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F. L. CLAYTON, JR.
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July 7, 1980

Docket No. 50-348

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

Dear Mr. O'Reilly:

In response to I.E. Bulletin No. 80-11, "Masonry Wall Design," dated May 8, 1980, Alabama Power Company submits the following sixty (60) day response for Farley Nuclear Plant Unit 1.

Item 1

Identify all masonry walls in your facility which are in proximity to or have attachments from safety-related piping or equipment such that wall failure could affect a safety-related system. Describe the systems and equipment, both safety and non-safety-related, associated with these masonry walls. Include in your review, masonry walls that are intended to resist impact or pressurization loads, such as missiles, pipe whip, pipe break, jet impingement, or tornado, and fire or water barriers, or shield walls. Equipment to be considered as attachments or in proximity to the walls shall include, but is not limited to, pumps, valves, motors, heat exchangers, cable trays, cable/conduit, HVAC ductwork, and electrical cabinets, instrumentation and controls. Plant surveys, if necessary, for areas inaccessible during normal plant operation shall be performed at the earliest opportunity.

Response

A field walkdown was performed to identify all masonry walls in Farley Nuclear Plant Unit 1, which are in proximity to or have attachments from safety-related piping or equipment. All masonry walls, the function of each wall, and its relation to safety-related equipment are listed and identified in the attached walkdown summary sheets (Sheets 1 thru 6).

In addition, the walkdown collected data and information for the re-evaluation of the design adequacy of the masonry walls. A composite sketch showing the system supports, both safety and non-safety related, associated with each masonry wall will be developed to reflect the as-built condition and incorporated in the 180-day re-evaluation report.

Item 2

Provide a re-evaluation of the design adequacy of the walls identified in Item 1 above to determine whether the masonry walls will perform their intended function under all postulated loads and load combinations. In this regard, the NRC encourages the formation of an owners' group to establish both appropriate re-evalulation criteria and where necessary, a later confirmatory masonry test program to quantify the safety margins established by the re-evaluation criteria (this is discussed further in Item 3 below).

a. Establish a prioritized program for the re-evaluation of the masonry walls. Provide a description of the program and a detailed schedule for completion of the re-evaluation for the categories in the program. The completion date of all re-evaluations should not be more than 180 days from the date of this Bulletin. A higher priority should be placed on the wall re-evaluations considering safety-related piping 2-1/2 inches or greater in diameter, piping with support loads due to thermal expansion greater than 100 pounds, safety-related equipment weighing 100 pounds or greater, the safety significance of the potentially affected systems, the overall loads on the wall, and the opportunity for performing plant surveys and, if necessary, modifications in areas otherwise inaccessible. The factors described above are meant to provide guidance in determining what loads may significantly affect the masonry wall analyses.

Response

All masonry walls will be re-evaluated using the composite sketch (as-built condition) generated from the field walkdown to ensure the wall will satisfy the intended function of wall as noted in the walkdown summary sheets. Based on the magnitude and number of support loads, all walls are divided into three groups - Priority 1, Priority 2 and Priority 3. The completion date of re-evaluation for each group is as follows:

Priority 1	To be completed by September 30, 1980
Priority 2	To be completed by October 15, 1980
Priority 3	To be completed by November 7, 1980

NOTE: The walls identified in the attached sheets are grouped by priority.

Item 3

Existing test data or conservative assumptions may be used to justify the re-evaluation acceptance criteria if the criteria are shown to be conservative and applicable for the actual plant conditions. In the absence of appropriate acceptance criteria a confirmatory masonry wall test program is required by the NRC in order to quantify the safety margins inherent in the re-evaluation criteria. Describe in detail the actions planned and their schedule to justify the re-evaluation criteria used in Item 2. If a test program is necessary, provide your commitment for such a program and a schedule for submittal of a description of the test program and a schedule for completion of the program. This test program should address all appropriate loads (seismic, tornado, missile, etc.). It is expected that the test program will extend beyond the 180 day period allowed for the other Bulletin actions. Submit the results of the test program upon its completion.

Response

Justification for the re-evaluation criteria will be submitted with the re-evaluation report within 180 days of the date of receipt of the Bulletin. Justification will be based on reference to effective codes and established standards of practice related to concrete and masonry design typically used throughout the industry.

It is anticipated that such justification will be considered appropriate, and that a test program will not be necessary. The one possible exception is masonry wall structural properties for which construction test data is not available or cannot otherwise be determined.

The other information requested in I.E. Bulletin 80-11 will be submitted as directed in our 180 day response.

If there are any questions, please advise.

Yours very truly,

F. L. Clayton, Jr.

CLB/rt

Attachments

cc: R. A. Thomas
G. F. Trowbridge
W. H. Bradford
NRC Office of I & E
Washington, D. C.

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 8th DAY OF JULY 1980.

Notary Public
My Commission Expires 2-15-82

JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1
SYSTEMS WALKDOWN FOR BLOCK WALLS

PRIORITY 1

WALL MARK NO.	SAFETY RELATED SYSTEMS ATTACHED TO WALL					SAFETY RELATED SYSTEM IN PROXIMITY OF WALL					AUXILIARY BUILDING - UNIT 1	
	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	FLOOR ELEV.	FUNCTION OF WALL
8	--	Yes	--	--	--	Yes	Yes	Yes	Yes	--	121'-0"	Fire Wall
9	--	--	--	--	--	--	Yes	Yes	--	--	121'-0"	Fire Wall
10	--	--	Yes	Yes	--	--	Yes	Yes	--	--	121'-0"	Fire Wall
11	--	--	Yes	Yes	--	--	Yes	Yes	--	--	121'-0"	Fire Wall
13	--	--	--	--	--	--	Yes	Yes	--	--	121'-0"	Fire Wall
14	--	--	--	--	--	--	Yes	Yes	--	--	121'-0"	Fire Wall
15	--	--	Yes	--	--	--	--	Yes	--	--	121'-0"	Fire Wall
16	--	--	Yes	--	--	--	Yes	Yes	--	--	121'-0"	Fire Wall
17	--	--	--	--	--	--	--	Yes	--	--	121'-0"	Shield Wall
19	--	--	--	--	--		--	--	--	Yes	121'-0"	Fire Wall
20	--	--	--	--	--	--	--	--	--	Yes	121'-0"	Fire Wall
21	--	Yes	Yes	Yes	--	Yes	--	Yes	Yes	Yes	121'-0"	Fire Wall

JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1
SYSTEMS WALKDOWN FOR BLOCK WALLS PRIORITY 1

WALL MARK NO.	SAFETY RELATED SYSTEMS ATTACHED TO WALL					SAFETY RELATED SYSTEM IN PROXIMITY OF WALL					AUXILIARY BUILDING - UNIT 1	
	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	FLOOR ELEV.	FUNCTION OF WALL
23	--	--	Yes	--	--	Yes	--	Yes	Yes	--	121'-0"	Fire Wall
24	--	Yes	--	--	--	Yes	Yes	Yes	Yes	--	139'-0"	Fire Wall
25	--	Yes	--	--	--	--	Yes	Yes	Yes	--	139'-0"	Fire Wall
27	--	--	Yes	--	--	--	Yes	--	--	Yes	139'-0"	Fire Wall
28	Yes	Yes	Yes	--	--	--	Yes	--	--	--	139'-0"	Fire Wall
30	--	--	--	Yes	--	--	Yes	Yes	Yes	--	139'-0"	Fire Wall
33	--	--	--	--	--	--	--	Yes	--	--	155'-0"	Fire Wall
34	--	--	Yes	--	--	--	Yes	--	--	--	155'-0"	Fire Wall
41	Yes	Yes	--	--	--	--	Yes	--	--	--	121'-0"	Shield Wall
42	Yes	Yes	--	--	--	--	--	--	--	--	121'-0"	Shield Wall
44	--	--	--	--	--	--	Yes	Yes	--	--	155'-0"	Divider
57	--	--	--	--	--	--	--	Yes	--	--	155'-0"	Fire Wall
62	--	--	Yes	Yes	--	--	--	--	--	--	155'-0"	Fire Wall
69	--	--	Yes	--	--	--	--	--	--	--	155'-0"	Fire Wall
71	--	--	Yes	--	--	--	--	--	--	--	155'-0"	Fire Wall

JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1
SYSTEMS WALKDOWN FOR BLOCK WALLS PRIORITY 1

WALL MARK NO.	SAFETY RELATED SYSTEMS ATTACHED TO WALL					SAFETY RELATED SYSTEM IN PROXIMITY OF WALL					AUXILIARY BUILDING - UNIT 1	
	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	FLOOR ELEV.	FUNCTION OF WALL
DG-1	--	--	Yes	Yes	--	--	--	--	--	Yes	177'-0"	Divider
SW-1	--	--	Yes	--	--	Yes	Yes	Yes	--	--	188'-9"	Fire Wall
SW-2	--	--	Yes	--	--	Yes	Yes	Yes	--	--	188'-9"	Fire Wall

JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1
SYSTEMS WALKDOWN FOR BLOCK WALLS PRIORITY 2

WALL MARK NO.	SAFETY RELATED SYSTEMS ATTACHED TO WALL					SAFETY RELATED SYSTEM IN PROXIMITY OF WALL					AUXILIARY BUILDING - UNIT 1	
	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	PIPING	EQUIP.	CONDUIT	TRAYS	HVAC	FLOOR ELEV.	FUNCTION OF WALL
1	--	--	--	Yes	--	--	--	--	--	--	77'-0" & 83'-0"	Reduce opening
2a	Yes	--	--	--	--	--	--	--	--	--	100'-0"	K. O. Panel
2b	--	--	--	--	--	--	Yes	--	--	--	100'-0"	K. O. Panel
2c	Yes	Yes	--	--	--	Yes	--	--	--	--	100'-0"	K. O. Panel
4	Yes	--	Yes	--	--	--	--	--	--	--	121'-0"	K. O. Panel
6	--	--	--	--	--	Yes	--	--	--	--	121'-0"	K. O. Panel
31	--	--	--	--	--	--	Yes	--	--	--	155'-0"	K. O. Panel
39	--	--	Yes	--	--	--	--	--	--	--	100'-0"	K. O. Panel

JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1
SYSTEMS WALKDOWN FOR BLOCK WALLS PRIORITY 3

WALL MARK NO.	AUXILIARY BUILDING - UNIT 1		
	COMMENTS	FLOOR ELEV.	FUNCTION OF WALL
3	Under construction	100-0"	Radiation Shielding
5	Under construction	121'-0'	Radiation Shielding
12	No systems are attached or lie in the proximity of this wall	121'-0"	Fire Wall
29	No systems are attached or lie in the proximity of this wall	139'-0"	Fire Wall
38	No systems are attached or lie in the proximity of this wall	77'-0" & 83'-0"	K. O. Panel
43	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
45	No systems are attached or lie in the proximity of this wall	155'-0"	Fire Wall
46	No systems are attached or lie in the proximity of this wall	155'-0"	Fire Wall
47	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
48	No systems are attached or lie in the proximity of this wall	155'-0"	Fire Wall
49	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
50	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
51	No systems are attached or lie in the proximity of this wall	155'-0"	Fire Wall
52	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
53	No systems are attached or lie in the proximity of this wall	155'-0"	Fire Wall
54	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
55	No systems are attached or lie in the proximity of this wall	155'-0"	Fire Wall
56	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
58	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
59	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
60a	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
60b	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
61	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
63	No systems are attached or lie in the proximity of this wall	155'-0"	Divider

JOSEPH M. FARLEY NUCLEAR PLANT UNIT 1
SYSTEMS WALKDOWN FOR BLOCK WALLS PRIORITY 3

WALL MARK NO.	AUXILIARY BUILDING - UNIT 1		
	COMMENTS	FLOOR ELEV.	FUNCTION OF WALL
64	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
65	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
66	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
67	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
68	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
70	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
72	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
73	No systems are attached or lie in the proximity of this wall	155'-0"	Divider
	NOTE: These numbers (7,22,26,32,35,36,37		
	and 40) have not been assigned to any wall.		