

ATTACHMENT A

APPLICATION FOR AMENDMENT
TO TECHNICAL SPECIFICATIONS

AEC Docket No. 50-247
August 29, 1974

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The following definitions shall apply to the inspection methods employed in Table 4.2-1. The paragraphs referenced are corresponding paragraphs of Section XI of the ASME Code for In-Service Inspection of Nuclear Reactor Coolant Systems dated January 1970.

- a. UT - Ultrasonic examination per paragraph IS 213.2.*
- b. RT - Radiographic examination per paragraph IS 213.1.
- c. MT - Magnetic particle examination per paragraph IS 212.1.
- d. PT - Liquid penetrant examination per paragraph IS 212.2.
- e. V - Visual examination per paragraphs IS 211.1 or IS 211.2.
- f. ET - Eddy current examination

*All indications which produce a response greater than 100% of the reference level shall be investigated to the extent that the operator can determine the shape, identity and location of all such reflectors and evaluate these indications per paragraph IS-311. Evaluations per IS-311 shall include a determination as to the need for the re-examination of indications during appropriate succeeding inspection intervals.

Examinations which reveal unacceptable structural defects in a category shall be extended to include an additional number (or areas) of system components or piping in the same category approximately equal to that initially examined. In the event further unacceptable structural defects are revealed, all remaining system components or piping in the category shall be examined to the extent specified in that examination category.

With the exception of those components or areas for which the examination may be deferred to the end of the inspection interval, at least 25 percent of the required examinations shall have been completed by the expiration of one-third of the inspection interval (with credit for no more than 33-1/3 percent if additional examinations are completed) and at least 50 percent shall have been completed by the expiration of two-thirds of the inspection interval (with credit for no more than 66-2/3 percent). The remaining required examinations

shall be completed by the end of the inspection interval. Successive inspections shall meet the requirements of Paragraph ISI-243 of the ASME Rules for In-Service Inspection of Nuclear Reactor Coolant Systems.

Basis

The inspection program, where practical, is in compliance with Section XI of the ASME Code for In-Service Inspection of Nuclear Reactor Coolant Systems dated January 1970. Though examinations in certain areas are desirable, it should be recognized that equipment and techniques to perform the inspection are still in development. In all areas scheduled for volumetric examination, a detailed pre-service mapping will be conducted using techniques expected to be used for post-operation examinations.⁽¹⁾ The areas indicated for inspection represent those of representative stress levels, and therefore will serve to indicate potential problems before significant flaws develop there or at other areas. As more experience is gained in operation of pressurized-water reactors, the time schedule and location of inspection may be altered or, should new techniques be developed, consideration may be given to incorporate these new techniques into this inspection program.

The techniques for inspection include visual inspections, ultrasonic, eddy current, radiographic, magnetic particle and liquid penetrant testing of selected parts during refueling periods or other appropriate plant outages.

The inspection requirements of this section shall apply to all pressure-containing components that are part of the system boundary defined herein. Due to the design of Indian Point Unit #2 there may be areas where weld access is impossible due to high radiation and/or physical access problems, exception is taken to performing inspection in these areas.

Before initial operation of the plant, a base line eddy current inspection of tubing in all four steam generators was performed. This inspection consisted of testing all tubes, with the exception of those plugged, thru the tube sheet to the first tube support. In addition, the 2nd, 10th, 20th, 30th and 40th rows were tested thru the tube sheet to the 6th tube support (uppermost) and the 45th row was tested thru the tube sheet to over the "U" bend. No significant defect indications

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were noted in either the inlet or outlet side of the tubes as a result of this inspection. Permanent records, both magnetic tape and strip chart, of the inspection data are being maintained.

Prior to August 29, 1974, the date of this submittal, there has been no indication of steam generator tubing deterioration as evidenced by primary to secondary leakage. Feedwater and boiler water chemistry has been and is being maintained in accordance with the steam generator manufacturer's recommendations.

