February 21, 2001

Mr. A. Alan Blind
Vice President, Nuclear Power
Consolidated Edison Company
of New York, Inc.
Broadway and Bleakley Avenue
Buchanan, NY 10511

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 - AMENDMENT RE: REVISION TO VENTILATION CHARCOAL ADSORBER TESTING PROGRAM (TAC NO. MA7375)

Dear Mr. Blind:

The Commission has issued the enclosed Amendment No. 215 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 November 22, 1999, as supplemented on September 11, 2000.

The amendment revises TS Sections 4.5.D, “Containment Air Filtration System,” 4.5.E, “Control Room Air Filtration System,” 4.5.F, “Fuel Storage Building Air Filtration System,” and 4.5.G, “Post-Accident Containment Venting System,” to address the testing requirements in Generic Letter 99-02, “Laboratory Testing of Nuclear-Grade Activated Charcoal.” The laboratory testing of the engineered safeguards features ventilation system charcoal samples will meet the requirements of the American Society for Testing and Materials Standard D3803-1989.

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,

/RA/

Patrick D. Milano, Senior Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-247

Enclosures: 1. Amendment No. 215 to DPR-26
2. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page
ADAMS ACCESSION NUMBER: ML003767569
ADAMS DOCUMENT TITLE: IP2 Amend MA7375 Charcoal T~.wpd
☒Publicly Available ☐Non-Publicly Available ☐Sensitive ☒Non-Sensitive

OFFICE	PM:PDI-1	LA:PDI-1	SC:SPLB	OGC	SC:PDI-1
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DATE	02/05/01	02/05/01	02/07/01	02/14/01	02/21/01

Official Record Copy

DATED: February 21, 2001

AMENDMENT NO. 215 TO FACILITY OPERATING LICENSE NO. DPR-26-INDIAN POINT UNIT 2

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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. 215
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 November 22, 1999, as supplemented on September 11, 2000, 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:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 215, 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 and shall be implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 21, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 215

FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages	Insert Pages
4.5-3	4.5-3
4.5-5	4.5-5
4.5-6	4.5-6
4.5-10	4.5-10
- - - -	4.5-11

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 215 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 November 22, 1999, as supplemented on September 11, 2000, the Consolidated Edison Company of New York, Inc. (the licensee) submitted a request for changes to the Indian Point Nuclear Generating Unit No. 2 (IP2) Technical Specifications (TSs). The requested changes would revise TS Sections 4.5.D, "Containment Air Filtration System (CAFS)," 4.5.E, "Control Room Air Filtration System (CRAFS)," 4.5.F, "Fuel Storage Building Air Filtration System (FSBAFS)," and 4.5.G, "Post-Accident Containment Venting System (PACVS)," to address the testing standards in Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal." In this regard, the laboratory testing of the engineered safeguards features ventilation system charcoal samples would meet the specifications of the American Society for Testing and Materials (ASTM) Standard D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon."

2.0 EVALUATION

The NRC staff, with technical assistance from Brookhaven National Laboratory (BNL), has reviewed the licensee's submittals. In addition, the staff has reviewed the attached BNL Technical Evaluation Report (TER) regarding the proposed TS changes for IP2. Based on its review, the staff adopts the TER. In view of the above, and because the NRC staff considers ASTM D3803-1989 to be the most accurate and most realistic protocol for testing charcoal in safety-related ventilation systems, the NRC staff finds that the proposed TS changes satisfy the actions requested in GL 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, and are acceptable.

The NRC received a letter from the ASTM in response to a March 8, 2000, Federal Register notice (65 FR 12286) related to revising testing standards in accordance with ASTM D3803-1989 for laboratory testing of activated charcoal in response to GL 99-02. The ASTM notified the NRC that the 1989 standard is out of date and should be replaced by D3803-1991 (reaffirmed in 1998). The staff acknowledges that the most current version of ASTM D3803 is ASTM D3803-1991 (1998). However, it was decided, for consistency purposes, to have all of the nuclear reactors test to the same standard (ASTM D3803-1989) because, prior to GL 99-02 being issued, approximately one third of nuclear reactors had TSs that referenced ASTM D3803-1989, and there are no substantive changes between the 1989 and 1998 versions.

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 commented that no basis for the proposed limit on methyl iodide penetration was presented in the submittal. The NRC staff has found that the proposed methyl iodide penetration limit is acceptable as discussed in the attached TER. The State official's comment was not directed to the staff's proposed no significant hazards consideration determination.

