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

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

DOCKET NO. 50-3

INDIAN POINT NUCLEAR GENERATING UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 19
License No. DPR-5

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

   A. The applications for amendment by Power Authority of the State of New York (the licensee) dated April 20, 1977 and May 27, 1977, comply 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 applications, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this 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.

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-5 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 19 , 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

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 21, 1978

LICENSE AUTHORITY FILE COPY

B. Jones

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

December 21, 1978

DO NOT REMOVE
Pasted

Docket Nos. 50-3
and 50-247

Amn-19 to
DPR-5

Consolidated Edison Company
of New York, Inc.
ATTN: Mr. William J. Cahill, Jr.
Vice President
4 Irving Place
New York New York 10003

Gentlemen:

The Commission has issued the enclosed Amendment No. 19 to Facility License No. DPR-5 and Amendment No. 43 to Facility License No. DPR-26 for Indian Point Station, Unit No. 1 and Indian Point Nuclear Generating Plant, Unit No. 2, respectively. These amendments consist of changes to the Technical Specifications in response to your requests dated April 20, 1977 and May 27, 1977.

These amendments revised the Technical Specifications to allow use of morpholine in the secondary side and its discharge to the river when used, and made a change in an entrainment survival sampling station.

We have evaluated the potential for environmental impact of plant operation in accordance with the enclosed amendments. The amendments do not affect the concentration limit for morpholine (0.1 ppm) found in our Final Environmental Statement for Indian Point No. 2 and, therefore, will not result in any significant environmental impact. The change in the entrainment survival sampling station insures that the organisms collected had actually passed through Indian Point No. 3 and not through Indian Point No. 2. Therefore, it will provide more useful data. This change also 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 statment, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of of these amendments.

The use of morpholine was discussed in the Final Safety Analysis Report for Indian Point Unit No. 2, which was reviewed and approved by our staff. Therefore, these amendments do not involve new safety information of a type not considered by a previous Commission safety review of the Facility. It does not involve a significant increase in the probability

or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of the related Notice of Issuance is also enclosed.

Sincerely,

A. Schwencer

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:
1. Amendment Nos. 19 and 43 to License Nos. DPR-5 and DPR-26
2. Notice of Issuance

cc: w/enclosures
See next page

ATTACHMENT TO LICENSE AMENDMENT NOS. 19, 43, AND 19

TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NOS. DPR-5, DPR-26 and DPR-64

DOCKET NOS. 50-3, 50-247 AND 50-286

Replace the following pages of the Appendix "B" Environmental Technical Specifications with the enclosed pages. The revised pages are identified by amendment numbers in the lower left corner. Since these pages are common to the Technical Specifications in all the Indian Point Units, the amendment numbers applicable to each Unit are listed on each page. Vertical lines in the right margin indicate the area of change associated with this amendment action.

Remove	Replace
2.3-8	2.3-8
2.3-17	2.3-17
2.3-20	2.3-20
2.3-22	2.3-22
4.1-13	4.1-13

2.3.3 Other Chemicals Which Affect Water Quality

Objective (Continued)

C. Solid Effluents

To dispose of solid wastes collected in the intake forebay in accordance with applicable regulations.

Specification

2.3.3.1 Liquid Releases

The release of the chemical discharges shall not exceed the concentration levels in the discharge canal listed in Table 2.3-1 or the amount listed in Table 2.3-2 prior to entry into the river (i.e., at the confluence).

They can be discharged in the following manner:

- released continuously
- released batchwise
- released only in the event of evaporator breakdown
- released on assumption of system leakage

The conditions under which the chemicals may be released, the maximum sustained release, and the concentration under the most adverse condition shall be maintained as listed in Table 2.3-2.

All the chemical discharges, whether released continuously or intermittently, shall not exceed the concentration levels shown in Table 2.3-1 in accordance with applicable regulations.

3.3.3 Other Chemicals Which Affect Water Quality

Specification

3.3.3.1 Liquid Releases

The monitoring of liquid effluents shall be conducted in accordance with Table 2.3-1. Sampling and analysis of all discharges shall be conducted using ASTM or other approved standard methods. Duplicate samples shall be taken at one (1) meter and three (3) meter depths at the intake and discharge canal. The source of discharge should be sampled where possible, if such sampling will provide a more accurate assessment of plant discharges. During unplanned accidental releases, samples shall be taken hourly during the event. The location of sampling and resulting analysis of samples shall be reported in accordance with Section 5.6.1.1, Annual Environmental Operating Report. Records shall be kept of the concentrations measured, amounts used, and the rate of discharge on a daily and yearly basis. Records shall be kept on the sampling techniques and analytical procedures used. All analytical equipment shall be periodically calibrated. A backup method shall be made available in the event that the analytical instrument used is not functioning.