In view of the above considerations, inspection of a relatively large sampling of tubes from one steam generator at the first refueling shutdown will provide sufficient data to evaluate the structural integrity of the steam generator tubing and detect abnormal conditions that may be of a generic nature. Furthermore, the Company is proceeding with the development of remote inspection equipment and it is not expected that this equipment will be operational before the first shutdown for refueling. To perform this inspection without the use of remote equipment would involve a considerable amount of radiation exposure to personnel and would not be in accordance with the goals of Regulatory Guide 8.8 "Information Relevant to Maintaining Occupational Radiation Exposure as Low as Practicable (Nuclear Reactors)" and Regulatory Guide 8.10 "Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as Practicable".

The selection of the steam generator as well as the tubing to be inspected at the first refueling will be random provided there has been no evidence of tubing deterioration prior to the inspection. Should there be such evidence at the time of the inspection, the inspection order will be dictated by existing conditions at that time and the program may be expanded to include more than one steam generator.

The system boundary includes all pressure vessels, piping, pumps and valves which are:

- a. part of the reactor coolant system ⁽²⁾ or

ITEM 3.8 - Steam Generator 21; Shell Inclusion Area

There will be a volumetric examination of the steam generator 21 shell inclusion area as shown in Table 4.2-1.

ITEM 3.9 - Steam Generator Tubes

The steam generator tubes are accessible through a manway in each side of the primary head. Both cold and hot leg tubes will be inspected.

The examinations scheduled are listed in Table 4.2-1.

D. Piping Pressure Boundary

ITEM 4.1 (CATEGORY F) - Vessel, Pump and Valve Safe-Ends to Primary Pipe Welds and Safe-Ends in Branch Piping Welds

There are no pump or valve safe-ends in the primary system boundary. The examinations scheduled to be performed on vessel safe-end welds are shown in Table 4.2-1.

ITEM 4.2 (CATEGORY J) - Circumferential and Longitudinal Pipe Welds

Due to the design of the Indian Point Unit No. 2 piping systems, there may be areas where access to piping welds will be impossible due to high radiation levels and/or physical access problems. Existing examination techniques may also limit inspections. Exception is taken to performing inspections in these areas. Exception is also taken to performing inspections on socket welds within the primary boundary and sampling and instrumentation piping and thermowells.

The remaining welds in the primary system will be examined in such a manner as to cumulatively cover 25% of the welds during the inspection interval.

The examinations scheduled are given in Table 4.2-1.

ITEM 4.3 (CATEGORY G-1) - Pressure-Retaining Bolting

The only pressure-retaining bolting in the piping boundary is at the upstream side of the pressurizer safety valve connections to the relief line. This bolting is less than two (2) inches in diameter and thus is covered by Item 4.4 below.

TABLE 4.2-1 (sheet 6 of 11)

<u>Item No.</u>	<u>Examination Category</u>	<u>Components and Parts to be Examined</u>	<u>Method</u>	<u>Extent of Examination (Percent in 10 Year Interval)</u>	<u>Remarks</u>
Code, provided this inclusion area is included as part of Category B examination Requirements (Table IS-251).					
HEAT EXCHANGERS (CLASS A) AND STEAM GENERATORS					
3.1	B	Longitudinal and circumferential welds, including tube-sheet-to-head or shell welds on the primary side.	V & UT	5% See Remarks	The inspection is limited to the circumferential weld attaching the tube sheet to the lower head.
3.2	D	Primary nozzle-to-vessel head welds and nozzle-to-head inside radiused section		See Remarks	The primary nozzles are cast with the head. No inspections are planned.
3.3	F	Primary nozzle-to-safe-end welds	V & PT	100%	Not anticipated that meaningful UT results can be obtained.
3.4	G-1	Pressure-retaining bolting		Not applicable	
3.5	G-2	Pressure-retaining bolting	V	100%	

4.2-22

Change No.