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 (65 FR 69059). 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachment: TER, Brookhaven National Laboratory

Principal Contributor: J. Segala

Date: February 21, 2001

TECHNICAL EVALUATION REPORT
BROOKHAVEN NATIONAL LABORATORY
FOR THE OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF SYSTEMS SAFETY AND ANALYSIS
PLANT SYSTEMS BRANCH
RELATED TO AMENDMENT TO FACILITY OPERATING LICENSE NO. DPR-26
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT UNIT NO. 2
DOCKET NO. 50 - 247

1.0 INTRODUCTION

By letter dated November 22, 1999, the Consolidated Edison Company of New York, Inc. (Con Ed) submitted its response to the actions requested in Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, for the Indian Point Unit 2. By the same letter dated November 22, 1999, Con Ed requested a change to the Technical Specification (TS) Sections 4.5.D, 4.5.E, 4.5.F, and 4.5.G, covering the Containment Air Filtration System (CAFS), the Control Room Air Filtration System (CRAFS), the Fuel Storage Building Air Filtration System (FSBAFS), and the Post-Accident Containment Venting System (PACVS), respectively. By letter dated September 11, 2000, Con Ed provided additional information clarifying that CRAFS is the only ESF ventilation system that is currently credited in the accident analysis for the Indian Point Unit 2. Other relevant information pertaining to the charcoal testing for the CRAFS was included in this submittal. The proposed changes would revise the TS Section 4.5.E on surveillance testing of this safety related ventilation system charcoal to meet the requested actions of GL 99-02.

2.0 BACKGROUND

Safety-related air-cleaning units used in the engineered safety features (ESF) ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by filtering radioiodine. Analyses of design basis accidents assume particular safety related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal filters used in these systems will perform in a manner that is consistent with the licensing basis of a facility, licensees have requirements in their TS to periodically perform a laboratory test (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

Both the fuel storage building air filtration system (FSBAFS) and the post-accident containment ventilation system (PACVS) were never credited in the plant's accident analysis. A recent alternate source term amendment eliminated the containment air filtration system (CAFS) from the accident analysis. Therefore, the only system which is credited in the accident analysis is the control room air filtration system (CRAFS).

In GL 99-02, the staff alerted licensees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing bases with respect to the dose limits of General Design Criterion (GDC) 19 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TS reference ASTM D3803-1989 for charcoal filter laboratory testing. Licensees whose TS do not reference ASTM D3803-1989 were requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

3.1 Laboratory Charcoal Sample Testing Surveillance Requirements

The current and proposed laboratory charcoal sample testing TS surveillance requirements for the Control Room Air Filtration System (CRAFS) are shown in Table 1 and Table 2, respectively.

The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The proposed test temperature of 30°C and test relative humidity of 95% are acceptable because it is consistent with ASTM D3803-1989 and the actions requested in GL 99-02.

On the basis of UFSAR Section 14.3.6.5, the credited filter efficiency of the CRAFS for methyl iodide is 90%. The proposed test penetration for radioactive methyl iodide for the CRAFS is <5%. The proposed test penetration is obtained by applying a safety factor of 2 to the credited efficiency. The proposed safety factor of 2 is acceptable because it ensures that the efficiency credited in the accident analysis is still valid at the end of the surveillance interval. This is consistent with the minimum safety factor of 2 specified in GL 99-02.

The August 23, 1999 errata to GL 99-02 clarified that if the maximum actual face velocity is greater than 110% of 40 fpm, then the test face velocity should be specified in the TS. Based on the Con Ed letter of September 11, 2000, for the CRAFS, the actual system face velocity at the charcoal adsorber sections is 40 fpm at the nominal system flow rates specified in the TS. The proposed testing of the charcoal adsorbers will be performed in accordance with ASTM D3803-1989 which specifies a test face velocity of 40 fpm with appropriate margins. This is acceptable because it ensures that the testing will be consistent with the operation of the ventilation system during accident conditions. Therefore, it is not necessary to specify the face velocity in the proposed TS change. This is consistent with the errata to GL 99-02 dated August 23, 1999.

4.0 CONCLUSION

On the basis of its evaluation, BNL recommends that the NRC staff consider the proposed TS changes to be acceptable.

Principal Contributor: Mano Subudhi
Date: October 11, 2000

TABLE 1 - CURRENT TS REQUIREMENTS											
System Description						**Current TS Requirements**					
TS Section	System	Bed Thickness (inches)	Actual Charcoal		Credited Efficiency of MI (%)	Test Penetration of methyl iodide (%)	Safety Factor	Test Standard	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
			Res. Time (sec)	Face Velocity (fpm)							
4.5.E	Control Room Air Filtration System (CRAFS)	2	0.25	40	90**	2*	5	ASTM D3803-1979*	80*	70*	Not Stated

* Not stated in the TS. Specified in the September 11, 2000 letter.
** Calculated based on the TS test penetration and safety factor.
*** Calculated based on the credited efficiency and the test penetration.

TABLE 2 - PROPOSED TS REQUIREMENTS											
System Description						**Proposed TS Requirements**					
TS Section	System	Bed Thickness (inches)	Actual Charcoal		Credited Efficiency of MI (%)	Test Penetration of Methyl Iodide (%)	Safety Factor	Test Standard	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
			Res. Time (sec)	Face Velocity (fpm)							
4.5.E	Control Room Air Filtration System (CRAFS)	2	0.25	40	90**	5	2***	ASTM D3803-1989	30	95	40