

December 19, 2006

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Stop P1-137  
Washington, DC 20555-0001

ULNRC-05353



Ladies and Gentlemen:

**DOCKET NUMBER 50-483  
CALLAWAY PLANT UNIT 1  
UNION ELECTRIC CO.  
FACILITY OPERATING LICENSE NPF-30  
CLARIFYING INFORMATION REGARDING APPLICATION FOR LICENSE  
AMENDMENT TO REVISE TECHNICAL SPECIFICATION  
3.6.7, "RECIRCULATION FLUID PH CONTROL SYSTEM"**

- Reference: 1. ULNRC-05293, dated May 30, 2006  
2. ULNRC-05194, dated September 1, 2005  
3. ULNRC-05347, dated November 22, 2006

Reference 1 provided Union Electric Company's (AmerenUE's) application to request approval of changes to Technical Specification (TS) 3.5.2, "ECCS – Operating" and TS 3.6.7, "Recirculation Fluid pH Control System" to support replacement of the containment recirculation sumps inlet trash racks and screens with strainers in response to Generic Letter 2004-02. The change to TS 3.5.2 is required to reflect the change from trash racks and screens to strainers with significantly larger effective surface area. The change to TS 3.6.7 is required to relocate the Recirculation Fluid pH Control System from the current location above the containment sump pits to alternate locations on the containment floor to allow installation of the new strainers.

On November 4, 2006, the NRR Project Manager requested the following information to support the license amendment request (LAR) to revise SR 3.6.7.1 and SR 3.6.7.2.

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The relocated Recirculation Fluid pH Control System will continue to use the existing TSP-C basket basic design. The existing baskets will be moved several feet to avoid physical interference with the new sump strainer assemblies which will protrude vertically above the existing recirculation sump pits. The TSP-C baskets will remain in the vicinity of the recirculation sump pits and within the post-accident recirculating fluid flow path. Because the baskets must be relocated outside the containment sumps, the phrase "in place in the confines of each containment recirculation sump" needs to be deleted from SR 3.6.7.1.

The existing TSP-C baskets have been evaluated for minor changes incorporated as a result of the basket relocation.

The baskets will be relocated onto new base plates resulting in an elevation increase of 1" from the current design. Following relocation, the lower elevation of the TSP-C located within each basket will be at a nominal elevation of 2001'-6" (versus nominal 2001'-5" currently). The minimum flood elevation in the containment building following a large break loss of coolant accident (LBLOCA) at the time of containment spray swapover will be approximately 2002'-4". The TSP-C will begin dissolving post-LOCA prior to containment spray recirculation similar to the existing design. Therefore the basket relocation will have no significant impact on the timing for TSP-C dissolution or the pH of the water in the containment sumps.

The licensing basis of the Recirculation Fluid pH Control System includes that the TSP-C required in the baskets will result in a range of pH in the containment recirculation sump of a minimum of 7.1 to a maximum of 9.0. This pH range and the mass of TSP-C for the pH range was approved in Amendment 96 issued May 3, 1995, for Callaway. The maximum mass of TSP allowed in each basket is based on basket structural integrity and not on exceeding a maximum sump pH.

The TSP-C baskets will be stiffened to accommodate a minor increase in TSP-C mass due to compaction of the TSP-C within each basket over time. The range of evaluated post-LOCA sump pH following complete TSP-C dissolution is not changed due to this minor increase in the allowed TSP-C mass and the sump pH will remain within the licensing basis pH range of 7.1 to 9.0. The proposed change will only relocate the mass of TSP-C in the baskets in SR 3.6.7.1 to the TS Bases and the minimum pH of 7.1 in the TS Bases will be given in the new SR 3.6.7.2.

The existing licensing basis on the Recirculation Fluid pH Control System continues to be met in the same manner as with the current baskets. Therefore, the proposed amendment does not make any changes to the licensing basis of this system.

The rewritten SR 3.6.7.1 (i.e., the new SRs 3.6.7.1 and 3.6.7.2) is not reducing any inspection and testing requirements on the existing TSP-C baskets following their relocation. The proposed amendment removes specific acceptance criteria from the described SR's and replace it with a generic statement to verify structural integrity and that the minimum pH limit of 7.1 can be achieved. The specific surveillance acceptance criterion to meet the SR's is

relocated outside of the TS into the TS Bases. Removing procedural details for meeting TS requirements from the TS is acceptable because locating such detail in the TS Bases or in programmatic documents required by TS section 5.5, as appropriate, will maintain an effective level of regulatory control while providing for appropriate change control process as defined in 10 CFR 50.59 and TS Section 5.5.14, "Technical Specification Bases Control Program." This same precedent was used during Callaway's conversion to improved TS by Amendment 133 as discussed in the NRC Safety Evaluation for that amendment.

In Reference 2, Callaway provided information on chemical effects evaluations for Callaway Plant sumps. In the response to question 2(c) item 8, Callaway identified that Industry and NRC Sponsored Integrated Chemical Effects Testing (ICET) test 2 was appropriate for conditions at Callaway. Since submittal of reference 2, Callaway has continued to participate in chemical effect evaluations through the Pressurized Water Reactor Owner's Group (PWROG). In March of 2006, WCAP-16530 "Evaluation of Post Accident Chemical Effects in Containment Sump Fluid to Support GSI-191" was submitted to the NRC for approval. The NRC is currently reviewing this WCAP with the draft SE anticipated in May of 2007. Callaway intends to follow the guidance provided in the WCAP and associated Safety Evaluation in determining the impact of chemical effects. Callaway expects to complete the chemical effect evaluations by December 31, 2007 as required in Generic Letter 2004-02.

During review of this amendment request by NRC staff, a concern was identified that changes to the chemical used for pH control could potentially be made without requiring prior NRC approval due to the chemical name not being included in the TS. To address the reviewer's concern, AmerenUE is proposing added the licensing condition provide in Enclosure 1 to Appendix C of the Callaway Plant Operating License. This licensing condition would require NRC approval is required prior to using a different chemical for pH control.

A summary of the regulatory commitments made in this letter is provided in Enclosure 2. If you have any questions concerning this matter, please contact Dave Shafer at (314) 554-3104 or (573) 676-4722.

I declare under penalty that the foregoing is true and correct.

Sincerely,



Executed on: December 19, 2006

David T. Fitzgerald  
Manager - Regulatory Affairs

BFH/

Enclosures: 1 - Proposed License Condition, NPF-30, Appendix C  
2 - List of Commitments

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Proposed License Condition, NPF-30, Appendix C

<u>Amendment Number</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
###	Technical Specification (TS) 3.6.7 requires the Recirculation Fluid pH Control System to be OPERABLE and Surveillance Requirement (SR) 3.6.7.2 requires verification that the sump pH be $\geq 7.1$ . Trisodium phosphate crystalline (TSP-C) will be used for pH control as described in TS Bases 3.6.7. NRC approval is required prior to using a different chemical for pH control.	Prior to MODE 4 ascending during startup from the Refuel 15 outage.

**LIST OF COMMITMENTS**

The following table identifies those actions committed to by AmerenUE in this document. Any other statements in this document are provided for information purposes and are not considered commitments. Please direct questions regarding these commitments to:

<b>COMMITMENT</b>	<b>Due Date/Event</b>
Trisodium phosphate crystalline (TSP-C) will be used for pH control as described in TS Bases 3.6.7. NRC approval is required prior to using a different chemical for pH control.	Prior to MODE 4 ascending during startup from the Refuel 15 outage.