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SENIOR VICE PRESIDENT
NUCLEAR

50-293

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BECO Ltr. 83-290

Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C.

1983/1984 Inservice Inspection Plan

- Enclosures: (A) First Inspection Period - Second Ten Year
Interval ISI Checklist
(B) Augmented Inspection to Complete First Ten
Year Inspection Interval ISI Checklist

Dear Sir:

In accordance with the requirements of ASME Section XI, 1980 Edition, Article IWA-1400(c), Boston Edison Company files for your information and use, a copy of the ISI Examination Plan for the 1983/1984 Refueling Outage of the Pilgrim Nuclear Power Station, Unit #1.

The 1983/1984 ISI Examination will be divided into three specific categories; namely:

- (a) mechanized volumetric examination of selected reactor vessel nozzles in the recirculation system;
- (b) remote visual examination of the core spray sparger and the remote visual and ultrasonic examination of the jet pump beams;
- (c) manual volumetric, surface, and visual examination of selected components in the Class 1, 2, and 3 systems.

Included in the manual examination is a listing of components which are to be inspected as part of the first ten-year interval (Enclosure (B)).

The examinations which are included in the first inspection period of the second interval are listed in Enclosure (A). The examination of the Core Spray Sparger is not being considered as part of the second ten-year program.

Should you have any questions, please contact us.

Very truly yours,

W D Harrington

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INSERVICE INSPECTION CHECKLIST
1983/1984 REFUELING OUTAGE
FIRST INSPECTION PERIOD - SECOND TEN-YEAR INTERVAL

ENCLOSURE (A)

System: REACTOR VESSEL Page 1 of 10 Rev. 0

Line or Component Description	P&ID and Co-ordinates	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Reactor Vessel	252	1	B-A	B1.11	Circumferential Shell Weld	1	Vol.	Examine length of weld that is accessible from nozzle opening H2B.
	252	1	B-A	B1.22	Meridional Head Welds at 0°, 45°, and 90°.	3	Vol.	
	252	1	B-A	B1.30	Shell-to-flange weld from 0° through 120°.	1	Vol.	Examination to be conducted from flange face.
	252	1	B-A	B1.40	Head-to-flange weld from 0° through 120°.	1	Vol. & Surf.	
	252	1	B-D	B3.90	Nozzle-to-vessel Welds: N1A, N2A, N2B, N2C, N3A, N4A, and N6A.	7	Vol.	Limited access because of biological shielding design and attachment of insulation.
	252	1	B-D	B3.100	Nozzle inner radius sections N1A, N2A, N2B, N2C, N3A, N4A, N4B, N4C, N4D, and N6A	10	Vol.	Feedwater nozzles are examined in accordance with NUREG 0619.
	252	1	B-F	B5.10	Safe End-to-nozzle welds 2-N1A-1, 2-N2A-1, 2-N2B-1, 2-N2C-1, 14-A-1, 6-N4A-1, 6-N4B-1, 6-N4C-1, and 6-N4D-1.	9	Vol. & Surf.	

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INSERVICE INSPECTION CHECKLIST
1983/1984 REFUELING OUTAGE
FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
Power Station
Unit - 1

ENCLOSURE (A)

System: REACTOR PRESSURE VESSEL AND RECIRCULATION PUMPS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Closure Heads Nuts	252	1	B-G-1	B6.10	RPV Nuts (1-18)	18	Surf.		
Closure Studs in Place	252	1	B-G-1	B6.20	RPV Studs (1-18)	18	Vol.		
Threads in Flange	252	1	B-G-1	B6.40	Threaded Bushings of RPV Studs (1-18)	18	Vol.		
Closure Washers	252	1	B-G-1	B6.50	Closure Washers of RPV Studs (1-18)	18	Visual VT-1		
Bushings	252	1	B-G-1	B6.50	Bushings of RPV Studs that are removed for fuel transfer (41-44)	4	Visual VT-1		
Recirculation Pumps	252	1	B-G-1	B6.180	Pump A - Bolts 1-9 Pump B - Bolts 1-9	18	Vol.		
	252	1	B-G-1	B6.200	Pump A - Nuts, Bushings & Washers Pump B - Nuts, Bushings & Washers	All All	Visual VT-1 Visual VT-1		
Reactor Vessel Skirt Weld	252	1	B-H	B8.10	Vessel Skirt Weld from 0° to 60° (approx. 100" of weld).	1	Vol.		

