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December 23, 1982

Docket No. 50-247

Mr. John D. O'Toole, Vice President
Nuclear Engineering and Quality Assurance
Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

Dear Mr. O'Toole:

The Commission has issued the enclosed Amendment No. 83 to Facility Operating License No. DPR-26 for the Indian Point Nuclear Generating Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application dated December 17, 1982.

The amendment modifies your Technical Specifications to require a prompt report in the event of a hurricane and action to ensure that the plant is in a cold shutdown condition prior to hurricane arrival on site. These changes have been mutually agreed upon by discussions between you and members of the NRC staff.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by;
S. A. Varga

Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing

Enclosures:
1. Amendment No. 83 to DPR-26
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

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F. R. Notice
Amendment changed by verbal decision

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

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

DOCKET NO. 50-247

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 83
License No. DPR-26

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Consolidated Edison Company of New York, Inc. (the licensee) dated December 17, 1982, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by the amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-26 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 83, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 23, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 83

FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Revise Appendix A as follows:

Remove Pages	Insert Pages
ii	ii
-	3.14-1
-	4.17-1

	Rod Drop Time	3.10-7
	Rod Position Monitor	3.10-7
	Quadrant Power Tilt Monitor	3.10-7
	Notification	3.10-8
3.11	Movable In-Core Instrumentation	3.11-1
3.12	Shock Suppressors (Snubbers)	3.12-1
3.13	Fire Protection and Detection Systems	3.13-1
3.14	Hurricane Alert	3.14-1
4	Surveillance Requirements	4.1-1
4.1	Operational Safety Review	4.1-1
4.2	Primary System Surveillance	4.2-1
4.3	Reactor Coolant System Integrity Testing	4.3-1
4.4	Containment Tests	4.4-1
	Integrated Leakage Rate	4.4-1
	Sensitive Leakage Rate	4.4-2
	Air Lock Tests	4.4-3
	Containment Isolation Valves	4.4-3
	Containment Modifications	4.4-4
	Report of Test Results	4.4-5
	Visual Inspection	4.4-5
	Residual Heat Removal System	4.4-5
4.5	Engineered Safety Features	4.5-1
	Safety Injection System	4.5-1
	Containment Spray System	4.5-2
	Hydrogen Recombiner System	4.5-2
	Containment Air Filtration System	4.5-3
	Control Room Air Filtration System	4.5-4
	Fuel Storage Building Air Filtration System	4.5-6
	Post Accident Containment Venting System	4.5-8
4.6	Emergency Power System Periodic Tests	4.6-1
	Diesel Generators	4.6-1
	Diesel Fuel Tanks	4.6-2
	Station Batteries	4.6-2
	Gas Turbine Generators	4.6-2
	Gas Turbine Fuel Supply	4.6-3
4.7	Main Steam Stop Valves	4.7-1
4.8	Auxiliary Feedwater System	4.8-1
4.9	Reactivity Anomalies	4.9-1
4.10	DELETED	
4.11	DELETED	
4.12	Shock Suppressors (Snubbers)	4.12-1
4.13	Steam Generator Tube Inservice Surveillance	4.13-1
	Inspection Requirements	4.13-1
	Corrective Measures	4.13-4
	Reports	4.13-4
4.14	Fire Protection and Detection Systems	4.14-1
4.15	Radioactive Materials Surveillance	4.15-1
4.16	Reactor Coolant System and Containment Free Volume Leakage Detection and Removal Systems Surveillance	4.16-1
4.17	Hurricane Alert	4.17-1

3.14 HURRICANE ALERT

Applicability

Applies to a hurricane with winds in excess of 87 knots, when a Hurricane Warning has been issued for any coastal area south of Indian Point or east of Indian Point as far east as New Haven, Connecticut.

Objective

To define actions permitted after receipt of Hurricane Warnings.

