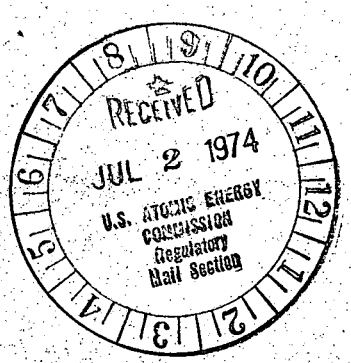


ATTACHMENT A

APPLICATION FOR AMENDMENT
TO TECHNICAL SPECIFICATIONS

AEC Docket No. 50-247
July 1, 1974

5976

4.2 PRIMARY SYSTEM SURVEILLANCE

Applicability

Applies to pre-operational and in-service structural surveillance of the reactor vessel and primary system boundary.

Objective

To assure the continued integrity of the primary system boundary.

Specification

a. Prior to initial plant operation, a survey, using volumetric, visual and surface techniques, shall be made to establish pre-operational system integrity and establish baseline data.

b. Post-operational non-destructive inspections listed in Table 4.2-1 shall be performed as specified. The results obtained from compliance with this specification shall be evaluated after five years and the conclusions of this evaluation shall be reviewed with the AEC.

c. The structural integrity of the primary system boundary shall be maintained at the level required by the original acceptance standards throughout the life of the plant. Any evidence as a result of the inspections listed in Table 4.2-1, that defects have initiated or grown shall be investigated, including evaluation of comparable areas of the primary system.

d. Detailed records of each inspection shall be maintained to allow comparison and evaluation of future inspections.

The inspection interval shall be ten years.

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.

*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, 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.

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

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

b. connected to reactor coolant system, up to and including any and all of the following:

(1) the outermost containment isolation valve[3] in system piping which penetrates primary reactor containment.

(2) the second of two valves[4] normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment and

(3) the reactor coolant system safety and relief valves.

Exclusions

(1) Sample and instrumentation piping and socket-welded piping two inches and smaller.

(2) Components that can be isolated from the reactor coolant system by two valves (both closed, both open or one closed and the other open). Each open valve must be capable of automatic actuation and its closure time must be such that, for postulated failure of the component during normal reactor operation (and the other valve is open), the reactor can be shut down and cooled down in an orderly manner assuming makeup is provided by the reactor coolant makeup system[5] only.

The examinations scheduled are listed in Table 4.2-1 and are discussed below:

A. Reactor Vessel and Closure Head

ITEM 1.1 (CATEGORY A) - Pressure-Containing Welds in Reactor Vessel Belt-Line Region

Due to the Indian Point Unit No. 2 plant design, the welds in the reactor vessel are not accessible from the O.D. It is intended that these welds be volumetrically examined from the I.D. when required, using remote, mechanized techniques. Since the examination of these

welds requires removal of the core internals and thermal shield, the examinations are scheduled near the end of the ten-year inspection interval.

When the longitudinal and circumferential welds have received an exposure to neutron fluence in excess of 10^{19} nvt (E_n of 1 MeV or above), the length of weld in the high fluence region to be examined shall be increased to, at least, 50 percent.

ITEM 1.2 (CATEGORY B) - Longitudinal and Circumferential Welds in Shell (Other than those of Category A and C) and Meridional and Circumferential Seam Welds in Bottom Head and Closure Head (Other than those of Category C)

Welds accessible to the remote inspection device will be volumetrically examined from the I.D.

A small portion of the welds between the head flange weld and the CRD shroud are accessible for an ultrasonic examination from the O.D. when the head is removed from the vessel. These welds will be examined during the inspection interval. The examinations scheduled to be performed on these welds are shown in Table 4.2-1.

ITEM 1.3 (CATEGORY C) - Vessel-to-Flange and Head-to-Flange Circumferential Welds

The head-to-flange weld can be examined using either mechanized or manual ultrasonic techniques. This weld is accessible when the head is removed for refueling.

