

November 24, 1987

Docket No. 50-286

DISTRUBTION

<u>Docket File</u>	EJordan
NRC PDR	JPartlow
SVarga	TBarnhart(4)
BBoger	WJones
CVogan	EButcher
DNeighbors	ACRS(10)
DHagen	GPA/PA
OGC	ARM/LFMB
JJohnson	PD

Mr. John C. Brons
Executive Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
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Dear Mr. Brons:

The Commission has issued the enclosed Amendment No. 80 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 February 6, 1987. (TAC No. 64634).

The amendment deletes Technical Specifications for the Containment Atmosphere Sampling System. The Containment Atmosphere Sampling System was replaced by the Containment Hydrogen Monitoring System.

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

Sincerely,

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

Enclosures:

1. Amendment No. 80 to DPR-64
2. Safety Evaluation

cc: w/enclosures
See next page

PDI-I *w*
CVogan
11/19/87

PDI-I *JN*
DNeighbors
11/10/87

OGC *LHZ*
S H Lewis
11/18/87

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RCapra
11/24/87

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Mr. John C. Brons
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Indian Point Nuclear Generating
Unit No. 3

cc:

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Indian Point 3

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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. 80
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 February 6, 1987, 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:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 80, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Capra, Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 24, 1987



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

ATTACHMENT TO LICENSE AMENDMENT NO. 80
FACILITY OPERATING LICENSE NO. DPR-64
DOCKET NO. 50-286

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3.3-11	3.3-11
3.3-12	3.3-12
3.3-18	3.3-18
3.3-19	3.3-19

3. Isolation shall be maintained between the essential and non-essential headers at all times when above cold shutdown conditions except that for a period of eight hours the headers may be connected while another essential header is being placed in service as described in F.2, above.

G. Hydrogen Recombiner System

1. The reactor T_{avg} shall be not exceed 350° unless the following requirements are met:
 - a) Both hydrogen recombiner units together with their associated piping, valves, oxygen supply system and control system are operable.
 - b) One hydrogen monitor including a flow path and associated containment fan cooler unit shall be operable.
 - c) Hydrogen and oxygen supplies shall not be connected to the hydrogen recombiner units except under conditions of an accident or those specified in 4.5.A.3.
2. The requirements of 3.3.G.1 may be modified to allow any one of the following components to be inoperable at any one time:

- a. One hydrogen recombiner unit or its associated flow path or oxygen supply system or control system may be inoperable for a period not to exceed 15 days provided the other recombiner unit is demonstrated to be operable.
 - b. Both containment hydrogen monitoring systems may be inoperable for a period not to exceed 7 days.
3. If the Hydrogen Recombiner System is not restored to meet the requirements of 3.2.G.1 within the time period specified in 3.3.G.2, then:
- a. If the reactor is critical, it shall be brought to the hot shutdown condition utilizing normal operating procedures. The shutdown shall start no later than at the end of the specified time period.
 - b. If the reactor is subcritical, the reactor coolant system temperature and pressure shall not be increased more than 25°F and 100 psi, respectively, over existing values.
 - c. In either case if the requirements of 3.3.G.1 are not satisfied within an additional 48 hours, the reactor shall be brought to the cold shutdown condition utilizing normal operating procedures. The shutdown shall start no later than the end of the 48 hour period.

H. Control Room Ventilation System

1. The control room ventilation system shall be operable at all times when containment integrity is required as per Specification 3.6.

The four day out of service period for the Weld Channel and Penetration Pressurization System and the Isolation Valve Seal Water System is allowed because no credit has been taken for operation of these systems in the calculation of off-site accident doses should an accident occur. No other safeguards systems are dependent on operation of these systems.⁽¹¹⁾ The minimum pressure settings for the IVSWS and WC & PPS during operation assures effective performance of these systems for the maximum containment calculated peak accident pressure of 40.6 psig.⁽¹²⁾

