

Public Service
Electric and Gas
Company

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Vice President - Nuclear Engineering

SEP 13 1990

NLR-N90166

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

SUPPLEMENTAL INFORMATION APPLICABLE TO
CLARIFICATION OF THE APPENDIX R EXEMPTION
FOR PANEL 335
SALEM GENERATING STATION
DOCKET NOS. 50-272, 50-311

In response to your questions regarding our request, per
NLR-N90058, for correction to the previously approved 10 CFR 50
Appendix R exemption regarding the fire suppression system for
Panel 335 in each unit, Public Service Electric and Gas forwards
the attached responses. If you have any questions about this
submittal, please do not hesitate to call.

Sincerely,



Attachment

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SEP 13 1990

C Mr. J. C. Stone
Licensing Project Manager

Mr. T. Johnson
Senior Resident Inspector

Mr. T. Martin, Administrator
Region I

Mr. Kent Tosch, Chief
New Jersey Department of Environmental Protection
Division of Environmental Quality
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625

1. Question: What two types of mechanisms are employed to provide alarms for indication of fire at Panel 335, and how are they actuated?

Answer: The design includes the installation of smoke detectors in the area of Panel 335. Actuation of a smoke detector will be indicated in the Control Room. In addition, the dry pipe portion of the system is pressurized with air between the fusible link sprinkler heads and the dry pipe valve. A pressure switch is utilized to monitor air pressure. When heat from a fire causes a fusible link sprinkler head to open allowing the pressurized air to be released, the air pressure switch will signal a second fire indication in the Control Room.

2. Question: What air supply is applied to the dry pipe and how is it assured that water is not introduced into that system or air introduced into the water suppression system?

Answer: The air supply to be used in the dry pipe portion of the system is the Control Air System. In order to regulate the air pressure being maintained in the dry portion of the system and allow for make up of minor system losses, an air pressure maintenance device will be installed downstream of the Control Air System manual isolation valve (see figure attached). Internal to the air pressure maintenance device is a ball check that prevents the back flow of water into the air system. The air pressure maintenance device, however, is also provided with a bypass line and a normally closed bypass valve. This line allows the dry portion of the system to be re-pressurized expeditiously following a system actuation. Therefore, downstream of the "Tee" where the bypass line and the air pressure maintenance device intersect (between the air pressure maintenance device and the dry portion of the system), a check valve is being provided. Both the air pressure maintenance device and the check valve are typical components of a dry pipe system.

Finally, the dry pipe valve selected includes a differential air to water seat design. This type of design allows use of a lower air pressure to control a much higher water pressure. Once a fusible link sprinkler head opens to release the pressurized air, the air pressure maintenance device prevents rapid re-pressurization of the dry portion of the system so that the dry pipe valve will open. This is accomplished by a 1/16" restricting orifice within the air pressure maintenance device.

