

March 30, 1990

Docket No. 50-286

Distribution:

| | |
|---------------|-------------|
| Docket File | Wanda Jones |
| NRC/Local PDR | JCalvo |
| PDI-1 Rdg | JNeighbors |
| SVarga | LKopp |
| BBoger | GPA/PA |
| CVogan | OC/LFMB |
| RCapra | JLinville |
| OGC | DHagan |
| EJordan | TMeek(4) |
| RJones | |

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

Dear Mr. Brons:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 71300)

The Commission has issued the enclosed Amendment No. 95 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 in response to your application transmitted by letter dated April 12, 1989.

The amendment revises the Technical Specifications related to Residual Heat Removal Pump out-of-service requirements with T_{avg} below 200°F and above 140°F (Refueling Operation Condition).

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

Sincerely,

Joseph D. Neighbors, Senior Project Manager
 Project Directorate I-1
 Division of Reactor Projects - I/II
 Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 95 to DPR-64
2. Safety Evaluation

cc: w/enclosures
 See next page

| | | | | | | |
|------|-----------|-------------|------------|-----------|-----------|---|
| OFC | :PDI-1 | :PDI-1 | :RSB | :OGC | :PDI-1 | : |
| NAME | :CVogan | :JNeighbors | :rc RJones | :RCapra | : | : |
| DATE | : 1/30/90 | : 2/7/90 | : 3/20/90 | : 3/22/90 | : 3/30/90 | : |

OFFICIAL RECORD COPY
 Document Name: ISSUANCE OF AMEND TAC 71300

9004110064 900330
 PDR ADOCK 05000286
 P PIC

Handwritten: c/p-1, DF01, 11

Mr. John C. Brons
Power Authority of the State
of New York

Indian Point 3 Nuclear Power Plant

cc:

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

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

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

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

Mr. Phillip Bayne, President
Power Authority of the State
of New York
123 Main Street
White Plains, New York 10601

Mr. A. Klausmann, Vice President
Quality Assurance
Power Authority of the State of New York
1633 Broadway
New York, New York 10019

Mr. Joseph E. Russell
Resident Manager
Indian Point 3 Nuclear Power Plant
Post Office Box 215
Buchanan, New York 10511

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

Mr. George M. Wilverding, Manager
Nuclear Safety Evaluation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Mr. F. X. Pindar
Quality Assurance Superintendent
Indian Point 3 Nuclear Power Plant
Post Office Box 215
Buchanan, New York 10511

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

Mr. R. Beedle, Vice President
Nuclear Support
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

Mr. S. S. Zulla, Vice President
Nuclear Engineering
Power Authority of the State
of New York
123 Main Street
White Plains, New York 10601

Mr. William Josiger, Vice President
Operations and Maintenance
Power Authority of the State
of New York
123 Main Street
White Plains, New York 10601

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



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

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. 95
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 April 12, 1989, 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. 95, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

Donald S. Crinkman
for 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: March 30, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 95

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Revise Appendix A as follows:

Remove Pages

3.1-1
3.1-1a
3.1-1b

Insert Pages

3.1-1
3.1-1a
3.1-1b

3. LIMITING CONDITIONS FOR OPERATION

For the case where no exception time is specified for inoperable components, this time is assumed to be zero.

In the event that service water temperature exceeds 90°F, the unit shall be placed in at least hot shutdown within the next seven hours and be in at least cold shutdown within the following thirty hours unless service water temperature is reduced to 90°F or less within these time intervals as measured from initial discovery or until the reactor is placed in a condition where this service water temperature is not applicable.

3.1 REACTOR COOLANT SYSTEM

Applicability

Applies to the operating status of the Reactor Coolant System; operational components; heatup; cooldown; criticality; activity; chemistry and leakage.

Objective

To specify those limiting conditions for operation of the Reactor Coolant System which must be met to ensure safe reactor operation.

Specification

A. OPERATIONAL COMPONENTS

1. Coolant Pumps

- a. When a reduction is made in the boron concentration of the reactor coolant, at least one reactor coolant pump or one residual heat removal pump (connected to the Reactor Coolant System) shall be in operation.
- b. (1) When the reactor coolant system T_{avg} is greater than 350°F and electrical power is available to the reactor coolant pumps, and as permitted during special plant evolutions, at least one reactor coolant pump shall be in operation. All reactor coolant pumps may be de-energized for up to 1 hour provided no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and core outlet temperature is maintained at least 10°F below saturation temperature.

(2) When the reactor is subcritical and reactor coolant system T_{avg} is greater than 350°F, control bank withdrawal shall be prohibited unless four reactor coolant pumps are operating.
- c. When the reactor coolant system T_{avg} is greater than 200°F and less than 350°F, and as permitted during special plant evolutions, at least one reactor coolant pump or one residual heat removal pump (connected to the Reactor Coolant System) shall

be in operation. All reactor coolant pumps may be de-energized with RHR not in service for up to 1 hour provided no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and core outlet temperature is maintained at least 10°F below saturation temperature.