Samples of the steam generator or boiler blowdown shall be analyzed for phosphate (PO_4), hydrazine, cyclohexylamine and morpholine on a weekly basis when used.

LIQUID EFFLUENT MONITORING SURVEY

Parameter Analyzed for	Max. Conc. (ppm)	Collection and Analyses Frequency	Uses of Chemical
Phosphate (Orthophosphate)*	1.5	WK	Used for maintaining the chemistry in the secondary system
Hydrazine*	0.1	WK	Used for oxygen scavenger of secondary system
Cyclohexylamine*	0.1	WK	Used to adjust pH of feedwater to steam generator
Morpholine*	0.1	WK	Used for maintaining the chemistry in the secondary system
pH - (units)	6.0 - 9.0	DD	
Lithium Hydroxide	0.01	D	Used to adjust pH of primary coolant
Boron	1.0	D	Used as chemical shim in primary coolant
Chromium (total)	0.05	WK	Used as corrosion inhibitor
Residual Chlorine (free and combined)	0.5	D	Used as a biocide to treat condenser and auxiliary cooling water systems
Chlorine Demand	(Not Applicable)	WK	
Sodium Hydroxide	(Not Applicable)	DD	Used as a chemical regenerant
Specific Conductance (Salinity)	(Not Applicable)	WK	
Soda Ash	(Not Applicable)	D	Used to wash Unit No. 1 flue gas passages
Sulfuric Acid	(Not Applicable)	DD	Used as a chemical regenerant

*It is not intended to use these chemicals constantly. These chemicals will be analyzed when used.

Amendment No. 19 (Unit 1)
Amendment No. 43 (Unit 2)
Amendment No. 19 (Unit 3)

TABLE 2.3-2 ANTICIPATED RELEASES (Sheet 1 of 3)

CHEMICAL AND HOW RELEASED	MAXIMUM SUSTAINED RELEASE (lb/day)			CONCENTRATION WITH DILUTION FLOW OF 100,000 GPM* (ppm)
	Unit No. 1	Unit No. 2	Unit No. 3	
(A) Released Continuously				
Phosphate [X]	15	38	38	8.4×10^{-2}
Hydrazine	NA	1	1	8.3×10^{-3}
Cyclohexylamine	2.5	2.4	2.4	2.2×10^{-2}
Morpholine XX	NA	35	35	6.0×10^{-2}
Sodium Hydroxide	36	NA	NA	3.0×10^{-2}
(B) Released on the Assumption of System Leakage**				
Potassium Chromate (as Chromium)	NA	30	30	5.0×10^{-2}
Drewgard 100[+++]	NA	132	132	2.5×10^{0}
(C) Released on a Batch Basis				
Residual Chlorine	----------see text----------			
Detergent	3 (2 hr/day)	NA	NA	3.0×10^{-2}
Sodium Hydroxide	156 (1 hr, once a day)***	NA	NA	2.4×10^{0}
Sulfuric Acid	450 (1 hr, once a day)***	NA	NA	9.0×10^{0}

Amendment No. 19 (Unit 1)
Amendment No. 43 (Unit 2)
Amendment No. 19 (Unit 3)

TABLE 2.3-2 ANTICIPATED RELEASES (Sheet 3 of 3)

+ Chlorination will not take place at the same time hydrazine is released on a batch basis. Layup chemicals may be released on a batch basis, provided concentrations in Table 2.3-1 are not exceeded.

++ This release (in lbs/day) is based upon the direct release of maximum reactor coolant system concentrations at the maximum rate of the waste disposal system. The occurrence of this release is therefore very unlikely.

+++ Based on discharge of entire system in one hour at a maximum contration of 2000 ppm.

• Discharged during cleaning of the Unit No. 1 superheater and air preheater.

X In the event that all volatile treatment is used in the secondary coolant system, very little phosphate compounds will be discharged.

