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 ROBINSON, W.R.    Carolina Power & Light Co.  
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SUBJECT: Forwards supplemental TS re Cycle 6 fuel transition in support of application for amend to License NPF-63, per NRC request.

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Vice President  
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FEB 17 1994

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United States Nuclear Regulatory Commission  
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SHEARON HARRIS NUCLEAR POWER PLANT  
DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
CYCLE 6 FUEL TRANSITION - SUPPLEMENTAL INFORMATION

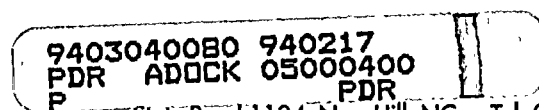
Gentlemen:

By letter dated July 16, 1993, Carolina Power & Light Company (CP&L) submitted a proposed revision to the Technical Specifications (TS) for the Shearon Harris Nuclear Power Plant (SHNPP). The proposed amendment incorporates references to Siemens Power Corporation (SPC) methodologies that will support Cycle 6 operation at SHNPP. Additionally, on August 27, 1993, CP&L submitted plant-specific safety limits and setpoints related to the transition to fuel supplied by SPC.

Based on recent discussions with the NRC Staff, CP&L hereby provides the following additional information relative to the July 16, 1993 and August 27, 1993 submittals:

1. Responses to NRC questions concerning TS Table 2.2-1 in CP&L's August 27, 1993 submittal and a question concerning the meaning of the phrase "plant response" contained in CP&L's July 16, 1993 submittal are provided in Attachment 1.
2. Revised marked-up TS pages 6-24 and 6-24a, as well as new retyped TS pages 6-24 and 6-24b are attached to reflect NRC comments on the use of NRC-approved versions of SPC methodologies (Attachment 2). Specifically, these pages have been revised to incorporate the phrase "latest Revision and Supplements" in lieu of specific revision numbers for certain methodology references and to add a statement that specific revision numbers will be contained in the Core Operating Limits Report (COLR). Revised Page Change Instructions are included in Attachment 3.

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ADD 1

The 10 CFR 50.92 evaluations submitted as part of CP&L's July 16, 1993 and August 27, 1993 submittals are unaffected by this additional information.

Questions regarding this matter may be referred to Mr. R. W. Prunty at (919) 362-2030.

Very truly yours,



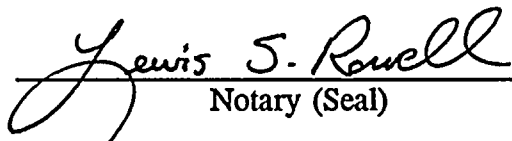
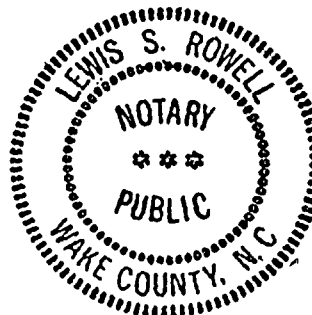
W. R. Robinson

LSR/lsr

c: Mr. S. D. Ebnetter  
Mr. N. B. Le  
Mr. J. E. Tedrow

W. R. Robinson, 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.

My commission expires: 7/12/94

  
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SHEARON HARRIS NUCLEAR POWER PLANT  
NRC DOCKET NO. 50-400/LICENSE NO. NPF-63  
REQUEST FOR LICENSE AMENDMENT  
CYCLE 6 FUEL TRANSITION - SUPPLEMENTAL INFORMATION

With respect to NRC questions on Technical Specification Table 2.2-1 in Carolina Power & Light Company's August 27, 1993 submittal and the phrase "plant response" in the July 16, 1993 submittal:

Question 1: What is the methodology for the choice of + 12% for the value of  $q_i - q_b$  as the point at which the  $f_1(\Delta I)$  function reduces the trip setpoint?

Response: The methodology for the setpoint calculations is the approved Siemens Power Corporation statistical setpoint methodology, EMF-92-081 (A), "Statistical Setpoint/Transient Methodology for Westinghouse Type Reactors." This is the reference "I" in the Core Operating Limits Report reference section (6.9.1.6) of the Technical Specifications.

The AFD control for Cycle 6 uses the approved PDC-3 methodology, ANF-88-054 (A), latest Revision, "PDC-3: Advanced Nuclear Fuels Corporation Power Distribution Control for Pressurized Water Reactors and Application of PDC-3 to H. B. Robinson Unit 2."

Question 2: Why was the + 12% chosen for the value of  $q_i - q_b$  as the point at which the  $f_1(\Delta I)$  reduces the trip setpoint instead of + 9% or + 10% or some other arbitrary value?

Response: The value of + 12% was chosen as the value that would be expected to bound the possible normal operation axial flux difference (AFD) for Cycle 6 and future cycles and could be supported by the statistical setpoint analysis.

PDC-3 AFD control does not use absolute AFD limits but rather the AFD limits are relative to the target AFD. Therefore, with AFD limits at - 10 and + 7 and an expected target at Beginning of Cycle 6 of + 2%, the predicted maximum allowed AFD is + 9%. However, future cycles may have a more positive target AFD than that of Cycle 6.

Question 3: What is the overall effect on operation caused by changing the value from + 6% to + 12%?

Response: The overall effect on operation is that the OTΔT trip setpoint is not reduced by the  $f_1(\Delta I)$  function by operation within limits established by the safety analysis. If the value had remained at the + 6%, the OTΔT trip would be reduced unnecessarily whenever the AFD exceeded + 6%.

Question 4: CP&L's July 16, 1993 submittal states that plant response will be supported by Siemens Power Corporation methodology. What is meant by "plant response"?

Response: Plant response refers to the Final Safety Analysis Report (FSAR) Chapter 15 plant transient calculations.

