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February 22, 2012

Mr. Mohan C. Thadani
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Office of Nuclear Reactor Regulation
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Rockville, MD 20852-2738

**Subject: Ameren Missouri Supplemental Response to October 7, 2011
10 C.F.R. § 2.206 Petition Filed by Lawrence S. Criscione**

**Reference: January 18, 2012 Ameren Missouri Response to October 7, 2011
10 C.F.R. § 2.206 Petition Filed by Lawrence S. Criscione**

Dear Mr. Thadani:

Union Electric Company d/b/a Ameren Missouri (“Ameren”) submits to the Nuclear Regulatory Commission (“NRC”) Petition Review Board (“PRB”) this supplemental written response to the petition filed by Mr. Lawrence S. Criscione on October 7, 2011 (“Petition”) concerning a reactor shutdown procedure in use at the Callaway Plant Unit 1 (“Callaway”).

I. Introduction

By letter dated January 18, 2012, Ameren responded in writing to Mr. Criscione’s Petition. A copy of the January 18, 2012 letter is attached hereto. As discussed in the January 18, 2012 letter, many issues raised in the Petition are not appropriate for resolution under Section 2.206, and thus should not be considered for further action under Section 2.206. With respect to those issues that arguably fall within the purview of Section 2.206, Ameren responded that the NRC should not accept the Petition for any further action because, contrary to the Petition’s unfounded allegations, the reactor shutdown procedure challenged in the Petition fully complies with Callaway’s licensing basis requirements as documented in Callaway’s Technical Specification Bases and the NRC’s Safety Evaluation of a license amendment issued in 1998 (License Amendment No. 126).

Ameren hereby supplements the January 18, 2012 response with the following additional information explaining why the NRC should not accept the Petition for any further action.

II. The NRC Should Reject the Petition Because its Allegations Are Without Merit

A. Summary of January 18, 2012 Response

Ameren previously explained in its January 18, 2012 written response that the crux of Mr. Criscione's Petition is the allegation that Callaway reactor shutdown procedure OTG-ZZ-00005, Addendum 1 is not compliant with Callaway's Technical Specifications. See, e.g., Petition, Enclosure at 10. To the contrary, Ameren previously explained that the allegation is false because reactor shutdown procedure OTG-ZZ-00005, Addendum 1 fully complies with Callaway's licensing basis requirements with respect to the bypass of the P-4/564°F feedwater isolation signal ("FWIS") electrical signal. More specifically, Ameren explained that the procedure complies with Callaway's current licensing basis with respect to the Technical Specifications and their Bases. Further, Ameren explained that when Callaway's operating license was amended in 1998 (License Amendment No. 126), the NRC issued revised language for the Technical Specification Bases to document the NRC's approval of the P-4/564°F FWIS bypass under certain circumstances. In addition, the NRC's Safety Evaluation that supported the NRC's approval of the license amendment explicitly found that Callaway's request to bypass the P-4/564°F FWIS signal was acceptable under these circumstances. Thus, the Petition has no merit.

Ameren also explained that Mr. Criscione's concern was one of documentation – i.e., the Petition, in essence, only questions the manner in which the allowance to bypass P-4/564°F FWIS in certain circumstances should be captured in Callaway's licensing documents – and not with any safety concern. While Mr. Criscione apparently believes that compliance with a plant's Technical Specification Bases is not the same as compliance with the plant's Technical Specifications (PRB Transcript at 28-29¹), Ameren demonstrated that his documentation concern is meritless. Ameren complies with licensing basis requirements documented in the Technical Specification Bases just as it would comply with licensing basis requirements documented in its Technical Specifications. Moreover, Mr. Criscione clearly stated that he endorsed the safety merit in taking the bypass action under appropriate circumstances. PRB Transcript at 60 ("I was wanting to bypass that signal when the reactor was still critical. I wanted to do it at 10 percent power in Mode 1. And I felt comfortable doing that. I felt that it was a safe thing to do"); see also Petition, Enclosure 1 at 2.

