TERA

CP&L

Carolina Power & Light Company

August 10, 1979

FILE: NG-3513 (B) SERIAL: GD-79-2027

Mr. James P. O'Reilly, Director
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 & 2
LICENSE NOS. DPR-71 AND DPR-62
DOCKET NOS. 50-325 AND 50-324
SUPPLEMENT TO IE BULLETIN 79-02

Dear Mr. O'Reilly:

During the recent visit of July 26-27, 1979, of your Mr. Leo Modenos and subsequent telephone conversations between your staff and the Brunswick Steam Electric Plant staff, several concerns were addressed regarding our testing and response to IE Bulletin 79-02. This supplement is in response to those concerns.

Special Test Procedure, SP-79/22, will be revised to include ultrasonic testing of previously installed wedge anchors to determine length. Thread depth of newly installed wedge anchors will be checked prior to torquing. Self-drilling acceptance criteria will be added (Enclosure 1) to verify/ check for proper installation. UE&C has given verbal confirmation that these tolerances (Enclosure 1) are adequate.

In light of the new acceptance criteria (plug depth and thread engagement) and using anchors vice supports to determine percentages, the following are BSEP's current test results (based on a proposed 100% inspection of anchors for pipe size supports greater than 2 1/2 inches):

		Unit No. 1	Unit No. 2	Total
1.	Supports Requiring Inspection	82	78	160
2.	Number of Concrete Anchors	286	276	562
3.	Anchors Not Inspected	176	171	347
4.	Anchors Inspected	110	105	215

1042 144

411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

790352

OFFICIAL COP

7909270796

5.	Number Anchors Failed	13	14	27
6.	Failure Rate	11.82%	13.33%	12.56%
7.	Potential Failures, Uninspected Anchors	21	23	44
8.	Anchors Repaired	4	4	8
9.	Anchors Not Repaired	9	10	19
10.	Anchors Not Repaired but Preloaded to 20% Ultimate	8	8	16
11.	Currently Failed Anchors (Not preloaded)	1	2	3
12.	Total Potential Anchor Failure (7 + 11)	22	25	47
12a.	Total Potential Anchor Failure (7 + 9)	30	33	63
13.	Potential Anchor Failure Rate (12/2)	7.7%	9.05%	8.36%
13a.	Potential Anchor Failure Rate (12a/2)	10.5%	11.96%	11.21%

As a result of the higher failure rate due to the new criteria, testing will be done on all anchors. Due to the increased testing requirements, we submit the following schedule for testing completion:

Complete inspection of greater than 2 1/2 inch line size accessible anchors...August 24, 1979.

Complete repair of greater than 2 1/2 inch line size accessible anchors...August 31, 1979.

Complete inspection of less than 2 1/2 inch line size accessible anchors...September 30, 1979.

Complete repair of less than 2 1/2 inch line size accessible anchors...October 12, 1979.

This schedule is based on the use of presently available personnel and resources. Any significant increase in the failure rate will be brought to the attention of the NRC staff (Mr. Modenos/Mr. Herdt). Inaccessible anchors will be inspected

during the first extended outage which permits access to their locations.

From our initial response to IEB 79-02, the last sentence of our response to Item 3 needs to be revised as follows: "In these cases, cyclic requirements will be satisfied by tightening the top nuts only after verifying that the leveling nut is backed off."

Based on the following data, it is concluded that continued operation of the Brunswick Steam Electric Plant is justified without undue risk to public health and safety.

1. Analyses performed to date have shown a small failure rate.

2. Most failed anchors are preloaded to equal or greater than calculated load.

3. A relatively small number of seismic supports employ concrete expansion anchors. Using the projected failure rate of both units, the total failure rate would involve approximately 2% of the total supports.

4. No system has a high percentage of failures.

5. Greater than 90% of all anchors left to be tested are accessible.

Very truly yours,

B. J. Furr
Manager
Generation Department

RMP:CSB:dcj*

Enclosure

cc: Mr. Harold Denton
Mr. Norman C. Moseley

ENCLOSURE 1

BSEP Proposed Acceptance Criteria

1. Thread Engagement:

Anchor Size	Min. Engagement
3/8	1/4"
1/2	3/8"
5/8	3/8"
3/4	1/2"
7/8	5/8"

2. Anchor Installation: (Depth from sleeve top to plug top)

Anchor Size	Plug Depth
3/8	25/32"
1/2	1 5/32"
5/8	1 13/32"
3/4	1 31/32"
7/8	2 9/32"

(± 1/8")