



Ralph E. Beedle
Executive Vice President
Nuclear Generation

October 2, 1992
IPN-92-048

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

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Power-Operated Relief Valve and Block Valve Reliability and Low-Temperature Overpressure Protection For Light-Water Reactors (Generic Letter 90-06)

- References:
1. NYPA Letter, J. C. Brons to the NRC, " Response to Generic Letter 90-06," dated December 21, 1990 (IPN-90-058).
 2. NRC Letter, N. Conicella to R. E. Beedle, same subject, dated July 28, 1992.
 3. NUREG-1316, " Technical Findings and Regulatory Analysis Related to Generic Issue 70--Valuation of Power Operated Relief Valve and Block Valve Reliability in PWR Nuclear Power Plants."

Dear Sir:

The Authority submitted a response to Generic Letter (GL) 90-06 in Reference 1, and provided information on the quality assurance, maintenance and inservice testing aspects of power-operated relief valves (PORVs) and block valves which enhance the reliability of these valves. In Reference 2, the NRC requested information pertaining to the addition of PORV nitrogen supply system valves to the ASME Section XI Inservice Testing (IST) Program for Pumps and Valves or as an alternative to test these non-ASME Code Class valves periodically outside the IST Program. The NRC also requested information in Reference 2 regarding the Authority's evaluation for the Technical Specification (TS) changes recommended in GL 90-06.

In response to the recommendation in GL 90-06 and Reference 2, the Authority has added the non-ASME Code Class nitrogen supply system valves for the PORVs in the IP-3 surveillance test program. These valves would be tested every refueling outage. The first test was conducted during the recently completed cycle 8/9 refueling outage. The Authority has evaluated the TS changes recommended in GL 90-06 and has determined that IP-3 TS for PORVs, block valves and Overpressure Protection System don't warrant any changes for

070025
9210090210 921002
PDR ADDCK 05000286
PDR

AD19 1/0

the following reasons:

The IP-3 accident analysis for the Steam Generator Tube Rupture (SGTR) accident does not specifically call for the use of PORVs to reduce the Reactor Coolant System (RCS) pressure. Although the Emergency Operating Procedure (EOP) for SGTR accident utilizes the PORVs, it does not rely primarily on the PORVs to mitigate the accident. The primary action for depressurizing the RCS after a SGTR accident involves the pressurizer spray. If the pressurizer spray is not available due to loss of offsite power, one PORV is called upon. If a single PORV is not available, the auxiliary spray supplied by the charging pumps is used to depressurize the RCS.

The cost/benefit analysis in Reference 3 relies on a large Outage Avoidance Cost (OAC). As discussed in Reference 3, the EPRI observation that the capacity losses attributed to these valves have remained relatively constant over the years infers that little, if any, improvement has been made in the maintenance and quality assurance procedures for these valves. Considering the above, the OAC discussion in NUREG-1316 concluded that placing the PORVs and block valves on the quality assurance program list of critical valves, improvements in PORV and block valve maintenance programs and quality assurance procedures, inservice testing in accordance with Section XI of the ASME Code and additional testing for PORV block valves requested in Generic Letter 89-10, and upgrading the Technical Specifications for these valves could result in approximately a 75% reduction in plant capacity losses attributed to PORVs and block valves.

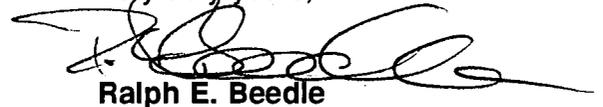
As indicated in Reference 1, the IP-3 PORVs and block valves are included in the Plant Equipment Database as Category 1 safety-related valves and are part of the Quality Assurance (QA) Program. This QA Program is in compliance with 10 CFR 50 Appendix B. The Authority performs regular preventive maintenance on PORVs and block valves, and these valves are included in the ASME Section XI IST Program. The block valves are included in the motor-operated valve (MOV) test program in accordance with Generic Letter 89-10. Therefore, since all these improvements are already in place for IP-3, and PORVs and block valves have not been the cause of plant capacity losses, there is no apparent OAC savings associated with these improvements for IP-3. The other remaining element of the OAC calculation is the upgrading of the Technical Specifications to impose a 72 hour allowed outage time (AOT) for an inoperable PORV. Not only could this put the plant in an unnecessary transient condition from power operation to hot shutdown, but could also result in an increase in IP-3 capacity losses and yield a negative OAC. A negative OAC combined with the implementation cost, would result in a negative cost/benefit value. Therefore, the Authority believes that considering the quality assurance, maintenance and testing programs for the PORVs and the block valves at IP-3, there would be no substantial increase in the overall protection of the public health and safety. Furthermore, the lack of any increase in this benefit does not justify the cost to impose this restriction.

In Reference 2, the NRC also indicated that it would be receptive to the idea of extending the recommended 24 hour AOT for an inoperable Low-Temperature Overpressure Protection (LTOP) channel to 7 days provided the plant is not water solid and the licensee identifies a pressurizer level which provides protection against cold overpressurization comparable to that provided by the nitrogen bubble in the Babcock and Wilcox (B&W) plants. The current IP-3 TS include restrictions that preclude operation in a water solid condition with

one or more PORVs inoperable. The RCS is protected against overpressure transients when the RCS temperature is less than 332°F by restricting the number of charging and safety injection pumps that can be energized to feed the RCS. Figures 3.1.A-4, 3.1.A-5 and 3.1.A-6 of the TS provide the pressurizer levels for various conditions to protect the RCS from cold overpressurization. Based on the above discussion, the Authority believes that the IP-3 TS provide reasonable protection against cold overpressurization and therefore justifies the AOT of 7 days for an inoperable Overpressure Protection channel as currently provided in the IP-3 TS.

Should you or your staff have any questions regarding this matter, please contact Mr. P. Kokolakis.

Very truly yours,



Ralph E. Beedle

cc: U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector's Office
Indian Point 3
U. S. Nuclear Regulatory Commission
P. O. Box 337
Buchanan, NY 10511

Mr. Nicola F. Conicella, Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
U. S. Nuclear Regulatory Commission
Mail Stop 14 B2
Washington, DC 20555