

CP&L

Carolina Power & Light Company

P.O. Box 1551 • Raleigh, N.C. 27602

07 30 90

A. B CUTTER
Vice President
Nuclear Services Department

SERIAL: NLS-90-149
TSC 87TSB17

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

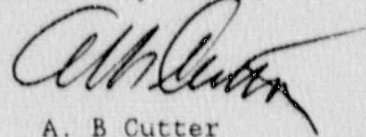
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62
RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
EXTENSION OF OPERATING LICENSE
(NRC TAC NOS. 66082 AND 66083)

Gentlemen:

By letter dated February 6, 1990, the Nuclear Regulatory Commission transmitted a request for additional information concerning Carolina Power & Light Company's (CP&L) license amendment request dated August 17, 1987 to extend the expiration dates of the Brunswick Steam Electric Plant, Units 1 and 2 operating licenses. On May 29, 1990, CP&L submitted responses to twelve of the Staff's thirteen questions. Enclosed is the response to remaining NRC Staff question.

Please refer any questions regarding this submittal to Mr. W. R. Murray at (919) 546-4661.

Yours very truly,



A. B. Cutter

A. B. Cutter, 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, contractors, and agents of Carolina Power & Light Company.

Thomasine C. Valentine
Notary (Seal)

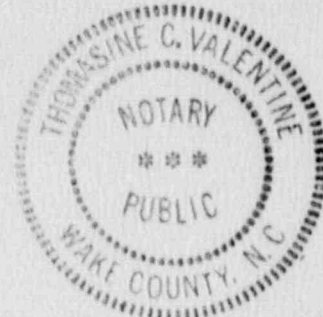
My commission expires: 1-31-95

WRM/wrm (\cor\ol-part2)

Enclosure

cc: Mr. S. D. Ebnetter
Mr. N. B. Le
Mr. R. L. Prevatte

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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2
NRC DOCKETS 50-325 & 50-324
OPERATING LICENSES DPR-71 & DPR-62
RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION
OPERATING LICENSE EXTENSION
(NRC TAC NOS. 66082 AND 66083)

NRC REQUEST NO. 13:

Provide a listing of all FES or FSAR sections in which less than 40 years of operation was assumed; provide an assessment of the impact of the extensions on conclusions found in the sections identified.

CP&L RESPONSE:

Listed below are the Updated FSAR sections which reference time of operation of less than 40 years:

- (a) Updated FSAR Section 2.1.3

This section addresses population projections through the year 2010. Updated population projections based on 40 years of plant operation are provided as responses to NRC Requests Nos. 1 and 2.

- (b) Updated FSAR Section 3.5.1, pages 3.5.1-13 and 3.5.1-15

This section discusses turbine failure probabilities provided by General Electric (GE). General Electric was contacted and provided assistance in assessing the proposed extension to the operating license expiration date. General Electric advises that the turbine failure probabilities cited in the Updated FSAR are for a hypothetical turbine rotor which has shrunk on wheels (discs) having certain assumed undetected defects and material properties based on statistically estimated distributions. The probability values provided in Updated FSAR Table 3.5.1-3 are linear with time; therefore, the probabilities shown in Updated FSAR Tables 3.5.1-3 and 3.5.1-5 should be multiplied by 1.33 to reflect the change from a thirty year to a forty year time period. Although the turbine failure probabilities are slightly increased, the conclusion of the Updated FSAR remains unchanged that the probabilities are sufficiently small to be considered as an acceptable risk. The consequences of such an event would remain unchanged regardless of whether a thirty year or forty year time period was assumed.

Listed below are the Final Environmental Statement (FES) sections which reference time of operation of less than 40 years:

(a) FES Section IX, page IX-1

This section of the FES addresses irreversible and irretrievable commitment of resources due to the operation of the Brunswick Plant. The FES identified two major resources that would be irreversibly and irretrievably committed due to operation of the Brunswick Plant: the land (during the life of the plant) and the uranium consumed by the reactor. The FES conclusions concerning the irreversible and irretrievable commitment of resources remain unchanged as a result of the proposed operating license extension.

(b) FES Section XI.B, page XI-16

This section of the FES discusses the cost-benefit analyses for the plant with respect to alternatives. The analysis assumes a 30 year effective plant life relative to monetized costs and/or benefits. The extension of the operating licenses produces significant additional benefit for the customers of Carolina Power & Light Company and the Eastern Municipal Power Agency, while deferring the cost of replacement power. Therefore, the FES conclusion that the environmental impact of plant operation will be greatly outweighed by the availability of electrical power produced by the plant remains valid for the period of the requested operating license extensions.