TABLE 4.2-1 (sheet 7 of 11)

<u>Item No.</u>	<u>Examination Category</u>	<u>Components and Parts to be Examined</u>	<u>Method</u>	<u>Extent of Examination (Percent in 10 Year Interval)</u>	<u>Remarks</u>
3.6	H	Integrally-welded vessel supports		Not applicable	
3.7	I-2	Vessel cladding	V	1 patch	One (1) patch (36 square inches) in each primary side will be examined during the ten-year interval.
3.8		Steam Generator No. 21; Shell Inclusion Area	UT	See Remarks	UT of Steam Generator No. 21 shell at inclusion area during shutdowns for refueling for the first ten years of operation. Should these examinations indicate no change in inclusion pattern, the inspections of the inclusion area may subsequently be decreased to at least once during each inspection interval.
3.9		Steam Generator Tubes	ET	See remarks	Eddy current examination of 12% of the tubes in one steam generator will be performed at the first shutdown for refueling. At each subsequent shutdown for refueling, a similar examination will be made on one steam generator until all four steam generators have been inspected. This cycle of examinations will be repeated during all following refueling shutdowns. After the first refueling shutdown the maximum interval between inspections shall not exceed 20-calendar months. Detailed inspection procedures will be developed prior to the first scheduled inspection.

4.2-23

Change No.

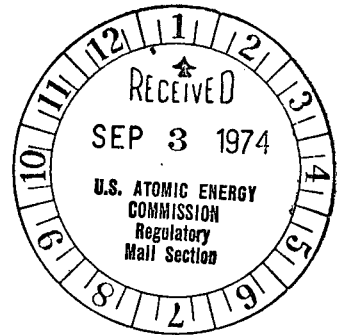
ATTACHMENT B

Safety Evaluation

The proposed changes to Section 4.2 of the Technical Specifications set forth in Appendix A to Facility Operating License No. DPR-26 provide an acceptable program of in-service inspection for the Steam Generator tubes.

The proposed changes in Section 4.2 of Appendix A to Facility Operating License No. DPR-26 have been reviewed as required by the Consolidated Edison Nuclear Facilities Safety Committee and the Station Nuclear Safety Committee. Both Committees concur that these changes do not represent a significant hazards consideration.

BEFORE THE UNITED STATES
ATOMIC ENERGY COMMISSION



In the Matter of)
)
Consolidated Edison Company) Docket No. 50-247
of New York, Inc.)
(Indian Point Station, Unit No. 2))

CERTIFICATE OF SERVICE

I hereby certify that I have served a document
entitled "Application for Amendment to Technical Specifications"
sworn to on August 29, 1974 together with Attachments A and B
thereto, by mailing first-class and postage prepaid copies
thereof to each of the following persons this 30th day of
August, 1974:

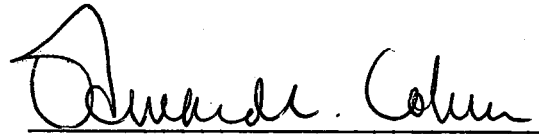
Myron Karman, Esq.
Counsel for AEC Regulatory
Staff
Office of the General Counsel
Regulation
U.S. Atomic Energy Commission
Washington, D.C. 20545

Anthony Z. Roisman, Esq.
Berlin, Roisman & Kessler
1712 N Street, N.W.
Fourth Floor
Washington, D.C. 20036

Angus Macbeth, Esq.
Natural Resources Defense
Council, Inc.
15 West 44th Street
New York, New York 10036

J. Bruce MacDonald, Esq.
Deputy Commissioner and Counsel
New York State Department of
Commerce and Counsel to the
Atomic Energy Council
99 Washington Avenue
Albany, New York 12210

Honorable Louis J. Lefkowitz
Attorney General of the State
of New York
Room 4776
Two World Trade Center
New York, New York 10047



Edward L. Cohen

LeBoeuf, Lamb, Leiby & MacRae
Attorneys for Applicant