POWER AUTHORITY OF THE STATE OF NEW YORK

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August 23, 1982
IPN-82-60

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

Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Environmental Qualification of Auxiliary Feedwater System Electrical Equipment

Dear Sir:

This letter supplements our August 24, 1981 response (IPN-81-63) to the Commission's May 21, 1981 Safety Evaluation Report for the Environmental Qualification of Electrical Equipment.

Attachment I to this letter provides a conceptual design of the auxiliary feedwater system (AFS) modification which is planned to resolve the concerns of both environmental qualification of safety related electrical equipment within the AFS pump room and simultaneous blowdown of two steam generators. This modification will eliminate the presence of high energy steam within the AFW pump room during normal plant operation. However, steam will enter the steam supply line of the AFS turbine driven pump during testing of this pump normally on a monthly basis and during abnormal plant conditions, which require pump operation. Since the period of time when steam will be present in the supply line is negligible, the Authority considers the environment of the AFW pump room to be non-harsh.

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The Commission is requested to review the attached AFS modification as a part of the review of our August 24, 1981 environmental qualification response which is to be the subject of a supplemental NRC SER.

This matter has been discussed with Messrs. J. O. Thoma and J. Kennedy of the NRC Staff who have indicated that this modification appears acceptable.

Very truly yours,

J. P. Bayne
Executive Vice President
Nuclear Generation

cc: Resident Inspector's Office
Indian Point Unit 3
U.S. Nuclear Regulatory Commission
P.O. Box 38
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ATTACHMENT I

PROPOSED AFS MODIFICATION

Power Authority of the State of New York

Indian Point 3 Nuclear Power Plant
docket No. 50-286
August 1982

The following is a description of the proposed changes to the existing auxiliary feedwater system (AFS) (see Figure 1) in order to resolve the concerns of: 1) environmental qualification of electrical equipment within the AFS pump room, and 2) simultaneous blowdown of two steam generators.

Figure 2 illustrates the proposed modification to be performed as follows:

1. Add new air operated (with nitrogen backup), normally open, stop valves in each of the branch lines leading from the steam generators. The new stop valves will be added downstream of the existing stop-check valves (MS-41 and MS-42).

2. Add new stop-check valves downstream of the new isolation valves. Incorporate a normally closed vent downstream of the existing stop valves as a telltale for safety when maintenance is performed on the stop valves, and also for performing a hydro test of the line.

3. The new air operated isolation valves will be capable of remote manual activation from the control room and will also close automatically upon detection of a rupture in the common header. The preferable failure mode for the air operator will be "fail open" with an alarm to the control room.

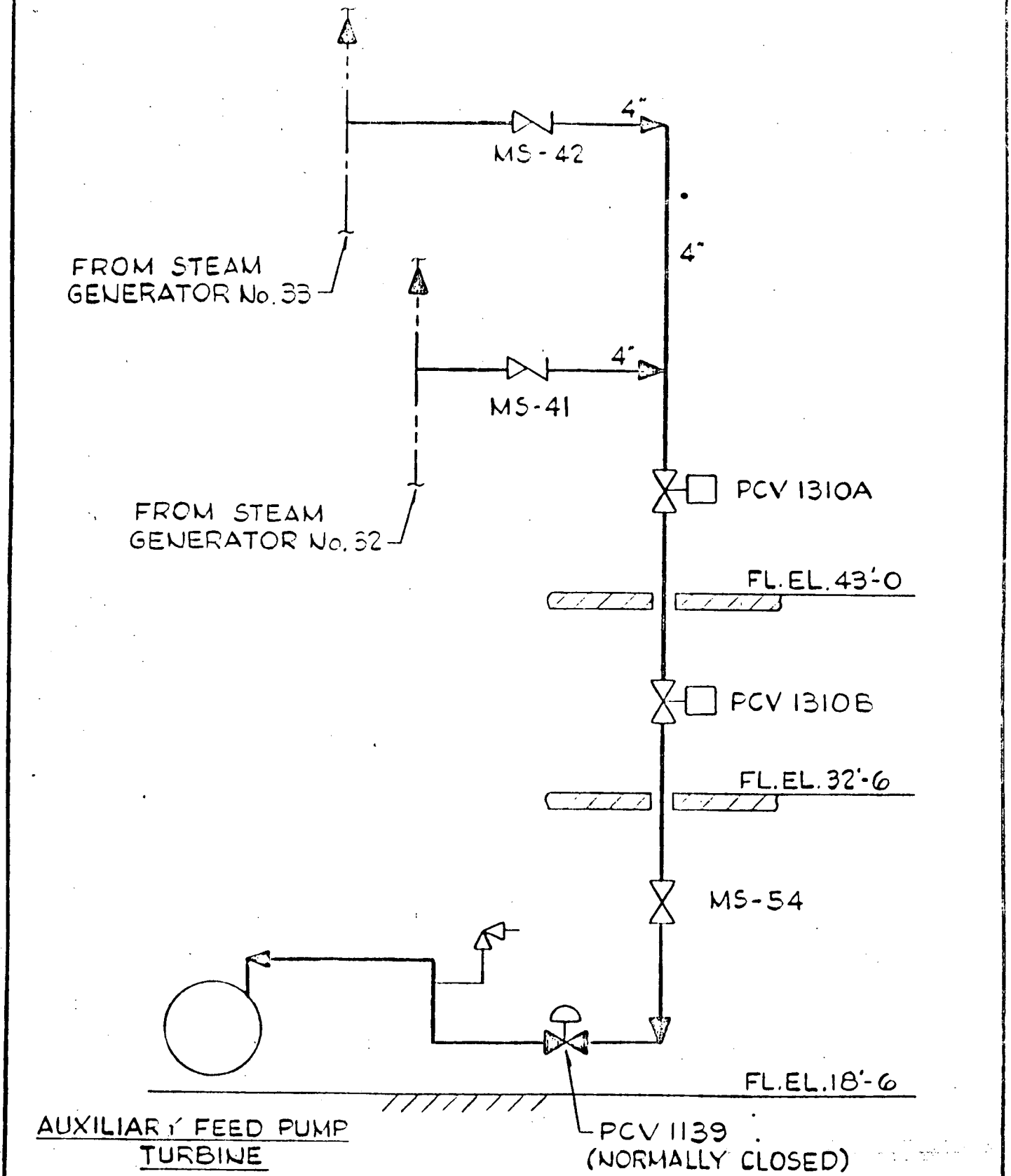
4. Relocate the existing, normally closed, PCV-1139 and its associated manual isolation valve (MS-54) from the AFP room to the floor above (elevation 32'-6"), and seal the floor penetrations in the immediate location of the turbine driven steam supply line.

5. Remove the two existing, temperature actuated, shutoff valves (PCV-1310 A&B), as their function has been assumed by the new stop valves.

6. Add a drip pot and a continuous drain line upstream of the relocated valve PCV-1139 to prevent the accumulation of moisture due to the condensation of steam in the line.

7. Revise the piping layout downstream of the relocated PCV-1139 to improve drainage capability. The line shall slope continuously toward the turbine. The line shall also incorporate drip pots to aid in condensate removal.

8. Perform stress analysis in order to establish pipe support locations and to verify that the line downstream of the relocated PCV-1139 can accomodate the thermal and cyclic stresses imposed when PCV-1139 opens, or when either or both of the new isolation valves operate.



INDIAN POINT No. 3 NUCLEAR POWER PLANT

FIGURE 1 : CURRENT ARRANGEMENT STEAM SUPPLY TO AFP TURBINE

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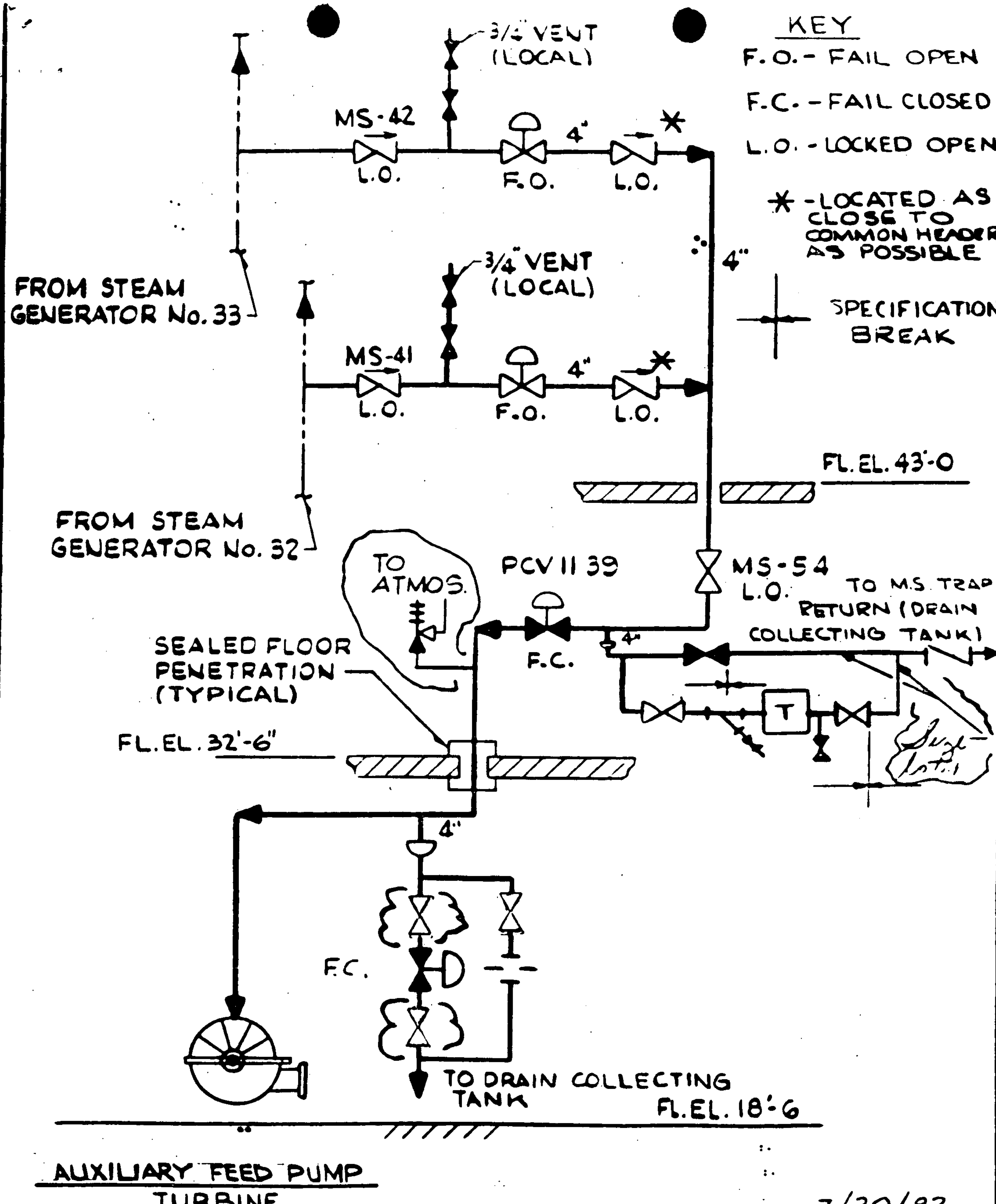

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INDIAN POINT No.3 NUCLEAR POWER PLANT

FIG.2: CONCEPTUAL DESIGN FOR STEAM SUPPLY TO AFF TURBINE

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