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

June 9, 1994

Docket No. 50-247

Mr. Stephen B. Bram
Vice President, Nuclear Power
Consolidated Edison Company
of New York, Inc.
Broadway and Bleakley Avenue
Buchanan, New York 10511

Dear Mr. Bram:

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 (TAC NO. M88464)

The Commission has issued the enclosed Amendment No. 170 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 (TSs) in response to your application transmitted by letter dated December 6, 1993.

The amendment revises the TSs to provide several temporary one-time changes that are necessary to support the fuel out, chemical decontamination program that is currently scheduled for the upcoming 1995 refueling outage. Specifically, the amendment revises the definition of the cold shutdown condition in TS 1.2.1 by changing the upper limit of T_{avg} for the cold shutdown condition from 200 °F to 250 °F. The amendment also revises the definition of the hot shutdown condition in TS 1.2.2 by changing the lower limit of T_{avg} for the hot shutdown condition from greater than 200 °F to greater than 250 °F.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Francis J. Williams, Jr., Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

9406170283 940609
PDR ADOCK 05000247
P PDR

Enclosures:
1. Amendment No. 170 to DPR-26
2. Safety Evaluation

cc w/enclosures:
See next page

NRC FILE CENTER COPY

DF01
1/1

Mr. Stephen B. Bram
Consolidated Edison Company
of New York, Inc.

Indian Point Nuclear Generating
Unit No. 2

cc:

Mayor, Village of Buchanan
236 Tate Avenue
Buchanan, New York 10511

Ms. Donna Ross
New York State Energy Office
2 Empire State Plaza
16th Floor
Albany, New York 12223

Mr. Charles W. Jackson
Manager of Nuclear Safety and
Licensing
Consolidated Edison Company
of New York, Inc.
Broadway and Bleakley Avenue
Buchanan, New York 10511

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

Mr. Brent L. Brandenburg
Assistant General Counsel
Consolidated Edison Company
of New York, Inc.
4 Irving Place - 1822
New York, New York 10003

Charles Donaldson, Esquire
Assistant Attorney General
New York Department of Law
120 Broadway
New York, New York 10271

Mr. Peter Kokolakis, Director
Nuclear Licensing
Power Authority of the State
of New York
123 Main Street
White Plains, New York 10601

Mr. Walter Stein
Secretary - NFSC
Consolidated Edison Company
of New York, Inc.
4 Irving Place - 1822
New York, New York 10003

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Docket No. 50-247 June 9, 1994

Mr. Stephen B. Bram
Vice President, Nuclear Power
Consolidated Edison Company
of New York, Inc.
Broadway and Bleakley Avenue
Buchanan, New York 10511

Dear Mr. Bram:

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 (TAC NO. M88464)

The Commission has issued the enclosed Amendment No. 170 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 (TSs) in response to your application transmitted by letter dated December 6, 1993.

The amendment revises the TSs to provide several temporary one-time changes that are necessary to support the fuel out, chemical decontamination program that is currently scheduled for the upcoming 1995 refueling outage. Specifically, the amendment revises the definition of the cold shutdown condition in TS 1.2.1 by changing the upper limit of T_{avg} for the cold shutdown condition from 200 °F to 250 °F. The amendment also revises the definition of the hot shutdown condition in TS 1.2.2 by changing the lower limit of T_{avg} for the hot shutdown condition from greater than 200 °F to greater than 250 °F.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,
Original signed by:

Francis J. Williams, Jr., Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 170 to DPR-26
2. Safety Evaluation

cc w/enclosures:
See next page

Distribution:
See attached sheet

LA:PDI-1	PM:PDI-1	PM:PDI-1	EMCB	SRXB	NRR:PRPB
CVogan	JMenning:smm	FWilliams	JStrosnider	TCollins	LCunningham
4/6/94	4/6/94	4/18/94	5/12/94	5/18/94	5/20/94
OGC	D:PDI-1				
EHoller	MBoyle RACapra				
5/27/94	6/9/94	/ /	/ /	/ /	/ /

