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

April 21, 1993

Docket No. 50-286

Mr. Ralph E. Beedle
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. Beedle:

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC NO. M84682)

The Commission has issued the enclosed Amendment No. 131 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The amendment consists of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated October 9, 1992.

The amendment revises the Technical Specifications to incorporate the following changes:

(1) The containment fan cooler unit filtration system testing frequency (specified in TS Section 4.5.A.4) has been changed to accommodate operation on a 24-month cycle.

(2) The central control room filtration system testing frequency (specified in TS Section 4.5.A.5) has been changed to accommodate operation on a 24-month cycle.

(3) The containment vent isolation valve mechanical stop verification frequency (specified in TS Section 4.13.A) has been changed to accommodate operation on a 24-month cycle.

These changes followed the guidance provided in Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," as applicable.

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,

Nicola F. Conicella, Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 131 to DPR-64
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Ralph E. Beedle
Power Authority of the State
of New York

Indian Point Nuclear Generating
Station Unit No. 3

cc:

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

Mr. Gerald C. Goldstein
Assistant General Counsel
Power Authority of the State
of New York
1633 Broadway
New York, New York 10019

Mr. John C. Brons, President
Power Authority of the State
of New York
123 Main Street
White Plains, New York 10601

Mr. William A. Josiger
Resident Manager
Indian Point 3 Nuclear Power Plant
Post Office Box 215
Buchanan, New York 10511

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

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

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

Resident Inspector
Indian Point 3 Nuclear Power Plant
U.S. Nuclear Regulatory Commission
Post Office Box 337
Buchanan, New York 10511

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

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

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

POWER AUTHORITY OF THE STATE OF NEW YORK

DOCKET NO. 50-286

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131
License No. DPR-64

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

   A. The application for amendment by Power Authority of the State of New York (the licensee) dated October 9, 1992, 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-64 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 131, 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

Robert A. Capra

Robert A. Capra, 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: April 21, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 131

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Revise Appendix A as follows:

Remove Pages	Insert Pages
4.5-3	4.5-3
4.5-4	4.5-4
4.13-1	4.13-1
4.13-2	4.13-2

4. Containment Air Filtration System

a. Visual inspection of the filter installations shall be performed in accordance with ANSI N 510 (1975) every six months for the first two years and at least once per 24 months thereafter, or at any time fire, chemical releases or work done on the filters could alter their integrity.

b. At least once per 24 months, the following conditions shall be demonstrated before the system can be considered operable:

(1) The pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at ambient conditions and accident design flow rates.

(2) Using either direct or indirect measurements, the flow rate of the system fans shall be shown to be at least 90% of the accident design flow rate.

(3) The charcoal filter isolation valves shall be tested to verify operability.

c. At least once per 24 months or at any time fire, chemical releases or work done on the filters could alter their integrity or after every 720 hours of charcoal adsorber use since the last test, the following conditions shall be demonstrated before the system can be considered operable:

(1) Impregnated activated charcoal from each of the five units shall have a methyl iodine removal efficiency $\geq$ 85% $\pm$ 20% of the accident design flow rate, 5 to 15 mg/m^3 inlet methyl iodine concentration, $\geq$ 95% relative humidity and $\geq$ 250°F. In addition, ignition shall not occur below 300°F.

(2) A halogenated hydrocarbon (freon) test on charcoal adsorbers at $\pm$ 20% of the accident design flow rate and ambient conditions shall show $\geq$ 99% halogenated hydrocarbon removal.

(3) A locally generated DOP* test of the HEPA filters at $\pm$ 20% of the accident design flow rate and ambient conditions shall show $\geq$ 99% DOP removal.

*Dioctylphthalate Particles

5. Control Room Air Filtration System

a. Visual inspection of the filter installations shall be performed in accordance with ANSI N 510 (1975) every six months for the first two years and at least once per 24 months thereafter, or at any time fire, chemical releases or work done on the filters could alter their integrity.

b. The charcoal filtration system shall be operated for a minimum of 15 minutes every month.

c. At least once per 24 months, the following conditions shall be demonstrated before the system can be considered operable:

(1) The pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at ambient conditions and accident design flow rates.

