EXAMINATION PROGRAM PLAN
FOR
NEW YORK POWER AUTHORITY
Indian Point Unit No. 3
2nd Outage; 3rd Period; 1st Interval
1987

This document details the proposed planned scope of examination by Westinghouse for Refueling Outage V-VI, including items and areas selected for examination, examination and documentation procedures and isometric sketches containing identification of all areas to be examined.

Qualification of examiners, materials and equipment will be available on site prior to the start of examinations.

Efforts should be made to provide access to all planned examinations, however, due to circumstances such as radiation, environment, accessibility, etc., some variations may occur. In the event of such occurrences, substitute areas may be selected.

This program and the procedures incorporated herein require approval of New York Power Authority and the Authorized Inspector prior to the start of examinations.

Prepared By: WESTINGHOUSE ELECTRIC CORPORATION

W Approval: Phillip E. Burkes 7-5-87
ISI Coordinator Date

New York Power Authority Approval: [signature] 5/11/87
Date

Title: Level III

Authorized Inspector Review: [signature] 5/14/87
Date

Agency: Hartford Steam Boiler Insp. & Ins. Co.

NEW YORK POWER AUTHORITY
INDIAN POINT UNIT NO. 3
REFUELING OUTAGE V-VI
2ND OUTAGE: 3RD PERIOD; 1ST INTERVAL
INSERVICE EXAMINATION
1987

All items listed below were examined, as indicated, in accordance with the requirements of the Plant Technical Specification, Westinghouse Position on NRC Regulatory Guide 1.150 Rev. 1 and to the requirements of Section XI 1974 Edition of the ASME Boiler and Pressure Vessel Code up to and including Summer 1975 Addenda (except for Categories B4.5, C2.1 and C2.2 which are examined to Summer 1978 requirements) to the extent practical with the access available and the limitations of component geometry.

Program Item	IWB-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
		Reactor Vessel				
1.	B1.1	Circumferential Weld 2 - 100%	154	--	--	1-1100
2.	B1.1	Circumferential Weld 3 - 100%	154	--	--	1-1100
3.	B1.1	Longitudinal Weld 8 - 100%	154	--	--	1-1100
4.	B1.1	Longitudinal Weld 9 - 100%	154	--	--	1-1100
5.	B1.1	Longitudinal Weld 10 - 100%	154	--	--	1-1100
6.	B1.1	Longitudinal Weld 11 - 100%	154	--	--	1-1100
7.	B1.1	Longitudinal Weld 12 - 100%	154	--	--	1-1100
8.	B1.1	Longitudinal Weld 13 - 100%	154	--	--	1-1100
9.	B1.2	Circumferential Weld 4 - 10.65° thru 50° from 0 Reference (0° Reactor Vessel)	154	--	--	1-1100
10.	B1.2	Longitudinal Weld 5 - 24.72" to 73.21" from 0 Reference (Top of Vessel Flange)	154	--	--	1-1100
11.	B1.2	Longitudinal Weld 6 - 24.72" to 73.21" from 0 Reference (Top of Vessel Flange)	154	--	--	1-1100

Program Item	IWB-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
12.	B1.2	Longitudinal Weld 7 - 24.72" to 73.21" from 0 Reference (Top of Vessel Flange)	154	--	--	1-1100
13.	B1.2	Circumferential Weld 14 - 5%	(8)	--	--	1-1100
14.	B1.2	Meridional Welds 15, 16, 17, 18, 19 & 20 - 340.69" to 361.45" from 0 Reference (Top of Vessel Flange)	154	--	--	1-1100
15.	B1.2	Closure Head Meridional Welds 2, 3, 4, 5, 6 and 7 - from 4" to 6" from 0 Reference (adjacent weld 1)	47	--	8	1-1300
16.	B1.2	Ring to Disc Weld 8 - 100%	--	--	(1)	1-1300
17.	B1.3	Vessel to Flange Weld 1 from I.D. - 100%	154	--	--	1-1100
18.	B1.3	Vessel to Flange Weld 1 from Seal Flange Surface - from 106.67° clockwise to 133.35°; 226.7° clockwise to 256.66° and 356.66° clockwise to 16.66°	154	--	--	1-1100
19.	B1.3	Closure Head to Flange Weld 1 - from centerline of Stud Hole 19 clockwise to centerline of Stud Hole 37	47	--	8	1-1300
20.	B1.4	Loop 31 Inlet Nozzle to Vessel Weld and Nozzle Inside Radius Section - Weld 24	154	--	--	1-1100
21.	B1.4	Loop 32 Inlet Nozzle to Vessel Weld and Nozzle Inside Radius Section - Weld 21	154	--	--	1-1100
22.	B1.4	Loop 33 Inlet Nozzle to Vessel Weld and Nozzle Inside Radius Section - Weld 25	154	--	--	1-1100
23.	B1.4	Loop 34 Inlet Nozzle to Vessel Weld and Nozzle Inside Radius Section - Weld 28	154	--	--	1-1100

