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10 COLUMBUS CIRCLE NEW YORK, N. Y. 10019

(212) 397-6200

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December 17, 1979
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Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Albert Schwencer, Chief
Operating Reactors Branch No. 1
Division of Operating Reactors

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Short Term Requirements of TMI Lessons Learned

Reference: Telecopied Draft Letter sent December 10, 1979
from L. Olshan (NRC) to G. Wilverding (PASNY)
to be signed by A. Schwencer, Chief, Operating
Reactors Branch No. 1

Dear Sir:

Enclosed please find information and the drawings listed
below that you requested in the referenced item covering de-
tailed information on the Items 2.1.7.a and 2.1.7.b of NUREG-
0578 and its clarification letter of October 30, 1979:

UE&C 9321-LL-31173, Sheets 3,4,5,5A,6 and 6A
UE&C 9321-LL-31183, Sheets 3,4,4A,5,5A, 11 and 16
UE&C 9321-F-30083
UE&C 9321-F-30043
Westinghouse 617F644
Westinghouse 617F645
Westinghouse 5651D72, Sht. 1 thru 14
Westinghouse 113E303, Sht. 1 to 8
Foxboro BD-11
Westinghouse 113E302, Sht. 1
Westinghouse 113E301, Sht. 1 - 11
UE&C 9321-LL-31183, Sheets 5, 11 and 16
UE&C 9321-F-31993
UE&C 9321-F-32003
UE&C 9321-LL-31173, Sht. 19

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UE&C 9321-F-30063
UE&C 9321-F-32233
Foxboro FA-1
UE&C 9321-F-31993
UE&C 9321-F-32003
UE&C 9321-F-30063
UE&C 9321-F-70033
UE&C 9321-F-20193

Very truly yours,



Paul J. Early
Assistant Chief Engineer-
Projects

cc: Mr. T. Rebelowski, Resident Inspector
U. S. Nuclear Regulatory Commission
P.O. Box 38
Buchanan, New York 10511

NRC CONCERN

1. 2.1.7a AFW System Automatic Initiation

We require that the licensee provide information that describes how the AFW automatic initiation system design meets each of the control grade functional criteria in NUREG-0578 (2.1.7a) and the clarifications to NUREG-0578 in the October 30, 1979 NRC (N. Denton) letter to all operating plants. The information should be sufficiently descriptive to permit independent technical review of the information and a conclusion that each of the criteria are met.

To demonstrate conformance with criteria 1, 2, 5 and 7 specific descriptive information (reference to specific FSAR is acceptable) supported by electric drawings, such as a schematic or elementary wiring diagrams should be submitted.

For power supply criteria 4 and 6, the licensee should submit a table or a detailed power distribution one-line diagram indicating power supply channels for each component.

To demonstrate testability criteria 3, the licensee should submit a summary description of the functional test procedures along with the existing or proposed test interval - (e.g., Standard Technical Specification surveillance requirements for typical engineered safety feature systems).

Response

The following is a list of documents which will enable independent technical review that each criteria is met. In addition, section 14.1.9 of the FSAR. "Loss of Normal Feedwater" describes the transient which occurs and demonstrates that loss of normal feedwater, with only one auxiliary boiler feed pump operable, will not adversely affect the core, reactor coolant system or steam system. The above is reiterated in the Technical Specifications, section 3.4.

The order in which the documents are presented are by NUREG 578 Positions (and clarifications)

NUREG 578 POSITION 1

1. The design shall provide for the automatic initiation of the auxiliary feedwater system

October 30, 1979 Letter Clarification Item #1

1. Provide automatic/manual initiation of AFWS.

References Documents

DWGs UE&C 9321-LL-31173

Sht.	Rev.
6	9
4	7
5	11
5A	1
6A	3
3	9

9321-LL-31183

Sht.	Rev.
3	8
4	10
4A	3
5	13
5A	2
11	11
16	11

NUREG 578 POSITION 2

2. The automatic initiation signals and circuits shall be designed so that a single failure will not result in the loss of auxiliary feedwater system function.

October 30, 1979 Clarification

None

Reference Documents

Same as stated in NUREG 578, position 1, in addition:

UE&C 9321-F-30083 - Rev 20.

