

May 2, 1985

Docket No. 50-286

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RDiggs	RBallard
BTurovlin	

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

Dear Mr. Brons:

The Commission has issued the enclosed Amendment No. 55 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 January 17, 1985.

The amendment would revise the Technical Specifications related to steam generator tube inservice surveillance to extend the region for which the tube plugging limit of 63% degradation due to pitting applies. This limit will now extend from the tubesheet to the second support plate for the remainder of Cycle 4.

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

Sincerely,

/s/JDNeighbors

Joseph D. Neighbors, Project Manager
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 55 to DPR-64
2. Safety Evaluation

cc: w/enclosures

See next page

*See previous white for concurrences

ORB#1:DL*	ORB#1:DL*	ORB#1:DL*	BC-ORB1:DL*	OELD*	AD:OR:DL*
CParrish	KJohnston;ps	JDNeighbors	SVarga		GLainas
4/4/85	4/4/85	4/4/85	4/5/85	4/10/85	4/29/85

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Docket No. 50-286

Mr. C. A. McNeill, Jr.
Senior Vice President - Nuclear Generation
Power Authority of the State of New York
123 Main Street
White Plains, New York 10601

Dear Mr. McNeill:

The Commission has issued the enclosed Amendment No. 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 January 17, 1985.

The amendment would revise the Technical Specifications related to steam generator tube inservice surveillance to extend the region for which the tube plugging limit of 63% degradation due to pitting applies. This limit will now extend from the tubesheet to the second support plate for the remainder of Cycle 4.

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Sincerely,

Joseph D. Neighbors, Project Manager
Operating Reactors Branch #1
Division of Licensing

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

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See next page

ORB#1:DL CP
CParrish KJohnston,ps
4/2/85 4/4/85
cp 4/4/85

ORB#1:DL
JDN Neighbors
4/4/85

BB ORB#1:DL
B Kanga
4/2/85

OELD
4/10/85

AD OR:DL
GLamas
4/2/85

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

Indian Point Nuclear Generating

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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.55
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 January 17, 1984, 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. 55, 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



Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 2, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 55

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Revise Appendix A as follows:

Remove Pages

4.9-1

4.9-6

Insert Pages

4.9-1

4.9-6

4.9 STEAM GENERATOR TUBE INSERVICE SURVEILLANCE

Applicability

Applies to inservice surveillance of the steam generator tubes.

Objective

To assure the continued integrity of the steam generator tubes that are a part of the primary coolant pressure boundary.

Specification

Steam generator tubes shall be determined operable by the following inspection program and corrective measures:

A. Inspection Requirements

1. Definitions

- a. Imperfection is an exception to the dimension, finish, or contour required by drawing or specification.
- b. Degradation means a service-induced cracking, wastage, wear or corrosion.
- c. Degraded Tube is a tube that contains imperfections caused by degradation large enough to be reliably detected by eddy current inspection. This is considered to be 20% degradation.
- d. % Degradation is an estimate % of the tube wall thickness affected or removed by degradation.
- e. Defect is an imperfection of such severity that it exceeds the plugging limit. A tube containing a defect is defective.
- f. Tube Plugging Limit is the tube imperfection depth at or beyond which the tube must either be removed from service or repaired. This is considered to be an imperfection depth of 40%. However, for Cycle 4 only, for the purposes of identifying defective tubes due to pitting between the tubesheet and second support plate of the cold leg side of all four steam generators, the tube plugging limit shall be an imperfection depth of 63%.
- g. Sleeve Plugging Limit - is the sleeve imperfection depth at or beyond which the sleeved tube must be removed from service or repaired. This is considered to be an imperfection depth of 40% for tube sleeves.

A 10% allowance for tube degradation that may occur between inservice tube examinations added to the 40% tube plugging limit provides an adequate margin to assure that SG tubes acceptable for operation will not have a minimum tube wall thickness less than the acceptable 50% of normal tube wall thickness (i.e., 0.025 in) during the service lifetime of the tubes. This minimum wall thickness is not applicable to pitted tubes in the cold leg region for Cycle 4.