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Program Item	IWB-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
24.	B1.5	Vessel Penetrations - 25%	--	--	(1)	--
25.	B1.6	Loop 31 Inlet Nozzle to Safe End Weld - 16 (DM)	154	(2)	--	1-4100
26.	B1.6	Loop 32 Inlet Nozzle to Safe End Weld - 16 (DM)	154	(2)	--	1-4200
27.	B1.6	Loop 33 Inlet Nozzle to Safe End Weld - 16 (DM)	154	(2)	--	1-4300
28.	B1.6	Loop 34 Inlet Nozzle to Safe End Weld - 16 (DM)	154	(2)	--	1-4400
29.	B1.8	Closure Head Studs and Nuts - 10 thru 18 and 37 thru 45	15	70	8	1-1400
30.	B1.9	Vessel Flange Ligaments - around stud holes 14, 15, 16, 31, 32, 33, 34, 49, 50, 51 & 52	154	--	--	1-1100
31.	B1.9	Vessel Flange Ligaments - around stud holes 11, 12, 13, 43, 44 and 45	(8)	--	88	1-1100
32.	B1.10	Closure Head Washers - 10 thru 18 and 37 thru 45	--	--	8	1-1400
33.	B1.11	Conoseal Bolting - Assembly 74 75, 76, 77, 78 and Spare	--	--	8	1-1300
34.	B1.12	Integrally Welded Vessel Supports (Done in Conjunction with B1.4)	154(3)	--	--	1-1100
35.	B1.15	Reactor Vessel Internals. Reference Program Appendix F of ISI-88	--	--	88	1-1200
36.	B1.17	Reactor Vessel Core Support Structures. Reference Program Appendix F of ISI-88	--	--	88	1-1200
37.	B1.18	Control Rod Drive Mechanisms - 60, 65 & 66	205	--	8	1-1300
38.	B1.19	Exempted Components - 100%	--	--	(1)	--
		Pressurizer				
39.	B2.1	Circumferential Welds 7, 9, 11, 13, 15 & 17	(9)	--	(9)	1-2100

Program Item	IWB-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
		Pressurizer (Cont'd)				
40.	B2.1	Longitudinal Welds 8, 10, 12, 14 & 16	(9)	--	(9)	1-2100
41.	B2.3	Heater Penetrations - 25%	--	--	(1)	--
42.	B2.10	Exempted Components - 100%	--	--	(1)	--
		Steam Generators 31, 32, 33, & 34				
43.	B3.9	Exempted Components - 100%	--	--	(1)	--
		Circumferential Butt Welds (4)				
44.	B4.5	Loop 31 Reactor Coolant Pipe - 15	154	(2)	--	1-4100
45.	B4.5	Loop 32 Reactor Coolant Pipe - 15	154	(2)	--	1-4200
46.	B4.5	Loop 33 Reactor Coolant Pipe - 15	154	(2)	--	1-4300
47.	B4.5	Loop 34 Reactor Coolant Pipe - 15	154	(2)	--	1-4400
48.	B4.5	Loop 32 14" RHR Hotleg Take-off - 11	205	11	8	1-4201
		Socket Welds				
49.	B4.8	Loop 31 - 1 1/2" SIS Coldleg - 2, 5, 6, 7, 8, 9 & 10	--	11	8	1-4107
50.	B4.8	Loop 31 - 2" & 1 1/2" Seal Injection - 1, 3, 4 & 5	--	11	8	1-4108
51.	B4.8	Loop 33 - 2" & 1 1/2" Seal Injection - 1, 2 & 3	--	11	8	1-4307
		Piping Pressure Boundary				
52.	B4.11	Exempted Components - 100%	--	--	(1)	--
		Reactor Coolant Pump 31				
53.	B5.8	Exempted Components 100%	--	--	(1)	--
		Reactor Coolant Pump 32				
54.	B5.8	Exempted Components - 100%	--	--	(1)	--

