

**From:** [Leeds, Eric](#)  
**To:** [Lyon, Fred](#)  
**Cc:** [Howe, Allen](#); [Evans, Michele](#); [McCree, Victor](#); [Croteau, Rick](#); [Cheok, Michael](#); [Ruland, William](#); [Hiland, Patrick](#); [Davis, Jack](#); [Nieh, Ho](#); [Roth\(OGC\), David](#); [Wilson, George](#); [Milano, Patrick](#); [Hipschman, Thomas](#); [Orders, William](#); [Monk, Robert](#); [Broaddus, Doug](#)  
**Subject:** RE: Next Actions for Safety Concern at WBN1  
**Date:** Thursday, June 21, 2012 12:23:21 PM

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Thanks, Fred. Got it. I plan to discuss with the NRR ET and Regional Management. I'll get back to you on this next week with how I plan to proceed.

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
301-415-1270

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**From:** Lyon, Fred  
**Sent:** Thursday, June 21, 2012 8:32 AM  
**To:** Leeds, Eric  
**Cc:** Howe, Allen; Evans, Michele; McCree, Victor; Croteau, Rick; Cheok, Michael; Ruland, William; Hiland, Patrick; Davis, Jack; Nieh, Ho; Roth(OGC), David; Wilson, George; Milano, Patrick; Hipschman, Thomas; Orders, William; Monk, Robert; Broaddus, Doug  
**Subject:** Next Actions for Safety Concern at WBN1

Eric, based on our discussion yesterday, *we feel that a CAL is not an appropriate and adequate process to provide reasonable assurance of adequate safety at WBN Unit 1.* We feel that a DFI or Order is now appropriate, as discussed below.

During our discussion, you emphasized three things:

1. You agreed that there is a safety issue at WBN Unit 1.
2. We agreed that we need a way for the NRC to get from where we are now with TVA, to a final end point of where TVA is in compliance with the NRC-approved licensing basis for flooding, i.e., we need reasonable assurance of adequate safety until permanent solutions are implemented.
3. You agreed that we must place the burden of proof on TVA to demonstrate adequate safety.

A CAL is not the appropriate process to provide reasonable assurance, for the reasons below:

1. In its June 13, 2012, letter to the NRC, which the staff is using as the basis for the CAL, TVA lists a number of proposed but not implemented future actions. However, TVA does not address the basic requirement to provide us with its justification as to (a) why it believes it has regained compliance with the regulations and licensing basis, and (b) why it is safe to operate until the actions, if found adequate, are completed.
2. The thermal barrier booster pumps (TBBPs) are flooded during the flooding event. These pumps are safety-related and required to be operable during a probable maximum flood (PMF) event. In the public meeting on May 31, TVA's senior vice president for engineering confirmed the flooding of the pumps to NRR and RII senior management. Previous to the May 31 meeting, there was margin to be

discussed, however small (less than 1 inch) and uncertain. Now, there is nothing to discuss about safety margin; there is none for the TBBPs.

3. The temporary modification to install a flood barrier around the TBBPs has been staged, but is not in place. This barrier is no longer a compensatory measure to gain additional margin. It is *required* for the survival of the pumps during a flooding event. Without the flood barrier in place, the facility is not in compliance with the licensing basis. A required design basis modification cannot be used as a contingency for reasonable assurance. Therefore, it is a design change that *requires NRC approval prior to installation* under 50.59 (see Section 7.3 of the Attachment to RIS 2005-20, Rev.1; the MC9900 guidance).
4. The sand baskets are *required* as an input assumption by TVA to the PMF calculations. The baskets have been in place since 2009, yet they are not reflected in the WBN Unit 1 UFSAR. The NRC staff stated in a letter to TVA on January 25, 2012, that we do not have confidence that the sand baskets will withstand the impact of large debris during a flood. In addition, the sand baskets are not fully installed at any of the four affected dams. In my discussions with the senior resident inspector, TVA has known that the sand baskets were required for flood mitigation since at least January 2010. We are unaware of any operability determination, functional evaluation, or 50.59 review of the sand baskets prior to May 7, 2012; and, based on my and the senior resident inspector's review, TVA's functional evaluation dated May 7, 2012, is woefully inadequate to address the sand baskets as a design change (see my email to you dated 6/19/12 forwarding the evaluation from Bob Monk, the senior resident inspector). The sand baskets are also a design change that *requires NRC approval prior to installation* under 50.59. TVA is in violation of 50.59, 50.71(e), and Appendix B, Criterion XVI.
5. Without the flood barrier to the TBBPs, a SBLOCA through the reactor coolant pump seals is the worst case scenario, leading to possible loss of natural circulation and decay heat removal through the steam generators. Without the sand baskets, the worst case scenario is loss of the ultimate heat sink, due to loss of the intake pumping station or loss of the SFP cooling pumps. There are no compensatory measures *installed* for *any* flood mitigation equipment. TVA has *no procedures* to cope with a loss of the flood mitigation equipment. Any actions they take after loss of the flood mitigation equipment are ad hoc.
6. The regulations at 10 CFR 50.54(h) states that, "The licensee shall be subject to...all rules, regulations, and orders of the Commission." The operating license states that, "The facility will operate in conformity with...the rules and regulations of the Commission...." There is no regulation that tells a licensee "If you are not in compliance, [you have this long to do this]..." Licensees must be in compliance. Compensatory measures allow a licensee to restore compliance. A staged compensatory measure is not acceptable, because it does not restore compliance. We do not license based on a promise that the facility will be in compliance when the design basis event occurs. The facility must be in compliance because *we assume that the event has occurred*. TVA is in violation of 50.54(h) and the operating license.

TVA is in noncompliance with NRC's regulations related to flood protection, and; therefore, there is no reasonable assurance of adequate safety at WBN Unit 1. We are beyond 50.54(f). We do not need additional information, and we are no longer trying to verify compliance. A senior TVA official told the NRC on May 31 that they were not in

compliance for WBN Unit 1.

A CAL not appropriate because it is only a commitment by the licensee to do certain things. A promise by the licensee is not a sufficient basis for reasonable assurance. We do not issue licenses based on promises of actions. Therefore, we see two options available to us:

1. An Order is appropriate. Since TVA is not in compliance at WBN Unit 1 with the regulations for flood protection, i.e., GDC 2, the facility is unsafe. In its current condition, the flood mitigation equipment is unprotected and the facility cannot be maintained in a safe shutdown condition.
2. A DFI under 2.204, for the purpose of determining whether an order under 2.202 should be issued, or whether other action should be taken... A DFI would give TVA *another chance* to tell us why they should be allowed to operate. Also, a DFI places the burden of proof on the licensee to demonstrate adequate safety, *even though, in our opinion, no additional information is required to issue an Order.*