

Consolidated Edison Company of New York, Inc.  
4 Irving Place, New York, NY 10003  
Telephone (212) 460-2533

June 30, 1986

Re: Indian Point Unit 2  
Docket No. 50-247

Mr. Hugh L. Thompson, Director  
Division of PWR Licensing - A  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Thompson:

This letter transmits the final summary report for the Detailed Control Room Design Review (DCRDR) of Indian Point Unit 2 (IP2). The DCRDR was conducted in accordance with our response to NUREG-0737, Supplement 1 dated April 15, 1983 and confirmed by your Order dated June 12, 1984, as amended on July 8, 1985. On February 14, 1984 we submitted the Program Plan for the DCRDR. In response to Mr. Varga's letter of April 24, 1984, we met with members of your staff on June 26, 1984 and November 20, 1984 to more specifically address their questions on our DCRDR Program Plan. On December 4, 1985 we again met with members of your staff to review the status of the DCRDR. These discussions have helped us to effectively carry out the DCRDR in a manner which we expect your staff will find acceptable, and which will avoid unnecessary changes to the IP2 Central Control Room (CCR).

The schedule for implementation of planned corrective actions will involve a period of at least two fuel cycles such that by startup from the projected 1989 refueling outage the work is expected to be completed. This effort involves a multi-phase implementation which has begun. The two Category A corrective actions will be accomplished before the startup from the projected 1987 refueling outage. Remaining corrective actions requiring the Unit to be off line will be accomplished by startup from the projected 1989 refueling outage. Other corrective actions will be accomplished with the Unit on line between June, 1987 through startup from the projected 1989 refueling outage. This implementation plan allows for optimum utilization of engineering resources and available outage time as well as better coordination with the post accident monitoring instrumentation upgrade in accordance with our NUREG-0737, Supplement 1 submittals of August 30, 1985, November 29, 1985 and June 2, 1986. Significant resources are required to implement

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the DCRDR, post-accident monitoring instrumentation upgrade and the completion of the SAS/SPDS. Our schedule for implementing DCRDR corrective actions, proposed here, is in keeping with the integration requirements of NUREG-0737, Supplement 1, and provides a balanced and cost-effective approach. Based on the DCRDR, we have concluded that no unsafe plant condition would result from any of the Human Engineering Discrepancies (HEDs) identified in the study.

As discussed at the June 26, 1984 meeting, the alternate safe shutdown capability is not part of the DCRDR. However, at this time, we wish to point out that, since that meeting, although not included in our DCRDR activity, the IP2 Alternate Safe Shutdown System (ASSS) has undergone some changes for 10 CFR 50, Appendix R fire protection requirements that have also enhanced the man-machine interface. These are briefly summarized below:

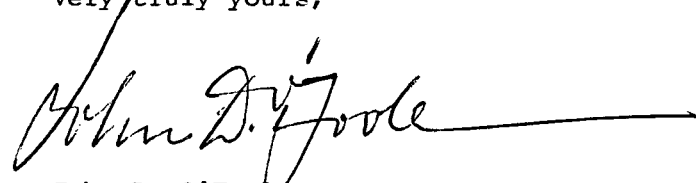
- 1) Lighting has been provided for operation of equipment at remote locations and access and egress routes to and from these locations. The level of lighting was based on analysis and operator walkdown testing which assures that the safety functions can be accomplished. This was presented in our January 31, 1985 and September 11, 1985 submittals and was accepted by your staff in granting our requested exemption by your letter of November 13, 1985.
- 2) The ASSS has been provided with the type of controls and instruments that operators are familiar with in their routine plant operation.
- 3) The ASSS procedure was updated to incorporate more explicit operator instructions using task analysis principles, and an alternate central control point was designated.
- 4) Portable communications were provided based on procedural walkthroughs and by testing for proper coverage. This assures the ability to get information to the designated control point.
- 5) Instrument gauge faces were relabeled to provide engineering units suitable to the safety function intended to be accomplished, and to enhance operator readability. Additionally, the pneumatic pressurizer pressure transmitter was replaced with one that provides full range RCS pressure coverage to assure that the cooldown function can be properly accomplished.
- 6) At the request of the NRC inspection team, several operators simulated use of the ASSS during the September, 1985 Appendix R inspection. Although the ASSS is decentralized at alternate locations throughout the plant, the inspection team was favorably impressed with the man-machine interface since

the operators were able to a) access and simulate operating equipment easily, b) communicate between each other and designated control point, c) readily follow procedural instructions, and d) understand their assigned tasks and plant control functions from outside the CCR.

In summary, the man-machine interface for the ASSS was adequately covered by implementation of 10 CFR 50.48 and Appendix R fire protection requirements and no separate design review such as that conducted for the CCR is necessary.

If you have any questions on this matter, do not hesitate to call.

Very truly yours,

A handwritten signature in cursive script, reading "John D. O'Toole", followed by a long horizontal line extending to the right.

John D. O'Toole  
Vice President

cc: Senior Resident Inspector  
Nuclear Regulatory Commission  
P. O. Box 38  
Buchanan, New York 10511