

November 25, 1980

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U.S. NUCLEAR REGULATORY COMMISSION
GENERAL SERVICES

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

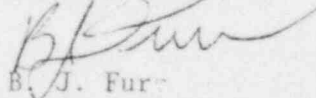
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
LICENSE NOS. DPR-71 AND DPR-62
DOCKET NOS. 50-325 AND 50-324
SUPPLEMENTAL RESPONSE TO IE BULLETIN 80-11

Dear Mr. O'Reilly:

Enclosed you will find Carolina Power & Light Company's supplemental response to IE Bulletin 80-11 concerning Masonry Wall Design. This response addresses additional information required by Item 2b(iii)(a), concerning the Brunswick Unit Nos. 1 and 2 Reactor Buildings, and Item 2b(iii)(b). As stated in our November 5, 1980, response, the information for the Diesel Generator Building will be provided by December 9, 1980.

Should you have questions regarding our response, please contact my staff.

Yours very truly,



B. J. Fur
Vice President
Nuclear Operations

DCS:ejj*

Enclosure

cc: Mr. Norman C. Moseley

Sworn to and subscribed before me this the 25th day of November, 1980.

Margaret A. Sparks
Notary Public

My Commission Expires June 5, 1984.

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Item 2b(iii)(a)

Report for Reactor Buildings - Unit 1 and Unit 2

The on-site survey revealed the following:

- (1) Wall 2A, Unit 1 has a 5'-0" x 6'-1" opening in the wall that is not shown on the drawings. The opening is filled with solid concrete masonry blocks that are stacked full depth but not mortared. This wall will be modified.

All safety-related masonry walls were reevaluated using floor response spectra curves specially developed for this report. The calculations followed the Acceptance Criteria (Appendix 80-11-A from our November 5, 1980, response) and embraced both OBE and DBE seismic input. Interface tension between wythes resulting from an attached load is less than 0.5 psi. The results of the calculations were recorded as a stress factor; i.e., as a ratio of actual stress to allowable stress. A range of stress factors is given on Attachment A.

Conclusions

Following modification of the wall indicated above:

All multiple wythe walls will behave as composite walls.

All safety-related concrete masonry walls in the two Reactor Buildings have structural integrity.

Item 2b (iii) (b)

The safety-related concrete masonry walls at Carolina Power & Light Company's Brunswick Plant having multiple wythe construction are all in the Reactor Buildings. The multiple wythe walls serve as shield walls (see Table 80-11-3 from our November 5, 1980, response). No safety-related equipment is attached to these walls except for light items such as an electrical panel, a junction box, or lighting fixture.

Multiple wythe walls were designed as composite and the shear stress in the interface between the wythes was checked.

See Report for Reactor Buildings under Item 2b (iii) (a) for stress factors for the multiple wythe walls.

ATTACHMENT A

Reactor Building - Unit #1Multiple Wythe Walls

	<u>OBE</u>	<u>DBE</u>
Masonry - Compression	0.02 to 0.11	0.01 to 0.07
Masonry - Tension	0.12 to 1.0	0.12 to 0.95
Mortar - Shear	0.02 to 0.10	0.02 to 0.10
Mortar - Collar Joint Shear	0.14 to 0.86	0.15 to 0.92

Single Wythe Walls

Masonry - Compression	0.02 to 0.10	0.01 to 0.06
Masonry - Tension	0.15 to 0.54	0.11 to 0.51
Mortar - Shear	0.04 to 0.15	0.04 to 0.17

Bond Beams

Reinforcing - Tension	0.15	0.11
Reinforcing - Bond	0.18	0.22

Reactor Building - Unit #2Multiple Wythe Walls

Masonry - Compression	0.02 to 0.11	0.01 to 0.07
Masonry - Tension	0.02 to 1.0	0.12 to 0.95
Mortar - Shear	0.02 to 0.04	0.02 to 0.04
Mortar - Collar Joint Shear	0.14 to 0.28	0.15 to 0.31

Single Wythe Walls

Masonry - Compression	0.02 to 0.10	0.01 to 0.06
Masonry - Tension	0.15 to 0.54	0.11 to 0.51
Mortar - Shear	0.04 to 0.15	0.04 to 0.17

Bond Beams

Reinforcing - Tension	0.15	0.11
Reinforcing - Bond	0.18	0.22