

**From:** Wilkins, Lynnea  
**Sent:** Thursday, March 04, 2010 12:58 PM  
**To:** Humphreys, Michael C.  
**Cc:** Burkhardt, Janet; Lent, Susan  
**Subject:** DRAFT Request for Additional Information Regarding the August 5, 2009 Scram with Complications at Columbia Generating Station

Mike,

Below is the draft request for additional information (RAI) from the Instrumentation & Control Branch regarding the August 5, 2009 Electrical Bus Failure and Scram with Complications at Columbia Generating Station. Please notify me if you would like to have a call to discuss the staff's questions before we issue.

Thanks  
Lynnea

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**DRAFT REQUEST FOR ADDITIONAL INFORMATION**

1. Describe the Digital Electric Hydraulic (DEH) system and feedwater control for the turbine-driven feedpumps, with particular attention to redundancies in the systems.
2. Expound upon the analysis within 10 CFR 50.59 evaluation of 2007 for the DEH that is described within the evaluation as "An extensive Failure Modes and Effects Analysis (FMEA)" that was performed "for the new DEH system to verify that a single component failure of the new system is unlikely to result in a failure of the DEH system that would result in a plant shutdown or plant transient" to explicitly describe the analysis that was performed and any evaluation of software common-cause failures that it included.
3. As a result of the analysis performed on the DEH, describe any actions taken to mitigate vulnerabilities created by software common-cause failures.
4. In terms of feedwater system fluid dynamics, provide a detailed explanation of the cause of the low suction pressure at the turbine-driven feedpumps that caused the pumps to trip.
5. Similar to that requested to be provided for the DEH, describe any analysis that was performed for the 10 CFR 50.59 change of 2007 to the feedwater control for the turbine-driven feedpumps to evaluate software common-cause failures.

6. As a result of any analysis performed on the feedwater control for the turbine-driven feedpumps, describe any actions taken to mitigate vulnerabilities created by software common-cause failures.

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