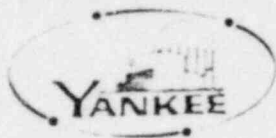


YANKEE ATOMIC ELECTRIC COMPANY

20 Turrpike Road Westborough, Massachusetts 01581

January 20, 1975

United States Atomic Energy Commission
Washington, D. C. 20545

Attention: Directorate of Licensing

Reference: (a) License No. DPR-3 (Docket No. 50-29)
(b) USAEC letter to YAEC dated 12/17/74
(c) USAEC letter to YAEC dated 8/8/72
(d) YAEC letter to USAEC dated 9/8/72

Enclosures: (1) Figure 1 - Site Building Arrangement
(2) Figure 2 - Primary Auxiliary Building and Diesel Generator Building
(3) Figure 3 - Ground Floor Turbine Room
(4) Figure 4 - Turbine Room Elevations

Dear Sir:

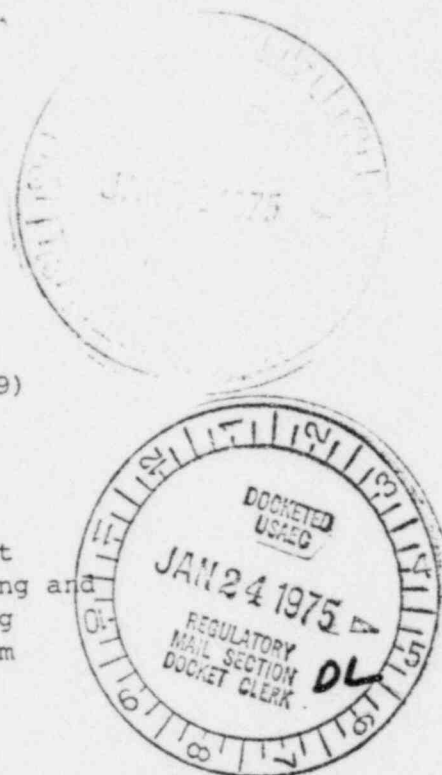
In response to Reference (b), we conducted an investigation at the Yankee Rowe plant to determine whether the failure of any non-Category I (seismic) equipment could result in flooding or release of chemicals that could jeopardize safe shutdown of the facility. This investigation was carried out in accordance with the AEC criteria entitled, "Guidelines for Review of Non-Category I Systems Whose Failure Could Cause Flooding of Safety Related Equipment".

This report discusses the results of the investigation, the temporary protective measures which were determined necessary; a time schedule for completion of the permanent modifications and an inspection program which has been instituted and will remain in force until the permanent modifications have been completed.

GENERAL INFORMATION

The Yankee Nuclear Power Station was not designed to the seismic criteria now in effect; consequently, the piping systems are classified as Safety Related or non-safety related rather than by a seismic category.

All of the applicable non-safety related systems in Reference (b) were included in our investigation, specifically:



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Service Water	Demineralized water
Condensate	Drains
Feedwater	Heating Boiler Condensate
Reactor Building Cooling Water	Make-up
Circulating Water	Potable Water
	Fire Protection

PLANT SHUTDOWN

The Turbine Building and Primary Auxiliary Building contain safety related equipment required for safe shutdown of the plant. Heat removal can be provided by the equipment located in either building. These buildings are separated as shown in Figure 1; therefore, simultaneous flooding of both buildings from a single pipe rupture is not possible.

The Control Room and Switchgear Room are located in the Turbine Building and the emergency diesel generator and safety injection pumps are located in the Diesel Generator Building with interconnecting cables between the two buildings.

TURBINE BUILDING

The Switchgear Room and Control Room, shown on Figure 4, are located in the Turbine Building at El. 1037'-8", and 1052'-8", respectively. The floor of the Turbine Building is at ground level, El. 1022'-8". Flooding of the Switchgear Room cannot occur, unless the entire Turbine Building were flooded to a depth greater than 15 feet. This is considered a highly unlikely event because of the many doors and openings to the outside. In addition, submergence of non-safety related equipment in the Turbine Building would result in equipment trips and thereby alert the operator to the malfunction.

PRIMARY AUXILIARY BUILDING

Service water, component cooling water, demineralized water, and heating system condensate is routed through a room in the lower level of the Primary Auxiliary Building. This room is shown on Figure 2. A rupture of any of these systems, which results in a water depth in excess of one foot could flood out Motor Control Center 4 and prevent operation of the charging pumps, which are needed for heat removal, and the purification pumps, which are needed for post-LOCA, long term recirculation. While the heat removal function of the charging pumps could be provided by equipment in the Turbine Building, long term recirculation could not. Therefore, the purification pumps must remain functional.

DIESEL GENERATOR BUILDING

The Diesel Generator Building contains the three diesel generators and Emergency Buses 1, 2 and 3, which are required in the event of a loss of offsite power, and the safety injection system which is required for both shutdown and the design basis accident (LOCA). No non-category I

pipng of any size passes through this building and flooding is not considered a possibility. The connecting door between Primary Auxiliary Building and the Diesel Generator Building is maintained in a closed position since it is equipped with an automatic door closer.

DESCRIPTION OF REQUIRED CHANGES

Flooding of vital areas will be prevented by the following modifications:

1. Sufficient openings will be provided in the Primary Auxiliary Building to prevent the flooding of Motor Control Center 4.
2. Redundant alarms will be installed in the floor sump to alert the Control Room operators of increasing water level in the Primary Auxiliary Building.
3. Means will be provided to guarantee that leakage under the connecting door between the Primary Auxiliary Building and the Diesel Generator Building cannot impair the operability of the 480V switchgear comprising Emergency Buses 1, 2 and 3. At present, several alternatives are being considered which include door seals, drainage paths, berms, etc. The details of this modification will be submitted as soon as the design is finalized. It is anticipated that this information will be available within the 30 day period allotted.

