



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

April 7, 1994

Docket No. 50-324

Mr. R. A. Anderson, Vice President  
Brunswick Steam Electric Plant  
Carolina Power & Light Company  
Post Office Box 10429  
Southport, North Carolina 28461

Dear Mr. Anderson:

SUBJECT: DEFERRAL OF LIQUID PENETRANT EXAMINATION AND FABRICATION OF SEAL WELDS ON CORE SPRAY SPARGER BRACKETS - BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2 (TAC NO. MR1694)

By a letter dated February 8, 1994, you submitted a revision to Carolina Power & Light Company's (CP&L's) schedule for completing the liquid penetrant (LP) examination of the core spray sparger bracket welds on Brunswick Steam Electric Plant (BSEP), Unit 2. Additionally, you stated that the seal welds on the core spray sparger brackets would be deferred to the 1995 refueling outage. The reason for this schedule change was based on the deferral of the feedwater sprager replacement until the Cycle 12 refueling outage. With this deferral of the feedwater sprager replacement, the LP examination and seal welding on the core spray sparger would become the only reason for performing a reactor vessel drain down.

On November 27, 1991, CP&L submitted a letter to document the completion of the core spray sparger repair and provide the safety evaluation. In this letter, CP&L also committed to perform an LP examination of the repair bracket assembly welds and the application of seal welds between the brackets and sparger arms during the next BSEP, Unit 2, reload outage (Cycle 11). After reviewing the information provided with the November 27, 1991, letter, on January 14, 1994, the NRC staff issued a letter to CP&L concurring with the evaluation of the acceptability of the core spray system at BSEP, Unit 2, for the next operating cycle. The staff found that the continued operation of the Unit 2 repaired core spray sparger beyond the next fuel cycle would depend on the satisfactory evaluation of the inspection results performed during the next refueling outage and the continued effectiveness of the reinforcing welded brackets. Therefore, the staff requested that CP&L provide the results of these inspections and their evaluations to the NRC should CP&L determine that a permanent rework of the sparger during the next outage was not needed.

The NRC staff has reviewed the basis for the deferral of the LP examination and the seal welding. The staff finds that the in-vessel visual examination of welds joining the core spray sparger tee-box brackets using a high-resolution camera is acceptable to verify the weld integrity for the next operating cycle. Thus, the NRC concurs with the deferral of the LP

9404180177 940407  
PDR ADOCK 05000324  
P PDR

100000

NRC FILE CENTER COPY

RF01  
1/0

Mr. R. A. Anderson

- 2 -

examination of these welds to the next refueling outage. The NRC staff also finds the deferral of the application of seal welds to the Cycle 12 refueling outage (B212R1) to be acceptable. This is based on the lower susceptibility of the bracket base and weld metal to intergranular stress corrosion cracking and the limited exposure duration to the reactor coolant operating environment of two operating cycles. Additionally the NRC staff agrees with the decision to discontinue visual inspection of the sparger arm to tee weld cracks after the Cycle 12 outage because the structural integrity is now assumed by the welded brackets.

If you have any questions, please contact me at 301-504-1457.

Sincerely,



Patrick D. Milano, Project Manager  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

cc:  
See next page

Mr. R. A. Anderson  
Carolina Power & Light Company

Brunswick Steam Electric Plant  
Units 1 and 2

cc:

Mr. Mark S. Calvert  
Associate General Counsel  
Carolina Power & Light Company  
Post Office Box 1551  
Raleigh, North Carolina 27602

Karen E. Long  
Assistant Attorney General  
State of North Carolina  
Post Office Box 629  
Raleigh, North Carolina 27602

Mr. Donald Warren, Chairman  
Brunswick County Board of Commissioners  
Post Office Box 249  
Bolivia, North Carolina 28422

Mr. Robert P. Gruber  
Executive Director  
Public Staff - NCUC  
Post Office Box 29520  
Raleigh, North Carolina 27626-0520

Resident Inspector  
U.S. Nuclear Regulatory Commission  
Star Route 1, Post Office Box 208  
Southport, North Carolina 28461

Mr. H. W. Habermeyer, Jr.  
Vice President  
Nuclear Services Department  
Carolina Power & Light Company  
Post Office Box 1551 - Mail OHS7  
Raleigh, North Carolina 27602

Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission  
101 Marietta St., N.W., Ste. 2900  
Atlanta, Georgia 30323

Mr. Norman R. Holden, Mayor  
City of Southport  
212 Frink Drive  
Southport, North Carolina 28461

Mr. Dayne H. Brown, Director  
Division of Radiation Protection  
N.C. Department of Environmental,  
Commerce and Natural Resources  
Post Office Box 27687  
Raleigh, North Carolina 27611-7687

Mr. Dan E. Summers  
Emergency Management Coordinator  
New Hanover County Department of  
Emergency Management  
Post Office Box 1525  
Wilmington, North Carolina 28402

Mr. William Levis  
Plant Manager - Unit 1  
Carolina Power & Light Company  
Brunswick Steam Electric Plant  
Post Office Box 10429  
Southport, North Carolina 28461

Public Service Commission  
State of South Carolina  
Post Office Drawer 11649  
Columbia, South Carolina 29211

Mr. Clay C. Warren  
Plant Manager - Unit 2  
Brunswick Steam Electric Plant  
Post Office Box 10429  
Southport, North Carolina 28461

April 7, 1994

Mr. R. A. Anderson

- 2 -

examination of these welds to the next refueling outage. The NRC staff also finds the deferral of the application of seal welds to the Cycle 12 refueling outage (B212R1) to be acceptable. This is based on the lower susceptibility of the bracket base and weld metal to intergranular stress corrosion cracking and the limited exposure duration to the reactor coolant operating environment of two operating cycles. Additionally, the NRC staff agrees with the decision to discontinue visual inspection of the sparger arm to tee weld cracks after the Cycle 12 outage because the structural integrity is now assumed by the welded brackets.

If you have any questions, please contact me at 301-504-1457.

Sincerely,

Original Signed by:  
Patrick D. Milano, Project Manager  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

cc:  
See next page

DISTRIBUTION:

|                    |               |                           |
|--------------------|---------------|---------------------------|
| Docket File        | S. Bajwa      | E. Merschoff, Region II   |
| NRC & Local PDRs   | J. Strosnider | H. Christensen, Region II |
| PD2-1 Reading File | R. Hermann    | OGC                       |
| S. Varga           | W. Koo        | ACRS (10)                 |
| G. Lainas          | P. Milano     |                           |
| W. Bateman         | P. Anderson   |                           |

|        |           |          |             |         |  |
|--------|-----------|----------|-------------|---------|--|
| OFFICE | LA:PD2-1  | PM:PD2-1 | C:EMCB      | D:PD2-1 |  |
| NAME   | PAnderson | PMilano  | JStrosnider | SBajwa  |  |
| DATE   | 04/31/94  | 04/1/94  | 04/1/94     | 04/6/94 |  |

File Name: G:\BRUNSWIC\B81694PT.LTR