Ameren also noted in its response that, were this issue faced for the first time today, Ameren would recommend that any discussion of the FWIS generated by the coincidence of P-4/564°F be eliminated from the Technical Specifications and Bases altogether because it satisfies none of

¹ Official Transcript of Proceedings, 10 CFR 2.206 Petition Review Board, Re: Lawrence S. Criscione (Jan. 9, 2012) ("PRB Transcript").

the criteria in 10 C.F.R. § 50.36(c)(2)(ii).² In other words, the P-4/564°F FWIS bypass need not be addressed in the Callaway Technical Specifications or their Bases at all because the actuation signal being bypassed (FWIS on the coincidence of a reactor trip and low Reactor Coolant System average temperature) is not credited in any accident analysis and has no risk significance.

B. Supplemental Information

Ameren hereby supplements its January 18, 2012 written response with the following information, which provides further explanation as to why the P-4/564°F FWIS bypass need not be addressed in the Callaway Technical Specifications or their Bases.

The Callaway Improved Technical Specifications (“ITS”) do not require “reverse cascading.” In the case of reverse cascading, the blocking or other inoperability of an end device would also require that devices earlier in the signal chain be also declared inoperable. In the case of the P-4/564°F FWIS bypass, the inoperability of the main feedwater isolation valves, which are covered by Technical Specification 3.7.3, does not require a reverse cascade such that the P-4 permissive, which is covered in Technical Specification 3.3.2, would likewise be declared inoperable. The operability of the P-4 permissive is predicated on the operability of the reactor trip breaker switches that provide the necessary inputs to the Solid State Protection System. If feedwater isolation with reactor coolant system temperature less than or equal to 564°F (the downstream application of the P-4 outputs) were in fact a function credited in the accident analyses, then Function 5 (Turbine Trip and Feedwater Isolation) of ITS Table 3.3.2-1 would list this as a required feedwater isolation sub-function. This is not the case. Thus, this fact is additional evidence supporting Ameren's position that the allowance to bypass the P-4/564°F FWIS need not be addressed in the Callaway Technical Specifications. In fact, there is no

² 10 C.F.R. § 50.36(c)(2)(ii) provides:

A technical specification limiting condition for operation of a nuclear reactor must be established for each item meeting one or more of the following criteria:

(A) *Criterion 1.* Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

(B) *Criterion 2.* A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

(C) *Criterion 3.* A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

(D) *Criterion 4.* A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

None of these criteria applies to the FWIS, which is generated upon the coincidence of a reactor trip (generating the P-4 permissive) and low RCS temperature.

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regulatory requirement in 10 CFR 50.36 that this actuation signal, or the allowance for its bypass, be discussed in the Callaway Technical Specification Bases.³

III. Conclusion

For the reasons explained in Ameren's January 18, 2012 response and this supplemental response, the NRC should not accept the Petition for any further action under Section 2.206. The Petition's allegation that Callaway has not complied with its licensing basis requirements simply is not true. Moreover, the P-4/564°F FWIS bypass need not be addressed in the Callaway Technical Specifications or their Bases because it is not credited in any accident analysis and has no risk significance.

Sincerely,



Daryl M. Shapiro
Timothy J. V. Walsh
Counsel for Ameren

cc (w/attachment):

Sher Bahadur, NRC Petitioner Review Board Chairman
Merrilee Banic, NRC Petition Review Board
Robert Elliott, NRC Technical Specification Branch Chief
William Ruland, NRC Division of Safety Systems Director

³ Ameren understands that Seabrook Station had such a sub-function in their Engineered Safety Features Actuation System Technical Specifications prior to their Amendment 45 (dated November 29, 1995 – TAC M93713), at which time it was relocated out of their Technical Specifications for the same reasons described above – that the sub-function was not credited in any accident analysis and had no risk significance.