

UNITED STATES NUCLEAR REGULATORY COMMISSION REGION II 101 MARIETTA STREET, N.W., SUITE 2900 ATLANTA, GEORGIA 30323-0199

December 13, 1996

EA 96-442

Carolina Power & Light Company ATTN: Mr. W. R. Campbell Vice President Brunswick Steam Electric Plant Post Office Box 10429 Southport, North Carolina 28461

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NOS, 50-325/96-16 AND 50-324/96-16)

Dear Mr. Campbell:

This refers to the integrated inspection completed on October 26, 1996 at your Brunswick facility. The inspection included a review of your failure to provide temperature compensation for the Plant Process Computer (PPC) feedwater flow algorithm which resulted in operation of Brunswick Unit 2 in excess of (1) the maximum thermal power authorized by the license and (2) thermal limits required by Technical Specification (TS) 3.2.1. The inspection report was sent to you by letter dated November 22, 1996. A closed, predecisional enforcement conference was conducted in the Region II office on December 9, 1996, with you and members of your staff to discuss the apparent violations, the poot causes, and your corrective actions to preclude recurrence. A Vist of conference attendees, NRC slides, and a copy of your presentation materials are enclosed.

Based on the information developed during the inspection and the information you provided during the conference, the NRC has determined that violations of NRC requirements occupred. The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. Violation A involves the failure to maintain the Unit/2 thermal power within the operating license limits. On August 28, 1996, a reactor engineer reviewing core thermal power calculations associated with the Power Uprate Project determined that the Unit 2 PPC point value for feedwater flow was not properly compensated for feedwater temperature deviations from the normal operating temperature. The condition had existed on Unit 2 since the unit restarted after a refueling outage ending in July 1994 when Unit 2 was modified to add a new PPC and associated software. Due to the failure to temperature compensate the feedwater flow process point value, the core thermal power calculated and indicated by the PPC was less than the actual core thermal power. During periods when feedwater temperature was lower than the normal operating value. Unit 2 was operated at indicated power levels of up to 100 percent power or 2436 megawatts (MW) thermal which was equivalent to actual power levels of up to 102.4 percent power or 2494 MW thermal. This is a violation of License Condition 2.C.1 of Facility Operating License Number DPR-62 which requires that Unit 2 be operated at or less than 2436 MW thermal.

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Carolina Power & Light Company ATTN: Mr. W. R. Campbell Vice President Brunswick Steam Electric Plant Post Office Box 10429 Southport, North Carolina 28461

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NOS. 50-325/96-15 AND 50-324/96-15)

Dear Mr. Campbell:

This refers to the integrated inspection completed on October 26, 1996 at your Brunswick facility. The inspection included a review of your failure to provide temperature compensation for the Plant Process Computer (PPC) feedwater flow algorithm which resulted in operation of Brunswick Unit 2 in excess of (1) the maximum thermal power authorized by the license and (2) thermal limits required by Technical Specification (TS) 3.2.1. The inspection report was sent to you by letter dated November 22, 1996. A closed, predecisional enforcement conference was conducted in the Region II office on December 9, 1996, with you and members of your staff to discuss the apparent violations, the root causes, and your corrective actions to preclude recurrence. A list of conference attendees, NRC slides, and a copy of your presentation materials are enclosed.

Based on the information developed during the inspection and the information you provided during the conference, the NRC has determined that violations of NRC requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. Violation A involves the failure to maintain the Unit 2 thermal power within the operating license limits. On August 28, 1996, a reactor engineer reviewing core thermal power calculations associated with the Power Uprate Project determined that the Unit 2 PPC point value for feedwater flow was not properly compensated for feedwater temperature deviations from the normal operating temperature. The condition had existed on Unit 2 since the unit restarted after a refueling outage ending in July 1994 when Unit 2 was modified to add a new PPC and associated software. Due to the failure to temperature compensate the feedwater flow process point value, the core thermal power calculated and indicated by the PPC was less than the actual core thermal power. During periods when feedwater temperature was lower than the normal operating value, Unit 2 was operated at indicated power levels of up to 100 percent power or 2436 megawatts (MW) thermal which was equivalent to actual power levels of up to 102.4 percent power or 2494 MW thermal. This is a violation of License Condition 2.C.1 of Facility Operating License Number DPR-62 which requires that Unit 2 be operated at or less than 2436 MW thermal.

ENCLOSURE 2