

Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 736.8001



Joseph E. Russell
Resident Manager

May 18, 1992
IP3-NRC-92-032

License No. 50-286
Docket No. DPR-64

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555

Dear Sir:

The following is a special report of an Overpressure Protection System (OPS) actuation at Indian Point 3, prepared in accordance with Technical Specification 6.9.2.j and 3.1.A.8.c.

At 1355 hours on April 18, 1992, during a normal plant cooldown in preparation for a refueling outage, the low temperature overpressure protection system actuated. The system responded as designed.

The actuation occurred during a controlled evolution with Reactor Coolant System (RCS) pressure and temperature within the limits of the Indian Point 3 10CFR50 Appendix G criteria.

The OPS is designed to prevent overpressurization of the reactor vessel during low pressure and temperature conditions. It is a three channel curve tracking circuit which initiates a chain of coincidence logic for the purpose of automatically preventing a violation of the technical specification temperature/pressure limit curve for the reactor vessel.

Three cold leg resistance temperature detectors (RTD) and three loop pressure transmitters provide the temperature and pressure inputs to redundant trains. Two of the three temperatures at or below 330 degrees will arm the OPS, open the block valves for the Power Operated Relief Valves (PORV), and unblock the OPS alarm. The temperature and pressure are then compared to a setpoint curve and provide a PORV opening signal when the delta pressure is less than a minimum value.

9205200266 920518
PDR ADDOCK 05000286
S PDR

Handwritten signature
1/0

The alarms for the OPS system are armed by the same temperature setpoint as the opening of the PORV block valves and the OPS system arming. Therefore, prior to the arming of the OPS system, no alarms were present. The alarms occurred coincident with the arming and actuation of the system.

At 1330 hours on April 18, 1992 the following initial conditions existed.

| | |
|---|--------------------------------------|
| RCS temperature | 345 degrees F |
| RCS pressure | 1400 psig steam bubble in Pzr. |
| Pressurizer level | approximately 91% |
| Reactor Coolant Pumps (RCP) in operation | 33 and 34 RCPs |
| OPS status | not armed |
| Cooldown rate | approximately 12 degrees per hour |

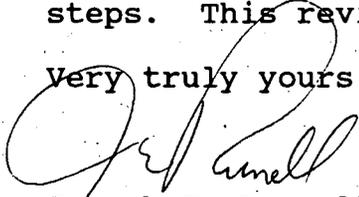
Just prior to 1355, POP-3.3, Plant Cooldown - Hot to Cold Shutdown, was being performed. The operators were aware of the OPS system requirements and had been following the curve with pressure. Shortly after the OPS had been placed in service the operator noted that OPS had armed and the block valves were going open. Annunciators for "RCS Overpress Press Trip" and "Impending RCS Overpress" alarmed and the PORVs opened. The RCS cooldown had been maintained and because RCS pressure had been momentarily stabilized to allow the operator to perform other duties, the temperature/pressure correlation circuit generated an actuation signal. The operators stopped the cooldown, reduced pressure to less than the OPS setpoint, and closed the PORVs.

The actuation occurred at 330 degrees F, which is before the system is required to be in service (equal to or less than 326 degrees F). The system functioned as required when armed and actual pressure was greater than setpoint.

The root cause of the event was personnel error by a licensed reactor operator. The error was a cognitive error in that the concurrent actions being performed at the time detracted from the operator's ability to maintain pressure below the setpoint curve.

Procedure POP-3.3 will be revised to prevent recurrence.
The revision will prioritize and sequence operator action
steps. This revision will be completed by June 30, 1992.

Very truly yours,



Joseph E. Russell
Resident Manager
Indian Point 3 Nuclear Power Plant

jer/whs/rj