

**Lee, Samson**

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**From:** David Lochbaum <[davelochbaum@gmail.com](mailto:davelochbaum@gmail.com)>

**Sent:** Wednesday, August 19, 2020 6:37 AM

**To:** Morris, Scott <[Scott.Morris@nrc.gov](mailto:Scott.Morris@nrc.gov)>

**Cc:** Linda Seeley <[lindaseeley@gmail.com](mailto:lindaseeley@gmail.com)>; Raspa, Rossana <[Rossana.Raspa@nrc.gov](mailto:Rossana.Raspa@nrc.gov)>; Spicher, Terri <[Terri.Spicher@nrc.gov](mailto:Terri.Spicher@nrc.gov)>; [pdblanch@comcast.net](mailto:pdblanch@comcast.net); Nieh, Ho <[Ho.Nieh@nrc.gov](mailto:Ho.Nieh@nrc.gov)>

**Subject:** [External\_Sender] Re: Diablo Canyon's exigent LAR

Hello Scott:



This reliability study did not consider the common-cause failure of AFW piping due to, say, external corrosion. Nor from internal corrosion, either, for that matter.

To its credit, NRC Inspection Procedure 49001, "Inspection of Erosion-Corrosion/Flow-Accelerated-Corrosion Monitoring Program," was not silent about the safety requirement involved:

***When reviewing these systems consider that all safety-related piping systems and certain non-safety-related piping systems are under the regulatory auspices of the maintenance rule and license renewal, which require licensees to demonstrate that the performance or condition of these systems and components are being effectively controlled and managed through condition monitoring and preventive maintenance to ensure that they remain capable of performing their intended function.***

***Condition monitoring goals or measures should be predictive in nature, providing early warning of degradation before failures occur.***

Whether due to internal factors (e.g., erosion-corrosion) or external contamination, the fact remains that seven sections of AFW system piping on Unit 2 degraded until the pipe wall thickness was less than allowed by the ASME code. As a direct consequence, an AFW pipe failed and leaked at a rate of 3.9 gpm. PG&E has ample reason to suspect that Unit 1 AFW system piping is degraded to the point there replacement of sections will be necessary to restore minimum safety margins.

What might happen if an earthquake occurs while Unit 1 operates with degraded AFW piping?

The earthquake could result in loss of the normal feedwater system via any one of numerous ways.

And the earthquake's ground motion could also rupture the degraded sections of the AFW system piping.

So, for the NRC to approve the exigent license amendment request by PG&E and allow Unit 1 to continue operating in this known degraded condition would be akin to the NRC approving the request by FirstEnergy to allow Davis-Besse to continue operating with a known degraded condition of CRDM nozzle cracking and leakage. And we all know how well that worked out.

I assume that the people of California will be protected by luck while PG&E and NRC gambles with their lives like the people of Ohio were back in 2001. There I go again with flawed assumptions.

Thanks,  
Dave Lochbaum

On Tue, Aug 18, 2020 at 5:37 PM Morris, Scott <[Scott.Morris@nrc.gov](mailto:Scott.Morris@nrc.gov)> wrote:

Hello David!

Thank you for cc'ing me on your email to Paul. Please know that we are keenly aware of this issue at Diablo Canyon Unit 2 and are actively reviewing its nuclear safety (and any associated potential licensee performance assessment) implications consistent with our independent oversight mission here in Region IV ... which includes a review of the "extent of condition" of this issue to Unit 1. We are also coordinating with our colleagues in headquarters (NRR) as they follow their established process for considering the exigent technical specification amendment request for Unit 1. One item worthy of note here is that the AFW leak

apparently resulted from external corrosion of the piping, which is unusual and (to my current understanding) not explicitly addressed by ASME Code requirements.

I have ensured that the NRR staff considering the amendment request are aware of the concerns expressed in your (and Paul's) email.

I will provide a follow up email with more details in the coming days.

Best Regards,

*Scott A. Morris*

Regional Administrator

**U.S. Nuclear Regulatory Commission / Region IV**

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**From:** David Lochbaum <[davelochbaum@gmail.com](mailto:davelochbaum@gmail.com)>

**Sent:** Tuesday, August 18, 2020 7:03 AM

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**Subject:** [External\_Sender] Diablo Canyon's exigent LAR

Hello Paul:

According to the highlighted passages on page 7 of the 22-page attachment to PG&E's license amendment request, workers discovered a 3.9 gallon per minute leak from a section of AFW piping on Unit 2 last month. I'm impressed -- I can't tell you how many times I've mistaken a 3.9 gpm leak for a 4 gpm leak.

In any case, workers conducted an extent of condition and found no more puddles under Unit 2 AFW pipes. But they found six pipe sections where the wall thickness had dropped below minimum allowed by the ASME code. Those thinned sections were replaced.

The license amendment request seeks to allow workers to find and fix thinned pipe sections PG&E expects to exist on Unit 1's AFW system.

What is not explained in the license amendment request is why it took a 3.9 gpm leak for workers to notice thinned AFW piping on Unit 2.

Attached are just a small, small handful of the many, man NRC's correspondence to plant owners about pipe wall thinning. Thinned pipe sections that ruptured have killed workers at Surry in Virginia and Mihima in Japan. Both to avoid killing workers and to keep cooling water inside pipes instead of on floors, the NRC required -- not suggested, but required -- owners implement pipe wall thickness monitoring programs that replace pipe sections BEFORE their wall thickness drops below ASME allowables. Waiting until notices observe a 3.9 gpm leak is NOT one of the monitoring programs permitted by the NRC. And yet, ....

So, how did so many AFW pipes on Unit 2 thin below ASME allowable limits? And why are AFW pipe sections suspected of intolerable thinning on Unit 1? If PG&E was implementing an effective pipe wall thinning monitoring program, these sections would have been detected and remedied before leaking water on the floor. But nooooo!

So, for not doing what the NRC repeatedly mandated them to do, PG&E wants the NRC's permission to keep operating Unit 1 while it plays catch up. Maybe crime does pay, after all.

Thanks,

Dave Lochbaum

