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Nuclear Power Plant
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New York Power Authority

Joseph E. Russell
Resident Manager

March 26, 1991
IP3-91-022
MFP-91-029B

Docket No. 50-286
License No. DPR-64
EA 91-009

Director, Office of Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: **Indian Point 3 Nuclear Power Plant**
Reply to Notice of Violation Regarding NRC
Inspection Report No. 50-286/90-80

Dear Sir:

This letter and its Attachment provide the Authority's response to the notice of violation (NOV) enclosed in your letter of February 22, 1991.

The corrective actions and program improvements discussed in Attachment I will be completed before the beginning of the next refueling outage.

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

Very truly yours,

Joseph E. Russell
Resident Manager
Indian Point Unit 3

JER:MFP:dw

Attachment

IE01
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cc: Document Control Desk (original)
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ATTACHMENT I
REPLY TO NOTICE OF VIOLATION
90-80-01

VIOLATION:

A. 10 CFR Part 50, Appendix B, Criterion V, requires activities affecting quality to be prescribed by, and be accomplished in accordance with, procedures of a type appropriate to the circumstances. The procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to the above, certain activities affecting quality were either not prescribed by, or were not accomplished in accordance with, procedures of a type appropriate to the circumstances, as evidenced by the following examples:

1. For reinstallation of the upper internals package (UIP) in the reactor vessel, Licensee Procedure SOP-RP-1, Rev. 7, (FP-INT-R7, Rev. 0) requires that the measurement for determining that the UIP is properly seated without interference from foreign objects is to be taken in 2 locations 180 degrees apart from each other (East and West). However, during reinstallation of the upper internals in the reactor vessel on November 14, 1990, these measurements were taken approximately 45 degrees apart in a North to South orientation.

2. Licensee Procedure SOP-RP-1, Rev. 6, (FP-INT-R6, Rev. 0) utilized during refueling outage 6/7 in May 1989:

   a. did not provide criteria for determining when the UIP has safely cleared the storage stand before the UIP is moved laterally towards the reactor vessel for reinstallation; and

   b. did not provide appropriate instructions for making measurements to determine if the UIP was fully seated in that it did not provide clear reference points as to where the refueling bridge should be located, from where on the refueling bridge the measurements were to be taken, and to where on the reactor vessel flange and upper plate of the UIP the measurements were to be taken;

3. Procedure SOP-RP-1, Rev. 6, Section 9.2.9, (FP-INT-R6, Rev. 0) used during the 6/7 refueling outage in May 1989, requires the operators to make two sets of measurements from the refueling bridge to the upper plate of the UIP using a steel tape with a plumb bob attached. The first set of measurements is taken prior to UIP removal for refueling and the second set is taken after UIP reinstallation following completion of refueling. However, as a result of not establishing measures for identifying and controlling the steel tape measuring device and associated plumb bob used during the 6/7 refueling outage, it was not possible to confirm that measurement discrepancies which occurred between the two measurement sets were due to two different tape measuring plumb bob devices being used.

This is a Severity Level IV violation. (Supplement I)

RESPONSE:

The Authority, having reviewed in detail the Notice of Violation (90-80-01), agrees that the refueling procedure SOP-RP-1 needs improvement and that the examples stated constitute procedural shortcomings. These procedural shortcomings were corrected immediately upon the completion of our investigation of the stuck fuel assemblies event and before the cycle 7/8 refueling was completed.

Several of the examples specified in the violation (item 1, 2b, 3) deal with a series of steps that are performed to check for the presence of foreign objects which could potentially interfere with the seating of the upper internals package. The Authority added these steps to the vendor's generic refueling procedure several years ago in response to an industry event at another utility. During that event an irradiation capsule plug was found out of position, trapped between the upper internals and lower internals support flanges.

The directions, provided within the procedures to accomplish this activity, were deficient, in that they did not acknowledge the physical constraints which existed at the time (i.e., location of the upper internals lifting rig) and in some cases were vague (i.e., did not provide reference points or the need to control test equipment). This resulted in a situation where the intent of the procedural steps could not be achieved by verbatim compliance.

The refueling crew, while they did deviate from the procedure and did not follow existing administrative requirements in doing so, did assure the proper seating of the upper internals package, which was the intent of the procedure.

Notwithstanding the above, the Authority agrees that clear, concise procedural instructions are a requirement and that deviations from these instructions must be documented and approved in accordance with standard administrative processes. The Authority therefore agrees that the procedural deficiencies identified within the NOV constitute violations of NRC requirements. These procedural deficiencies have already been corrected.

Example 2a of the NOV identifies that specific criteria for determining that the UIP has safely cleared the storage stand were not provided. As stated during the enforcement conference, the Authority believes that the length of the guide studs created an environment with a low fault tolerance. In retrospect, the procedure, which had been successfully used many times during the last fifteen years at IP3, was deficient in that it did not compensate for the shortcoming in this design feature. This procedure has been revised to provide specific criteria.

The Authority, immediately upon recovering from the stuck fuel assemblies event and in concert with the NRC's Augmented Inspection Team, conducted an exhaustive self-assessment of the refueling process. This critical review revealed the root cause of the event and the procedural deficiencies identified in the NOV as well as several opportunities for improving the NYPA refueling process. The following actions are planned:

- The Authority will establish, prior to entering each refueling outage, an IP3 refueling organization. This organization is presented in Attachment II. The Authority will designate one individual to provide direct management control over all IP3 refueling activities.

- The Authority will rewrite the IP3 refueling procedure in the format used for other IP3 procedures. It is anticipated that refueling activities will differentiate between operation and maintenance functions (i.e., fuel movement and reactor disassembly/assembly).

- The Authority will conduct training on the revised refueling procedures.

- The Authority will perform a design review of the upper internals package (UIP) support stand to assess the possibility of lengthening the guide studs. If the guide studs can be lengthened they will provide for improved stabilization of the UIP when it is placed into and removed from the stand. This design would preclude lateral movement over the support stand until the internals are lifted high enough to ensure clearance.

- The Authority will examine other reactor components such as the reactor head and lower internals to determine if they are susceptible to damage during movement. Initial assessments have not indicated similar vulnerabilities.

- The Authority will develop an indexing system to provide reference points for vertical and horizontal clearances of suspended heavy loads.

- The Authority will evaluate the existing underwater lighting system and make improvements if necessary.

The Authority believes that its immediate corrective actions and the long term improvements listed above will preclude recurrence of this or similar events. The Authority also believes that its improved refueling process will ensure that events are promptly identified and reported to management.

These corrective actions and program improvements will be completed before the beginning of the next refueling outage.

ATTACHMENT II
REPLY TO NOTICE OF VIOLATION
90-80-01