- d. When the reactor coolant system T_{avg} is less than 200°F, but not in the refueling operation condition, and as permitted during special plant evolutions, at least one residual heat removal pump (connected to the Reactor Coolant System) shall be in operation. This RHR pump may be out of service for up to 1 hour provided no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and core outlet temperature is maintained at least 10°F below saturation temperature.
- e. When the reactor is critical and above 2% rated power, except for natural circulation tests, at least two reactor coolant pumps shall be in operation.
- f. The reactor shall not be operated at power levels above 10% rated power with less than four (4) reactor coolant loops in operation.
- g. If the requirements of 3.1.A.1.e and 3.1.A.1.f. above cannot be satisfied, the reactor shall be brought to the hot shutdown condition within 1 hour.
- h. A reactor coolant pump (RCP) may not be started (or jogged) when the RCS cold leg temperature (T_{cold}) is at or below 326°F, with no other RCP's operating, unless RCS make up is not in excess of RCS losses, and one of the following requirements is met:

(1) The OPS is operable, steam generator pressure is not decreasing, and the temperature of each steam generator is less than or equal to the coldest T_{cold} ;

Or

(2) The OPS is operable, the temperature of the hottest steam generator exceeds the coldest T_{cold} by no more than 64°F, pressurizer level is at or below 75 percent, and T_{cold} is as per Figure 3.1.A-1;

Or

(3) The OPS is inoperable, steam generator pressure is not decreasing, the temperature of each steam generator is less than or equal to the coldest T_{cold} , pressurizer level is at or below 75 percent, and the RCS pressure does not exceed that given by Curve I on Fig. 3.1.A-2;

Or

3.1-1a

(4) The OPS is inoperable, the temperature of the hottest steam generator exceeds the coldest T_{cold} by no more than 64°F, and pressurizer level and RCS pressure do not exceed the boundaries given on Fig. 3.1.A-4.

i. Additional pumps may not be started (or jogged) unless the OPS is operable and the pressurizer level is not increasing.

(1) Specification 3.1.A.1.i above may be modified to allow the OPS inoperable, providing the temperature of each steam generator has remained less than or equal to the coldest T_{cold} since the first RCP start, pressurizer level is at or below 75 percent, and the RCS pressure does not exceed that given by Curve I on Fig. 3.1.A-2.

(2) Specification 3.1.A.1.i above may be further modified to allow the OPS inoperable and the temperature of the hottest steam generator to be no greater than 64°F higher than the coldest T_{cold} , provided that pressurizer level is at or below 75 percent and RCS pressure does not exceed that given by Curve II on Fig. 3.1.A-2.

j. Following the start of one or more RCP's and prior to reaching 326°F, the RCS pressure shall not exceed that given by Curves I and II on Fig. 3.1.A-3 as appropriate.

3.1-1b



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
March 30, 1990

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 95 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

INTRODUCTION

By letter dated April 12, 1989, the Power Authority of the State of New York (the licensee) requested an amendment to Facility Operating License No. DRP-64. The amendment would revise the Technical Specifications related to the Residual Heat Removal (RHR) Pumps out-of-service time.

DISCUSSION AND EVALUATION

Paragraphs 3.1.A.1.b through d of the existing Technical Specifications provide Reactor Coolant Pump (RCP) and RHR Pump operating requirements during the conditions of hot and cold shutdown. Additionally, Paragraphs b and c allow for pump inoperability under stipulated conditions. Paragraph b allows all reactor coolant pumps to be de-energized for up to one hour provided no operations are permitted that would cause dilution of the reactor coolant system boron concentration, and core outlet temperature is maintained at least 10°F below saturation temperature. Paragraph c allows all reactor coolant pumps to be de-energized for up to one hour with RHR not in service with the same provisions as above.

The licensee provided, in part, the following evaluation:

The proposed change to Paragraph 3.1.A.1.d would allow the operating RHR Pump to be out-of-service for up to one (1) hour below 200°F and not in the refueling operation condition (140°F) provided no operations are permitted that would cause dilution of the RCS boron concentration, and core outlet temperature is maintained at least 10°F below saturation temperature. The one hour allowed for the no pump running condition is not of sufficient duration to allow significant localized boron dilution due to stratification. Combined with the requirement for no operations that could cause dilution, the probability of exceeding shutdown margin in any region of the core is not significantly increased. Additionally, the requirement to maintain core exit temperature 10°F below saturation provides sufficient margin to the onset of boiling, including time to restore cooling before boiling occurs in any part of the core. Moreover, the proposed change does not affect the operation of RCS/RHR temperature and flow instrumentation. The proposed change provides for flexibility consistent with existing specifications, without compromising decay heat removal capability.

The "out-of-service" (O-O-S) condition is being defined as not in operation, but not necessarily inoperable. In accordance with Specification 3.3.A.7, two (2) RHR Pumps are required operable during cold shutdown with T_{avg} above 140°F unless an alternate means of decay heat removal is available. A single RHR loop provides sufficient heat removal capability for removing decay heat; but single failure considerations require that an additional RHR loop be operable. Thus, should the operating pump be shutoff (O-O-S yet operable), Specification 3.3.A.7 is not violated and the proposed change would allow up to one hour to reinstate an RHR Pump to operating status. This allows for the flexibility desired during pump turnover when the operating pump is shut off and a short period of inoperability occurs between shutoff time and the time another pump is put into operation. Should, however, the operating pump become inoperable, the proposed change would require an RHR Pump to be rendered in operation within the one hour period. At this point, one RHR Pump should be in operation and should an inoperable pump remain, the requirements of 3.3.A.7.a or b must be met. Thus, the proposed change constitutes the addition of a Limiting Condition for Operation (LCO) not presently included in the Technical Specifications and does not compromise existing specifications aimed at maintaining decay heat removal capability.

We have reviewed the change proposed by the licensee and conclude, based on our review, that the change is acceptable. The change would make the RHR pumps out-of-service time flexibility consistent with other existing Technical Specifications.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 this amendment.

CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: March 30, 1990

PRINCIPAL CONTRIBUTOR:

Joseph D. Neighbors