UE&C 9321-F-30043 (A210060 - Rev 2 - Con Ed Equiv.)

(W) 617F644 - Rev 7

(W) 617F645 - Rev 5

(W) 5651D72 Sht. 1 thru 14

5651D72	Sht.	Rev.
	1	5
	2	3
	3	3
	4	1
	5	2
	6	3
	7	2
	8	3
	9	1
	10	2
	11	3
	12	5
	13	4
	14	4

NUREG 578 Position 3

3. Testability of the initiating signals and circuits shall be a feature of the design.

October 30, 1979 Clarification Item #2

2. Testability of the initiating signals and circuits is required.

Monthly in accordance with our Technical Specification a check on the steam generator Low-Low level bistables are performed. This test verifies the operability of the Analog Channel. In addition, a monthly relay logic test is performed. The logic test is being modified to encompass the entire AFWS initiating circuitry consistent with the present safeguard equipment testing scheme. This will be accomplished prior to plant startup. Also at refueling intervals, a timing test assures proper sequencing of the pumps and a loss of outside power (Blackout) coincidental with a safety injection. This actuation test also confirms the load capacity of the diesels to power the safeguard equipment (including AFWS).

NUREG 578 POSITION 4

4. The initiating signals and circuits shall be powered from the emergency buses.

OCTOBER 30, 1979 CLARIFICATION ITEM #3

3. Initiating signals and circuits shall be powered from the emergency buses.

Reference Documents

Same as stated in NUREG 578, Position 1 and 2, in addition:

(W) 113E303 Sht 1 to 8

Sht	Rev
1	18
2	5
3	8
4	8
5	8A
6	9B
7	8
8	6A

Foxboro DWG BD-11 - Rev 1

(W) 113E302 Sht 1 - Rev 10

(W) 113E301 Sht 1 - 11

Sht	Rev
1	9
2	5A
3	5A
4	6
5	5A
6	2
7	3A
8	3A
9	4
10	4
11	5

NUREG 578 POSITION 5 and 7

5. Manual capability to initiate the auxiliary feedwater system from the control room shall be retained and shall be implemented so that a single failure in the manual circuits will not result in the loss of system function.
7. The automatic initiating signals and circuits shall be designed so that their failure will not result in the loss of manual capability to initiate the AFWS from the control room.

OCTOBER 30, 1979 CLARIFICATION ITEM #5

5. Failure in the automatic circuits shall not result in the loss of manual capability to initiate the AFWS from the control room.

Reference Documents

9321-LL-31183

Sht	Rev
11	11
16	11
5	13

NUREG 578 POSITION 6

6. The a-c motor-driven pumps and valves in the auxiliary feedwater system shall be included in the automatic actuation (simultaneous and/or sequential) of the loads onto the emergency buses.

OCTOBER 30, 1979 CLARIFICATION ITEM #4

4. Necessary pumps and valve shall be included in the automatic sequence of the loads to the emergency buses. Verify that the addition of these loads does not compromise the emergency diesel generating capacity.

Reference Documents

Same as stated in NUREG 578, position 1 and 2, in addition:

U.E.&C 9321-F-31993 Rev 20

U.E.&C 9321-F-32003 Rev 14

UE&C 9321-LL-31173 Sht 19 - Rev 5

NRC CONCERN

2. 2.1.7b AFW System Flow Indication to Steam Generators

We require information of a similar nature to that described 2.1.7a above to demonstrate conformance with the 2.1.7b criteria and clarification to NUREG-0578 in the October 30, 1979 NRC (h. Denton) letter to all operating plants; namely, single failure, testability, power supply and indication accuracy.

RESPONSE

Single Failure

Reference Documents

U.E.&C 9321-F-32233 - Rev 6
Foxboro DWG FA-1 - Rev 3A
U.E.&C 9321-F-31993 - Rev 20
U.E.&C 9321-F-32003 - Rev 14
U.E.&C 9321-F-30063 - Rev 27/29

Testability

Reference Documents

U.E.&C 9321-F-70033 Rev 8
U.E.&C 9321-F-20193 Rev 16

Power Supply

Reference Documents

Same as stated in "Single Failure"

Indicator Accuracy

Foxboro EBDM 1/2%
HX252 W Indicator 2%