(2) Using either direct or indirect measurements, the flow rate of the system fans shall be shown to be at least 90% of accident design flow rate.

d. At least once per 24 months or at any time fire, chemical releases or work done on the filters could alter their integrity or after every 720 hours of charcoal adsorber use since the last test, the following conditions shall be demonstrated before the system can be considered operable:

(1) The charcoal shall have a methyl iodine removal efficiency $\geq$ 90% at $\pm$ 20% of the accident design flow rate, 0.05 to 0.15 mg/m^3 inlet methyl iodine concentration, $\geq$ 95% relative humidity and $\geq$ 125°F.

(2) A halogenated hydrocarbon (freon) test on charcoal adsorbers at $\pm$ 20% of the accident design flow rate and ambient conditions shall show $\geq$ 99% halogenated hydrocarbon removal.

(3) A locally generated DOP test of the HEPA filters at $\pm$ 20% of the accident design flow rate and ambient conditions shall show $\geq$ 99% DOP removal.

4.13 Containment Vent and Purge System

Applicability

This specification applies to the surveillance requirements of the containment vent and purge system during normal operations and when reactor fuel is anticipated to be moved before the reactor has been subcritical for at least 365 hours.

Objective

To verify the operability of the containment vent and purge system.

Specification

The following surveillance shall be performed as stated.

A. Isolation Valves

1. Each month verify that the containment purge supply and exhaust isolation valves are closed during operation above cold shutdown.

2. At least once per 24 months verify that the mechanical stops on the containment vent isolation valve (PCV-1190, -1191, -1192) actuator is limited to the valve opening angle to 60° (90° = full open).

B. HEPA Filters and Charcoal Absorbers

If fuel movement is to take place before the reactor has been subcritical for at least 365 hours, the containment vent and purge system shall be demonstrated operable as follows:

1. Within 18 months prior to fuel movement and (1) after each complete or partial replacement of a HEPA filter or charcoal adsorber bank within 18 months prior to fuel movement, or (2) after structural maintenance on the HEPA filter or charcoal adsorber housing within 18 months prior to fuel movement, which could effect system operation:

   a. Verify that the charcoal adsorbers remove ≥ 99% of halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at the operating flow ± 10%.

   b. Verifying that the HEPA filter banks remove ≥ 99% of the DOP when they are tested in-place while operating the ventilation system at the operating flow rate ± 10%.

2. Within 18 months prior to fuel movement and after every 720 hours of system operation, subject a representative sample of carbon from the charcoal adsorbers to a laboratory analysis and verify within 31 days a removal efficiency of ≥ 90% for radioactive methyl iodine at an operating air flow velocity ± 20% per test 5.b in Table 2 of Regulatory Guide 1.52, March 1978.

Basis

The containment purge supply and exhaust isolation valves are required to be closed during plant operation above cold shutdown. Containment purge supply or exhaust isolation valve closure may be verified by way of the position indication lights, the weld channel and penetration pressurization system or visual means. The maximum opening angle of the containment vent isolation valves is being limited as an analysis demonstrates valve operability against accident containment pressures provided the valves are limited to an opening angle of 60°.

The operability of the HEPA filter and charcoal absorber system and the resulting iodine removal capacity are consistent with accident analyses. The representative carbon sample will be two inches in diameter with a length equal to the thickness of the bed.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. DPR-64

POWER AUTHORITY OF THE STATE OF NEW YORK

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

DOCKET NO. 50-286

1.0 INTRODUCTION

By letter dated October 9, 1992, the Power Authority of the State of New York (the licensee) submitted a request for changes to the Indian Point Nuclear Generating Unit No. 3 (IP3), Technical Specifications (TSs). The requested changes would revise the TS to incorporate the following containment and control room ventilation system changes:

(1) The containment fan cooler unit filtration system testing frequency (specified in TS Section 4.5.A.4) would be changed to accommodate operation on a 24-month cycle.

