



John S. Keenan
Vice President
Brunswick Nuclear Plant

FEB 25 2002

SERIAL: BSEP 02-0042
TSC-2001-09

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

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
REQUEST FOR LICENSE AMENDMENTS - EXTENDED POWER UPRATE
(NRC TAC NOS. MB2700 AND MB2701)

Ladies and Gentlemen:

On August 9, 2001 (Serial: BSEP 01-0086), Carolina Power & Light (CP&L) Company requested a revision to the Operating Licenses (OLs) and the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Units 1 and 2. The proposed license amendments increase the maximum power level authorized by Section 2.C.(1) of OLs DPR-71 and DPR-62 from 2558 megawatts thermal (MWt) to 2923 MWt. Subsequently, on February 7, 2002, the NRC provided an electronic version of a Request for Additional Information (RAI) concerning the impact of extended power uprate on main steam isolation valve closure times. The response to this RAI is enclosed.

Please refer any questions regarding this submittal to Mr. Leonard R. Beller, Manager - Regulatory Affairs, at (910) 457-2073.

Sincerely,

John S. Keenan

MAT/mat

P.O. Box 10429
Southport, NC 28461

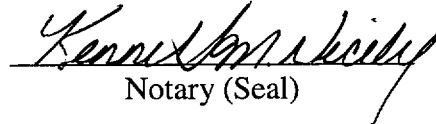
T > 910.457.2496
F > 910.457.2803

A001

Enclosure:

Response to Request for Additional Information (RAI) 17

C. J. Gannon, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, and agents of Carolina Power & Light Company.


Notary (Seal)

My commission expires: *MAY 18, 2003*

cc: U. S. Nuclear Regulatory Commission, Region II
ATTN: Mr. Luis A. Reyes, Regional Administrator
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-8931

U. S. Nuclear Regulatory Commission
ATTN: Mr. Theodore A. Easlick, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission (**Electronic Copy Only**)
ATTN: Mr. Allen G. Hansen (Mail Stop OWFN 8G9)
11555 Rockville Pike
Rockville, MD 20852-2738

U. S. Nuclear Regulatory Commission
ATTN: Mr. Mohammed Shuaibi (Mail Stop OWFN 8H4A)
11555 Rockville Pike
Rockville, MD 20852-2738

Ms. Jo A. Sanford
Chair - North Carolina Utilities Commission
P.O. Box 29510
Raleigh, NC 27626-0510

Mr. Mel Fry
Director - Division of Radiation Protection
North Carolina Department of Environment and Natural Resources
3825 Barrett Drive
Raleigh, NC 27609-7221

ENCLOSURE

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Background

On August 9, 2001 (Serial: BSEP 01-0086), Carolina Power & Light (CP&L) Company requested a revision to the Operating Licenses (OLs) and the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Units 1 and 2. The proposed license amendments increase the maximum power level authorized by Section 2.C.(1) of OLs DPR-71 and DPR-62 from 2558 megawatts thermal (MWt) to 2923 MWt. Subsequently, on February 7, 2002, the NRC provided an electronic version of a Request for Additional Information (RAI) concerning the impact of extended power uprate (EPU) on main steam isolation valve (MSIV) closure times. The response to this RAI follows.

NRC Question 17-1

Regarding Response to RAI 12, BSEP 01-0165, December 20, 2001.

...Page 5 of 8, first full paragraph...the licensee discusses the controls for speed of the MSIV. The licensee should provide information to justify its statement related to its ability to control the speed of the valves to provide a closure time no less than 3 seconds. This information should account for the effect of the increased flow rate at EPU that will assist the valve in closing.

Response to Question 17-1

The BSEP MSIVs are Rockwell, Y-pattern globe valves, which are assisted in the closing direction by flow (i.e. flow over the seat). The increase in main steam flow under EPU conditions may result in a slight increase in the valve closure force. However, the actuators for the MSIVs are specifically designed to account for variations in the closure force. For the valves to open or close, hydraulic fluid has to be displaced from one end of the actuator cylinder to the other and does so through two pressure compensated variable flow control valves, each with an integral check valve feature. These are set up so that each check valve permits flow only in the direction opposite to the other. The rate of flow is controlled independently in each direction and is adjustable. This allows the MSIVs to operate at different speeds in both the opening and closing directions. The pressure compensating design ensures that the valve stem moves only at

the preset speed regardless of the differential pressure across the valve. The MSIV closure speeds are confirmed to be between 3 and 5 seconds under static conditions during each cold shutdown; not required if the time period since the previous full stroke exercise is less than 3 months. The valves have been specifically designed to ensure reliable closure at these preset speeds, regardless of the flowrates across the valves. To account for minor variations in stroke times, the procedure for the performance of MSIV stroke time testing (i.e., OPT-25.1, Nuclear Steam Supply System Main Steam and Feedwater Isolation Valve Operability Test) includes the following guidance:

MSIV closure times should be close to 4 seconds. When it is apparent that a MSIV's stroke time has drifted toward the high or low end of the acceptable band, then the closure times should be adjusted.

This procedural guidance ensures that margin to the 3 second minimum stroke time is maintained.