SCHEDULE OF CHANGES

The schedule for completion of Items 1 thru 3 is expected to be:

Item 1	April 30, 1975
Item 2	April 30, 1975
Item 3	March 1, 1975

Until the above modifications are completed, YAEC intends to:

1. Provide an audible addition to the existing high sump level alarm which is located in the Primary Auxiliary Building.
2. Initiate an hourly inspection by plant personnel. This inspection is to include verification of the closed position of the southwest inter-connecting door.
3. Instruct Control Room operators that changes in the service water flow may be the result of a rupture.

CHEMICALS

All chemicals used in the plant are stored either in the Water Treatment Room or in a warehouse; these are shown on Figure 1. Thus,

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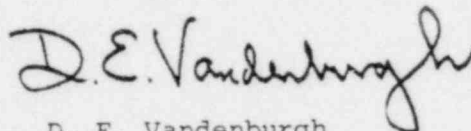
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a pipe rupture in a non-safety related system could not cause the release of chemicals which would prevent safe shutdown of the plant.

We trust the above information is responsive to your letter and, of course, we are prepared to discuss this matter at your convenience.

Very truly yours,

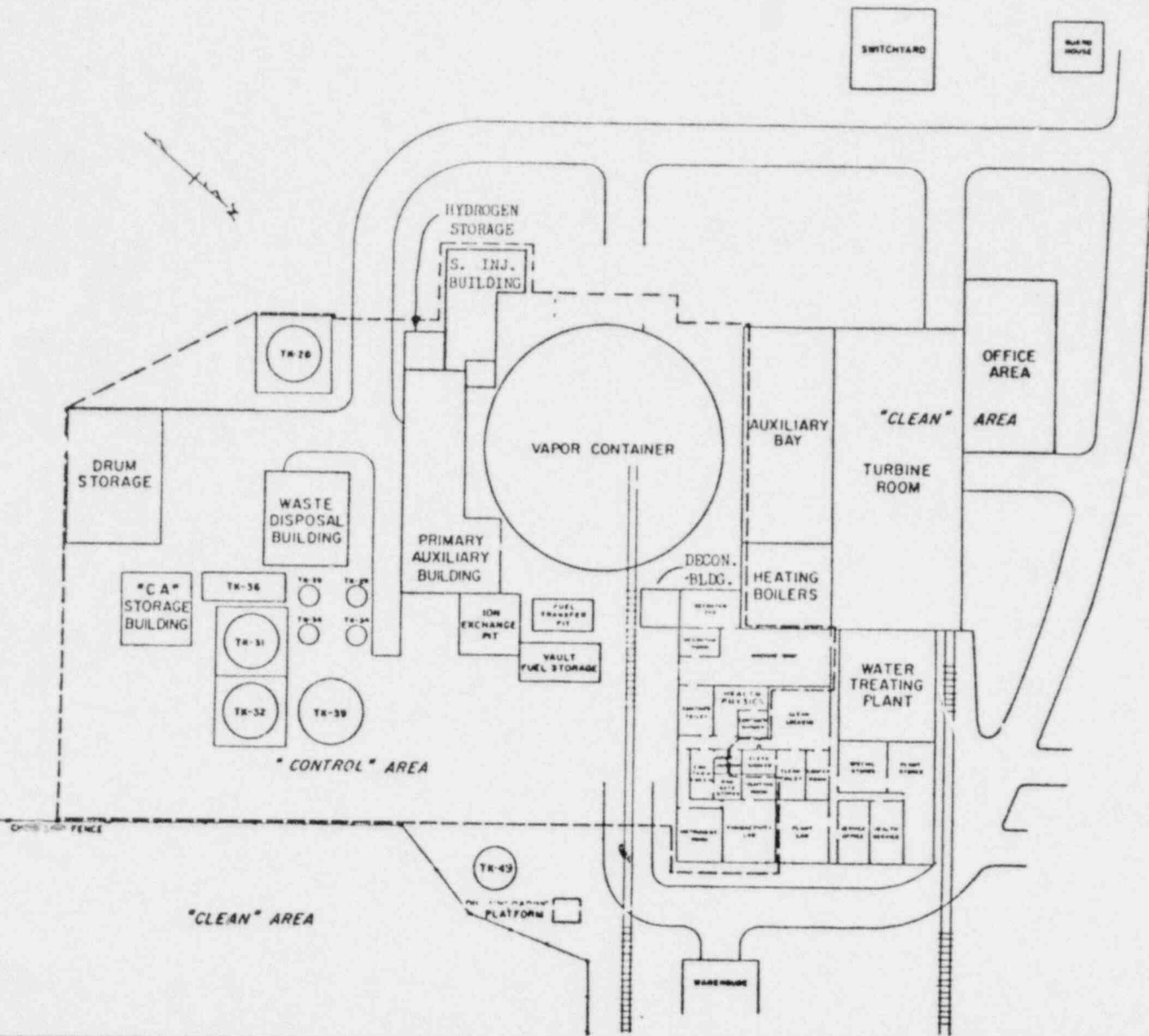
YANKEE ATOMIC ELECTRIC COMPANY



D. E. Vandenburg
Vice President

TWG/kg
Enclosures

POOR ORIGINAL



Regulatory Docket File

1-20-75

YANKEE NUCLEAR POWER STATION	SITE BUILDING ARRANGEMENT	Figure 1
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