UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report Nos. 50-325/79-27 and 50-324/79-26

Licensee: Carolina Power and Light Co.
411 Fayetteville Street
Raleigh, North Carolina 27602

Facility Name: Brunswick Steam Plant, Units 1 & 2

Docket Nos. 50-325 and 50-324

License Nos. DPR-71 and DPR-62

Inspected at Brunswick near Southport, North Carolina

Inspected by: L. Modenos — 8/16/79
L. Modenos — Date Signed

Approved by: A. Herdt — 8/16/79
A. Herdt, Section Chief, RC&ES Branch — Date Signed

SUMMARY

Inspected on July 26-27, 1979

Areas Inspected

This special, unannounced inspection involved 19 inspector-hours onsite in the areas of concrete expansion anchor installation.

Results

No items of noncomplinace or deviations were identified.

DETAILS

1. Persons Contacted

   Licensee Employees

   *A. C. Tollison, Plant Manager
   *B. Poulk, NRC Coordinator Plant

   Other Organizations

   *J. Ramsey, Engineer, United Engineering

   NRC Resident Inspector

   *J. E. Ouzts

   *Attended exit interview.

2. Exit Interview

   The inspection scope and findings were summarized on July 27, 1979 with those persons indicated in Paragraph 1 above.

3. Licensee Action on Previous Inspection Findings

   Not inspected.

4. Unresolved Items

   Unresolved items were not identified during this inspection.

5. Concrete Expansion Anchors

   In response to IE Bulletin No. 79-02, Carolina Power & Light Company (CP&L) submitted their response to the bulletin on July 12, 1979. The response was reviewed by IE:Region II with the subsequent inspection of the site to verify their data. It was determined that their data revealed an incomplete engineering analysis and inaccurate results.

   The inaccurate results were identified when minimum thread engagement and dimension from top of shell to cone for self drilling expansion anchors was recorded during inspection without any further analysis of that data. The special test procedure SP 79-22 "Inspection and Testing Procedure for Concrete Expansion Anchors" Rev. 3 was reviewed and was found to be inadequate in defining acceptance criteria for minimum thread engagement and top of shell to cone dimension for self drilling anchors.

The following supports were identified, where questionable data was not evaluated for possible failures:

Unit 1	Unit 2
1E11-14FS-2	2E11-2SS396
1E11-89SS461	2G41-A5PG142
1E11-71PG589	2E11-37A90
1E11-71PG588	2G41-59PG161
1E11-71PG181	2G41-12PG3
1E11-2PG134	2E51-42SS74
1E11-47SS224	2E51-40SS84
1E21-39SS109	2E11-89PG207
1E21-40SS107	2E11-71SS393

The inspection procedure also required clarification for wedge type anchors, how embedment depth would be determined. CP&L agreed to revise their procedure to include acceptance criteria for thread engagement and clarify information needed for wedge type anchors.

The inspection and test program identified 86 supports for Unit 1 and 89 supports for Unit 2. These numbers appeared to be relatively small. A random inspection of residual heat removal support drawings of Unit 1, verified that the plant had a major number of welded supports and the supports identified with expansion anchors seemed accurate.

During the exit interview on July 27, 1979, CP&L was informed that they must establish their acceptance criteria and re-evaluate their data by July 30, 1979, arrive at a new rate of failure and submit a supplemental response to IE Bulletin.

On July 30, 1979 CP&L called Region II and informed us of their findings of 11.8% rate of failure of Unit 1 and 13.3% rate of failure of Unit 2. They committed to increase testing to 100 percent by August 31, 1979 and would be able to accomplish this while the plants were operating. A supplemental response would be sent by August 10, 1979 clarifying the questions and items brought up by the NRC inspector.

This IE Bulletin 79-02 remains open until all inspections and evaluations are completed and evaluated by the NRC. No items of noncompliance or deviation were identified.