Due to the Indian Point Unit No. 2 plant design, the vessel to flange weld in the reactor vessel is not accessible from the O.D. It is intended that this weld be volumetrically examined from the I.D. using remote mechanized techniques.

The examinations scheduled to be performed on these welds are shown in Table 4.2-1.

ITEM 1-4 (CATEGORY D) - Primary Nozzle-to-Vessel Welds and Nozzle-to-Vessel Inside Radiused Section

Due to the plant design, the vessel nozzle welds are accessible only from the I.D. It is believed that the inner radius of outlet nozzles can be examined without removing the core barrel. However, the core barrel must be removed to examine the inlet nozzles. For this reason, it is planned that the examination of the outlet nozzles be performed during the planned refueling outages near the third and sixth year and the inspection of the inlet nozzles near the end of the ten (10) year inspection interval.

ITEM 1.5 (CATEGORY E-1) - Vessel Penetrations, Including Control Rod Drive Penetrations and Control Rod Housing Pressure Boundary Welds

The penetrations in this category are the control rod drive penetrations in the upper head and the instrument penetrations in the upper and lower head. Because of the design of the vessel penetrations and the pressure boundary weld, no meaningful volumetric examinations can be performed. Visual examinations will be performed as discussed in Item 1.6 below.

ITEM 1.6 (CATEGORY E-2) - Vessel Penetrations Including Control Rod Drive Penetrations and Control Rod Housing Pressure Boundary Welds

As noted in Item 1.5 above, the control rod drive penetrations in the upper head and the instrument penetrations in the upper and lower head are included in this category. The penetrations in the upper head can be visually inspected for leakage during the system hydrostatic test as defined by Paragraph IS-521 of ASME Code Section XI at or near the end of the ten-year interval. The penetrations in the lower head will also be examined for leakage during this test.

ITEM 1.7 (CATEGORY F) - Primary Nozzles to Safe-end Welds

There are dissimilar metal welds between the carbon steel nozzle forgings and the reactor coolant piping. These welds will be ultrasonically tested during the inspection interval. This inspection will coincide

with the Item 1.4 inspection. Limited access to the O.D. of these welds is provided by removable plugs in the primary shield above the nozzles and removable insulation covering the nozzle welds. Exception is taken to performing a surface examination on these welds due to anticipated radiation levels and physical access.

ITEMS 1.8; 1.9; 1.10 (CATEGORY G-1) - Closure Studs, Nuts, Washers, Bushings and Ligaments Between Threaded Stud Holes

The closure studs, nuts, washers, bushings and ligaments between threaded stud holes will be inspected in accordance with Section XI of the ASME Code. The examinations scheduled for this inspection are shown in Table 4.2-1.

ITEM 1.11 (CATEGORY G-2) - Closure Studs and Nuts

There are no pressure-retaining bolts less than two inches in diameter on the Indian Point Unit No. 2 vessel.

ITEM 1.12 (CATEGORY H) - Integrally-Welded Vessel Supports

There are a total of four vessel-support pads welded to inlet and outlet nozzles on the Indian Point Unit No. 2 vessel. In accordance with Category H of Table IS-251 of the Code, the area to be examined should be the weld connection between the nozzle and the vessel shell. This examination is covered by Item 1.4 above.

ITEMS 1.13 and 1.14 (CATEGORY I-1) - Closure Head Cladding and Vessel Cladding

The cladding in the closure head can be visually examined and liquid penetrant examined when the head is removed from the vessel for refueling. Portions of the cladding in the reactor vessel are accessible for remote visual examinations through access ports in the core barrel support flange. The examinations scheduled to be performed are shown in Table 4.2-1.

ITEM 1.15 (CATEGORY N) - Interior Surfaces and Integrally-Welded Internal Supports

The internal surfaces and internal components of the reactor vessel will be inspected in accordance with Section XI of the Code.

