

January 28, 1997

Mr. William J. Cahill, Jr.
Chief Nuclear Officer
Power Authority of the State
of New York
123 Main Street
White Plains, NY 10601

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 3
(TAC NO. M96757)

Dear Mr. Cahill:

The Commission has issued the enclosed Amendment No. 172 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3 (IP3). The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated October 1, 1996.

The amendment extends the surveillance interval for certain items to allow completion of your current fuel cycle without a shutdown.

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:

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

Docket No. 50-286

Enclosures: 1. Amendment No. 172o DPR-64
2. Safety Evaluation

cc w/encls: See next page

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ISSUANCE OF AMENDMENT NO. 172 TO FACILITY OPERATING LICENSE NO. DPR-28

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

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Sincerely,

A handwritten signature in black ink, appearing to read "George F. Wunder".

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

Docket No. 50-286

Enclosures: 1. Amendment No. 172 to DPR-64
2. Safety Evaluation

cc w/encls: See next page

William J. Cahill, Jr.
Power Authority of the State
of New York

Indian Point Nuclear Generating
Station Unit No. 3

cc:

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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. 172
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 1, 1996, 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.172, 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



S. Singh Bajwa, 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: January 28, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 172

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Revise Appendix A as follows:

Remove Pages

4.4-4

4.4-6

4.5-2

4.8-1

Insert Pages

4.4-4

4.4-6

4.5-2

4.8-1

1. Tests and Frequency [See Note A, below]

- a. Isolation valves in Table 4.4-1 shall be tested for operability at intervals no greater than 30 months (24 months + 25%).
- b. Isolation valves in Table 4.4-1 which are pressurized by the Weld Channel and Penetration Pressurization System shall be leakage tested as part of the Weld Channel and Penetration Pressurization System Test at intervals no greater than 30 months (24 months + 25%).
- c. Isolation valves in Table 4.4-1 which are pressurized by the Isolation Valve Seal Water System shall be tested at intervals no greater than 30 months (24 months + 25%) as part of an overall Isolation Valve Seal Water System Test.
- d. Isolation valves in Table 4.4-1 which are not pressurized will be tested at intervals no greater than 30 months (24 months + 25%).
- e. Isolation valves in Table 4.4-1 shall be tested with the medium and at the pressure specified therein.

2. Acceptance Criteria

- a. The combined leakage rate for the following shall be less than 0.5 L,: isolation valves listed in Table 4.4-1 subject to gas or nitrogen pressurization testing, air lock testing as specified in D.1, portions of the sensitive leakage rate test described in C.1 which pertain to containment penetrations and double-gasketed seals.
- b. The leakage rate into containment for the isolation valves sealed with the service water system is 0.36 gpm per fan cooler.
- c. The leakage rate for the Isolation Valve Seal Water System shall not exceed 14,700 cc/hr.

Note A: Leakage testing of containment isolation valves in Table 4.1-1 that become due prior to the next refueling outage may be deferred until the next refueling outage (RO9), but no later than May 31, 1997.

4.4-4

I. Residual Heat Removal System

1. Test

- a. (1) The portion of the Residual Heat Removal System that is outside the containment shall be tested either by use in normal operation or hydrostatically tested at 350 psig at the interval specified below.
- (2) The piping between the residual heat removal pumps suctions and the containment isolation valves in the residual heat removal pump suction line from the containment sump shall be hydrostatically tested at no less than 100 psig at the interval specified below.
- b. Visual inspection shall be made for excessive leakage during these tests from components of the system. Any significant leakage shall be measured by collection and weighing or by another equivalent method.

2. Acceptance Criterion

The maximum allowable leakage from the Residual Heat Removal System components located outside of the containment shall not exceed two gallons per hour.

3. Corrective Action

Repairs or isolation shall be made as required to maintain leakage within the acceptance criterion.

4. Test Frequency

Tests of the Residual Heat Removal System shall be conducted at least once per 24 months. [See Note A, below]

Note A: Leak testing of the boron injection tank may be deferred until the next refueling outage (RO9), but no later than May 31, 1997.

- a. System tests shall be performed at least once per 24 months. The tests shall be performed with the isolation valves in the spray supply lines at the containment and the spray additive tank isolation valves blocked closed. Operation of the system is initiated by tripping the normal actuation instrumentation.
- b. The spray nozzles shall be checked for proper functioning at least every five years. [See Note A, below]
- c. The tests will be considered satisfactory if visual observations indicate all components have operated satisfactorily.

3. Containment Hydrogen Monitoring Systems

- a. Containment hydrogen monitoring system tests shall be performed at intervals no greater than six months. The tests shall include drawing a sample from the fan cooler units.
- b. The above tests will be considered satisfactory if visual observations and control panel indication indicate that all components have operated satisfactorily.

Note A: Testing of the spray nozzles may be deferred until the next refueling outage (RO9), but no later than May 31, 1997.

Applicability

Applies to periodic testing requirements of the Auxiliary Feedwater System.

Objective

To verify the operability of the Auxiliary Feedwater System and its ability to respond properly when required.

Specification

1.
 - a. Each auxiliary feedwater pump will be started manually from the control room at monthly intervals with full flow established to the steam generators at least once per 24 months.
 - b. The auxiliary feedwater pumps discharge valves will be tested by operator action at intervals not greater than six months.
 - c. Backup supply valves from the city water system will be tested at least once per 24 months. [See Note A, below]
2. Acceptance levels of performance shall be that the pumps start, reach their required developed head and operate for at least fifteen minutes.
3. At least once per 24 months,
 - a. Verify that the recirculation valve will actuate to its correct position.
 - b. Verify that each auxiliary feedwater pump will start as designated automatically upon receipt of an auxiliary feedwater actuation test signal.

Basis

The testing of the auxiliary feedwater pumps will verify their operability. The capacity of any one of the three auxiliary feedwater pumps is sufficient to meet decay heat removal requirements.

Note A: Testing of the backup supply valves may be deferred until the next refueling outage (RO9), but no later than May 31, 1997.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 172 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 1, 1996, the Power Authority of the State of New York, the licensee for Indian Point Nuclear Generating Unit No. 3 (IP3), requested NRC's approval to implement amendments to its Operating License DPR-64, by incorporating modifications to the Technical Specifications (TSs). The proposed amendment would allow for a one-time extension of the surveillance intervals for the containment isolation valve seat leakage test, the isolation valve seal water test, the boron injection tank leakage test, the containment spray nozzle test, and the city water backup to the auxiliary boiler feed pump test. These tests would be performed during the refueling outage scheduled to begin in April 1997.

2.0 EVALUATION

2.1 Containment Leak Rate Tests

Paragraph III.D.3 of Appendix J to 10 CFR Part 50 and TS Section 4.4 require that the local leakage rate testing of containment isolation valves (CIVs) (Type C testing) be performed at intervals no greater than 2 years plus 25%. The licensee has a one-time-only extension of no more than an additional 4.5 months in the interval between tests. These tests will be performed during IP3's next refueling outage which is currently scheduled for the spring of 1997. Without this one-time extension, a forced outage would be necessary to perform the required testing.

The CIVs provide containment isolation during selected design basis accidents to prevent the uncontrolled release of fission products from the core to the environment. Ensuring the leak tightness of the CIVs will preserve the accident analysis assumptions related to the leakage of radioactive fission products from the reactor to the environment following a design basis accident. The last completed test period began on July 31, 1994, and extended for a period of approximately 6 months, with many of the valves being tested at least 3 months after the first test. Past test results show good performance of the CIVs with respect to leak tightness. The requested one-time extension of the 30-month surveillance limit for testing CIV leakage involves an extension from January 16 to May 31, 1997 (about 4½ months), or a 15% increase in the surveillance interval. In order to accommodate this

extension, the licensee evaluated the leak test data acquired previously, against a reduced criteria that includes 15% additional margin. From this evaluation, the licensee concluded that the request for extending the surveillance interval for testing CIV leakage can safely be extended based on the conservative system design, periodic monitoring of the system, the fact that no credit is taken for system operation in the calculation of accident doses, and the fact that the more restrictive criteria has been met in the more-recent tests.

Based on the above, the NRC staff has concluded that there is reasonable assurance that the containment leak rate will remain within acceptable limits if the local leak rate test interval is extended by 4½ months. The staff concludes, therefore, that the proposed change to the TSs allowing a one-time extension of the interval between Type C leak tests is acceptable.

2.2 Containment Spray Nozzle Test

This amendment also requests a one-time extension of the surveillance test interval for the functional test of the Containment Spray Nozzles currently due in January 1997. In accordance with TS 4.5.A.2.b, a functional test of the Containment Spray Nozzles should be conducted once every 5 years. Based on 6.25 year test interval, which includes a 25% extension allowance for surveillance intervals, the next test of the nozzles should be conducted by January 1997. This amendment requests a one-time extension that would allow the functional test to be conducted during the next refueling outage, but no later than May 31, 1997. These tests will be performed during IP3's next refueling outage, which is currently scheduled for the spring of 1997. According to the licensee, these tests will be performed no later than May 31, 1997. Without this one-time extension, a forced outage will be necessary to perform the required testing.