Specifications

3.14a: If the National Weather Service issues a Hurricane Warning for a hurricane with winds in excess of 87 knots (approximately 100 mph) within 500 nautical miles of the facility, a prompt report shall be made to the NRC Incident Response Center within 1 hour of receipt of that Hurricane Warning. This notification is in lieu of the reporting requirements of Specification 6.9.

3.14.b: If the National Weather Service issues a Hurricane Warning for a hurricane with winds in excess of 87 knots within 320 nautical miles of the facility and a Hurricane Warning is in effect for any coastal area south of Indian Point or any coastal area east of Indian Point as far east as New Haven, Connecticut; the hurricane direction, translational velocity and average wind speed shall be monitored at least every hour and the Unit shall be placed in the Hot Shutdown condition within four (4) hours. Appropriate action shall be taken to ensure that the plant is in the Cold Shutdown condition prior to arrival on site of a hurricane with winds in excess of 87 knots.

4.17 HURRICANE ALERT

Applicability

Applies to the monitoring requirements of a hurricane when Hurricane Warnings are issued for any coastal area south of Indian Point or as far east as New Haven, Connecticut.

Objective

To begin tracking a hurricane's movement for the purpose of taking the actions of Specification 3.14.

Specification

Upon receipt of Hurricane Warnings for the mid-Atlantic coast of the United States, reports issued by the National Weather Service and the National Hurricane Center shall be monitored at least every three (3) hours.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 83 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 December 17, 1982, the Consolidated Edison Company (licensee) proposed to amend its operating license DPR-26 for Indian Point, Unit No. 2, by submitting an addition to the Technical Specifications. The licensee proposed an additional Technical Specifications for Surveillance and Limiting Conditions of Operation entitled "Hurricane Alert."

As part of the licensee's study, "Indian Point Probabilistic Safety Study," the licensee identified a potential risk which may result from hurricane damage to safety related structures, systems and components. After review by the NRC staff and its consultants and subsequent discussions with the licensee, the licensee proposed a Technical Specification to monitor hurricanes. In essence, the proposed Technical Specification requires that the licensee monitor hurricanes approaching the facility and place the plant in the cold shutdown condition prior to a hurricane with winds in excess of 87 knots arriving on-site.

2.0 Evaluation

We have reviewed Consolidated Edison's proposed Technical Specification addition using data and analyses of the movement of hurricanes and information provided by the National Oceanic Atmospheric Administration (NOAA).

NOAA publicly disseminates hurricane positions, forecast movement, and warnings. A hurricane warning is issued by NOAA for a coastal zone whenever a hurricane is expected to affect a land area within 24 hours. Therefore, use of hurricane warnings, issued for any coastal area south of Indian Point or as far east as New Haven, Connecticut, to initiate plant shutdown in a timely manner is appropriate.

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Specification 3.14a would require prompt reporting to the NRC of any hurricane with winds in excess of 87 knots, within 500 nautical miles of the facility. Based on median (50%) and near maximum (95%) translationa speeds of landfalling hurricanes (averaging 15 and 30 knots, respectively)[1] and acceleration with latitude change, it would require 34 and 17 hours, respectively, to reach the facility from a distance of 500 miles.

Specification 3.14b would require the unit to be placed in a Hot Shutdown condition within four (4) hours and hourly hurricane monitoring when a hurricane with winds in excess of 87 knots is within 320 nautical miles of the facility and a Hurricane Warning is in effect for proximate coastal areas. Based on median and near maximum translational speeds of landfalling hurricanes (averaging near 20 and 35 knots, respectively)[1], acceleration with latitude change, and consideration of the median radius of maximum winds of hurricanes at that latitude (~40 nautical miles)[1], it would require 17 and 8 hours, respectively, to reach the facility from a distance of 320 nautical miles.

Our review of hurricane wind speeds[2] and tracks[3,4] from 1871 to 1981 indicates that a hurricane with windspeeds in excess of 87 knots has a mean recurrence interval of greater than 100 years in the coastal region near the facility. We also expect that the hurricane winds will be diminished when the hurricane moves onshore.