Program Item	IWB-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
55.	--	Flywheel - Pump Motor Flywheel 32	41	--	8	1-5100
		Reactor Coolant Pump 33				
56.	B5.6	Pump Casing Welds - 33-1, 33-2 and 33-3	--	11(5)	8(5)	1-5100
57.	B5.7	Pump Casing - Exterior of Pump Casing 33	--	--	8(7)	1-5100
58.	B5.8	Exempted Components - 100%	--	--	(1)	--
		Reactor Coolant Pump 34				
59.	B5.8	Exempted Components - 100%	--	--	(1)	--
		Valves				
60.	B6.7	10" - 895D-Interior Surface	--	--	8	1-4401
61.	B6.9	Exempted Components - 100%	--	--	(1)	--

Program Item	IWC-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
		Residual Heat Exchanger 31				
62.	C1.2	Nozzle to Vessel Welds - 31-3 and 31-4	--	--	(7)	2-1120
63.	C1.3	Integrally Welded Support - 31-2WS	--	11	8	2-1120
		Residual Heat Exchanger 32				
64.	C1.2	Nozzle to Vessel Welds - 32-3 and 32-4	--	--	(7)	2-1120
		Accumulator Tank 32				
65.	C1.1	Circumferential Weld 32-1 from 0" clockwise to 25" from 0 reference	47	--	8	2-1210

Program Item	IWC-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
66.	C1.1	Circumferential Weld 32-3 from 0" clockwise to 25" from 0 reference	47	--	8	2-1210
67.	C1.1	Circumferential Weld 32-4 from 0" clockwise to 25" from 0 reference	47	--	8	2-1210
68.	C1.32	Integrally Welded Support-32-1WS- 0" Clockwise to 100" from 0 Reference	--	70	8	2-1210
69.	C1.3	Integrally Welded Support - 32-2WS- 14" to 30" from 0 Reference (Adjacent 32-1WS)	--	70	8	2-1210
70.	C1.4	Manway Bolting - 32-B1 thru 32-B20	15	--	8	2-1210
		Boron Injection Tank				
71.	C1.1	Circumferential Weld 1 - from 0 clockwise to 12" from 0 reference	47	--	8	2-1220
72.	C1.1	Circumferential Weld 2 - from 0" clockwise to 12" from 0 reference	47	--	8	2-1220
73.	C1.2	Reinforcing Pad Welds 5 & 6	--	70	8	2-1220
74.	C1.3	Integrally Welded Support - 1WS	--	70	8	2-1220
75.	C1.4	Manway Bolting - B1 thru B20	15	--	8	2-1220
		Circumferential Butt Welds (4)				
76.	C2.1	Loop 33 - 28" Mainsteam - 9	205	70	8	2-2300
77.	C2.1	12" RHR - 28 & 29	205	11	8	2-2510
78.	C2.1	10" RHR - 17 & 18	205	11	8	2-2520
79.	C2.1	10" Line 351 Accumulator Discharge - 4 & 5	205	11	8	2-2521
80.	C2.1	10" Line 352-Accumulator Discharge 14(DM)	205	11	8	2-2522
81.	C2.1	8" RHR - 27, 29 & 30	205	11	8	2-2530

