuson
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¹*Lessons Learned From the Fukushima Nuclear Accident*
National Academies of Sciences, Engineering, and Medicine.
2016. *Lessons Learned from the Fukushima Nuclear Accident for Improving Safety
and Security of U.S. Nuclear Plants: Phase 2*. Washington, DC: The National Academies
Press. doi: 10.17226/21874.

²March 12, 2012 §50.54(f) letter