



John S. Keenan
Vice President
Brunswick Nuclear Plant

FEB 21 2002

SERIAL: BSEP 02-0046
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 13, 2002 (Serial: BSEP 02-0037), CP&L provided a response to a Request for Additional Information (RAI) concerning the containment pressure and temperature analyses performed in support of the BSEP extended power uprate. On February 13, 2002, during a telephone conversation regarding BSEP 02-0037, the NRC requested additional curves associated with the containment pressure and temperature analyses. 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

P.O. Box 10429
Southport, NC 28461

T > 910.457.2496
F > 910.457.2803

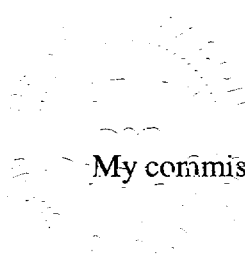
A001

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Enclosure:

Response to Request for Additional Information (RAI) 20

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.


Deane S. Mason
Notary (Seal)

My commission expires: 8-29-04

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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Response to Request for Additional Information (RAI) 20

Background

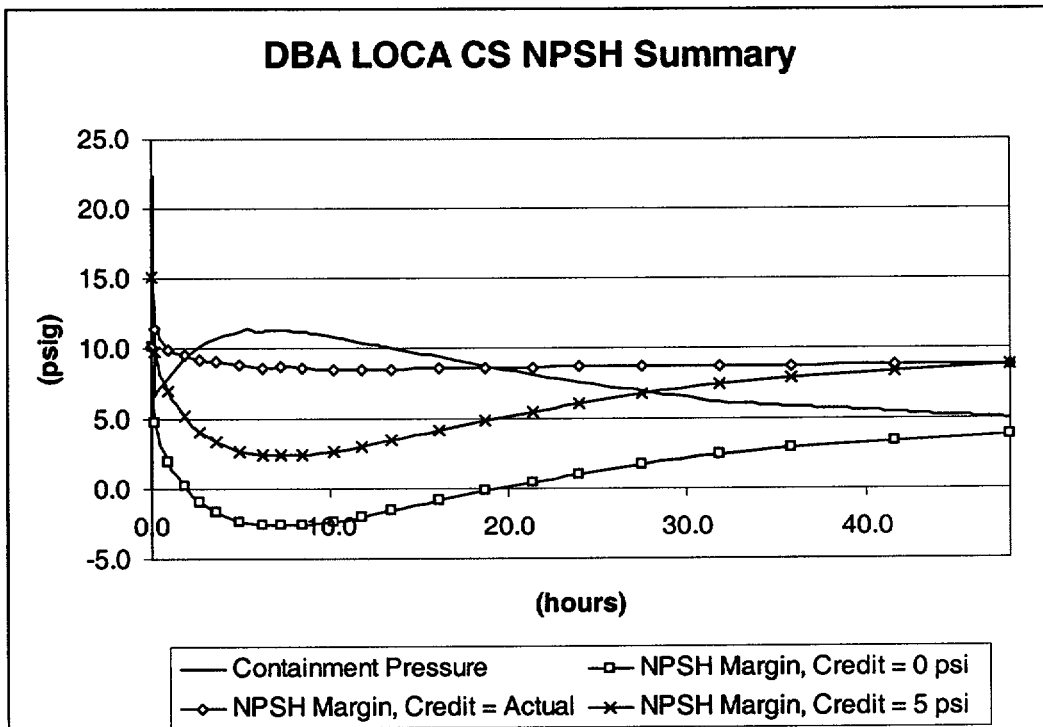
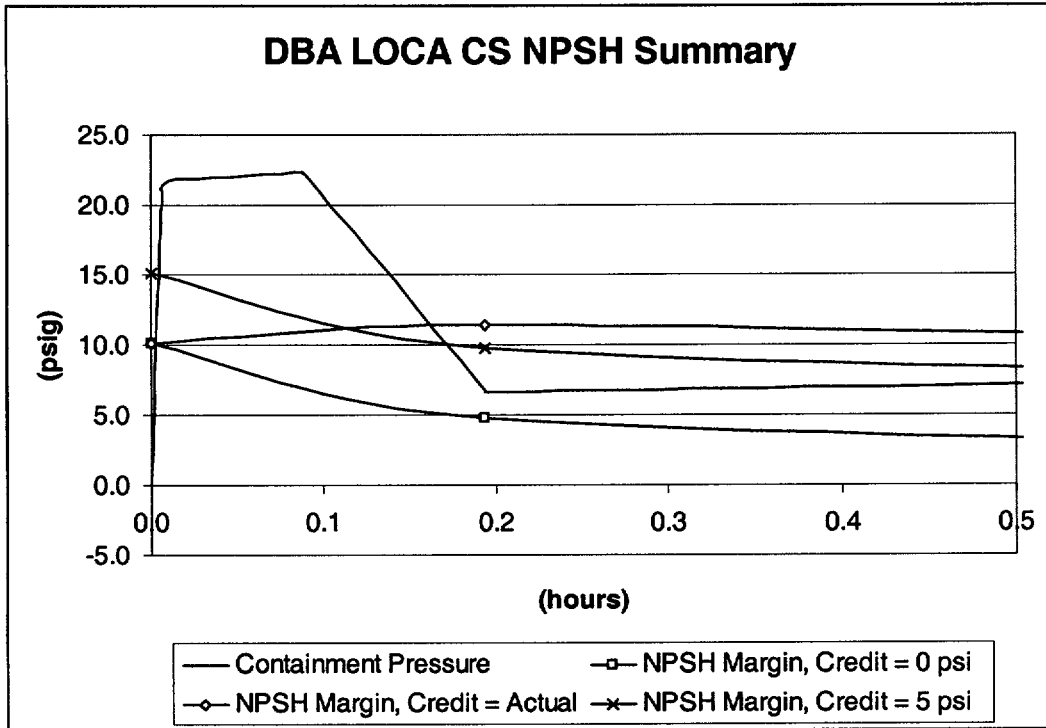
On August 9, 2001 (Serial: BSEP 01-0086), Carolina Power & Light (CP&L) Company requested a revision to the Operating Licenses (OLs) and the Technical Specifications for the Brunswick Steam Electric Plant (BSEP), Units 1 and 2. The proposed license amendments increase the maximum power level authorized by Section 2.C.(1) of OLs DPR-71 and DPR-62 from 2558 megawatts thermal (MWt) to 2923 MWt. Subsequently, on February 13, 2002, CP&L provided a response to a Request for Additional Information (RAI) concerning the containment pressure and temperature analyses performed in support of the BSEP extended power uprate (EPU) (Serial: BSEP 02-0037). On February 13, 2002, during a telephone conversation regarding BSEP 02-0037, the NRC requested additional curves associated with the containment pressure and temperature analyses. The response to this RAI follows.