The Component Cooling System is not required during the injection phase of a loss-of-coolant accident. The component cooling pumps are located in the Primary Auxiliary Building and are accessible for repair after a loss-of-coolant accident.⁽⁶⁾ During the recirculation phase following a loss-of-coolant accident, only one of the three component cooling pumps is required for minimum safeguards.⁽⁷⁾

A total of six service water pumps are installed, only two of the set of three service water pumps on the header designated the essential header are required immediately following a postulated loss-of-coolant accident.⁽⁸⁾ During the recirculation phase of the accident, two service water pumps on the non-essential header will be manually started to supply cooling water for one component cooling system heat exchanger, one control room air conditioner, and one diesel generator; the other component cooling system heat exchanger, the other control room air conditioner, the two other diesel generators and remaining safety related equipment are cooled by the essential service water header.⁽¹⁴⁾

Two full rated recombination systems are provided in order to control the hydrogen evolved in the containment following a loss-of-coolant accident. Either system is capable of preventing the hydrogen concentration from exceeding 2% by volume within the containment. Each of the systems is separate from the other and is provided with redundant features. Power supplies for the blowers and ignitors are separate, so that loss of one power supply will not affect the remaining system. Hydrogen gas is used as the externally supplied fuel. Oxygen gas is added to the containment atmosphere through a separate containment feed to prevent depletion of oxygen in the air below the concentration required for stable operation of the combustor (12%). The containment hydrogen

monitoring system consists of two safety related hydrogen concentration measurement cabinets with sample lines which pass through the containment penetrations to each containment fan cooler unit plenum. Two of the five sampling lines (from containment fan cooler units nos. 32 and 35) are routed to a common source line and then to a hydrogen monitor. The other three sample lines (from containment fan cooler units nos. 31, 33 and 34) are likewise headered and routed to the other hydrogen monitor. Each monitor has a separate return line. The design hydrogen concentration for operating the recombiner is established at 2% by volume. Conservative calculations indicate that the hydrogen content within the containment will not reach 2% by volume until 12 days after a loss-of-coolant accident. (10) There is, therefore, no need for immediate operation of the recombiner following an accident, and the quantity of hydrogen fuel stored at the site will be only for periodic testing of the recombiners.

Auxiliary Component Cooling Pumps are provided to deliver cooling water for the two Recirculation Pumps located inside the containment. Each recirculation pump is fed by two Auxiliary Component Cooling Pumps. A single Auxiliary Component Cooling Pump is capable of supplying the necessary cooling water required for a recirculation pump during the recirculation phase following a loss-of-coolant accident.

The control room ventilation is designed to filter the control room atmosphere for intake air and/or for recirculation during control room isolation conditions. The control room system is designed to automatically start upon control room isolation and to maintain the control room pressure to the design positive pressure so that all leakage should be out leakage.

The OPS has been designed to withstand the effects of the postulated worst case Mass Input (i.e., single safety injection pump) without exceeding the 10 CFR 50, Appendix G curve. Curve III on Figure 3.1.A-3 provides the setpoint curve of the OPS PORVs which is sufficiently below the Appendix G curve such that PORVs overshoots would not exceed the allowable Appendix G pressures. Therefore, only one safety injection pump can be available to feed water into the RCS when the OPS is operable. The other pump must be prevented from injecting water into the RCS. This may be accomplished, for example, by placing the SI pump



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 80 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 February 6, 1987, the Power Authority of the State of New York (the licensee) requested an amendment to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. This amendment would revise the Technical Specification 3.3.G to delete references to the Containment Atmosphere Sampling System.

Evaluation:

The licensee's letter dated December 30, 1980, described the Containment Hydrogen Monitoring System and stated that the Containment Atmosphere Sampling System would be retired. Amendment No. 65, dated April 18, 1986, provided Technical Specifications for the Containment Hydrogen Monitoring System but did not delete references to the Containment Atmosphere Sampling System. The licensee therefore, has proposed to delete those references to the Containment Atmosphere Sampling System since they are no longer applicable.

We have reviewed these changes and conclude that they are acceptable and should be made.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in 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.

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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: November 24, 1987

PRINCIPAL CONTRIBUTOR:

D. Neighbors