B. Pressurizer

ITEM 2.1 (CATEGORY B) - Longitudinal and Circumferential Welds

Examination of the pressurizer longitudinal and circumferential welds will be performed on accessible portions of the pressurizer shell. Approximately 50 percent of the shell is enclosed in a biological and missile shield and is, therefore, not accessible for examination.

ITEM 2.2 (CATEGORY D) - Nozzle-to-Vessel Welds

The nozzles on the pressurizer are cast with the upper and lower heads; therefore, no inspections are required for these items. Inspection requirements for instrument and sample nozzles are included in Item 2.4.

ITEM 2.3 (CATEGORY E-1) - Heater Connections

The heater connections on the I.D. of the pressurizer are not accessible for visual or surface examination. The external connections are accessible for a visual examination and will be inspected as discussed in Item 2.4 below.

ITEM 2.4 (CATEGORY E-2) - Heater Connections

The pressurizer heater external connections are accessible for visual examination. These connections will be visually examined for leakage during the system hydrostatic test as defined by Paragraph IS-521 of ASME Section XI at or near the end of the ten-year interval. The instrument and sample nozzles of the pressurizer are included in this inspection.

ITEM 2.5 (CATEGORY G-1) - Pressure Retaining Bolting

There is no pressure-retaining bolting on the Indian Point Unit No. 2 pressurizer two inches or greater in diameter.

ITEM 2.6 (CATEGORY G-2) - Pressure Retaining Bolting

The pressurizer manway bolting will be inspected in accordance with the requirements of Section XI.

ITEM 2.7 (CATEGORY H) - Integrally-Welded Vessel Supports

There are no integrally welded vessel supports on the Indian Point Unit No. 2 pressurizer.

ITEM 2.8 (CATEGORY I-2) - Vessel Cladding

There will be a visual examination of the vessel cladding in accordance with ASME Section XI.

ITEM 2.9 - Pressurizer Plate Inclusion Area

There will be a volumetric examination of the pressurizer plate inclusion area as shown in Table 4.2-1.

C. Heat Exchangers (Class A) and Steam Generators

ITEM 3.1 (CATEGORY B) - Longitudinal and Circumferential Welds, Including Tubesheet-to-Head or Shell Welds on the Primary Side

The primary head for the Indian Point Unit No. 2 steam generators is a one-piece casting. Thus, the only weld covered by this category is the tubesheet-to-head weld. It is believed that this weld can be examined from the O.D. of the steam generator by ultrasonic techniques. The examinations scheduled for this weld are shown in Table 4.2-1.

ITEM 3.2 (CATEGORY D) - Primary Nozzle-to-Vessel Head Welds and Nozzle-to-Head Inside Radiused Section

The primary nozzles are cast with the primary head; therefore, no inspections are planned for this item.

ITEM 3.3 (CATEGORY F) - Primary Nozzle to Safe-End Welds

The steam generator safe-ends are a buttered end preparation of the cast nozzle and are located between the nozzle and cast fittings. It is not anticipated that a meaningful ultrasonic examination of these welds can be performed. However, these examinations are being conducted presently and if meaningful results are obtained, these areas shall be inspected per ASME Section XI requirements.

ITEM 3.4 (CATEGORY G-1) - Pressure-Retaining Bolting

There is no pressure-retaining bolting two inches or greater in diameter on the steam generator.

ITEM 3.5 (CATEGORY G-2) - Pressure-Retaining Bolting

The pressure-retaining bolting on the steam generator primary manway will be inspected in accordance with the requirements of Section XI.

ITEM 3.6 (CATEGORY H) - Integrally-Welded Vessel Supports

Indian Point Unit No. 2 generator supports are not integrally welded to the steam generator. Thus, this item does not apply.

