

A. Alan Blind
Vice President

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April 2, 2001

Re: Indian Point Unit No. 2
Docket No. 50-247
NL-01-038

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Station P1-137
Washington, DC 20555-0001

Subject: 2000 Refueling Outage Inservice Inspection (ISI) Program Summary
Report – Second Outage, Second Period, Third Interval.

Reference: 1) Con Edison Letter to NRC dated October 9, 1997

Pursuant to the requirements of Indian Point Unit No. 2 Technical Specification Section 4.2.2, inspections of the primary and secondary side components (the reactor, steam generator, piping, and supports) were performed during the 2000 refueling outage. These inspections, performed during the second outage of the second period, are being applied to the second period of the third interval. During this refueling outage, the plant's originally installed steam generators were replaced, and preservice inspection examinations on the replacement steam generators were performed. These are annotated as PSI on the attached ASME Form NIS-1, "Owners Report for Inservice Inspections."

Summaries of the inservice/preservice inspections performed, snubber inspections, pressure tests performed, and Form NIS-1 (including the areas subject to examination, results, and corrective measures) are provided in Attachment 1.

A report summarizing the Class 1 and 2 code repairs and replacements performed since the last ISI summary report (Reference 1) will be provided by May 2, 2001. A report summarizing the replacement of the steam generators and related Form NIS-2, "Owners Report for Repair and Replacement" is provided in Attachment 2.

Pursuant to 10 CFR 50.55a(b)(2)(ix)(D), a summary of examinations of the containment liner and concrete surfaces is provided in Attachment 3.

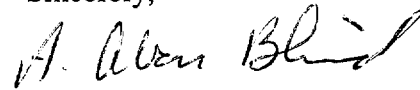
Detailed information pertaining to these reports is available at IP-2 for review.

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Commitments made by Con Edison that are contained in this letter are listed in Attachment 4.

Should you or your staff have any concerns regarding this matter, please contact Mr. John McCann, Manager, Nuclear Safety & Licensing at 914-734-5074.

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Alan Blair".

Attachments

C: Mr. Hubert J. Miller
Regional Administrator-Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Patrick D. Milano, Senior Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
US Nuclear Regulatory Commission
Mail Stop O-8-C2
Washington, DC 20555

Senior Resident Inspector
US Nuclear Regulatory Commission
PO Box 38
Buchanan, NY 10511

ATTACHMENT 1 TO NL-01-038

Inservice Inspection & Preservice Inspection Summary
Snubber Summary
Pressure Testing Summary
Form NIS-1

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247

Indian Point Unit No. 2
Second Outage, Second Period, Third Interval
Non-Destructive Examination Report

Introduction

Inservice inspections were performed at Indian Point Unit No. 2 during the 2000 refueling outage, which occurred between February 2000 and January 2001.

Examinations were performed in accordance with the requirements of:

1. The Consolidated Edison Third Ten Year Inservice Inspection Program
2. Technical Specifications
3. ASME Boiler & Pressure Vessel Code, Section XI, 1989 Edition without Addenda

The following items were examined:

1. Reactor studs, nuts, washers, and vessel
2. Steam Generators 21, 22, 23, and 24 (PSI)
3. Residual Heat Removal (RHR) Heat Exchanger 22
4. Class 1 and 2 piping and supports

The examinations performed are summarized on the attached Form NIS-1.

Prior to the start of these examinations, certification documents relative to personnel, equipment, and materials were reviewed and determined to be satisfactory.

Personnel from the Hartford Steam Boiler Inspection and Insurance Company, and Con Edison conducted surveillances of and witnessed examinations and related activities. Management overviews were conducted by the Con Edison Nuclear Quality Assurance Department.

Visual examinations revealed the following indications, which exceeded the procedural acceptance criteria. This procedural acceptance criteria is more stringent than the Code acceptance criteria. There were nine (9) components identified with visual deficiencies.

