Docket File

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

April 27, 1992

Docket Nos. 50-325
and 50-324

Mr. R. A. Watson
Senior Vice President
Nuclear Generation
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Watson:

SUBJECT: MASONRY BLOCK WALLS AT BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2

On April 9, 1992, we requested that you provide written documentation of your activities to determine the extent of bolting, i.e., anchoring, deficiencies at the Brunswick Steam Electric Plant, Units 1 and 2. Specifically, we requested that you describe corrective actions, plans and schedules, justify continued operation, and describe the root cause of the identified deficiencies. In addition, we requested that you meet with us to discuss these issues further. You responded by letter dated April 15, 1992. Since that time, you have identified that the anchor bolt deficiencies were more widespread in the diesel generator building than originally anticipated; and you have taken action to shutdown both units because of operability concerns.

This letter is to confirm the actions that you proposed when you advised us of your plans to shutdown the two units in a telephone conference call on April 21, 1992. It is our understanding that you will maintain the units in a shutdown condition until you have completed sufficient examinations of and any necessary repairs to installed anchor bolts in walls and equipment necessary to support safe shutdown to assure the operability of these components. Further, we understand that you plan to implement a program to restore any deficiencies to the design basis under which you were licensed.

Considering the significance of the issue, we believe it would be advisable for you to report your plans and schedules to the agency in greater detail. Therefore, we request that you meet with us to discuss the recently identified deficiencies, in addition to the issues identified in our previous letter of April 9, 1992. We request that the meeting take place prior to restart of either unit.

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To assist you in responding to our request, we have enclosed a list of questions and issues that should be addressed.

Sincerely,

Original signed by

Steven A. Varga, Director
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

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LA:PD21:DRPE	PM:PD21:DRPE	D:PD21:DRPE	NRR:DET
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4/24/92	4/27/92	4/24/92	4/24/92
ADR2:NRR	D:DRPE:NRR	D:RII	
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Mr. R. A. Watson
Carolina Power & Light Company

Brunswick Steam Electric Plant
Units 1 and 2

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ENCLOSURE

LIST OF QUESTIONS AND ISSUES FOR THE
MEETING WITH CP&L
ON SEISMIC QUALIFICATION CONCERN AT BRUNSWICK

The following areas of concern should be addressed. However, you should not confine yourself to these issues, but be prepared to detail all activities that you plan in this area that are pertinent to restoring the design basis of the plant.

I. Discussion and review of your April 15, 1992, response to our April 9, 1992, letter. Particular attention should be paid to:

A. Discuss the causes of the apparent lack of timeliness of corrective actions for Emergency Diesel Generator (EDG) masonry wall bolting and service water pumps.

B. Present the results of masonry wall bolt inspections, and provide the basis for the 25 percent sampling program for masonry wall bolts for walls other than those in the EDG Building.

C. Explain why you are inspecting less than 100 percent of through-wall bolts. Are non-functioning bolts to be removed?

D. Describe your program for inspection and analysis of reinforced concrete walls.

E. With regard to pipe supports, you stated that the sampling technique and frequency of expansion anchor bolt inspections were in accordance with the requirements of IE Bulletin 79-02. You also stated that "out of a total 433 anchors that were examined, 156 anchors could not be fully evaluated because the stud (rod, bolt) or leveling nut was, for unknown reason, 'frozen' or seized." If the bolts were frozen, that means those bolts could not have been backed out for measurements of bolt thread engagement length, anchor sleeves embedment lengths, and the anchor torquing could not have been verified. Explain how the sampling technique and inspection frequency used could have met the requirements of IE Bulletin 79-02, as stated above.

F. With respect to Design Guide II.20, "Design Guide For civil/Structural Operability Reviews" (DG), for piping and piping supports, the staff finds that the DG does not address or inadequately addresses the following attributes in the operability determination criteria:

(1) How the comprehensive loading combinations for both normal and faulted conditions are considered in the criteria.

(2) What damping values and response spectra are to be used, as well as a comprehensive methodology and analysis procedure similar to Ft. Calhoun's and Dresden/Quad Cities', which have been accepted by the staff.

(3) How other occasional loads, including water hammer or steam hammer, as well as secondary loads, are to be used.

(4) The appropriateness of using the "Structural Review Panel," in lieu of a comprehensive evaluation provided in the DG.

Explain how these issues are addressed in your operability evaluations for piping and piping supports.

G. Your root cause response provided a discussion of the paper work that you had reviewed but reached no conclusion. Discuss the progress you have made with respect to determining the root cause.

H. Discuss the progress you have made on your plans to inspect and correct identified deficiencies.

II. Discussion of your latest identification of deficiencies that led to your shutdown of two units.

A. Address how you determined there was an issue, why it was overlooked in your earlier response to our letter, and what actions you took to evaluate and correct the deficiencies.

B. In light of your recent identification that the anchor bolt deficiencies were more widespread in the DG building than originally anticipated, discuss your plans for validating the original conclusions resulting from your IE Bulletin 80-11 program reviews.

III. Discussion of the following issues identified during inspections on site:

A. Characterize the type, number and safety significance of the backlog of items qualified under your short term structural integrity program.

B. Discuss the schedule for correcting these items and the reason more timely corrective action was not taken.

C. Provide the basis for assumed validity of existing analyses for short term structural integrity in view of deficiencies found recently in analysis for CBEAF (Control Building Emergency Air Filters) supports and masonry wall bolting.

D. Provide the basis for design values assumed in masonry wall analyses (i.e. bolt, mortar, block, rebar and grout strength).

E. Describe the quality controls applied to verify bolt torque values during recert masonry wall work.

F. Explain the non-uniformity in the use of steel angles on masonry walls in the switchgear rooms in the EDG building, and in the use of steel bracings for the stairwell enclosures in the same rooms.