ITEM 3.7 (CATEGORY I-2) - Vessel Cladding

The interior of the primary side of the steam generator is accessible through a manway in each side of the primary head. One patch of cladding (36 square inches) in each side of the primary head will be visually examined during the inspection interval. The examinations scheduled are listed in Table 4.2-1.

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.

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.

ITEM 4.4 (CATEGORY G-2) - Pressure-Retaining Bolting

The bolting connections joining the upstream side of the pressurizer safety valves to the relief line will be examined in accordance with Section XI of the ASME Code, as shown in Table 4.2-1.

ITEM 4.5 (CATEGORY K-1) - Integrally-Welded Supports

The accessible integrally-welded supports in the Indian Point Unit No. 2 piping systems subject to this inspection will be examined in accordance with Section XI of the Code. The examinations scheduled are shown in Table 4.2-1.

ITEM 4.6 (CATEGORY K-2) - Piping Support and Hanger

The accessible piping supports and hangers of the piping systems subject to this inspection will be examined in accordance with the Code. The examinations scheduled are shown in Table 4.2-1.

E. Pump Pressure Boundary

The only pumps subject to inspection are the reactor coolant pumps. The following items apply to these pumps.

ITEM 5.1 (CATEGORY L-1) - Pump Casing Welds

The reactor coolant pump casing is a weldment of two cast shells. At this time, there are no proven means of volumetrically inspecting the pump casing welds in service; therefore, no inspections are planned. However, the accessible internal surface of one pump casing weld shall be visually and liquid penetrant inspected. The pump casing weld inspected shall correspond to the pump casing inspected in Item 5.2.

ITEM 5.2 (CATEGORY L-2) - Pump Casing

The internal pressure boundary surfaces of the reactor coolant pumps are not accessible during normal or refueling outages. If removal of the

pump internals is required during the inspection interval, there will be a visual examination of the internal surfaces of one disassembled pump. Otherwise, the examination of the internal surfaces of one disassembled pump will be performed at or near the end of the inspection interval.

ITEM 5.3 (CATEGORY F) - Nozzle-to-Safe-End Welds

There are no nozzle-to-safe-end welds on the Indian Point Unit No. 2 reactor coolant pumps.

ITEM 5.4 (CATEGORY G-1) - Pressure-Retaining Bolting

The reactor coolant pump main flange studs are greater than two (2) inches in diameter. These studs will be examined in accordance with the code. The examinations scheduled are shown in Table 4.2-1.

ITEM 5.5 (CATEGORY G-2) - Pressure-Retaining Bolting

There is pressure-retaining bolting less than two (2) inches in diameter, associated with the reactor coolant pump seals. Since this bolting is not normally accessible, examination of this bolting will be performed only when the pump is disassembled for maintenance purposes.

ITEM 5.6 (CATEGORY K-1) - Integrally-Welded Supports

The reactor coolant pump supports consist of a cast foot welded to the pump casing. There are no currently known techniques for ultrasonically inspecting these welds. The examinations scheduled are shown in Table 4.2-1.

ITEM 5.7 (CATEGORY K-2) - Supports and Hangers

The reactor coolant pump supports will be visually examined during the inspection interval in accordance with Section XI of the code. The examinations scheduled are shown in Table 4.2-1.

F. Valve Pressure Boundary

The inspections in this category are limited to accessible valves three (3) inches or greater in the system boundary.

ITEM 6.1 (CATEGORY M-1) - Valve-Body Welds

None of the valves subject to this inspection have pressure containing body welds and thus, this item is not applicable.

ITEM 6.2 (CATEGORY M-2) - Valve Bodies

The internal surfaces of one disassembled valve in each of the groups of valves of the same construction, design, manufacturing method, manufacturer and performing similar functions in the system shall be examined during each inspection interval.

ITEM 6.3 (CATEGORY F) - Valve-to-Safe-End Welds

There are no valve-to-safe-end welds in the piping boundary subject to this examination.

