Enclosure 3

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

050311-830424

Report No. 50-311/83-18

Docket No. 50-311

License No. DPR-75 Priority - Category C

Licensee: Public Service Electric and Gas Company

80 Park Plaza

Newark, New Jersey 07101

Facility Name: Salem Nuclear Generating Station - Unit 2

Inspection At: Hancocks Bridge, New Jersey

Inspection Conducted: May 9-18, 1983

Inspectors: _____ July 18, 1983
L. J. Norrholm, Senior Resident Inspector date

_____ July 18, 1983
R. Summers, Resident Inspector date

_____
date

Approved by: R P Zimmerman for _____ July 20, 1983
H. B. Kister, Chief, Projects Section No. 2B, date
Division of Project and Resident Programs

Inspection Summary:

Inspection on May 9-18, 1983 (Report Number 50-311/83-18)
Special inspection (12 hours) to review the circumstances surrounding the loss of reactor coolant system overpressure protection event of April 24, 1983.
Results: One violation was identified (Failure to meet a Technical Specification Limiting Condition for Operation - Paragraph 2).

Region I Form 12
(Rev. February 1982)

DETAILS

1. Persons Contacted

J. Driscoll, Assistant General Manager-Salem Operations
L. Fry, Operations Manager
N. Gerrity, Senior Operations Supervisor
J. Gueller, Operating Engineer
J. Zupko, Jr., General Manager-Salem Operations

2. Loss of Low Temperature Overpressure Protection Event

On April 23, 1983, with the plant in Mode 5 (Cold Shutdown) and the reactor vessel head installed, both Pressurizer Overpressure Protection (POPS) relief valves were inoperable due to closed block valves which were tagged to support on-going maintenance. Technical Specification 3.4.10.3 requires that, with the reactor coolant system temperature less than 312 degrees F and the vessel head installed, one of the following methods of overpressure protection must be available:

Two POPS relief valves with a lift setting less than or equal to 375 psig, or,
The Reactor Coolant System (RCS) be depressurized and vented through a vent of at least 3.14 square inches.

With the POPS valves inoperable as described above, the plant was being maintained in a depressurized condition via a vent path established through an open flange established by pressurizer safety valve 2PR5 removal. The vent path was checked once per shift by sending operators into containment to confirm that the valve was not installed on the flange.

On April 21, 1983 the shift supervisor signed authorization of a work order requesting that a blank be installed at 2PR5 flange in preparation for safety injection (SI) system full-flow tests, and at about 6:00 a.m. on April 24, 1983 maintenance department personnel installed the blank. This action eliminated the established overpressure protection for the reactor coolant system. Subsequent statements of the shift supervisor indicated that he intended only to authorize fabrication of the blank and expected verbal notification prior to blank installation in order to establish an alternate vent path. The installation of the blank at 2PR5 flange apparently took place with no further contact between maintenance and operations personnel.

At about 6:45 a.m. on April 25, operations personnel were informed that the blank may have been installed during the preceding weekend. The flange was checked and the blank found in place at about 8:45 a.m. Immediate steps were initiated to establish an alternate vent path by clearing tags on the PORV block valves, opening a block valve, and blocking open a PORV. This path was established at about 1:58 p.m. on April 25, 1983. Technical Specification 3.4.10.3 requires that, if both POPS valves are or become inoperable, the plant is to be depressurized and vented through a 3.14 square inch vent within eight hours.

- The following additional findings are pertinent to this event;

  -- Operators sent into containment apparently verified the safety valve not installed, by visually observing removed valve 2PR5. They apparently did not routinely check the mounting flange opening.

  -- During the interval that the vent path was closed, no challenge to the overpressurization system occurred.

  -- During this interval, all charging pumps and safety injection pumps were unavailable and tagged off. The safety injection accumulators were depressurized and the pressurizer heaters were tagged off.

  -- For the duration of this event, the RCS was in a partially drained condition with level maintained at about the centerline of the loop nozzles. In this condition, the pressurizer is empty.

  -- No procedural guidance was provided to establish a preferred vent path, nor were any defined controls established to ensure that the vent path was not voided, other than the once per shift surveillance inspection.

  Failure to maintain the required reactor coolant system vent path when no POPS relief valves were operable constitutes a violation of Technical Specification 3.4.10.3 (311/83-18-01).

3. Exit Interview

   The inspectors met with licensee management on May 19, 1983 to discuss the scope and findings of this special inspection.