



John S. Keenan
Vice President
Brunswick Nuclear Plant

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U. S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

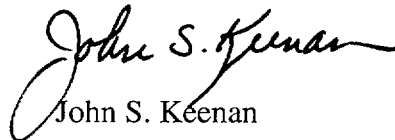
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING
REQUEST FOR LICENSE AMENDMENTS - EXTENDED POWER UPRATE
(NRC TAC NOS. MB2700 AND MB2701)

Ladies and Gentlemen:

On August 9, 2001 (i.e., 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. On February 25 and February 27, 2002, the NRC provided an electronic version of a request for additional information (RAI) concerning the percentage of the fuel assemblies to be replaced in each refueling outage to support the extended power uprate. The response to this RAI is enclosed.

Please refer any questions regarding this submittal to Mr. David C. DiCello,
Manager - Regulatory Affairs, at (910) 457-2235.

Sincerely,


John S. Keenan

MAT/mat

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Enclosure:

Response to Request for Additional Information (RAI) 23

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. Marsh
Notary (Seal)

My commission expires: 8.29.04

cc:

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ENCLOSURE

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Response to Request for Additional Information (RAI) 23

Background

On August 9, 2001 (i.e., 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. On February 25 and February 27, 2002, the NRC provided an electronic version of a request for additional information (RAI) concerning the percentage of the fuel assemblies to be replaced in each refueling outage to support the extended power uprate (EPU). The response to this RAI follows.

NRC Question 23-1

The licensee will be replacing a greater percentage of the fuel assemblies at Brunswick in each refueling outage to support the higher power level. Provide an estimate of the expected reload batch size post-power uprate. Address the environmental impact of the increased batch size.

Response to NRC Question 23-1

As a result of EPU, the number of fuel assemblies replaced during any given reload is expected to increase from approximately 39% of the core (i.e., 212 bundles) to approximately 47% (i.e., 256 bundles). CP&L ships spent fuel from the BSEP site to the Shearon Harris Nuclear Plant, which is licensed to store BSEP spent fuel and was built with four large spent fuel pools. Both the current off-load rate and the expected EPU off-load rate, can be accommodated by the capacity of CP&L's spent fuel pools. The overall affect of the EPU would be to increase the number of spent fuel bundles stored in spent fuel pools at the Harris site.

The increased reload batch sizes do not impact BSEP compliance with Table S-3 of 10 CFR 51, with respect to shipments to Harris. Table S-3 is not applicable to shipment of the fuel to Harris. One of the footnotes to Table S-3 states:

The contribution from transportation excludes transportation of cold fuel to a reactor and of irradiated fuel and radioactive wastes from a reactor which are considered in Table S-4.

The increased reload batch size is bounded by 10 CFR 51 Table S-4. CP&L owns spent fuel shipping casks and has periodically shipped BSEP spent fuel to Harris since 1989. The environmental consequences of such shipments are covered by Table S-4 of 10 CFR 51, the Environmental Assessment and Finding of No Significant Impact (53FR8040, February 29, 1988) and the NRC Assessment of the Environmental Effects of Transportation Resulting from Extended Fuel Enrichment and Irradiation (53FR30355, August 11, 1988). The impacts of transportation of fuel irradiated to 62,000 megawatt-days per metric ton have also been considered and found to be bounded by those summarized in Table S-4 (64FR48496, September 3, 1999).