ITEM 6.4 (CATEGORY G-1) - Pressure-Retaining Bolting

There is no pressure-retaining bolting greater than two (2) inches in diameter in the valves subject to this examination.

ITEM 6.5 (CATEGORY G-2) - Pressure-Retaining Bolting

The bolting subject to this examination will be the bonnet bolting in valves three (3) inches in size or greater. This bolting will be inspected in accordance with Section XI of the code, as shown in Table 4.2-1.

ITEM 6.6 (CATEGORY K-1) - Integrally-Welded Supports

There are no integrally-welded supports on the valves subject to this examination.

ITEM 6.7 (CATEGORY K-2) - Supports and Hangers

The supports and hangers of the valves subject to this examination shall be visually examined in accordance with Section XI of the code, as shown in Table 4.2-1.

G. Miscellaneous Inspections

ITEM 7.1 - Primary Pump Flywheels

The flywheels shall be visually examined at the first refueling. At each subsequent refueling, one different flywheel shall be examined by ultrasonic methods. The examinations scheduled are shown in Table 4.2-1.

ITEM 7.2 - Materials Irradiation Surveillance Specimens

The reactor vessel surveillance program* includes six specimen capsules to evaluate radiation damage based on pre-irradiation and post-irradiation testing of specimens. The specimens will be removed and examined at the following intervals.

Capsule 1 Replacement of first region of core
Capsule 2 Replacement of second region of core
Capsule 3 Replacement of fourth region of core
Capsule 4 End of the tenth year of operation
Capsule 5 End of the fifteenth year of operation
Capsule 6 End of the twentieth year of operation

(*) FSAR Section 4.5

NOTES

(1) To establish baseline data for examination of certain reactor vessel areas such as longitudinal and circumferential shell welds, vessel to flange welds, primary nozzle to vessel welds, etc., a manual preoperational ultrasonic survey of these areas within the reactor vessel was conducted. Data for inservice inspection of these areas will be obtained using remote mechanized equipment.

(2) The reactor coolant system is that system which contains primary reactor coolant at operating pressure during normal reactor operations.

(3) Containment isolation valves are those valves in system piping which penetrates the primary reactor containment and which can serve to isolate the system inside of containment from portions of the same system located outside of containment. Simple check valves are not acceptable for this purpose unless they are capable of automatic actuation upon an isolation signal.

(4) Two check valves in series are acceptable.

(5) See Note 1 on Page 4 of Section XI of the Code.

TABLE 4.2-1 (sheet 1 of 11)

Item No.	Examination Category*	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
		REACTOR VESSEL AND CLOSURE HEAD			
1.1	A	Longitudinal and circumferential shell welds in core region	UT	Longitudinal - 15% Circumferential - 7.5%	
1.2	B	Longitudinal and circumferential welds in shell (other than those of Category A and C), and meridional and circumferential seam welds in bottom head and closure head (other than those of Category C)	UT	Longitudinal - 15% Circumferential - 7.5%	Welds accessible to the remote inspection device will be volumetrically examiined from the I.D.
1.3	C	Vessel-to-flange and head-to-flange circumferential welds.	UT	100%	

* Refer to Table IS-251 in Section XI for definition of "Examination Categories"

Change No.

TABLE 4.2-1 (sheet 2 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
1.4	D	Primary nozzle-to-vessel welds and nozzle-to-vessel inside radiused section.	UT	100%	
1.5	E-1	Vessel penetrations, including control rod drive penetrations and control rod housing pressure boundary welds.		Not applicable.	Not applicable.
1.6	E-2	Vessel penetrations, including control rod drive penetrations and control rod housing pressure boundary welds.	V	25%	The examinations will be a visual examination for leakage during the system hydrostatic test at or near the end of the ten-year inspection interval.
1.7	F	Primary nozzles to safe-end welds.	UT & V	100%	The individual visual examination performed during each inspection shall cover 100% of the circumference of the safe-end welds. All safe-end welds shall be examined during the inspection interval.