OFFICIAL RECORD COPY
FILENAME: A:\IP288464.AMD

DATED: June 9, 1994

AMENDMENT NO. 170 TO FACILITY OPERATING LICENSE NO. DPR-26-INDIAN POINT UNIT 2

Docket File
NRC & Local PDRs
PDI-1 Reading
S. Varga, 14/E/4
J. Calvo, 14/A/4
R. Capra
C. Vogan
F. Williams
OGC
D. Hagan, 3302 MNBB
G. Hill (2), P1-22
C. Grimes, 11/F/23
J. Menning
ACRS (10)
OPA
OC/LFDCB
PD plant-specific file
C. Cowgill, Region I
J. Davis, 7/D/4
T. Collins, 8/E/23
J. Strosnider, 7/D/4
L. Cunningham, 10/D/4

cc: Plant Service list

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

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. 170
License No. DPR-26

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

   A. The application for amendment by Consolidated Edison Company of of New York, Inc. (the licensee) dated December 6, 1993, 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 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:

9406170291 940609
PDR ADOCK 05000247
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 170, 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 to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Michael L. Boyle, Acting Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 9, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 170

FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Revise Appendix A as follows:

Remove Page	Insert Page
1-1	1-1

1.0 DEFINITIONS

The following terms are defined for uniform interpretation of the specifications.

1.1 a. RATED POWER

A steady state reactor thermal power of 3071.4 MWT.

b. THERMAL POWER

The total core heat transfer rate from the fuel to the coolant.

1.2 REACTOR OPERATING CONDITIONS

1.2.1 Cold Shutdown Condition

When the reactor is subcritical by at least 1% $\Delta k/k$ and Tavg is $\leq$ 200°F*.

1.2.2 Hot Shutdown Condition

When the reactor is subcritical, by an amount greater than or equal to the margin as specified in Technical Specification 3.10 and T_{avg} is > 200°F* and $\leq$ 555°F.

1.2.3 Reactor Critical

When the neutron chain reaction is self-sustaining and k_{eff} = 1.0.

1.2.4 Power Operation Condition

When the reactor is critical and the neutron flux power range instrumentation indicates greater than 2% of rated power.

* For the one time, fuel out, chemical decontamination program only, this value will be 250°F.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 170 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 6, 1993, 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 would modify the TSs to provide several temporary, one-time changes that are necessary to support the fuel out, chemical decontamination of the reactor coolant system (RCS) that is currently scheduled for the upcoming 1995 refueling outage. Specifically, the upper limit of T_{avg} for the cold shutdown condition specified in the definition of the cold shutdown condition in TS 1.2.1 would be increased from 200 °F to 250 °F. The lower limit of T_{avg} for the hot shutdown condition specified in the definition of the hot shutdown condition in TS 1.2.2 would be changed from greater than 200 °F to greater than 250 °F. The licensee anticipates that RCS temperature will be increased to as high as 240 °F during the chemical decontamination, invoking TS requirements for T_{avg} above 200 °F. The proposed changes would, in essence, extend the cold shutdown condition to 250 °F for implementation of the chemical decontamination program and thereby temporarily eliminate the need to take TS actions that will be unnecessary since no fuel will be in the reactor vessel.