The licensee has indicated that there are two plant procedures which delineate the steps necessary to achieve hot and cold shutdown. These two procedures are: (1) POP 3.1, "Plant Shutdown from Full Power Operation to Zero Power Condition"; and (2) POP 3.3, "Plant Cooldown from Zero Power Condition to Cold Shutdown Conditions." The former procedure is used when sufficient time is available to conduct a normal shutdown to the hot shutdown condition. The latter procedure is implemented when plant cooldown is necessary.[5] Both of these procedures have been reviewed and approved in consonance with Section 6.5 of the Technical Specifications, "Review and Audit - Station Nuclear Safety Committee and Nuclear Facilities Safety Committee." These procedures are presently in force at the Indian Point Nuclear Generating Unit No. 2.

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[1]Ho. F. P., Schwerdt, R. W., and Goodyear, H. V., "Severe Climatological Characteristics of Hurricanes and Tropical Storms, Gulf and East Coasts of the United States," NOAA Technical Report NWS 15, May 1975.

[2]Batts, M. E., Cordes, M. K., Russell, L. R., Shaver, J. R., and Simiu, E., "Hurricane Wind Speeds in the United States," NBS Building Science Series 124, May 1980.

[3]Cry, G. W., "Tropical Cyclones of the North Atlantic Ocean," Technical Paper No. 55, U. S. Weather Bureau, 1965.

[4]Yearly hurricane summaries from Monthly Weather Review.

[5]The plant cooldown rate is administratively limited to a maximum of 50°F per hour. In the event that time is of the essence POP 3.3 also allows a maximum allowable cooldown rate of 100°F per hour.

Based upon the aforementioned discussion of hurricane translational velocities the staff finds acceptable that a prompt report be made when a hurricane exists within 500 miles of the facility. This will provide a one day advance NRC notification at which time the staff will monitor events concurrent with licensee activities. Based upon an expected hurricane translational speed of 20 nautical miles per hour and the requirement to place the unit in the hot shutdown condition when a hurricane is within 320 nautical miles of the facility, the staff concludes that existing shutdown procedures can be used to place the facility in cold shutdown prior to hurricane arrival on-site. Finally, based upon an improbable hurricane translational speed of 35 nautical miles per hour and the requirement to take appropriate action to ensure cold shutdown condition prior to hurricane arrival on-site, the staff concludes that use of the POP 3.3 will achieve a timely cold shutdown.

The control building, diesel generator building, and offsite power may be susceptable to hurricane wind damage at Indian Point Unit 2. Loss of the control building or loss of offsite power and failure of the diesel generator building could interrupt the core cooling and containment heat removal functions. However, given that such a failure may occur, ample time will be available to regain essential cooling services prior to core uncovery since the reactor will be subcritical and generating a relatively small amount of decay heat. In addition, the containment can successfully mitigate the consequences should the cooling services remain disabled. Based on this, we have concluded that the additional specifications proposed by the licensee have no adverse affect on the safety of reactor operation. In summary, we agree that the anticipatory shutdown under the conditions proposed by the licensee will significantly reduce the potential risk that may be associated with hurricanes.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: December 23, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-247

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 83 to Facility Operating License No. DPR-26, issued to the Consolidated Edison Company of New York, Inc. (the licensee), which revised Technical Specifications for operation of the Indian Point Nuclear Generating Unit No. 2 (the facility) located in Buchanan, Westchester County, New York. The amendment is effective as of the date of issuance.

The amendment modifies your Technical Specifications to require a prompt report in the event of a hurricane and action to ensure that the plant is in a cold shutdown condition prior to hurricane arrival on site.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated December 17, 1982, (2) Amendment No. 83 to License No. DPR-26, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the White Plains Public Library, 100 Martine Avenue, White Plains, New York. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 23rd day of December 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing