

September 25, 2012

Allison M. Macfarlane  
Chairman  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: Flooding hazard threats to Fort Calhoun Station; redaction of NRC document

Dear Chairman Macfarlane:

It is now known that Fort Calhoun Station is not adequately protected against flooding hazards. Consequently, it is essential that to assure public health and safety the NRC not allow Fort Calhoun to restart until the high risk flooding hazard is fully remedied.

In July 2011 in the midst of the flooding that surrounded Fort Calhoun, NRC Senior Reactor Analyst David Loveless conducted technical review concluding that based on as-built design and current compensatory actions, Fort Calhoun would not be able to survive gross failure of the Oahe dam—one of six dams on the Missouri River upstream from Fort Calhoun. See enclosed March 6, 2012 memo.

Mr. Loveless's analysis cited a Corps of Engineers assessment that the water height at Fort Calhoun, following an Oahe dam rupture, could be as high as 1,060 feet mean sea level. (Fort Calhoun's design basis flooding elevation is only 1,014 feet mean sea level.) The technical review stated that this flood would result in flooding of all major plant equipment including the main control room and would likely require complete abandonment of the site for weeks.

In addition, Mr. Loveless calculated an incremental conditional core damage probability (ICCDP) of  $6 \times 10^{-4}$ . NRR Office Instruction LIC 504, Rev. 3, requires an immediate plant shutdown when the ICCDP is greater than  $5 \times 10^{-5}$ . Thus, the risk of core damage at Fort Calhoun from failure of the Oahe dam is a factor of 10 higher than the limit calling for immediate shutdown of the plant. It equates to a 1-in-1,667 chance—clearly much higher than the 1-in-20,000 chance enunciated in LIC 504 that requires immediate plant shutdown.

An NRC backfit panel concluded in March 2012 that obtaining further evaluation and additional information is justified. However, it concluded that the NRC's information request to all reactor operators (issued March 12, 2012) regarding flooding hazard reevaluation in the wake of the Fukushima accident is sufficient. (Fort Calhoun's deadline for complying with this information request is March 2014.) Thus, the backfit panel concluded that no specific action is now warranted at Fort Calhoun given the broader, generic efforts underway by the NRC to address flooding issues.

In light of the known high risk to Fort Calhoun from rupture of the Oahe dam—just one of six upstream dams, the NRC's generic efforts regarding flooding hazards should not take precedence over urgently needed specific actions regarding Fort Calhoun. Rather, the NRC must abide by its existing safety protocols, including LIC 504, and not allow Fort Calhoun to restart until the high risk hazard is fully remedied.

It is now known that the flooding hazard from an Oahe dam rupture greatly exceeds Fort Calhoun's flooding protection measures. Indeed, the magnitude of the problem is such that if Fort Calhoun were operating today, LIC 504 would call for its immediate shutdown. In this case, it would be imprudent for the NRC to allow this reactor—known to be inadequately protected against flooding—to restart.

During the summer of 2011, NRC Commissioner George Apostolakis stated emphatically that the agency would not allow a reactor to operate with known threats in the 1-in-1,000 range, as had faced and doomed Fukushima. We call on the NRC to now back up that assurance.

The enclosed March 6, 2012 memo reporting Mr. Loveless's analysis and the backfit panel's recommendations was recently removed from the NRC's Agencywide Documents Access and Management System (ADAMS). It was replaced with a redacted version, Accession Number ML12229A184, which blacks out most of the key information.

It is troubling that the complete March 6, 2012 memo containing this important information regarding the flooding hazard at Fort Calhoun has been removed. Its replacement by a redacted version needs to be adequately explained and justified.

We request the following from the Nuclear Regulatory Commission:

1. Ensure that the agency abides by its own established safety protocols by not allowing Fort Calhoun to restart until:
  - a. The flooding hazard is thoroughly reevaluated, including risk of failure of each of the six upstream dams, whether by individual dam failure or by cascading dam failures;
  - b. The known, high risk hazard is remedied; and
  - c. All flood protection deficiencies are fully rectified.
2. Provide the following information related to the removal of the unredacted March 6, 2012 memo from ADAMS and its recent replacement with a redacted version:
  - a. The name and job title of the person who redacted the document;
  - b. The reason(s) for the redaction; and
  - c. The legal basis for the redaction.
3. Compile a complete record of the agency's review and deliberations in response to the above requests, including all materials referenced, and make the complete record available for public review in ADAMS and the NRC's Public Document Room.

Thank you for your careful consideration of this critically important matter. We stand ready to provide any additional information you may require. We look forward to hearing from you.

Sincerely,



Mike Ryan  
Spokesman

Enclosure