UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

In the Matter of

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CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. (Indian Point Nuclear Generating Unit No. 2 Docket No. 50-247

ORDER FOR MODIFICATION OF LICENSE

Ι.

The Consolidated Edison Company of New York, Inc. (the licensee), is the holder of Facility Operating License No. DPR-26 which authorizes the operation of the nuclear power reactor known as Indian Point Nuclear Generating Unit No. 2 (the facility) at steady reactor power levels not in excess of 2758 megawatts thermal (rated power). The facility consists of a Westinghouse Electric Corporation designed pressurized reactor (PWR) located at the licensee's site in Westchester County, New York.

II.

In accordance with the requirements of the Commission's ECCS Acceptance Criteria 10 CFR 50.46, the licensee submitted on January 28, 1977 an ECCS evaluation for proposed operation using fuel manufactured by the Westinghouse Electric Corporation. This evaluation included limits on the peaking factor. The ECCS evaluation submitted by the licensee was based upon an ECCS evaluation developed by the Westinghouse Electric Corporation (Westinghouse), the designer of the Nuclear Steam Supply System for this facility. The Westinghouse ECCS Evaluation Model had been previously found to conform to the requirements of the Commission's ECCS Acceptance Criteria, 10 CFR Part 50.46 and Appendix K. The evaluation indicated that with the peaking factor limited as set forth in the evaluation, and with other limits set forth in the facility's Technical Specifications, the ECCS cooling performance for the facility would conform with the criteria contained in 10 CFR 50.46(b) which govern calculated peak clad temperature, maximum cladding oxidation, maximum hydrogen generation, coolable geometry and long-term cooling.

On March 23, 1978 Westinghouse informed the Nuclear Regulatory Commission (NRC) that an error had been discovered in the fuel rod heat balance equation involving the incorrect use of only half of the volumetric heat generation due to metal-water reaction in calculating the cladding temperature. Thus, the LOCA analyses previously submitted to the Commission by licensees of Westinghouse reactors were in error. The staff promptly determined that no immediate action was required to assure safe operation of these plants.

The error identified would result in an increase in calculated peak clad temperature, which, for some plants, could result in calculated temperatures in excess of 2200°F unless the allowable peaking factor was reduced somewhat. Westinghouse identified a number of other areas in the approved model which Westinghouse indicated contained sufficient conservatism to offset the calculated increase in peak clad temperature resulting from the

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correction of the error noted above. Four of these areas were generic, applicable to all plants, and a number of others were plant specific. As outlined in the attached SER, the staff concurs that some of these modifications would be appropriate to offset to some extent the penalty resulting from correction of the error. The attached SER sets forth the value for each modification applicable to each facility.

Revised computer calculations correcting the error, noted above, and incorporating the modifications described in the SER have not been run for each plant. However, the various parametric studies that have been made for various aspects of the approved model over the course of time provide a reasonable basis for concluding that when final revised calculations for the facility are submitted using the revised and corrected model, they will demonstrate that with the peaking factors set forth in the SER operation will conform to the criteria of 10 CFR 50.46(b). Such revised calculations fully conforming to 10 CFR 50.46 are to be provided for the facility as soon as possible.

As discussed in this Order and in the SER, operation of the Indian Point Unit No. 2 facility at the peaking factor limit specified in this Order, will assure that the ECCS will conform to the performance requirements of 10 CFR 50.46(b). Accordingly, this limit provides reasonable assurance that the public health and safety will not be endangered. Upon notification

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by the NRC staff, the licensee committed to provide a reevaluation of ECCS performance as promptly as practicable and to limit operation to achieve a peaking factor not exceeding the value specified herein. The commitments were confirmed by the licensee's letter of April 17, 1978. The staff believes that the licensee's action, under the circumstances, is appropriate and that this action should be confirmed by NRC Order.

IV.

Copies of the Safety Evaluation and the following documents are available for inspection at the Commission's Public Document Room at 1717 H Street, Washington, D. C. 20555, and are being placed in the Commission's local public document room at the Hendrick Hudson Free Library, 31 Albany Post Road, Montrose, New York.

(1) Letter from Westinghouse to NRC dated April 17, 1978.

(2) Letter from Consolidated Edison Companyof New York, to Mr. A. Schwencer, Operating Reactors Branch #1, dated April 17, 1978.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's Rules and Regulations in 10 CFR Parts 2 and 50, IT IS ORDERED THAT Facility Operating License No. DPR-26 is hereby amended by adding the following new provisions:

- (1) As soon as possible, the licensee shall submit a reevaluation of ECCS cooling performance calculated in accordance with the Westinghouse Evaluation Model, approved by the NRC staff and corrected for the errors described herein.
- (2) Until further authorization by the Commission, the Technical Specification limit for total nuclear peaking factor (F_Q) for the facility shall be limited to 2.24.

FOR THE NUCLEAR REGULATORY COMMISSION

Victor Stello, Or., Director Division of Operating Reactors Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland this 27th day of April 1978.