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February 28, 1980

IPN-80-24

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Washington, D. C. 20555

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

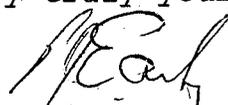
Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Fire Protection Program Review

Dear Sir:

Enclosed please find the Authority's revised response to NRC Staff Positions P2 and P3 of Attachment 2 to our letter to you of July 17, 1979 (IPN-79-51). These positions were discussed with your Mr. H. George on February 8, 1980 with the conclusion that these commitments were acceptable.

The fire protection improvements described in the enclosed revised responses were not included in the NRC's Safety Evaluation on the Indian Point 3 Fire Protection Program, dated March 6, 1979. The Authority plans to complete these modifications by October 31, 1980.

Very truly yours,


Paul J. Early
Assistant Chief Engineer-Projects

enc.

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

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ATTACHMENT 2
RESPONSES TO NRC STAFF POSITIONS
OF MAY 21, 1979
ON FIRE PROTECTION PROGRAM

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
JULY 13, 1979

(REVISED FEBRUARY 22, 1980)

Position 2

During the above referenced site visit, we were informed of the planned location for the 3-hour wall referenced in the PASNY letter of April 6, 1979 to be located between the cable tunnels and cable spreading room. With this location, an open area would exist between the end of the tunnels and the new wall. This open area will contain redundant safe shutdown cables. The staff concern is that the proposed fire protection using closed heads adjacent to the trays may not be effective in detecting and suppressing a fire in this area. Although manual suppression may be available to suppress a fire and protect redundant cables, we prefer to not place primary reliance on the fire brigade to prevent a fire from affecting redundant safety divisions. To provide adequate overall protection for cables in this area between the cable spreading room and the cable tunnels, one of the following should be provided:

- a. Extend the floor/ceiling separating the tunnels with a 3-hour rated barrier up to the new wall;
- b. Extend the closed head spray nozzles into the tray area so that nozzles are located above the trays, and use horizontal sidewall type nozzles to provide coverage of the trays. This type arrangement should extend for at least 15 feet into the tunnels, or
- c. Use open head spray nozzles in this area and extending for at least 15 feet into the tunnel. The system should be actuated by detection devices located above the cable trays.

If alternative (b) or (c) is chosen, the suppression systems protecting cables on each side of this open area should be on separate feeds such that failure or isolation of any section of fire suppression piping will not incapacitate both systems.

Response

Instead of providing 3-hour fire rated enclosures for cable trays 18N, 19N and 22N, the Authority proposes to implement NRC recommendation (b) to extend the closed head spray nozzles into the tray area so that the nozzles are located above the trays, and to use horizontal side-wall type nozzles to provide coverage of the trays. This type arrangement will extend at least 15 feet into the tunnels. The spray heads will meet the design density requirements of NFPA-15-1977. Rate of rise type heat detectors will be provided above each cable tray.

The suppression system protecting the cables on each side of the open area between the wall and the tunnel will be on separate feeds such that failure or isolation of any section of fire suppression piping will not incapacitate both systems.

Position 3

Barriers are provided at certain locations inside containment to separate redundant safe shutdown instrumentation cabling. No barriers are provided between redundant instrumentation cabling at the penetration area. To provide adequate separation between redundant cabling, both the following should be met:

- a. Provide test data to demonstrate the adequacy of the existing barriers to prevent a fire below the barrier from damaging cables in trays above the barrier, or install tested thermal barriers, such as Kao-Wool, to insulate the lower cable tray containing instrumentation cables of one channel where the redundant instrumentation cable trays are stacked above each other. The fire barrier installation should conform to a design which has been tested to demonstrate a 1-hour fire rating, and
- b. Thermal barriers, as above, should also be installed to enclose one channel of safe shutdown instrumentation both where the cabling crosses from the stack of trays over to the penetration area, and at the penetration area. An alternative to this would be to provide tested barriers to separate cable trays presenting an exposure hazard to the safe shutdown instrumentation. The channel to be protected should also be the channel that is located in the lowest tray where the redundant instrumentation cable trays are stacked above each other (channel 4).

Response

- a. The Authority will install tested fire barriers, such as "M" boards (BISCO) or high temperature fabric blankets (TECH-SIL), to enclose the lower cable trays of one channel where the redundant instrumentation cable trays are stacked above each other. The fire barrier installation will conform to a design which has been tested to demonstrate a minimum 1-hour fire rating.
- b. The Authority will install similar fire barriers as specified above, to enclose the same channel of safe shutdown instrumentation both where the cabling crosses from the stack of trays to the penetration area and at the penetration area.