

NOTICE OF VIOLATION

Public Service Electric and Gas Company
Salem Nuclear Generating Station
Unit 1

Docket No. 50-272
License No. DPR-70
EA 84-36

A special fire protection inspection conducted at the Salem Nuclear Generating Station on December 5-6, 1983 and January 16-20, 1984 identified violations of NRC requirements. In accordance with the "General Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1987), the violations are set forth below:

10 CFR 50.48(b) requires in part that all nuclear power plants licensed to operate prior to January 1, 1979, such as Salem Nuclear Generating Station, Unit 1, shall satisfy the applicable requirements of Appendix R to Part 50 including, specifically, the requirements of Sections III.G, Fire Protection of Safe Shutdown Capability, III.J, Emergency Lighting, and III.O, Oil Collection System for Reactor Coolant Pump.

- A. 10 CFR Part 50, Appendix R, Section III.G.1 requires that fire protection features shall be provided for structures, systems, and components important to safe shutdown. These features shall be capable of limiting fire damage so that one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control stations is free of fire damage.

Section III.G.2 and III.G.3 specify alternatives that may be implemented outside of primary containment to assure that one redundant train of equipment, cabling and associated circuits necessary to achieve and maintain hot shutdown remains free of fire damage. The alternatives are:

1. Separation of redundant trains of equipment, cabling and associated circuits by a three-hour rated fire barrier.
2. Separation of redundant trains of equipment, cabling and associated circuits by a horizontal distance of 20 feet with no intervening combustibles and fire detection and automatic fire suppression systems installed in the area.
3. Enclosure of redundant trains of equipment, cabling and associated circuits by a one-hour rated fire barrier with fire detection and automatic fire suppression systems installed in the area.
4. Installation of alternative or dedicated shutdown capability independent of the equipment, cabling and associated circuits under consideration, and installation of fire detection and fixed fire suppression systems in the area under consideration.

Contrary to the above, as of January 20, 1984, fire protection features were not provided for certain redundant trains of equipment and/or cabling located outside the primary containment necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control stations such that one train would remain free of fire damage and none of the alternatives provided by Section III.G.2 or III.G.3 were implemented. Specifically:

1. Redundant charging pumps 11, 12, and 13 in the auxiliary building, 84' elevation, required for hot shutdown were not separated by a three-hour fire barrier and the separation distance was less than 20 feet. Fire detection was provided; however, the automatic fire suppression was not area wide. One of the redundant trains was not enclosed in a one-hour fire barrier and no alternative or dedicated shutdown capabilities were provided.
 2. The redundant 460 VAC/230 VAC switchgear located in the auxiliary building, 84' elevation, and required for hot shutdown, were not separated by a three-hour fire barrier. Although the separation distance was greater than 20 feet, there were intervening combustibles consisting of horizontal cable trays and cables. The installed CO₂ suppression systems were not automatic. The installed one-hour fire barriers (partial height partitions) between the redundant switchgear did not completely enclose one of the redundant trains and there were no alternative or dedicated shutdown capabilities provided.
 3. The redundant service water motor control centers (MCCs) located in the intake structure and required for hot shutdown, were separated by three-hour rated concrete walls. However, the doors on these walls were not three-hour rated. The distance between the MCCs was greater than 20 feet and there was fire detection in the area; however, there was no automatic fire suppression. In addition, neither of the redundant trains were enclosed in a one-hour fire barrier and there were no alternative or dedicated shutdown capabilities provided.
- B. 10 CFR Part 50, Appendix R, Section III.G.1.b, requires that systems necessary to achieve and maintain cold shutdown from the control room or emergency control station(s) can be repaired within 72 hours.

Contrary to the above, as of January 20, 1984, redundant Resident Heat Removal pumps (11 and 12) required for cold shutdown were not capable of being repaired within 72 hours as demonstrated by the absence of planning, procedures, and/or materials necessary to implement fire damage repairs.

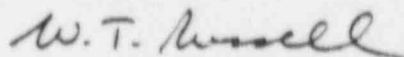
- C. 10 CFR Part 50, Appendix R, Section III.G.2, requires that, for redundant trains of systems necessary to achieve and maintain hot shutdown conditions inside non-inerted containments, one of six (III.G.2.a-f) fire protection means shall be provided.

Contrary to the above, as of January 20, 1984, none of the alternatives (III.G.2.a-f) were satisfied for the pressurizer heater termination cabinet and pressurizer level and pressure instrumentation cabinet 3.5, which were located inside the primary containment and relied upon in the fire hazards analysis to achieve and maintain hot shutdown conditions.

This is a Severity Level III problem (Supplement I).

Pursuant to the provisions of 10 CFR 2.201, Public Service Electric and Gas Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 with a copy to the Regional Administrator, Region I and a copy to the NRC Resident Inspector within 30 days of the date of the letter transmitting this Notice. This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation if admitted, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved. Where good cause is shown, consideration will be given to extending the response time. If an adequate reply is not received within the time specified in this Notice, an order may be issued to show cause why the licensee should not be modified, suspended, or revoked or why such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown.

FOR THE NUCLEAR REGULATORY COMMISSION



William T. Russell
Regional Administrator

Dated at King of Prussia, Pennsylvania,
this 15th day of June 1987.