Washers (14) for the reactor - visual inspection identified pitting on the inner surface of the washers. This pre-existing condition was evaluated and determined to be acceptable.

Valve bolting (3) in Class 1 systems - visual inspection identified minor leakage or corrosion. This leakage was corrected, the bolting re-inspected, and determined to be acceptable. The minor corrosion was accepted by VT Level III review.

Valve interior (1) in the RHR system - visual inspection identified marks in the body where the valve internals had previously made contact with the valve body. The marks in the valve body had been identified previously. The condition was determined to be acceptable.

Pipe supports (4) in the CVCS and SI systems - visual examinations identified misalignment, bending, frozen bearings and chipped grout. These supports were determined to be operable. One was accepted as is, one corrected and subsequently accepted, and two were accepted with recommendations for future corrective action.

In all cases the components were evaluated and determined to be operable. Minor maintenance was performed, or scheduled, to ensure continued satisfactory performance.

Unless otherwise indicated evaluations of visual indications were conducted by Con Edison Nuclear Engineering, and dispositioned appropriately, as noted on the data evaluation sheet.

Information regarding the above-mentioned indications and their dispositions is contained on the attached Form NIS-1, Item 15 – Abstract of Corrective Measures.

2000 REFUELING OUTAGE

INSERVICE INSPECTION PROGRAM SUMMARY-SNUBBERS

AREA AND EXTENT OF EXAMINATION

IWB-2500
REFERENCE

EXAMINATION
PROCEDURE

QUALITY GROUP A PIPE SUPPORT

F1.10	LINE 10	SR-807, SR-809, SR-809A	VISUAL-NOTE 1
	LINE 16	56-SR-1	
	LINE 41	SR-952, SR-953, SR-953A	
	LINE 43	SR-1020A, SR-1024A	
		SR-1025A, SR-1026	
	LINE 44	SR-1072, SR-1073	
	LINE 56	56-SR-12	
	LINE 61	SR-887	
	LINE 62	62-SR-1, 62-SR-2,	
		62-SR-3, SR-924	
	LINE 70	70-SR-10, SR-13	
	LINE 79	SR-902, SR-907, SR-908	
	LINE 80	SR-920A	
	LINE 351	PWR-127, PWR-128	
		PWR-129, 351-SR-1	
	LINE 352	PWR-152	
	LINE 353	PWR-147A	

QUALITY GROUP A COMPONENT SUPPORT

F1.40	<u>21 STEAM GENERATOR</u>	VISUAL-NOTE 1
	SG-21-1, SG-21-2, SG-21-3, SG-21-4, SG-21-5, SG-21-6	
	<u>22 STEAM GENERATOR</u>	
	SG-22-1, SG-22-2, SG-22-3, SG-22-4, SG-22-5, SG-22-6	
	<u>23 STEAM GENERATOR</u>	
	SG-23-1, SG-23-2, SG-23-3, SG-23-4, SG-23-5, SG-23-6	
	<u>24 STEAM GENERATOR</u>	
	SG-24-1, SG-24-2, SG-24-3, SG-24-4, SG-24-5, SG-24-6	

INSERVICE INSPECTION PROGRAM SUMMARY-SNUBBERS

AREA AND EXTENT OF EXAMINATION

QUALITY GROUP B PIPE SUPPORT

F1.20	LINE 1	MSR-2V, SR-M4 SR-M5A, SR-M5B	VISUAL-NOTE 1
	LINE 2	SR-M2, SR-M3A, SR-M3B SR-M1, SR-M51	
	LINE 3	MSR-1V, SR-M6, SR-M7 SR-M8A, SR-8AA	
	LINE 4	SR-M9, SR-10A, SR-M56	
	LINE 6	BF-SR-9	
	LINE 9	SR-55	
	LINE 10	SR-65	
	LINE 56	56-SR-6, 56-SR-26	
	LINE 60	SR-73A, SR-703-1, SR-703-2 SR-746A, SR-746B, SR-746C	
	LINE 155	SR-50A	
	LINE 293	SR-761, SR-763A	
	LINE 355	SR-748	
	LINE 356	SR-716, SR-718A, SR-720	
	LINE 358	SR-738A, SR-738B	
	LINE 361	SR-732A, SR-749, SR-749A SR-749B, SR-749C, SR-755 SR-756	
	LINE 518	SR-71A	
	LINE V-3	SR-M29	
	LINE V-4	SR-M25	

