Indian Point 3
Nuclear Power Plant
P.O. Box 215
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New York Power Authority

William A. Josiger
Resident Manager

June 29, 1989
IP3-89-048

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

Mr. William T. Russell
Regional Administrator
U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Subject: NRC Bulletin No. 88-08
Thermal Stresses In Piping Connected To
Reactor Coolant Systems

References:

1. NRC Bulletin No. 88-08: Thermal Stresses In Piping Connected To Reactor Coolant Systems, dated June 22, 1988.
2. NRC Bulletin No. 88-08, Supplement 1, dated June 24, 1988.
3. NRC Bulletin No. 88-08, Supplement 2, dated August 4, 1988.
4. NYPA letter Josiger to Russell, dated October 12, 1988, Indian Point 3 Response to NRC Bulletin 88-08 Actions
5. NRC Bulletin No. 88-08, Supplement 3, dated April 11, 1989.

Dear Mr. Russell:

Reference (1) requested licensees to review their reactor coolant systems (RCS) to identify any connected unisolable piping that could be subjected to temperature distributions which would result in unacceptable thermal stresses. If such piping were identified, licensees were requested to ensure that the piping will not be subjected to unacceptable thermal stresses. References (2), (3), and (5) provided amplifying information concerning this request.

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Reference (4) provided the results of the Authority's review requested by Reference (1). That review determined that there was one unisolable section of piping connected to the RCS that may have been subjected to thermal stresses as described in the subject bulletin. This letter and Attachment I provide the Authority's response to Action Items 2 and 3 of Reference (1) for the identified one unisolable section of piping connected to the RCS found at Indian Point 3.

Should you or your staff have any further questions regarding this matter, please contact Mr. M. F. Peckham of my staff.

Sincerely,

W. A. Josiger
Resident Manager
Indian Point 3
Nuclear Power Plant

State of New York
County of Westchester
Subscribed and sworn to before me this
29th day of June 1989

LORRIE A. HAFNER
Notary Public, State of New York
No. 4624710, Dutchess County
Term Expires May 2, 1990

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ATTACHMENT I
NRC BULLETIN 88-08
RESPONSE

ACTION ITEM 2

For any unisolable sections of piping connected to the RCS that may have been, or may presently be, subjected to excessive thermal stresses, examine nondestructively the welds, heat-affected zones and high stress locations, (including geometric discontinuities such as reducers, elbows, etc.) in that piping to provide assurance that there are no existing flaws.

RESPONSE

The Authority in Reference (4) stated that because of Indian Point Three's design, configuration and mode of operation, adverse thermal stress conditions of the type described in the Bulletin may potentially occur at the auxiliary/main spray interface. This line was nondestructively examined in accordance with the requirements of Bulletin 88-08 during the 6/7 Refueling Outage. The Authority also committed to inspect the normal and alternate charging lines. The four (4) lines inspected at Indian Point 3 were:

Line 64 (2" Auxiliary Pressurizer Spray)
Line 61 (4" Pressurizer Spray)
Line 96 (3" Normal Charging)
Line 80 (3" Alternate Charging)

To ensure a conservative response and as a result of findings in Reference (3) all lines were inspected to more stringent ultrasonic standards than ASME XI. The four lines were inspected using nondestructive examination techniques with one (ultrasonic) indication found in the line 64 base (subsurface) material between welds 27 and 28. No other indications were found during the surface and volumetric examinations of any of the other auxiliary line welds and base material.

The Authority has determined by evaluation that the indication found in line 64 is within acceptable limits (not reportable) per ASME XI and has concluded the indication could have been in existence since initial installation.

The Authority believes the indication is not a concern because of its size and subsurface location.

ATTACHMENT I
NRC BULLETIN 88-08
RESPONSE

ACTION ITEM 3

Plan and implement a program to provide continuing assurance that unisolable sections of all piping connected to the RCS will not be subjected to combined cyclic and static thermal stresses that could cause fatigue failure during the remaining life of the plant. Three methods by which this assurance of future system integrity may be provided are the following: one, redesign and/or modification of potentially affected piping; two, placement of temperature sensing instrumentation at appropriate locations in the potentially affected piping, and maintaining fluid temperatures (and overall temperature profiles) within safe, analyzed limits; three, instrumenting block valves and check valves in the potentially affected lines to ensure that leakage across these valves is detected in an expeditious manner.

RESPONSE

The Authority's evaluation of the piping configuration and the results of the NDE inspections show that no monitoring or modification of the line 64/61 interface is necessary. The Authority as a conservative measure has installed RTDs on the piping near the line 64/61 interface. These RTDs will be used for periodic monitoring of the line interface area. The Authority intends on using data gathered from the RTDs to assist in the evaluation of future inspections of this interface area.