(2) The central control room filtration system testing frequency (specified in TS Section 4.5.A.5) would be changed to accommodate operation on a 24-month cycle.

(3) The containment vent isolation valve mechanical stop verification frequency (specified in TS Section 4.13.A) would be changed to accommodate operation on a 24-month cycle.

The requested changes are needed to accommodate operation on a 24-month fuel cycle. The licensee commenced operating on a 24-month fuel cycle, instead of the previous 18-month fuel cycle, with fuel cycle 9. Fuel cycle 9 started in August 1992. The proposed changes follow the guidance provided in Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," as applicable.

2.0 EVALUATION

The licensee considered the following factors in evaluating the containment ventilation and control room ventilation system surveillance interval extensions from 18 to 24 months:

- Does on-line testing adequately demonstrate operability or are failures only being detected during these refueling tests?
- Did past equipment performance have an effect on system safety functions?
- Does performing the surveillance test at power present an unacceptable burden?

2.1 Containment Fan Cooler Unit Filtration System Testing

The containment fan cooler units (FCUs) were designed to remove the normal heat loss from equipment and piping in containment during plant operation and to remove sufficient heat from the containment during the initial loss-of-coolant-accident (LOCA) containment pressure transient so that containment design pressure would not be exceeded. The FCUs will continue to remove heat following a LOCA and reduce containment pressure to near atmospheric pressure within 24 hours. In addition, the FCUs function to remove fission products from the containment atmosphere should they be released in the event of an accident. Each FCU, of which there are five, consists of a fan, cooling coil, moisture separator, high efficiency particulate air (HEPA) filter, carbon filter, roughing filter, and set of dampers. The filtration portion of the units are bypassed during normal operation; however, upon receipt of a safety injection signal, dampers automatically reposition to place the filters in service.

The purpose of the refueling outage test is to verify the integrity and operability of the FCU filtration system by checking for leaks, filter bypassing, and charcoal adsorption capability. This test also verifies the operability of the charcoal filter isolation valves. The licensee stated that the surveillance and acceptance testing of the FCU filtration system is in accordance with the requirements of ANSI N510-1989, "Testing of Nuclear Air Treatment Systems." Specifically, the licensee performs the following during the refueling outage testing:

(1) Visual inspection of filters, mounting frames, and housing
(2) Air flow capacity and distribution test
(3) In-place leak test of the HEPA filter bank
(4) In-place leak test of the charcoal adsorber bank
(5) Laboratory testing of the charcoal adsorbent

ANSI N510 also recommends special testing of the HEPA and charcoal filters any time fire, chemical releases, or work done on the filters could alter their integrity or after 720 hours of charcoal operation. The licensee's TS currently contain these special testing requirements, therefore, these special testing requirements would not be altered by a 24-month surveillance testing interval.

In addition to the refueling outage test, the licensee conducts periodic on-line testing with the fans in operation which would reveal clogging of the HEPA filters or charcoal banks along with other conditions which could affect system operability. Specifically, the on-line test verifies system operability by checking the pressure drop across the HEPA and charcoal filter banks. The on-line test also checks the FCU housing interior, housing door seals, fan motor, and fan belts.

The licensee reviewed data from 1986 to 1990 related to containment FCU filtration system testing. The data indicated that there were no failures during the performance of the refueling tests. In addition, the data did not

indicate a decrease in filtration efficiency over time. Therefore, the licensee concluded that this surveillance test interval could be extended since the results of the refueling tests were satisfactory and there was no evidence that containment FCU filtration system performance was a function of the surveillance interval.

The NRC staff has reviewed the information presented by the licensee regarding containment FCU filtration system testing and concludes the requested change is acceptable.

