



John S. Keenan
Vice President
Brunswick Nuclear Plant

FEB 01 2002

SERIAL: BSEP 02-0034
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 December 10, 2001, the NRC provided an electronic version of a Request for Additional Information (RAI) requesting information associated with the Civil & Engineering Mechanics Section's review of the extended power uprate amendment request. CP&L responded to this RAI on January 24, 2002 (Serial: BSEP 01-0164), with the exception of NRC Question 11-4. The response to NRC Question 11-4 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

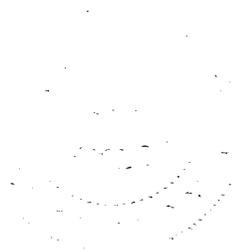
Enclosure:

Response to Request for Additional Information (RAI) 11-4

John S. Keenan, 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.

Dean S. Mason
Notary (Seal)

My commission expires: 8-29-04



cc:

U. S. Nuclear Regulatory Commission, Region II
ATTN: Dr. Bruce S. Mallett, 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

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)

Response to Request for Additional Information (RAI) 11-4

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 December 10, 2001, the NRC provided an electronic version of a RAI requesting information associated with the Civil & Engineering Mechanics Section's review of the extended power uprate (EPU) amendment request. CP&L responded to this RAI on January 24, 2002 (Serial: BSEP 01-0164), with the exception of NRC Question 11-4. The response to NRC Question 11-4 follows.

NRC Question 11-4

In reference to Section 3.3.2, you indicate that if there is an increase in annulus pressurization (AP), jet reaction, pipe restraint or fuel lift loads, the changes are considered in the analysis of the components affected due to upset, emergency and faulted conditions. Provide a summary discussion of how these loads are affected by the proposed power uprate. Confirm whether and how these loads are incorporated in the EPU evaluation of the reactor vessel and internal components.

Response to Question 11-4

The applicable loads on the reactor vessel and internals were considered for the EPU evaluation, as discussed in Section 3.3 of the PUSAR (i.e., Enclosure 3 of CP&L's EPU amendment request (Serial: BSEP 01-0086, dated August 9, 2001)). The EPU evaluation considered AP, jet reaction, pipe restraint or fuel lift loads.

The jet reaction load is a function of the vessel pressure, which remains unaffected by the EPU. Pipe restraint loads are imposed on the shield wall and do not affect the vessel or internals. Section 4.1.2.3 of the PUSAR addresses the availability of adequate margin in the shield wall. The reactor internals pressure difference evaluation documents that a net, positive fuel lift

margin exists for the fuel bundle due to the combined effect of reactor internal pressure difference and weight.

As discussed in Section 4.1.2.3, the AP load showed a minimal increase due to EPU. A reconciliation of the existing AP load evaluation basis of the vessel and internal components was performed for the change in the AP loads due to EPU. The resulting loads (i.e., the combination of seismic and AP loads) for those vessel and internal components, consistent with the existing design basis analysis, were determined to be within their corresponding allowable loads.