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December 20, 1999

SERIAL: BSEP 99-0194

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING GENERIC
LETTER 96-05, "PERIODIC VERIFICATION OF DESIGN-BASIS CAPABILITY OF
SAFETY-RELATED POWER-OPERATED VALVES"

Gentlemen:

On September 18, 1996, the NRC issued Generic Letter 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Power-Operated Valves." On October 30, 1997, the NRC issued "Safety Evaluation on Joint Owners' Group Program on Periodic Verification of Motor-Operated Valves Described in Topical Report NEDC-32719, (Revision 2)," which states that the NRC considers the Joint Owners' Group (JOG) Program on Motor-Operated Valve (MOV) Periodic Verification to be an acceptable industry-wide response to Generic Letter (GL) 96-05, within the conditions and limitations described in the safety evaluation. The JOG Program focuses on the potential age-related increase in the thrust and torque required to operate valves under their design-basis conditions. In the safety evaluation dated October 30, 1997, on the JOG Program, the NRC specified that licensees are responsible for addressing the thrust and torque delivered by the MOV motor actuator and its potential degradation.

In a letter dated March 17, 1997 (Serial: BSEP 97-0072), Carolina Power & Light (CP&L) Company committed, as a participant in the JOG test program, to implement an MOV periodic verification program for the Brunswick Steam Electric Plant (BSEP), Units 1 and 2 that is in accordance with the actions delineated in Generic Letter 96-05. Subsequently, in a letter dated October 27, 1998 (Serial: BSEP 98-0161), CP&L indicated it would implement the program elements described in Topical Report NEDC-32719, Revision 2, at the BSEP, with the exception that CP&L plans to deviate from the JOG Program regarding the interim static test frequency criteria described in Section 4 of the topical report.

Through recent discussions with the NRC Project Manager, CP&L has been requested to describe the BSEP plan for ensuring adequate ac and dc-powered MOV motor actuator output capability, including consideration of recent guidance in Limitorque Technical Update 98-01 and

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its Supplement 1. The purpose of this letter is to describe the BSEP plan for ensuring adequate ac and dc-powered MOV motor actuator output capability.

To address the potential degradation of thrust and torque delivered by MOV motor actuators, the BSEP MOV Program requires the following: (1) the performance of periodic static diagnostic testing of MOVs, to confirm MOV capability and proper switch settings and to detect potential degradation in actuator output; (2) the performance of preventive maintenance activities such as stem lubrication, periodic actuator gear case grease inspection, and actuator refurbishment, as required, to provide assurance of proper actuator performance; and (3) the application of allowances to account for actuator degradation mechanisms such as stem lubrication degradation and spring pack relaxation. The BSEP MOV Program monitors stem friction coefficient under static and dynamic conditions and rate-of-loading for valve closing strokes under static and dynamic conditions and makes necessary program adjustments to ensure MOVs remain capable of performing their design-basis functions.

CP&L has evaluated the impact of Limitorque Technical Update 98-01 and its Supplement 1, on the capability of ac-powered MOVs within the scope of the BSEP MOV Program. Based on this evaluation, no operability issues were identified. Also, CP&L has developed a methodology and evaluated the capability of BSEP dc-powered MOVs at degraded voltage and design-basis differential pressure conditions. No operability issues were identified with regard to dc-powered MOVs. Any emergent industry issues concerning dc-powered MOVs will continue to be reviewed by CP&L. CP&L is currently participating in an industry effort, through the Boiling Water Reactor Owners' Group Valve Technical Resolution Group, to develop a contemporary methodology for evaluating dc-powered MOV capability.

Please refer any questions regarding this submittal to Mr. Warren J. Dorman, Supervisor - Licensing, at (910) 457-2068.

Sincerely,



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Manager - Regulatory Affairs
Brunswick Steam Electric Plant

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