TABLE 4.2-1 (sheet 3 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
1.8	G-1	Closure studs and nuts	UT & V or PT	100%	
1.9	G-1	Ligaments between threaded stud holes	UT	100%	
1.10	G-1	Closure washers, bushings	V	100%	
1.11	G-2	Pressure-retaining bolting		Not applicable	Not applicable
1.12	H	Integrally-welded vessel supports		See remarks	This inspection is covered by Item 1.4.
1.13	I-1	Closure head cladding	PT & V	6 Patches	
1.14	I-1	Vessel cladding	V	6 Patches	
1.15	N	Interior surfaces and internals and integrally-welded internal supports	V	See remarks	The examination of interior vessel surfaces, internals, and the space below the reactor core, which are made accessible for examination by the removal of components during normal

TABLE 4.2-1 (sheet 4 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
					refueling outages shall be performed during each refueling period. Where access to the space below the reactor core during normal refueling outages precludes inspection of this space, at least one examination, at or near the end of each inspection interval, shall be conducted under conditions which enable inspection.
		PRESSURIZER			
2.1	B	Longitudinal and circumferential welds.	V & UT	Longitudinal - 10% Circumferential - 5%	Accessibility of welds is limited by biological and missile shield.
2.2	D	Nozzle-to-vessel welds	V & UT	See remarks	Instrument and sample nozzles are included in Item 2.4.
2.3	E-1	Heater connections		See remarks	These connections are considered in Item 2.4.

TABLE 4.2-1 (sheet 5 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
2.4	E-2	Heater connections and instrument and sample nozzles	V	See Remarks	Visual inspections for leakage will be performed on at least 25% of the penetrations during the system hydrostatic test.
2.5	G-1	Pressure-retaining bolting		Not applicable	
2.6	G-2	Pressure-retaining bolting	V	100%	
2.7	H	Integrally-welded vessel supports		Not applicable	
2.8	I-2	Vessel cladding	V	1 Patch	One (1) patch (36 square inches) on the primary side near the manway will be examined during the ten-year interval.
2.9		Pressurizer Plate Inclusion Area	UT	See Remarks	UT of pressurizer plate at inclusion area during the pre-operational test and during the first and second refueling. Should these examinations indicate no change in inclusion pattern, the applicant may subsequently follow the in-service inspection requirements of the ASME Section XI

TABLE 4.2-1 (sheet 6 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
					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.

TABLE 4.2-1 (sheet 7 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
3.4	G-1	Pressure-retaining bolting		Not applicable	
3.5	G-2	Pressure-retaining bolting	V	100%	
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.

TABLE 4.2-1 (sheet 8 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
		PIPING PRESSURE BOUNDARY			
4.1	F	Vessel, pump and valve safe-ends to primary pipe welds and safe-ends in branch piping welds.	UT, PT & V	100%	This examination covers only the pressurizer safe-ends.
4.2	J	Circumferential and longitudinal pipe welds	V & UT	25%	(1) Exception is taken to inaccessible welds. (2) Exception is taken for socket welds. (3) Exception is taken for sampling and instrumental piping and thermowells. (4) Exception is taken where examination techniques limit inspections.
4.3	G-1	Pressure-retaining bolting		Not applicable	
4.4	G-2	Pressure-retaining bolting	V	100%	

TABLE 4.2-1 (sheet 9 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
4.5	K-1	Integrally-welded supports	V & PT	25%	Exception is taken for supports which are not accessible. No meaningful ultrasonic examination can be performed on these welds. PT base line will be established during the first inspection interval.
4.6	K-2	Piping support and hangers	V	100%	Exception is taken for those supports which are not accessible.
		PUMP PRESSURE BOUNDARY			
5.1	L-1	Pump casing welds	V & PT	100%	No meaningful ultrasonic examinations can be performed on these welds.
5.2	L-2	Pump casings	V	See Remarks	Examination will be made when pump internals are removed for other reasons, but at least once at or near the end of each inspection interval.
5.3	F	Nozzle-to-safe-end welds		Not applicable	
5.4	G-1	Pressure-retaining bolting	UT & V	100%	