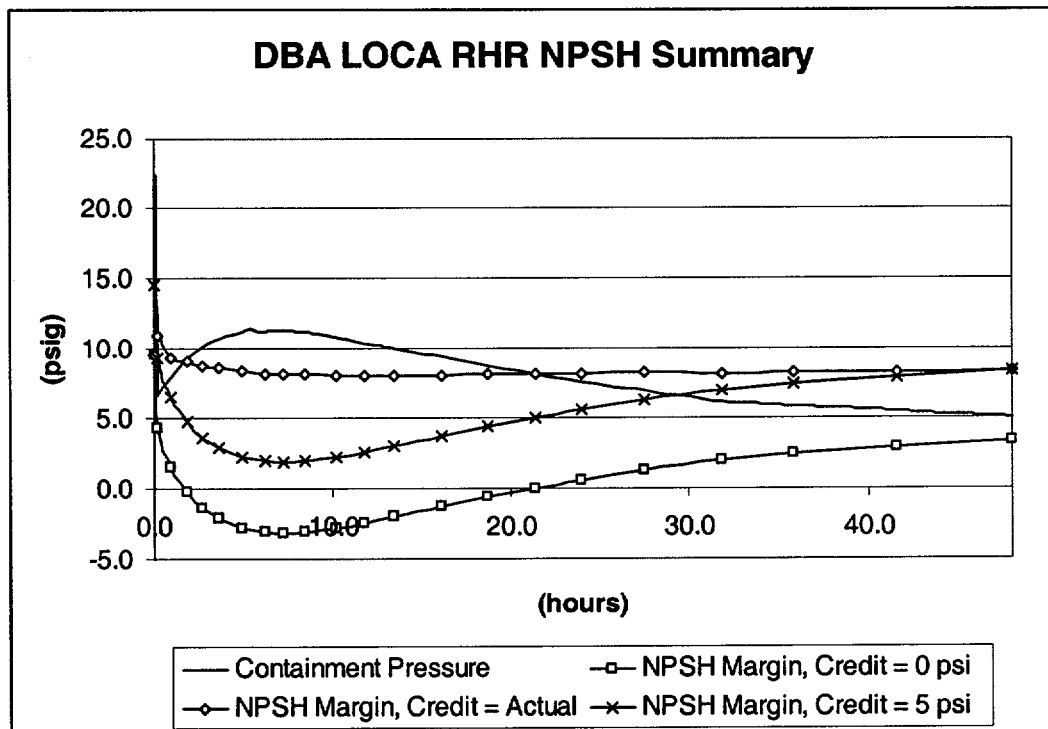
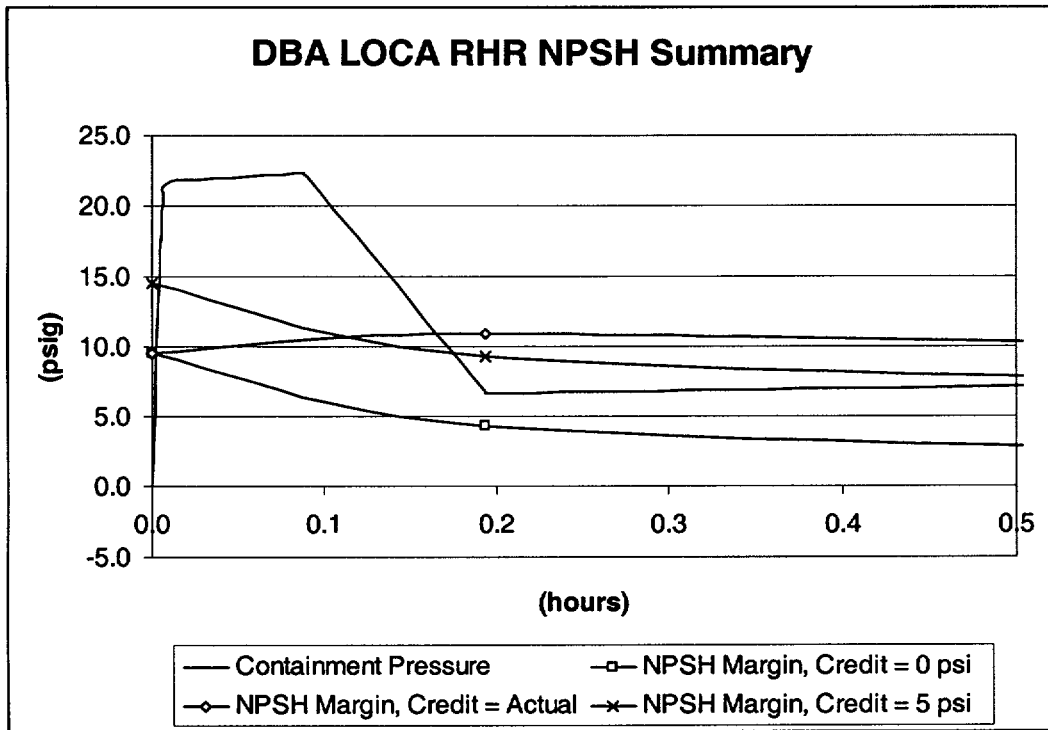
NRC Question 20-1

Please provide (1) a plot of long term RHR NPSH requirements based on Table 7-1 of CP&L's EPU amendment request dated August 9, 2001, and (2) a plot of long term CS NPSH requirements based on Table 7-2 of CP&L's EPU amendment request dated August 9, 2001.

Response to Question 20-1

The following graphs provide the requested information.





NRC Question 20-2

Please provide (1) a plot similar to "Figure 7 - Uncontrolled Drywell Hydrogen and Oxygen Concentrations for EPU," of the RAI 14 response, showing Controlled Drywell Hydrogen and Oxygen Concentrations for EPU and (2) a plot similar to "Figure 8 - Uncontrolled Wetwell Hydrogen and Oxygen Concentrations for EPU," of the RAI 14 response, showing Controlled Wetwell Hydrogen and Oxygen Concentrations for EPU.

Response to Question 20-2

The following figure provides the controlled and uncontrolled concentrations of hydrogen and oxygen for the containment drywell and wetwell mixed volume.