NOTE 1:VISUAL EXAMINATION OF SNUBBERS WAS PERFORMED PER PLANT TECHNICAL SPECIFICATION 4.12.A. THE VISUAL INSPECTION WAS PERFORMED IN ACCORDANCE WITH SURVEILLANCE TEST PROCEDURE PI-V1A AND PI-V1B.

2000 REFUELING OUTAGE

INSERVICE INSPECTION PROGRAM SUMMARY-SNUBBERS

AREA AND EXTENT OF EXAMINATION

NON QUALITY GROUP SNUBBERS

FOR INFORMATION ONLY

THE FOLLOWING NON SECTION XI SNUBBERS WERE VISUALLY INSPECTED IN ACCORDANCE WITH SURVEILLANCE TEST PROCEDURE PI-V1A AND PI-V1B.

LINE 2	SR-M50
LINE 3	SR-M8B, SM-53
LINE 4	SR-M10B, SR-M55
LINE 5	SR-B-3
LINE 6	SR-B1
LINE 7	SR-B7
LINE 8	SR-B5
LINE 13	SR-936, SR-937, SR938, SR-1027A, SR-1030, SR-1031, SR-1037A, SR-1051 SR-1053, SR-1060, SR-1079, SR-1080, SR-1099, SR-1100, SR-1103
LINE 14	14-SR-1, SR-927, SR-927A, SR-928, SR-928A, SR-971, SR-1035, SR-1039A SR-1042, SR-1049, SR-1057, SR-1093, SR-1095, SR-954
LINE 14A	SR-1001, SR-1002, SR-1075, SR-1076, SR-1078, SR-1120, SR-1122, SR1123 SR-1077
LINE 17	17-SR-2, SR-941, SR-941A, SR-1010, SR-1069
LINE 38	38-SR-21, 38-SR-22, 38-SR-24
LINE 45	45-SR-9, 45-SR-30
LINE 46	46-SR-2, 46-SR-3, 46-SR-30
LINE 47	47-R-30
LINE 48	48-SR-30
LINE 70	70-SR-3, 70-SR-4, 70-SR-5, 70-SR-6, 70-SR-11, 70-SR-12, 70-SR-14, RCS-5, RCS-6, 70-RCS-5A
LINE 71	71-SR-1, SR-963, SR-964, SR-964A, SR-967A
LINE 72	72-SR-1, SR-1125, SR-1126, SR-1127, SR-1128, SR-1129, SR-1131
LINE 73	SR-1016A, SR-1017, SR-1017A, SR-1017B, SR-1018A
LINE 74	74-SR-1, SR-1085, SR-1086, SR-1087, SR-1087A, SR-1089, SR-1092
LINE 76	76-H-15
LINE 78	78-SR-1
LINE 93	SR-752, SR-752A, SR-753
LINE 94	SR-759
LINE 163	SR-250, SR-250A, 163-SR-5

LINE 250 250-SR-1
 LINE 342 342-SR-6
 LINE 343 343-SR-5
 LINE 344 344-R-4
 LINE 353 PWR-148, SR-736, SR-737, SR-737A
 LINE 361 361-SR-10
 LINE 577 577-SR-1, 577-R-5, 577-SR-13, 577-SR-15, 577-SR-17
 LINE V-2 SR-V20A, SR-V20B
 LINE V-3 SR-M30, SR-M31, SR-M33
 LINE V-4 SR-M27, SR-M52
 LINE V-5 SR-M34, SR-M35, SR-M36, SR-M37, SR-M54
 LINE V-6 SR-M39, SR-M40, SR-M41
 LINE MS-3 SR-499, SR-501, SR-M503, MS-SR-129