The Containment Spray Nozzles are designed to provide a uniform spray of cooling water inside containment during loss-of-coolant and steam line rupture accidents. The functional test of the Containment Spray Nozzles is normally performed at a frequency of 5 years with the plant in cold shutdown. This plant alignment is needed because the test makes the containment spray system inoperable. Spray line spool pieces are removed and a large amount of compressed air is introduced into the system. The test requires hoses to be run through the containment equipment hatch (with both doors open) which is not permitted while the plant is at power. A review of the three most-recent tests over the past 16 years showed that the nozzles have always passed the tests.

Because there is no history of trouble with the spray nozzles over the past 16 years, because the extension requested is short, because a forced outage would increase the probability of undesired events which are more likely to occur during transient operation (heatup and cooldown) than at full power steady state operation and would subject the plant equipment to an

additional heatup/cool-down cycle resulting in unnecessary equipment degradation, the staff concludes that the requested extension of the surveillance on Containment Spray Nozzles is acceptable.

2.3 Boron Injection Tank Test

Amendment No. 139 to License No. DPR-64, IP3, allows the licensee to eliminate the requirement to maintain a Boron Injection Tank and the related heat tracing. In this amendment request, the licensee demonstrated that the departure from nuclear boiling limits are not exceeded and that any radiation releases from the plant remain within the applicable limits. Although the licensee is not required to maintain the boron injection tank (BIT), they are still required to monitor the system for leakage.

The purpose of the leakage testing is to ensure that in the event high head recirculation is required, leakage of potentially contaminated fluid outside of the containment will be minimal. The licensee tests the Safety Injection (SI) (including the BIT) and the Residual Heat Removal (RHR) systems under TS 4.4.1.4. This TS requires the licensee to test for excessive leakage, during operation, or hydrostatically at 350 psig, and also visually inspect the system components at an interval of at least once per 24 months. Based on TS 1.12, the licensee is permitted to extend the interval by 25% (or a total interval of 30 months). Since the testing renders the SI system inoperable, it is more favorable to the licensee to perform the test during cold shutdown.

The licensee indicated that, historically, the leakage testing resulted in leakage significantly less than the current acceptance criteria of 2 gallons per hour (gph) and the pending criteria of 1.09 gph. The most recent test resulted in leakage less than 0.05 gph. During the time period October 1994 to August 1996, the combined leakage of the BIT and other components, which provides the licensee with a trend of total SI and RHR leakage outside containment, was less than 0.1 gph.

The additional 2 months the licensee is requesting is a 7% increase over the currently approved surveillance interval (24 months + 25%). It is the staff's conclusion that this small increase in the surveillance interval will have an insignificant effect on the overall risk. In addition, the licensee has assured the staff that the normal monthly testing of the safety injection pumps, which circulated water through the BIT and associated piping, would alert plant operator of gross leakage.

The staff has considered the licensee's test record of low level leakage detected in the past, along with the insignificant impact to risk that an increase in the test interval would impose, and has concluded that this one-time request to extend the test interval is acceptable.

2.4 City Water Backup to Auxiliary Boiler Feed Pump

In accordance with TS 4.8.1.c, a functional test of the City Water Backup Supply Valves for the auxiliary boiler feed pump (ABFP) shall be conducted once every 24 months. Including a 25% extension allowance for surveillance intervals per TS 1.12, the next test of the valves would have to be conducted by March 1997.

The City Water Backup Supply Valves provide an alternate source of auxiliary feed water in the event that the normal source (the condensate storage tank) is depleted or otherwise unavailable for accident mitigation. The condensate storage tank minimum volume requirement is sufficient to maintain decay heat removal for at least 24 hours with the plant in hot shutdown, which is normally sufficient for the transition to the RHR system for decay heat removal. Therefore, no credit is taken in the safety analysis for the function of this system.

A review of the four most recent tests performed over the past 6 years on the City Water Backup Supply Valves for the AFW System shows that the valves have always passed the tests, based on valve stroke time being within the acceptance criteria. During the most recent test conducted October 1994, the measured valve opening stroke times ranged from 6 seconds to 10.7 seconds compared to an acceptance criterion of 20 seconds.

Because the City Water Backup Supply Valves have passed the last four surveillance tests with ample margin, because the extension requested is short, because a forced outage would increase the probability of undesired events which are more likely to occur during transient operation (heatup and cooldown) than at full power steady state operation and would subject the plant equipment to an additional heatup/cooldown cycle resulting in unnecessary equipment degradation, the staff concludes that the requested extension of the surveillance on the City Water Backup Supply Valves is 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 surveillance requirement. 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 (61 FR 64393). 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 Contributors: A. Gill
S. Brewer

Date: January 28, 1997