January 9, 2001

MEMORANDUM TO: File

FROM: Jack N. Donohew, Senior Project Manager, Section 2 ***/RA/***
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: CLARIFICATION OF APPLICATION TO ELIMINATE THE BORON DILUTION MITIGATION SYSTEM (TAC NO. MA9065)

Attached is an e-mail from the licensee that clarifies the application dated May 25, 2000, that requested the elimination of the boron dilution mitigation system (BDMS) from the technical specifications. The e-mail dated December 12, 2000, addresses two questions from me that are listed at the bottom of the e-mail. The licensee's responses clarifies the application and the information provided is also included in the Final Safety Analysis Report, which was reviewed before the questions were sent to the licensee.

Docket No. 50-483

Attachment: E-mail dated December 12, 2000

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EMAIL DATED DECEMBER 12, 2000

From: "Yates, G Bert" <GYates@ameren.com>
To: "Jack Donohew (E-mail)" <jnd@nrc.gov>
Date: Tue, Dec 12, 2000 7:45 PM
Subject: RE: Two Things Needed for BDMS Elimination LAR

Jack:

Response to item (1)

Callaway has never credited the actuation of the boron dilution mitigation system (BDMS) to mitigate an inadvertent MODE 2 dilution event. As discussed in FSAR Section 15.4.6.2 (see pages 15.4-26a and 15.4-27), Callaway was licensed with credit given to manual operator action to open the RWST valves and close the VCT valves for a MODE 2 event (40 minutes for operator action prior to criticality after a reactor trip). Automatic valve swapover via the BDMS is currently credited only in MODES 3-5, therefore the analysis in Appendix A to ULNRC-04257 dated 5/25/00 covers only those MODES.

Prior to the conversion to ITS, the old TS (previously referred to as the current TS or CTS) did not cover the entire BDMS as discussed in conversion DOC 1-30-M (reprinted hereinafter). We decided to adopt STS 3.3.9 as a more restrictive change, with the decision to augment the STS LCO 3.3.9 Applicability to reflect the P-6 interlock that defeats the flux multiplication block (see FSAR Figure 7.2-1 sheet 4). Note we added "MODE 2 (below P-6)" to the STS 3.3.9 LCO Applicability under JFD 3.3-88. Although we could have just adopted the STS 3.3.9 LCO Applicability, consistent with our analysis basis, we thought it made sense to include MODE 2 below P-6 since that is the point at which the source range channels begin to provide protection on a down-power. DOC 1-30-M reads:

"The current TS include operability requirements only on the source range channels which provide inputs to the BDMS and surveillances to verify the flux multiplication setpoint (quarterly) and valve swapover (18 months). The current TS do not address operability of the BDMS past the source range channel inputs (e.g., the BDMS microprocessor is not covered in the current TS) nor do the current TS cover other boron dilution analysis assumptions now covered in ITS 3.3.9 and its Bases (i.e., requiring at least one RCS loop in operation to provide mixing and the Mode 5 isolation of BGV0178 to limit dilution flow rate in that Mode). Since ITS 3.3.9 now covers these items, this is a more restrictive change. Other DOCs cover specific changes to current TS ACTIONS 5.a (see DOCs 1-04-LG and 1-43-A for format and terminology changes and DOCs 1-10-LS-32 and 1-55-LS-39 for specific relaxations) and 5.b (see DOCs 1-10-LS-32 and 1-34-A). The current TS surveillances addressed by Notes (9) and (12) to Functional Unit 6 in Table 4.3-1 are moved to ITS 3.3.9 with the only change being the use of a

simulated or actual signal to test the valve swapover function, as discussed in DOC 1-33-TR-1."

Note also that STS 3.3.1 Condition L (deleted under JFD 3.3-41, citing approved traveler TSTF-135) and CTS 3.3.1 Action 5.b applied only in MODES 3-5.

Response to item (2)

The FSAR mark-ups have not been drafted. We did not start using the standard STARS LAR format, which includes draft FSAR mark-ups, until after the 5/25/00 submittal. In any event, for this case Appendix A to ULNRC-04257 is a stand-alone document that really does not require FSAR mark-ups to understand. A great deal of the discussion in Section 15.4.6 will be replaced with either a reference to ULNRC-04257 (incorporation by reference) or more likely with excerpts from ULNRC-04257 that discuss salient analysis assumptions and results. However, we feel this is a 50.71(e) matter. Note also that several other FSAR sections will require revision to reflect the modification (e.g., Sections 3.1, 4.3, 4.6, 7.1, 7.6.12, 9.3.4, and 15.0 as well as Figures 6.3-1 sheet 1, 7.2-1 sheet 4, and 9.3-8 sheet 3). The entire FSAR change package is still being developed. In addition, ULNRC-04257 was submitted following the lead established by Comanche Peak and Wolf Creek. Their LARs did not include FSAR mark-ups.

If you decide that ULNRC-04257 can not be approved without the FSAR mark-ups, we will have to rearrange other work priorities to accommodate that. Please let me or Dave Shafer know.

Bert Yates

-----Original Message-----
From: Jack Donohew [mailto:JND@nrc.gov]
Sent: Thursday, December 07, 2000 10:24 AM
To: david_e_shafer@ameren.com
Subject: Two Things Needed for BDMS Elimination LAR

I took advantage of having to talk with Larry Kopp on another matter to discuss with him your BDMS elimination amendment application request (LAR). He is about finished with his evaluation, but he needs the following two things:
(1) The current TS on the BDMS are applicable to Modes 2 (below P-6), 3, 4, and 5. The LAR addresses elimination of the BDMS in Modes 3 to 5, but does not seem to address Mode 2 (up to P-6). What are we missing here?
(2) may we have copies of the corrections to FSAR Section 15.4.6 for this LAR?
<JND>

CC: "Shafer, David E" <DShafer@ameren.com>, "Mills, Ke...