

POWER AUTHORITY OF THE STATE OF NEW YORK
10 COLUMBUS CIRCLE NEW YORK, N. Y. 10019
(212) 397-6200

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December 21, 1978
JNRC-78-63

Director of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Thomas A. Ippolito
Operating Reactors Branch No. 3
Division of Operating Reactors

Subject: James A. FitzPatrick Nuclear Power Plant
Responses to NRC Staff Concerns/Staff Positions
Relating to Fire Protection Program
Docket No. 50-383

Dear Sir:

Transmitted herewith are responses to Enclosure No. 3 of your letter dated September 22, 1978 which forwarded the NRC staff's concerns/positions regarding the fire protection program at the James A. FitzPatrick Nuclear Power Plant.

Please note that responses to the questions given in Enclosures No. 2 and No. 4 of the September 22 letter were submitted to the Commission on October 23 and October 27 of this year, respectively.

Very truly yours,

Paul J. Early
Assistant Chief Engineer-
Projects

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James A. FitzPatrick Nuclear Power Plant
Responses to USNRC Staff Concerns/Staff Positions
(Delineated In Enclosure 3) Relating To Fire Protection

PF-7 Fire Brigade Composition

It is the Authority's position that the Shift Supervisor should continue as the Fire Brigade Leader. The Shift complement at JAFNPP includes the following members:

1. Shift Supervisor - Holds Senior Operator's License
2. Senior Nuclear Operator (SNO) - Holds Operator's License
3. Nuclear Control Operator (NCO) - Holds Operator's License
4. Nuclear Operator C (NOC)
5. Nuclear Operator B (NOB)
6. Auxiliary Operator A (AOA)
7. Security Force

In the event of a fire, the Shift Supervisor, at least two (2) licensed Operators and two (2) members of the Security Force comprise the five (5) member Fire Brigade. The Nuclear Control Operator reports to the Control Room.

It is the Authority's belief that this deployment of personnel during a fire emergency provides a number of advantages over the organization suggested by the Commission Staff.

- 1) Since the most serious threat to nuclear safety during a fire emergency is the fire itself, the presence of the most experienced and knowledgeable individual in the plant (the Shift Supervisor) at the fire scene minimizes the potential effect on nuclear safety for most fire emergencies.
- 2) The Operators dedicated to the Control Room (the SNO and NCO) are the two (2) individuals on the shift with the most hands-on experience in the Control Room, thus their presence in the Control Room during a forced shutdown during a fire emergency that may or may not have direct effect on the instruments, controls and systems used for shutdown is more essential than others on the shift.

- 3) The Senior Nuclear Operator is the individual with the closest involvement in the coordination of plant startup, planned shutdown, load changes, tests, scrams and any other evolution. In addition, the SNO provides most of the "on scene" direction of the evolutions noted above, thus, he demonstrates his ability to direct system operation from the Control Room or remote locations on a continuing basis.
- 4) In addition, the Senior Nuclear Operator and the Nuclear Control Operator have the authority and responsibility for shutting down the reactor when the safety of the reactor is in jeopardy or when operating parameters exceed protective circuit setpoint and an automatic shutdown (scram) does not occur. Each Operator holding a Senior Operator's License or Operator's License has been counselled in these responsibilities and authorities and receives periodic retraining in this and other areas as part of the Licensed Operator Requalification Program.
- 5) The Authority recognizes that a severe fire emergency in certain safety related equipment or cables might cause failures or interactions between related or redundant safety related systems which would result in system conditions and/or indications for which no pre-plans have been developed or discussed. The Authority further recognizes that under such conditions, the presence of the Shift Supervisor at the fire scene rather than in the Control Room might reduce or delay some mitigating acts related to conduct a safe shutdown of the reactor. However, the Authority believes that the probability of such an event is significantly lower than the probability of other fire emergencies. This position is based on the considerations that each safety related area in JAFNPP that contains a significant amount of combustible material is protected from a severe fire emergency by defense in depth principles. That is, where warranted, physical barriers, early warning systems, automatic suppression systems and one or more backup suppression devices is available, to effectively control, suppress and extinguish any credible fire.

In summary, it is the Authority's belief that existing and planned additions to the Fire Protection System, training, other modifications, that may be installed as a result of discussions borne of the August 15-18, 1978 meeting with the NRC at JAFNPP and further resolution of the Commission Staff Positions set forth in the U. S. Nuclear Regulatory Commission's letter of September 22, 1978, will assure more than adequate defense in depth with respect to any fire emergency at JAFNPP. It is therefore the Authority's position that the greatest single factor that presents a threat to nuclear safety (with respect to fire emergency) is the fire itself and therefore, the Shift Supervisor must remain the Fire Brigade Leader.

As a follow-up to our previous telephone conversations with Mr. Polk of your office, we are providing below and outline of the present status of our response for Question PF-8, PF-11, PF-19, PF-20, PF-22, PF-23, PF-27, PF-32 and PF-36.

The Authority has requested the Technical Services Support Contractor to evaluate the nine (9) fire protection questions listed above and to provide necessary design and engineering support. The Contractor has recently completed a Phase I study which consisted of review of the questions and a schedule for Phase II. The Phase II effort will develop answers to the USNRC's questions and provide a quantitative basis for either proposed modifications or for a justification of an acceptable alternative position.

The Authority is in the process of evaluating the results of the Phase I study to develop an acceptable scope of work for Phase II. A schedule for Phase II work has not yet been accepted.