Steam generator tube inspections of operating plants have demonstrated the capability to reliably detect wastage type defects that have penetrated 20% of the original 0.050 inch wall thickness.

The definition of tube plugging limit provides that an interim tube imperfection depth of 63% shall be applied for Cycle 4, to tubes which have experienced pitting on the cold leg side of a steam generator between the tube sheet and second support plate.

This 23% increase in allowable degradation for pitted tubes from the 40% allowed for degraded tubes is acceptable since burst tests, corrected to 600°F, of representative tubing with various flaw types, lengths and wall thicknesses, have demonstrated that 25% remaining wall thickness for all flaw lengths is adequate to withstand the max ΔP (2650 psi) calculated to occur during faulted conditions. The 63% plugging limit incorporates a 12% margin, which includes a 10% margin for measurement inaccuracies and a 2% safety margin for corrosion allowance..

The definition of sleeve plugging limit provides that a sleeve imperfection depth of 40% (.0156 inch) or greater shall be applied to tube sleeves.

The definition of tube inspection also provides that the steam generator inspection conducted as a result of the March 24, 1982 tube leak may be performed on the cold leg sides up to the second support plate on that side except that in at least one steam generator the inspection shall extend up the sixth tube support plate on the cold leg side. This is acceptable since the leakage which initiated this inspection occurred on the cold leg side and since a 100% inspection of the cold leg side of one steam generator up to the sixth tube support plate on that side revealed negligible defects. In addition, a 100% inspection of the hot leg sides of two steam generators up to the sixth tube support plate revealed negligible defects.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 55 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 January 17, 1985, the Power Authority of the State of New York (the licensee) requested an amendment to License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3 (IP-3). The proposed change would revise the Technical Specification related to steam generator tube inservice surveillance (Appendix A, Section 4.9) to extend the region for which the tube plugging limit of 63% degradation due to pitting applies. By letter dated November 9, 1984, we issued Amendment No. 50 granting an interim 63% plugging limit for the region from the tubesheet to the first support plate for cold leg pitted tubes. The proposed request would extend the region, for which the 63% degradation due to pitting applies, from the tubesheet to the second support plate for the remainder for Cycle 4.

EVALUATION

During a review of eddy current information conducted in support of a steam generator tube inspection and sleeving to be performed during the upcoming Cycle 4/5 refueling outage, the licensee determined that a tube, that had not been plugged in the No. 31 steam generator, exhibited a degradation of approximately 59% at a location 1.3 inches above the first support plate on the cold leg side. By letter dated January 17, 1985, the licensee requested an amendment to extend the region for which the cold leg tube plugging limit applies from the tubesheet to the second support plate.

The staff has reviewed the licensee's January 17, 1985 submittal. In its amendment request dated November 1, 1984, the licensee requested that a 63% plugging limit replace a 50% plugging limit for the area between the tubesheet and the first support plate for cold leg pitted tubes. By letter dated November 9, 1984, we issued Amendment No. 50 granting this request. In view of the safety evaluation performed in the November 9, 1985 amendment, we conclude that the factors supporting the granting of the 63% plugging limit from the tube sheet to the first support plate are also applicable from the first support plate to the second support plate. These factors are:

- The knowledge of the type, size and location of the tube defects.
- The observed conservatism of the eddy current test results in pulled tube samples.
- Acceptable burst test results for pitted tubes.

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- The improvement in plant chemistry and an apparent decrease in the tube degradation rate.
- The Technical Specification limit of 0.3 gpm for primary to secondary leakage ensures that prompt action will be taken in the unlikely occurrence of through wall penetration in any tube.

Based upon the above considerations, the proposed Technical Specification changes in the licensee letter of January 17, 1985 are acceptable.

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.

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: May 2, 1985

PRINCIPAL CONTRIBUTORS:

B. Turovlin
K. Johnston