TABLE 4.2-1 (sheet 10 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
5.5	G-2	Pressure-retaining bolting	V	See Remarks	Bolting will be inspected only when pump is disassembled for other reasons, but at least once at or near the end of each inspection interval.
5.6	K-1	Integrally-welded supports	V & PT	25%	Exception is taken for supports which are not accesible - no meaningful ultrasonic examination can be performed on these welds.
5.7	K-2	Supports and hangers	V	100%	
		VALVE PRESSURE BOUNDARY			
6.1	M-1	Valve-body welds		Not applicable	
6.2	M-2	Valve bodies	V	See Remarks	Exception taken for valves which are not accessible or which are not disassembled for maintenance purposes during the inspection interval.
6.3	F	Valve-to-safe end welds		Not applicable	

TABLE 4.2-1 (sheet 11 of 11)

Item No.	Examination Category	Components and Parts to be Examined	Method	Extent of Examination (Percent in 10 Year Interval)	Remarks
6.4	G-1	Pressure-retaining bolting		Not applicable	
6.5	G-2	Pressure-retaining bolting	V	100%	Exception is taken for valves which are not accessible.
6.6	K-1	Integrally-welded supports		Not applicable	
6.7	K-2	Supports and hangers	V	100%	Exception is taken for supports and hangers which are not accessible.
		MISCELLANEOUS INSPECTIONS			
7.1		Primary pump flywheel	V & UT	See Remarks	The flywheels shall be visually examined at the first refueling. At each subsequent refueling, one different flywheel shall be examined by ultrasonic methods.
7.2		Irradiation Specimen Schedule	Tensile and Charpy V Notch (Wedge Open Loading)	See Remarks	Refer to FSAR Section 4.5.1.

ATTACHMENT B

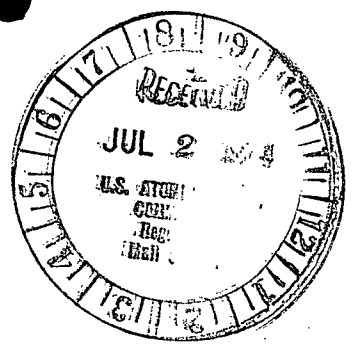
Safety Evaluation

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 improved program of inservice inspection for Indian Point 2. The program as modified by the proposed changes has been expanded to provide further assurance that the structural integrity of the vessel is being maintained at the level required by the original acceptance standards.

Section 4.2.4 as proposed requires that areas producing a response in excess of 100 percent of the reference level shall be further investigated and evaluated in accordance with Paragraph IS311 of Section XI of the ASME Code for In-Service Inspection of Nuclear Reactor Coolant Systems dated January, 1970. Reexamination of areas producing a response greater than 100 percent of the reference level during each appropriate successive inspection will also be determined in accordance with Paragraph IS311 of Section XI of the ASME Code.

The proposed changes to Section 4.2.10 provide an unequivocal requirement for the volumetric examination of the reactor vessel using remote, automatic ultrasonic inspection equipment. In addition, the proposed changes increase the extent of examination of the longitudinal and circumferential welds of the reactor vessel. The extent of these examinations now exceed ASME Code requirements by 50 percent.

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 Station Nuclear Safety Committee and by the Consolidated Edison Nuclear Facilities 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 of New York, Inc. (Indian Point Station, Unit No. 2)	)	Docket No. 50-247

CERTIFICATE OF SERVICE

I hereby certify that I have served a document entitled "Application for Amendment to Technical Specifications" sworn to on July 1, 1974, together with Attachments A and B thereto, by mailing copies thereof first-class and postage prepaid, to each of the following persons this 1st day of July, 1974:

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