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1983/1984 REFUELING OUTAGE
FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
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ENCLOSURE (A)

System: VARIOUS Page 3 of 10 Rev.0

Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Pressure Retaining Bolting	252	1	B-G-2	B7.50	Head Spray Flange Heat Vent Head Instrumentation	A11	VT-1		
	252	1	B-G-2	B7.70	Main Steam Safety & Relief Valves		VT-1		Visually examine bolting of valves removed for testing.
	252	1	B-G-2	B7.70	Main Steam Isolation Valves	A11	VT-1		Visual examination may be conducted while bolting is in place, valves need not be disassembled.
	252	1	B-G-2	B7.70	Recirculation System Valves (202-6A & B)	A11	VT-1		
	252	1	B-G-2	B7.70	Feedwater Valves (6-57A & B)	A11	VT-1		
	241	1	B-G-2	B7.70	RHR (1001-100) (1001-101) (1001-29A & B)	A11	VT-1		
	247	1	B-G-2	B7.70	RWCU (1201-81) (1201-5)	A11	VT-1		
	245	1	B-G-2	B7.70	RCIC (1301-49) (1301-50)	A11	VT-1		
	242	1	B-G-2	B7.70	Core Spray (1400-25A & B)	A11	VT-1		
	243	1	B-G-2	B7.70	HPCI (2301-4)	A11	VT-1		
Valve Body exceeding 4" n.p.s.	243	1	B-M-2	B12.40	HPCI (2301-7)	1	VT-3		
	252	1	B-M-2	B12.40	Main Steam Safety & Relief Valves		VT-3		Visually examine internal surfaces of valves removed for testing.

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Pilgrim Nuclear
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ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Main Steam Welds 1-A-7 1-A-8 1-A-9	252	1	B-J	B9.11	Circumferential Pipe Welds	3	Vol.		High stress welds re-inspect each ten year interval.
Feedwater Welds 6-N4A-7 6-N4A-8 6-N4B-7 6-N4B-8 6-N4C-8 6-N4C-9	252	1	B-J	B9.11	Circumferential Pipe Welds	6	Vol.		High stress welds re-inspect each ten year interval.
Residual Heat Removal 10-1A-5 10-1B-5	241	1	B-J	B9.11	Circumferential Pipe Welds	2	Vol.		High stress welds re-inspect each ten year interval.
High Pressure Coolant Injection 23-0-9 23-0-10	244	1	B-J	B9.11	Circumferential Pipe Welds	2	Vol.		High stress welds re-inspect each ten year interval.
Main Steam Welds 1-C-11 1-C-12 1-B-10 1-A-10 1-SD-1 1-AS-2	252	1	B-J	B9.11	Circumferential Pipe Welds	6	Vol.		
Feedwater Welds 6-N4A-6 6-N4B-6 6-N4C-7 6-B-5 6-A-7	252	1	B-J	B9.11	Circumferential Pipe Welds	5	Vol.		

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1983/1984 REFUELING OUTAGE
FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
Power Station
Unit - 1

ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
High Pressure Coolant Injection Welds 23-0-7 23-0-8 23-I-17	243	1	B-J	B9.11	Circumferential Pipe Welds	3	Vol.		
Residual Heat Removal Welds 10-HS-8 10-HS-9 10-HS-10	241	1	B-J	B9.11	Circumferential Pipe Welds	3	Vol.		
Reactor Water Cleanup Weld 12-I-6	247	1	B-J	B9.11	Circumferential Pipe Welds	1	Vol.		
Reactor Core Insolation Cooling Welds 13-I-7 13-0-3 13-0-4	245	1	B-J	B9.11	Circumferential Pipe Welds	3	Vol.		
Core Spray Welds 14-A-8 14-A-9 14-B-19 14-B-20	242	1	B-J	B9.11	Circumferential Pipe Welds	4	Vol.		