XX Morpholine is used as a substitute for phosphate and cyclohexylamine in the secondary cooling system.

Amendment No. 19 (Unit 1)
Amendment No. 43 (Unit 2)
Amendment No. 19 (Unit 3)

4.1.2a(2) Entrainment of Organisms

Applicability

Applies to determining and reporting the types and quantities of organisms entrained in the water passing through the condenser cooling water system and evaluating the losses on the population.

Objective

The purposes of the entrainment study are: (i) to determine the types and quantities of macrozooplankton, and fish eggs and larvae which pass through the condenser cooling water system of Units Nos. 2 and 3; (ii) to determine the effect of passage on their survival; and (iii) to determine for certain fish species if losses observed from condenser passage will create adverse effects on the existing populations in the receiving water.

Specification

A. Entrainment Measurements

Sampling to determine the number and the mortality of macrozooplankton and ichthyoplankton passing through the CWS of Unit No. 3 shall be conducted for two spawning seasons following initiation of commercial operation of Unit No. 3. For comparative purposes, sampling shall be conducted at Unit No. 2 during the same time sampling is conducted at Unit No. 3 and shall coincide with striped bass ichthyoplankton sampling at stations 1-7 (Fig. 4.1-1). Collections shall be made with appropriate gear at one intake at Unit No. 3, at station D-1 (Figure 4.1-2), and at station (D-3) (Figure 4.1-2).

Macrozooplankton and ichthyoplankton samples shall be taken at the condenser water boxes at Unit No. 2 or 3 corresponding to the intake bay sampled when needed to distinguish between effects of temperature and chlorination. Sampling shall be conducted during the same time stations 1-7 (Figure 4.1-1) are sampled for ichthyoplankton. The entrainment sampling shall be of sufficient intensity so as to produce statistically reliable data. Macrozooplankton and ichthyoplankton shall be identified as to species to the extent practicable. Densities in numbers of organisms per thousand m^3 shall be determined. Comprehensive analyses of number and mortality of macrozooplankton and of striped bass, ichthyoplankton by life stage will be made. Comparisons of the density of the entrainable striped bass life stages passing through the CWS of Units Nos. 2 and 3 with the density of comparable life stages collected at stations 1-7 (Figure 4.1-1) shall be made.

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. 43
License No. DPR-26

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

   A. The applications for amendment by Power Authority of the State of New York (the licensee) dated April 20, 1977 and May 27, 1977, comply 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 applications, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this 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.

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. 43, 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

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 21, 1978

ATTACHMENT TO LICENSE AMENDMENT NOS. 19, 43 AND 19

TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NOS. DPR-5, DPR-26 and DPR-64

DOCKET NOS. 50-3, 50-247 AND 50-286

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2.3.3 Other Chemicals Which Affect Water Quality

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Objective (Continued)

C. Solid Effluents

To dispose of solid wastes collected in the intake forebay in accordance with applicable regulations.

Specification

2.3.3.1 Liquid Releases

The release of the chemical discharges shall not exceed the concentration levels in the discharge canal listed in Table 2.3-1 or the amount listed in Table 2.3-2 prior to entry into the river (i.e., at the confluence).

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Specification

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Samples of the steam generator or boiler blowdown shall be analyzed for phosphate (PO_4), hydrazine, cyclohexylamine and morpholine on a weekly basis when used.

LIQUID EFFLUENT MONITORING SURVEY

Parameter Analyzed for	Max. Conc. (ppm)	Collection and Analyses Frequency	Uses of Chemical
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Amendment No. 19 (Unit 1)
Amendment No. 43 (Unit 2)
Amendment No. 19 (Unit 3)

TABLE 2.3-2 ANTICIPATED RELEASES (Sheet 1 of 3)

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Amendment No. 19 (Unit 1)
Amendment No. 43 (Unit 2)
Amendment No. 19 (Unit 3)

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• Discharged during cleaning of the Unit No. 1 superheater and air preheater.

X In the event that all volatile treatment is used in the secondary coolant system, very little phosphate compounds will be discharged.

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Amendment No. 19 (Unit 1)
Amendment No. 43 (Unit 2)
Amendment No. 19 (Unit 3)

4.1.2a(2) Entrainment of Organisms

Applicability

Applies to determining and reporting the types and quantities of organisms entrained in the water passing through the condenser cooling water system and evaluating the losses on the population.

Objective

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Specification

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