

POWER AUTHORITY OF THE STATE OF NEW YORK

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IPN-79-84

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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
Fire Protection Program Review

Dear Sir:

In the Authority's October 23, 1978 submittal to the NRC, a commitment was made in the response to staff question 11.d to install an automatic, wet-pipe hydraulic sprinkler system in the Diesel Generator Building for Diesel Generators Nos. 31, 32 and 33.

Please be advised that the system will not be installed. Instead, the Authority will provide a total flooding CO₂ system for these compartments. In a phone conversation on July 19, 1979 between the Authority's staff and Messrs. Olshan and Knight of your staff, it was concluded that this modification was acceptable.

In addition, the Authority is erecting a Butler type building over the circulating water and nuclear service water pumps on the intake structure to provide for easier all weather maintenance of these motors and pumps. The Authority will provide two manual hose stations, one at each end of the building, plus smoke detectors inside the building for detecting and suppressing fires. During the same phone conversation mentioned above, it was concluded that this protection was acceptable in-lieu-of the BTP 9.5-1 requirements for automatic fire suppression since the Indian Point 3 facility has backup nuclear service water pumps available.

Approved
11/1

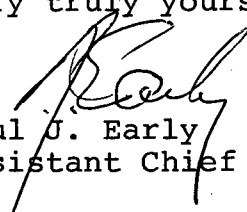
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U.S. Nuclear
Regulatory Commission

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A revised response to the previously mentioned staff question
11 is enclosed.

Very truly yours,


Paul J. Early
Assistant Chief Engineer-Projects

SUPPLEMENTAL INFORMATION TO
NRC REQUEST OF SEPTEMBER 29, 1978
AND NOVEMBER 28, 1978 FOR
ADDITIONAL INFORMATION ON
FIRE PROTECTION PROGRAM

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
SEPTEMBER 14, 1979

Question No. 11

Provide the following design criteria details for proposed additions to fire protection systems:

- a. Fire Pumps - number, rated capacity, rated pressure, type drive, electrical power arrangement, starting arrangement.
- b. Fire Water Tanks - number, capacity
- c. Fire Underground - drawings on location of piping, valves and hydrants.
- d. Sprinklers (in safety-related areas) - type system, actuation method, design densities, water flow alarms.
- e. Hose Stations - minimum nozzle pressure at design flow rates.
- f. Fire Detection Systems - emergency power supply, electrical circuit supervision, use of approved components.
- g. Fire Doors and Dampers - locations, fire ratings.
- h. CO₂ Systems - concentrations, soak times, actuation method.

Response

a. Fire Pumps

Number	2
Rated capacity	2500 GPM
Rated pressure	110 psig
Type of drive	one electric motor driven one diesel engine driven

Electrical power arrangement

The Motor Driven Fire Pump will have its normal power supply from a new 480 volt switchgear to be located in the turbine bldg. at elevation 15 feet. A stand-by power feed will be provided from an existing 480 volt Class 1E Switchgear. If the normal power supply fails, the pump can be run from the standby Class 1E power source.

Starting arrangement

Automatic, on pressure drop in the main fire loop below a pre-set point.

b. Fire Water Tanks

Number
Capacity

2
350,000 gallons each, 300,000 gallons in each tank are reserved for Fire Protection

c. Fire Underground

Attached is a drawing M095 showing the piping arrangement, valves and hydrants.

d. Sprinklers (in safety-related areas)

<u>Area</u>	<u>Type of System</u>	<u>Actuation Method</u>	<u>Design Densities</u>	<u>Water Flow Alarms</u>
Penetration Area & Tunnel EL.33'-0"	Dry-pipe preaction	Automatic	30 GPM/Sprinkler (1.34 GPM/Ft. ² of cable tray area).	Yes
Penetration Area & Tunnel EL.43'-0"	Dry-pipe preaction	Automatic	30 GPM/Sprinkler (1.34 GPM/Ft. ² of cable tray area).	Yes

e. Hose Stations

Minimum nozzle pressure at design flow rates shall be in conformance with NFPA standard 14, not less than 65 psi at the outlet with 500 GPM flowing from the outlet.

f. Fire Detection Systems

Shall have emergency power supply. All circuits shall be electrically supervised. All components shall be UL approved and FM listed.

g. Fire Doors and Dampers

<u>Location (see drawings A019 and A021)</u>	<u>Fire Rating</u>
Control Bldg. to Turbing Bldg. EL. 15'-0"	U.L. 3 Hour Rating
Control Bldg. to Stair EL. 15'-0"	U.L. 3 Hour Rating
South Wall of Control Bldg. to Sump Pump Rm. EL. 15'-0"	U.L. 1½ Hour Rating
West Wall to Diesel Gen. Bldg. EL.15'-0"	U.L. 3 Hour Rating
Diesel Gen. Bldg. EL. 15--0" Between the three Gen. Rms. (4 Doors)	U.L. 3 Hour Rating
East Wall of Diesel Gen. Bldg. EL.15'-0"	U.L. 3 Hour Rating
Control Bldg. to Turbine Bldg. EL. 36'-9"	U.L. 3 Hour Rating
Control Bldg. to Stair EL. 33'-0"	U.L. 1½ Hour Rating
South Wall of Control Bldg. to Air EL. 33'-0"	U.L. 1½ Hour Rating
West Wall of Control Room to Turbine Bldg. EL. 53'-0"	Bullet resistant (class 4 as required by 10 CFR 73.55 (c) (6). Approved by American Nuclear Insurers (ANI).
East Wall of Control Room to Stair EL. 53'-0"	Bullet resistant (class 4) as requested by 10 CFR 73. (c) (6). Approved by American Nuclear Insurers (ANI).
Northeast Wall of Diesel Gen. Bldg. EL.43'-6"	U.L. 3 Hour Rating
North End of Diesel Gen. Bldg. EL. 43'-6" (Between the Gen. Rooms, Two doors)	U.L. 3 Hour Rating

Cable Tunnel Entry
EL. 33'-0"

U.L. 3 Hour Rating

Fire Damper Between
Turbine Bldg. & Control
Bldg. EL. 33'-0"

U.L. 3 Hour Rating

Fire Damper Between
Turbine Bldg. & Control
Bldg. EL. 15'-0"

U.L. 3 Hour Rating

h. CO₂ System

<u>System</u>	<u>Concen- tration</u>	<u>Application Time (Soak Time)</u>	<u>Actuation Method</u>
Cable spreading rm. Control Bldg. EL. 33'-0"	50%	Total Flooding (10 min.)	Automatic - additional applica tion manual
Relay Room Control Bldg. EL. 15'-0"	50%	Total Flooding (10 min.)	Automatic additional applica tion manual
Diesel Gen. Bldg. Gen. # 31, 32, & 33	50%	Total Flooding (30 min.)	Automatic - additional applic tion manual