Corrosion and wear products found in the RCS circulate with the primary coolant through the reactor, and some of these products become activated. Oxide layers that form in the RCS incorporate these activated products, which eventually leads to personnel radiation exposure during maintenance of major plant components. Chemical decontamination of the full RCS is a method of reducing the radiation exposure to personnel. In the submittal dated December 6, 1993, the licensee stated that they plan to conduct a full RCS chemical decontamination without fuel during the 1995 refueling. The decontamination activities will be conducted in accordance with Westinghouse Topical Report WCAP-12932-A, Revision 2, "Full RCS Chemical Decontamination Program." In a letter from James E. Richardson (NRC) to P. E. Miller (Westinghouse), dated April 13, 1993, the NRC staff approved WCAP-12932-A for referencing in license applications. The staff's approval was, in part, contingent upon each licensee conducting a plant-specific 10 CFR 50.59 safety analysis, ensuring that decontamination operations are in compliance with all

9406170296 940609
PDR ADOCK 05000247
P PDR

applicable NRC regulations, and taking the specific actions recommended in WCAP-12932-A to return the plant to normal.

2.0 EVALUATION

The licensee has proposed that the definition of the cold shutdown condition in TS 1.2.1 be modified on a temporary, one-time basis. A footnote would be added to TS 1.2.1 that would indicate that for the one-time, fuel out, chemical decontamination program only, the upper limit of T_{avg} for the cold shutdown condition will be 250 °F instead of 200 °F. The licensee also proposed an accompanying change to the definition of the hot shutdown condition in TS 1.2.2. A footnote would indicate that for the one-time, fuel out, chemical decontamination program only, the lower limit of T_{avg} for the hot shutdown condition will be greater than 250 °F instead of greater than 200 °F. The licensee anticipates that RCS temperature will be increased to as high as 240 °F during the chemical decontamination. The proposed changes are intended to temporarily eliminate TS requirements associated with T_{avg} above 200 °F that will be unnecessary since no fuel will be in the reactor vessel during the chemical decontamination.

The TSs currently require actions on several systems when the reactor is at or above cold shutdown conditions as defined in TS 1.2.1. The reason for these actions fall into essentially two categories: RCS integrity protection and accident mitigation that includes control/prevention of releases to the environment. The protection of the RCS and contiguous systems against brittle fracture during the chemical decontamination is essential. The licensee has stated that the TSs involving RCS heatup/cooldown rates, chemistry limits, leakage, and overpressure protection would, therefore, continue to be met during the full RCS chemical decontamination, as addressed in WCAP-12932-A.

The TS requirements for accident mitigation involve actions for containment integrity, engineered safety features, snubbers, fire protection, instrumentation, gas turbine generators, and related surveillances that are relevant to fuel being in the reactor vessel, as is normally the case at or above cold shutdown operating conditions. During the chemical decontamination process, however, the need for measures for maintaining the reactor subcritical or protecting against the potential for highly radioactive gaseous releases in the event of any analyzed accident will be obviated because the reactor will be defueled. As discussed in WCAP-12932-A, the only accident during chemical decontamination that requires consideration is the failure of the liquid waste processing system since, functionally speaking, the chemical decontamination system can be considered as a system to process liquid waste. Evaluation of the failure of the liquid waste processing system is required on a plant-specific basis.

The licensee's preliminary analysis of the consequences of a potential failure in the liquid waste processing system, that would result in flashing of the process fluid, revealed that the limits of 10 CFR Part 20 would not be

exceeded. The licensee has stated that the chemical decontamination will be conducted under design conditions that are well within the design limits of the RCS and other affected systems. During the chemical decontamination process, the RCS essentially becomes a part of a radwaste system which extends to the decontamination skid in the primary auxiliary building. As such, implementation of appropriate design and procedural controls consistent with the requirements of WCAP-12932-A and the NRC's regulations for radwaste systems should be sufficient and ensure that safety is not compromised. As previously stated, the licensee is required to implement the chemical decontamination effort in accordance with the provisions of 10 CFR 50.59.

The NRC staff has concluded that the temporary, one-time TS changes proposed by the licensee are acceptable since (1) they will provide relief during chemical decontamination from TS actions that are unnecessary with no fuel in the reactor vessel and (2) they are consistent with WCAP-12932-A which has been approved by the NRC.

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 a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 7687). 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.

Principal Contributor:
J. Menning

Date: June 9, 1994