Program Item	IWC-2600 Reference	Area and Extent of Examination	Examination Procedure			Sketch Reference
			Vol.	Surf.	Vis	
82.	C2.1	8" RHR - 19	205	11	8	2-2531
83.	C2.1	8" RHR - 8 & 22	205	11	8	2-2532
84.	C2.1	8" RHR - 6 & 9	205	11	8	2-2533
85.	C2.1	6" RHR - 23 & 24	205	11	8	2-2530
86.	C2.1	6" RHR - 6	205	11	8	2-2532
87.	C2.1	6" RHR - 16 & 17	205	11	8	2-2541
		Longitudinal Welds (4)				
88.	C2.2	8" RHR - 11LS	205	11	8	2-2533
89.	C2.2	6" RHR - 38LS	205	11	8	2-2541
		Integrally Welded Supports				
90.	C2.5	12" RHR-H6	--	11	8	2-2510
91.	C2.5	6" RHR-H14	--	11	8	2-2542

Notes:

1. Examination performed by Plant Personnel during System Hydrostatic Tests.
2. Surface examination deleted per Tech Spec.
3. Nozzle to Vessel Welds are considered as Vessel Supports.
4. Examination requirements to Summer 1978 Addenda.
5. Surface examination performed per NRC Relief Request.
6. Visual from O.D. performed per NRC Relief Request.
7. Examination performed by Plant Personnel during System Hydrostatic Tests per Tech Spec.
8. Relief Request for Volumetric Examination. Visual Examination to be performed.
9. Relief Request for Volumetric. Visual examination performed by plant personnel during system hydrostatic tests.

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ATTACHMENT II

IPN-87-057

Final Weld and Component Examination Inservice Inspection Report for the 1st Outage; 1st Period; 2nd Interval

NEW YORK POWER AUTHORITY
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

FORM NIS-1 OWNERS' DATA REPORT FOR INSERVICE INSPECTIONS

As required by the Provisions of the ASME Code Rules

1. Owner New York Power Authority,123 Main Street,White Plains,New York 10601
(Name and Address of Owner)

2. Plant Indian Point,P.O.Box 215,Buchanan,New York 10511
(Name and Address of Plant)

3. Plant Unit 3 4. Owner Certificate of Authorization (if required) N/A

5. Commercial Service Date 8-30-76 6. National Board Number for Unit N/A

7. Components Inspected

Component or Appurtenance	Manufacturer or Installer	Manufacturer or Installer Serial No.	State or Province No.	National Board No.
Reactor Vessel	Combustion Engineering	66102	--	20758

Note: Supplemental sheets in form of lists, sketches, or drawings may be used provided (1) size is 8½ in. x 11 in., (2) information in items 1 through 6 on this data report is included on each sheet, and (3) each sheet is numbered and the number of sheets is recorded at the top of this form.

FORM NIS-1 (back)

8. Examination Dates 6-13-87 to 6-14-87 9. Inspection Interval from 8-30-86 to 8-30-96

10. Abstract of Examinations. Include a list of examinations and a statement concerning status of work required for current interval. Reference Tab C

11. Abstract of Conditions Noted Reference Tab B and Tab F

12. Abstract of Corrective Measures Recommended and Taken Reference Tab B and Tab F

We certify that the statements made in this report are correct and the examinations and corrective measures taken conform to the rules of the ASME Code, Section XI.

Date Dec 2 19 87 Signed W A Seniger By NYPA
Owner

Certificate of Authorization No. (if applicable) _____ Expiration Date _____

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and/or the State or Province of NEW YORK and employed by HSB I&I Co. of HARTFORD, CT. have inspected the components described in this Owners' Data Report during the period 6-13-87 to 6-14-87, and state that to the best of my knowledge and belief, the Owner has performed examinations and taken corrective measures described in this Owners' Data Report in accordance with the requirements of the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the examinations and corrective measures described in this Owners' Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date DECEMBER 2 19 87

Robert A. Boehme Commissions NB 7784, NY 2710
Inspector's Signature National Board, State, Province and No.