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FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
Power Station
Unit - 1

ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Reactor Recirculation	252	1	B-J	B9.40	Socket Weld	2	Surf.		Specific welds selected for examination will be identified by BECo later.
RPV Drain	252	1	B-J	B9.40	Socket Weld	2	Surf.		
Standby Liquid Control	252	1	B-J	B9.40	Socket Weld	2	Surf.		

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ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Reactor Recirculation	252	1	B-K-1	B10.10	Piping - Integrally Welded Attachment	2	Surf.		Specific welds selected for examination will be identified by BECo later.
Main Steam	252	1	B-K-1	B10.10	Piping - Integrally Welded Attachment	2	Surf.		
Feedwater	252	1	B-K-1	B10.10	Piping - Integrally Welded Attachment	5	Surf.		
Residual Heat Removal	252	1	B-K-1	B10.10	Piping - Integrally Welded Attachment	2	Surf.		

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1983/1984 REFUELING OUTAGE
FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
Power Station
Unit - 1

ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
High Pressure Coolant Injection	243	2	C-F	C5.11	Circumferential Pipe Weld	2	Vol.		Specific welds selected for examination will be identified by BECo later.
High Pressure Coolant Injection	243	2	C-F	C5.21	Circumferential Pipe Weld	2	Vol.	PRR 6	
Residual Heat Removal	241	2	C-F	C5.21	Circumferential Pipe Weld	7	Vol.	PRR 6	
Control Rod Drive	250	2	C-F	C5.21	Circumferential Pipe Weld	1	Vol.		

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FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
Power Station
Unit - 1

ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Residual Heat Removal	241	2	C-C	C3.40	Piping - Integrally Welded Attachments	6	Surf.		Specific welds selected for examination will be identified by BECo later.
High Pressure Coolant Injection	243	2	C-C	C3.40	Piping - Integrally Welded Attachments	2	Surf.		

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FIRST INSPECTION PERIOD - SECOND TEN YEAR INTERVAL

Pilgrim Nuclear
Power Station
Unit - 1

ENCLOSURE (A)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Component Supports		1	F-A,	F(1-3)	Component Supports		VT-3		Specific supports to be examined will be identified by BECo later. Total number requiring examination = 56.
		2	F-B,		Main Steam	1			
		3	F-C		Reactor Recirculation	4			
					Feedwater	2			
					Residual Heat Removal	15			
					Core Spray	4			
					High Pressure Injection	9			
					Reactor Water Cleanup	1			
					Service Water	5			
					Reactor Bldg. Cooling Water	9			
					Containment Atmosphere Control	1			
					Reactor Core Isolation Cooling	2			
					Standby Liquid Control	3			

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INSERVICE INSPECTION CHECKLIST
1983/1984 REFUELING OUTAGE
Augmented Inspection to Complete First TEN-Year
Inspection Interval

Pilgrim Nuclear
Power Station
Unit - 1
Enclosure (B)

System: VARIOUS

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Line or Component Description	P&ID and Co-ord	Class	Section XI Category	Section XI Item Number	Item Description	No. of Items	Exam Method	Relief Request	Remarks
Reactor Vessel		1	B-C	B1.3	Reactor Vessel shell to flange weld from 116° - 120°.		Vol.		Examinations to be con- ducted in accordance with the 1974 Edition of Section XI through the Summer '75 Addenda.
Pressure retaining bolting		1	B-G-1	B1.7	Reactor pressure vessel closure studs - #46 & #47.	2	Vol.		
					Reactor Pressure vessel closure Nuts - #46, 47 48, 49, 50, 51, 52, 53, 54, 55, 56	11	Vol.		
Valve Body exceeding 4" n.p.s.		1	B-M-2	B12.4	HPCI (2301-4)	1	VT-3		