

Rulemaking1CEm Resource

From: RulemakingComments Resource
Sent: Wednesday, November 20, 2013 1:52 PM
To: Rulemaking1CEm Resource
Subject: FW: Acceptable resolution of comments on Pool Storage

**DOCKETED BY USNRC—OFFICE OF THE SECRETARY
SECY-067**

PR#: PR-51

FRN#: 78FR56775

NRC DOCKET#: NRC-2012-0246

SECY DOCKET DATE: 11/19/13

TITLE: Waste Confidence—Continued Storage of Spent Nuclear Fuel

COMMENT#: 00225

From: Bob Deshotels [<mailto:r.l.deshotels@cox.net>]
Sent: Tuesday, November 19, 2013 6:47 PM
To: RulemakingComments Resource
Subject: Acceptable resolution of comments on Pool Storage

After discussion with NRC representatives at the Waste Confidence meeting in Carlsbad California last night, I would be completely confident in the design of the spent fuel storage at all sites subject to tsunami or storm surge hazards if the following actions would be taken:

1. Given the relatively undeveloped state of tsunami prediction technology (due to lack of information, not intelligence), non-expert reports should be included as credible possibilities for beyond-design-basis analysis of tsunami or storm surge damage. Specifically, the written reports of the friars after the 1812 earthquake that struck San Juan Capistrano should be included in the beyond-design-basis analysis of the storage pools and any back-up systems. Although there does not seem to be any obvious geology that could cause a tsunami as large as the 35 to 50-foot tsunami reported in 1812, I would like to mention that about half of the recent earthquakes in the Los Angeles area have been from faults that were previously unknown. Given the fact that the friars definitely saw something, we should consider it at least credible that there is a fault that has the potential for sudden vertical motion, or some other scenario that could cause a tsunami larger than the design basis for San Onofre.
2. Because of the complex geometry of the San Onofre site, and possibly other pool storage sites, a simple static analysis is not sufficient. Because the San Onofre pools are located between the reactor containment structures on the ocean side, and a steep cliff on the land side, the high-speed linear motion of a tsunami would be converted into a lower-speed very turbulent flow pattern. It is conceivable that this resulting turbulence and possible reflection of the water flow could result in damage to the fuel support structure, displacement of fuel containers, filling the pool with mud or sand, or damage that could reduce the level of water in the pool. The effect could possibly be loss of critically-safe geometry, and/or unsafe reduction in cooling. Computational fluid dynamics modeling can determine accurately whether any such unsafe condition could result from a beyond-design-basis tsunami by looking at a number of hypothetical cases with different height and direction. If unsafe conditions are possible according to the analysis, then mitigating structural features, standby systems, or offsite recovery plans could be developed to react to such unexpected, but credible situations.

Thankyou for your consideration.

Respectfully,
Bob Deshotels,

Retired quantitative risk analysis engineer (Director of Health, Safety and Environment) Fluor Corporation

Hearing Identifier: Secy_RuleMaking_comments_Public
Email Number: 238

Mail Envelope Properties (377CB97DD54F0F4FAAC7E9FD88BCA6D00127B3A5B26E)

Subject: FW: Acceptable resolution of comments on Pool Storage
Sent Date: 11/20/2013 1:52:07 PM
Received Date: 11/20/2013 1:52:08 PM
From: RulemakingComments Resource

Created By: RulemakingComments.Resource@nrc.gov

Recipients:
"Rulemaking1CEm Resource" <Rulemaking1CEm.Resource@nrc.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	3134	11/20/2013 1:52:08 PM

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received: