



MAINE YANKEE ATOMIC POWER COMPANY
ENGINEERING OFFICE

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June 30, 1980

B.4.1.1
WMY 80-103

United States Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Attention: Mr. Boyce H. Grier, Director

References: (a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC Letter to MYAPC dated May 8, 1980;
IE Bulletin No. 80-11

Subject: Response to IE Bulletin No. 80-11, "Masonry Wall Design"

Dear Sir:

Your letter, Reference (b), identified a problem with the structural integrity of concrete masonry walls, and requested that Maine Yankee respond to those actions delineated in your letter. Attached hereto is Maine Yankee's response to Items 1, 2a and 3 of the subject bulletin.

We trust this information is satisfactory; however, should you require additional information, please contact us.

Very truly yours,
MAINE YANKEE ATOMIC POWER COMPANY

W. P. Johnson
W. P. Johnson,
Vice President

COMMONWEALTH OF MASSACHUSETTS)
)ss
COUNTY OF WORCESTER)

Then personally appeared before me, W. P. Johnson, who, being duly sworn, did state that he is a Vice President of Maine Yankee Atomic Power Company, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Maine Yankee Atomic Power Company, and that the statements therein are true to the best of his knowledge and belief.



Robert H. Groce
Robert H. Groce Notary Public
My Commission Expires September 14, 1984

ATTACHMENT

Item 1: Table 1 identifies masonry walls which are in proximity to, or could effect a safety related system should they fail. They are listed in order of priority.

Item 2.a: A description of the Maine Yankee masonry wall re-evaluation program is provided below for your information.

1. Determine as-built condition of the walls identified in Item 1.
 - a. Develop as-built sketches, including identity and location of any wall mounted equipment.
 - b. Provide detail location of safety related systems in proximity of the masonry block walls.
 - c. Determine material properties and construction practices based upon historical records.
 - d. Determine actual size and spacing of wall reinforcement using a magnetic "R" meter.
2. Determine applicable wall loads.
 - a. Using existing building Amplified Response Spectra (ARS) determine in-plane and out-of-plane inertia forces.
 - b. Determine equivalent loads (or stresses) due to seismic building displacements (where applicable).
 - c. Determine local loads due to wall mounted equipment.

NOTE: (1) Only one pipe support has been identified as being anchored to a concrete block wall and that being for a 4" diameter pipe.
(2) All the concrete block walls are located such that missile, pipe whip, pipe break, jet impingement, tornado or pressurization loads are not applicable.

3. Determine the degree of stress within the walls due to the loads identified above, using the working stress methodology.
4. Allowable stresses will be based upon the 1979 Uniform Building Code (UBC), Chapter 24 and the most recently published American Concrete Institute (ACI) code. If both UBC and ACI allowable are exceeded in the course of our re-evaluation effort, modifications required to bring the wall's stress within UBC allowables will be implemented consistent with Technical Specifications. If, however, the stresses exceed UBC allowables, but are within ACI allowables, we will still install all required modifications on a more orderly schedule considering work and manpower. If the wall stresses are within UBC allowables the wall will be considered acceptable as is.

5. Our re-evaluation effort has already begun and we plan to have all work, including any required modifications complete by November 8, 1980.

Item 3: The ACI and the more conservative UBC codes have been industry standards for many years. These code allowables are conservative, have a solid basis in fact, are widely accepted and are substantiated by test data. Since all but one of MY's concrete block walls are of single wythe construction and are only subjected to dead, live and seismic load, cases clearly covered by both codes, we feel that no further justification for the use of these codes is required as the basis of our re-evaluation criteria. The one double wythe wall will be analyzed as two adjacent single wythe walls with no credit taken for the bond between wythes.

TABLE 1

<u>Building</u>	<u>Room Location</u>	<u>Reference Drawing</u>	<u>Wall Location</u>	<u>Equipment to be Protected</u>
Service	Switchgear Room, EL 45'-6"	1150-FE-27B	Battery No. 2&l area South and West wall	Reactor Trip Breaker SWGR, EMER MCC (MCC-8A) DC Dist Cab 4, DC Dist Cab 3, DC Dist Cab 2, DC Dist Cab 1, 3 ϕ , 22.5 KVA inverter 5, 480V Emergency SWG, Bus 8, 1 ϕ 10 KVA Inverter 2, Battery Charger No. 2, 1 ϕ 10 KVA Inverter 1, Battery Charger No. 1, Battery Groups 1 and 2
Service	Cable Tray Room, EL 35'-0"	11550-FA-1B	Battery Room 3&4 area - South, North and West wall. Cable Tray area, South East wall between Cols 7 thru 8, only block wall.	Battery Groups 3&4. Cable Trays DC, C5, C1, C4, DCBA, BA, C, C22 C3, A1, A2, A3, C6, C5.
Service	Control Room	11550-FA-1A	Toilet, South and East wall	Control Panel containing AFWS Controls, Main By-Pass Feedwater Valve Controls, Containment Recir. Fan Controls, Reactor Coolant Loop Indication, Reactor Coolant Pump Bearing Life Lube Pressure Indication.
Primary Auxiliary	Waste Gas Surge Drum Area EL 36'-0"	11550-FA-11A	Removable Shield wall East wall	Gas Decay Drums, Waste Gas Surge Tank, Waste Gas Manifolds
	Degasifier Vent Condenser Area	11550-FA-11A	South and East wall around PAB non-nuclear safety class charcoal filter.	Containment Purge Line is attached to block wall

TABLE 1

<u>Building</u>	<u>Room Location</u>	<u>Reference Drawing</u>	<u>Wall Location</u>	<u>Equipment to be Protected</u>
Turbine	Turbine Area EL 35' adjacent to elevator in hallway used for access to Control Room, clean locker.	11550-FM- 3C		PCC Temperature Controller.
Service	Cable Tray Room EL 35'-0"	11550-FA- 1B	Cable Tray area South wall.	Control Room Breathing Air Supply Fans FN-7A, FN-7B and ventilation ducts located on other side of South wall.