UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 179 TO FACILITY OPERATING LICENSE NO. DPR-26

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

DOCKET NO. 50-247

1.0 INTRODUCTION

By letter dated February 18, 1994, as supplemented June 3, 1994, November 1, 1994, December 2, 1994, December 14, 1994, and December 16, 1994, the Consolidated Edison Company of New York (the licensee) submitted a request for changes to the Indian Point Nuclear Generating Unit No. 2 Technical Specifications (TSs). The requested changes are a follow-up to License Amendment No. 159, issued on December 10, 1992, which changed the TS Section 1.0, Definitions, to accommodate a 24-month fuel cycle and which extended test intervals for specific surveillance tests. The requested changes in this proposal would extend the surveillance intervals to 24 months for the Vapor Containment Sump Discharge Flow and Temperature Channel, the Loss of Power Undervoltage and Degraded Voltage Relays, and the Control Rod Protection System (for use with Low Parasite fuel) Trip. Other specific surveillance extensions included in this proposal will be treated in a subsequent amendment. The changes requested by the licensee are related to a 24-month fuel cycle and are in accordance with Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle." The June 3, 1994, and November 1, 1994, submittals clarified information contained in the February 18, 1994, submittal and included a revised TS page to correct an administrative error in the original submittal. The December 2, 1994, submittal provided replacement TS pages which had been revised due to issuance of amendments following the original submittal and to eliminate those proposed changes not being addressed in this amendment. The December 14, 1994, and December 16, 1994, submittals provided revised TS pages 4 of 7 for Table 4.1-1, 2.3-7, and 3 of 5 for Table 3.5-2 to include the change in the Control Rod Protection System trip temperature. The temperature change in these locations had been inadvertently omitted in the original amendment applications. The supplements did not change the initial proposed no significant hazards consideration and were not outside the scope of the original *Federal Register* notice.

2.0 EVALUATION

Improved reactor fuels allow licensees to consider an increase in the duration of the fuel cycle for their facilities. A longer fuel cycle increases the time interval between refueling outages and the performance of TS surveillance requirements. GL 91-04 provides guidance to support the development of TS revisions to allow a 24-month surveillance interval and includes requirements to evaluate the effect on safety for an increase in surveillance testing and calibration intervals to accommodate a 24-month fuel cycle.

The licensee evaluation should conclude that the net effect on safety is small, that historical plant maintenance and surveillance data support the proposed extended surveillance intervals and that the assumptions in the plant licensing basis are still bounding with the incorporation of a 24-month surveillance interval.

The staff also determined that a licensee should address the issue of instrumentation errors/setpoint methodology assumptions when proposing an extended instrumentation calibration interval. Specifically, the licensee must evaluate the effects of an increased calibration interval on instrument uncertainties, equipment qualification, and vendor maintenance requirements to ensure that an extended surveillance interval does not result in exceeding the assumptions stated in the safety analysis.

The licensee has proposed to extend the calibration interval from 18 to 24 months for the following surveillances which involve instrumentation errors/ setpoint methodology:

(1) Vapor Containment Sump Discharge Flow and Temperature Channel
(2) Control Rod Protection System (for use with Low Parasite fuel) Trip

To support the proposed changes the licensee reviewed instrument calibration data from applicable surveillances and maintenance records and recorded the historical as-left and as-found drift information. The licensee confirmed that instrument drift has not, except on rare occasions, exceeded acceptable results and that the historical data does not indicate any problems that would preclude an increase in the interval for instrument calibration. the licensee's description of the methodology and assumptions used to determine the rate of instrument drift with time was approved by the staff as documented in Amendment No. 159 to Facility Operating License No. DPR-26.

The licensee statistically evaluated the past drift data to determine a projected 30-month drift value. The projected 30-month drift value was used as input to determine the Channel Statistical Allowance using the NRC-approved Westinghouse setpoint methodology. This evaluation included, along with instrument drift, the determination of all other channel uncertainties, including sensor, rack, measurement and test equipment, and process effects for normal environmental uncertainties to determine if they supported the current TSs and safety limits. For the Vapor Containment Sump Discharge Flow

and Temperature Channel it was determined that the resulting channel uncertainties supported the current TSs and safety analysis limits.

For the Control Rod Protection (CRP) System (for use with Low Parasite fuel) Trip it was determined that the uncertainties exceeded those that could be supported by the TS setpoint and, as a result, a setpoint change was proposed. The CRP System trip automatically opens the reactor trip breakers to unlatch the Control Rod Drive Mechanisms prior to Tcold decreasing below 350 °F during plant cooldown. As part of this evaluation, the licensee reviewed completed test procedures from the February 1986 outage to the present for the calibration of the Reactor Coolant System cold leg wide range temperature channels and for the calibration of the CRP System bistable to determine a projected 30-month drift value. The drift value was used as an input to determine the Channel Statistical Allowance using the Westinghouse setpoint methodology. The results of the channel statistical allowance calculations indicated that the channel uncertainties exceed those which can be supported by the existing TS trip setpoint of 350 °F. To accommodate the increased channel uncertainties, the licensee has proposed to increase the TS setpoint trip value from 350 °F to 381 °F in order to maintain the same margin between the plant protective function setpoint and the safety analysis limit.

The licensee has proposed to extend the surveillance interval from 18 to 24 months for the Loss of Power Undervoltage and Degraded Voltage Relays. These relays protect the 480 volt buses under conditions of complete loss of power and degraded voltage conditions and provide an alarm in the central control room when the voltage falls to approximately 90%. In addition the undervoltage relays provide a station blackout start signal for the steam driven auxiliary feedwater pumps in the Auxiliary Feedwater System. The licensee reviewed completed test data for the 1984, 1987, 1989, and 1991 refueling intervals. All of the undervoltage blackout relays were found to be within specifications at each of the refueling outage calibration periods. For the degraded voltage relays, there were 8 occurrences involving 4 relays where they were judged to be out of tolerance. There was one test where an alarm relay was out of tolerance. In the 7 year total time period, however, there was no instance of a relay failing to operate. During the 1993 refueling outage, the degraded voltage relays were replaced with a solid state, high accuracy relay which, based on equipment specifications, is expected to be superior to the previously installed relays.

Based on the above the staff finds the proposed TS changes to increase the surveillance interval from 18 to 24 months (30 months with grace period) for the Vapor Containment Sump Discharge Flow and Temperature Channel, the CRP System trip, and for the Loss of Power Undervoltage and Degraded Voltage Relays as proposed in the licensee submittal to be acceptable. The licensee has evaluated the proposed changes in accordance with the guidance contained in GL 91-04. The licensee has evaluated the effect of the increase in the above surveillance intervals on safety and has concluded that the effect is small. The licensee has confirmed that historical plant maintenance and surveillance data do not invalidate this conclusion. The licensee also confirmed that the increase in surveillance intervals to accommodate a 24-

month fuel cycle does not invalidate any assumption in the plant licensing basis. For the instrument surveillances the licensee evaluated the past drift data to determine a projected 30-month drift value. The projected 30-month drift value was used as input to determine the channel statistical allowance using the NRC-approved Westinghouse setpoint methodology. For the CRP System trip, in order to accommodate a 30-month surveillance interval, the licensee proposed to change the TS setpoint. The channel statistical allowance calculation in conjunction with the setpoint change has shown that sufficient margin exists between the analytical limits and the proposed TS trip setpoint and that the assumptions of the safety analysis are not violated. Therefore, the staff finds the proposed setpoint change to be acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New York State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (59 FR 22003). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: December 20, 1994