

## **NRR-PMDAPem Resource**

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**From:** Beasley, Benjamin  
**Sent:** Monday, March 13, 2017 12:19 PM  
**To:** Henderson, Erin Kathleen  
**Cc:** Brock, Kathryn; Hon, Andrew  
**Subject:** Status of Browns Ferry Preferred Pump Logic LAR

Erin,

The review of the Browns Ferry preferred pump logic license amendment request (CACs MF6738, MF6739, MF6740) continues to be a challenge. The CAS, PPL, and UPRTL are unique in the industry and have a complicated design. The project is 18 months old, we have had two rounds of RAIs, and we have charged about 1500 hours. We are not able to make a safety determination without additional work. At this time, we have suspended the LAR review pending the development of a clear plan for completing the review. I am writing to convey our plan to you and to ask whether TVA would like us to continue with the review. After you have reviewed the plan and the labor estimates to complete the review, please affirm to me in writing (email is acceptable) if you would like us to complete the review. If you do not want us to proceed with the review, then you would need to withdraw the request. To maintain the current review team and support resource planning, please reply within a month of the date of this email. If we are to proceed with the review, the plan for reaching a safety determination is described below.

The first step needed to advance the review was to determine whether or not an additional single failure must be considered. The licensing basis for the CAS, PPL, and UPRTL is an accident in one unit and a spurious accident signal in the other unit. We have concluded that the current licensing basis applies for the current allowed outage times (AOT) applied to the CAS, PPL and UPRTL. In order to extend the AOT for PPL to an explicit 7 days, current regulatory requirements will apply. (Refer to ML101960180 for a discussion of "forward fit.") Regulatory Guide 1.53 Revision 1 endorses IEEE 379-2000. The IEEE standard would require the consideration of an additional single failure. Presumably the worst case failure would be a failure in the control logic capability. Thus, to achieve the explicit 7 day AOT for PPL, TVA will need to supplement the LAR with the consideration of an additional single failure. This supplement could be in response to RAIs that result from an audit.

Based on what we know, we have estimated the effort for obtaining information and completing the review for both the current AOTs and the 7 day AOT. We believe that the Technical Specification changes with the currently applied AOTs can be considered on a deterministic basis. The estimate for completing the review for the currently applied AOTs is an additional 540 hours. To gain the 7 day AOT will require a risk informed review. The estimate for completing a risk informed review for the 7 day AOT is an additional 630 hours. (This 630 hours is in lieu of, not in addition to, the 540 hours for the deterministic approach.)

If you ask us to proceed with the review, the project will continue to receive elevated management oversight. We will ask that our respective management teams communicate periodically regarding the progress of the review.

If we proceed with the review, we propose to conduct an audit in Rockville which we hope will provide much of our needed information. We would follow the audit with an update of the labor estimate. We would draft the safety evaluation to clearly establish additional information needs. To obtain any additional information needed, we propose an audit for a limited number of NRC staff at the Browns Ferry site. The onsite audit should answer all outstanding questions and enable a safety determination.

If it will assist in your decision about whether to proceed, we can schedule a public conference call in short order to discuss the technical aspects and information needs. We appreciate and support TVA's desire to add the CAS, PPL, and UPRTL to the Technical Specifications. It is unfortunate that this project has become a

problem. If you choose to proceed, we will work closely with you to assure that the remaining review is efficient and timely.

Regards,  
Ben

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**From:** Beasley, Benjamin

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