2.2 Central Control Room Filtration System Testing

The central control room (CCR) filtration system is designed to filter the CCR atmosphere for intake air and/or recirculation during CCR isolation conditions. The system's normal lineup is such that the filter units are bypassed. The filter units consist of roughing filters, HEPA filters, and charcoal filters. Upon receipt of a safety injection signal or a CCR high radiation signal, the system will automatically align to the partial recirculation mode. The system can also be operated in the full recirculation mode. This mode is manually selected whenever the CCR toxic chemical monitors indicate hazardous concentrations of ammonia, carbon dioxide, or chlorine.

The purpose of the refueling outage test is to verify the integrity and operability of the CCR filtration system by checking for leaks, filter bypassing, and charcoal adsorption capability. The licensee stated that the surveillance and acceptance testing of the CCR filtration system is in accordance with the requirements of ANSI N510-1989, which is the same as the containment FCU filtration system discussed above in Section 2.1 of this safety evaluation.

ANSI N510 also recommends special testing of the HEPA and charcoal filters any time fire, chemical releases, or work done on the filters could alter their integrity or after 720 hours of charcoal operation. As was the case with the containment FCU filtration system, the licensee's TS also contain these requirements for the CCR filtration system, therefore, these testing requirements would not be altered by a 24-month surveillance testing interval.

In addition to the refueling outage test, the licensee tests the CCR filtration system on a monthly basis to verify equipment operability and ensure the system operates properly. Again, as was the case with the containment FCU filtration system, the importance of the CCR filtration system refueling test is to check for leaks, filter bypassing, and charcoal adsorption capability.

The licensee reviewed data from 1986 to 1990 related to CCR filtration system testing. The data indicated that there were no failures during the performance of the refueling tests. In addition, the data did not indicate a decrease in filtration efficiency over time. Therefore, the licensee concluded that this surveillance test interval could be extended since the

results of the refueling tests were satisfactory and there was no evidence that CCR filtration system performance was a function of the surveillance interval.

The NRC staff has reviewed the information presented by the licensee regarding central control room filtration system testing and concludes the requested changes are acceptable.

2.3 Containment Vent Isolation Valve Mechanical Stop Verification

The licensee's TS requires that each refueling outage, the mechanical stops on containment vent isolation valve actuators for valves PCV-1190, 1191, and 1192 are verified to limit the opening angle for each valve to 60° (90° is full open). The opening angle of the containment vent isolation valve is limited since the accident analysis demonstrates valve operability against postulated accident containment pressures only if the maximum valve opening angle is limited to 60°.

The inservice testing (IST) requirements of Section XI of the ASME Code requires local observation of valve stroking every two years. The licensee conducts local observation of the containment vent isolation valve mechanical stops during this refueling outage test. This ensures proper operation of the mechanical stops by direct observation of the valve actuator position.

In addition to the refueling tests, on-line testing for the containment vent isolation valves includes quarterly stroke time verification. The licensee stated that this stroke time test indirectly confirms that the maximum valve opening angle of 60° has not significantly changed.

NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," (W-STS), requires the containment vent isolation valve mechanical stop verification to be performed each refueling outage. The W-STS recognizes that the refueling periodicity can be either 18 or 24 months. The W-STS Bases indicate that a refueling outage periodicity is appropriate because the mechanical stops would typically only be removed (or repositioned) during a refueling outage. There is a low probability that the mechanical stops would reposition during normal operation.

The NRC staff has reviewed the information presented by the licensee regarding containment vent isolation mechanical stop verification and concludes the requested change is acceptable.

2.4 Summary

The licensee has evaluated the effect of the increase in the surveillance interval on safety for each of the proposed changes 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 increase in each of the surveillance intervals to accommodate a 24-month fuel cycle does not invalidate any assumption in the IP3 licensing basis.

The staff has reviewed the information presented by the licensee and concludes that the proposed changes do not have a significant effect on safety. In addition, the proposed changes follow the guidance of Generic Letter 91-04, as applicable. Therefore, all the proposed changes are 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 a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and 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 (57 FR 61120). 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:
Nicola F. Conicella

Date: April 21, 1993