New York Power Authority
Indian Point Unit No. 3 Nuclear Power Plant
Refueling Outage Core IV-V
1st Outage; 1st Period; 2nd Interval
Reactor Vessel Examination Summary
1987

Examinations which were applicable to the Second Inspection Interval were conducted on the Indian Point Unit 3 Reactor Vessel from 6/13 to 6/14 1987. Examinations were conducted in accordance with the ASME Code, Sec. XI, 1983 Edition up to and including Summer 1983 Addenda, and were supplemented by applicable requirements of USNRC Regulatory Code 1.150 Revision 1. The Examination Program Plan is located in Tab C and Tab I with all examination results located in Tab I.

Inspection, witnessing and surveillance of the examinations and related activities were conducted by personnel from: Hartford Steam Boiler Inspection and Insurance Company; United States Nuclear Regulatory Commission and New York Power Authority Quality Assurance Department.

Examinations

Examinations of the Reactor Vessel were conducted to interrogate as much of the required examination volume as was practical, within geometric, metallurgical and physical limitations. Westinghouse Procedure ISI-154 Rev. 3 applied to these examinations, requires the following:

a. Staight beam interrogation of all base material through which angle beams must pass to reach the weld and specified adjacent base metal. Areas where indications equal or exceed the amplitude of the remaining back reflection and areas producing a continuous total loss of back reflection accompanied by a continuous indication in a singular plane are considered recordable.

b. Straight beam interrogation of the vessel flange-to-upper shell weld and the outlet nozzle safe ends for a distance of one-half the weld thickness on both sides of the welds. Indications which equal or exceed 50% of the distance-amplitude-curve and were interpreted to be valid were recorded.

c. Examinations of the vessel flange-to-upper shell circumferential weld are performed from the flange seal surface. Beam angles for this examination are selected to provide near-normal incidence to the plane of the weld and to provide coverage of the weld and adjacent based material on the flange and shell side for a distance equal to one-half the weld thickness. Indications detected at transit times which represented the inner 25% of the vessel through-wall thickness measured from the inner surface which equal or exceed 20% of the distance-amplitude-curve and are interpreted to be valid are recorded. Indications detected at transit times greater than 25% of the vessel through-wall thickness measured from the inner surface which equal or exceed 50% of the distance-amplitude-curve and are interpreted to be valid are recorded.

d. Examinations of outlet nozzle-to-shell welds are performed from the nozzle bores. Beam angles for these examinations are selected to provide near-normal incidence to the plane of the weld and to provide coverage of the nozzle, weld, and adjacent base material on the shell side for a distance equal to one-half the weld thickness. The indication recording criteria are the same as for item c above.

   Nozzle inside radius examinations are conducted using transverse beams in both circumferential directions from the nozzle bores. Indications which equal or exceed 50% of the distance-amplitude-curve and are interpreted to be valid are considered recordable.

e. Examinations of the outlet nozzle-to-safe end welds are performed from the nozzle bores using straight beams and nominal 41° refracted longitudinal beams in both the axial and circumferential directions. Focused 60°L pitch catch search units were employed in the axial scan direction for interrogation of the inner 1/3 thickness.

f. Examinations of the vessel flange stud hole threads are conducted from the top of the flange using a straight beam. Indications which equal or exceed 50% of the distance-amplitude-curve and are interpreted to be valid are recorded.

All ultrasonic indications during the examinations were identified as valid or not valid and are traceable by an indication numbering system to the data printout. Valid indications having peak amplitudes less than the appropriate interpretation and investigation level needed only have their peak amplitude noted.

Results

Based on the aforementioned criteria, ultrasonic examinations of the reactor vessel resulted in the following indication being recorded.

Weld 26 outlet nozzle to shell	6 indications

All indications were evaluated in accordance with ASME Section XI-1983 Edition thru Summer 1983 Addenda and determined to be within the allowable limits specified therein. Indications are summarized in Tab F of the Final Report, and detailed along with the examination data in Tab I.

Numerous valid indications, having peak amplitudes less than the recording level or no measureable dimensions at a peak response of 50% DAC, were observed in Outlet Nozzle to Shell Welds 22, 26 and 27. Reflector locations are presented graphically in Tab I.

The remote immersion examination also detected numerous non-valid indications which were investigated and interpreted to be the result of redirected sound energy, component geometry and other innocuous sources.

Examination data for all examined areas are included in Tab I of the Final Report.