EXAMINATION, INDICATION & DISPOSITION

ISI INDICATIONS- QUALITY GROUP A PIPE SUPPORT

LINE 10 SR-807- Snubber is frozen: paddles will not rotate on the bearings.
 A+ B dimension is 6 3/8". Low as left oil.
 ACCEPTED BY EXAMINATION AFTER CORRECTION
 ACCEPTED BY ANALYSIS

 SR-809- Reservoir indicator markings not clear.
 Equivalent B dimension must be calculated and the As Left A+B
 must be evaluated.
 ACCEPTED BY ANALYSIS

 SR-809A- Snubber is frozen: paddles will not rotate on bearings. A+B
 dimension is 5 3/4".
 ACCEPTED BY EXAMINATION AFTER CORRECTION
 ACCEPTED BY ANALYSIS

 LINE 41 SR-953A- Hanger and tube interference. Unknown source of oil.
 ACCEPTED BY EXAMINATION AFTER CORRECTION

 LINE 43 SR-1020A- End attachment rotated 90 degrees. As left A+B is
 below 6 3/4".
 ACCEPTED BY EXAMINATION AFTER CORRECTION
 ACCEPTED BY ANALYSIS

 SR-1025A- Covered with oil from Reactor Coolant Pump.
 Threaded section from paddle to snubber is loose.
 ACCEPTED BY EXAMINATION AFTER CORRECTION

LINE 56 56-SR-12- White paint on snubber piston. No threads showing on
turnbuckle.
ACCEPTED BY EXAMINATION AFTER CORRECTION

LINE 61 SR-887- Turnbuckle locknut not snug. A+B oil level is 1/4".
ACCEPTED BY EXAMINATION AFTER CORRECTION
ACCEPTED BY ANALYSIS

LINE 62 62-SR-1- Snubber body jammed against line 74. Low as left
oil level.
ACCEPTED BY EXAMINATION AFTER CORRECTION
ACCEPTED BY ANALYSIS

62-SR-2- Snubber body in contact with spring can. Low as left
oil level.
ACCEPTED BY EXAMINATION AFTER CORRECTION
ACCEPTED BY ANALYSIS

62-SR-3- Light oil coating from Reactor Coolant Pump. The
clamp to the paddle is splayed (clamp ears not
parallel).
ACCEPTED BY EXAMINATION AFTER CORRECTION

SR-924- Low as left oil level.
ACCEPTED BY ANALYSIS

LINE 70 70-SR-10- Low as left oil level.
ACCEPTED BY ANALYSIS

70-SR-13- Top pipe to snubber bent.
ACCEPTED BY EXAMINATION AFTER CORRECTION

LINE 79 SR-908- Reservoir oil tag missing.
ACCEPTED BY ANALYSIS

LINE 80 SR-920A- Reservoir oil tag missing.
ACCEPTED BY ANALYSIS

LINE 352 PWR-152- Reservoir oil tag missing.
ACCEPTED BY ANALYSIS

ISI INDICATIONS- QUALITY GROUP A COMPONENT SUPPORT

21 STEAM GENERATOR

SG-21-1- As left A dimension is beyond acceptance criteria.
ACCEPTED BY ANALYSIS

22 STEAM GENERATOR

SG-22-1- Oil leak at braided connection.

ACCEPTED BY EXAMINATION AFTER CORRECTION

SG-22-2- Snubber difficult to remove. Snubber locked in position. Snubber removed for testing.

ACCEPTED BY ANALYSIS

SG-22-3- As left A dimension is beyond acceptance criteria.

ACCEPTED BY ANALYSIS

SG-22-4- Failed functional test on high compression bleed rate.

ACCEPTED BY ANALYSIS

23 STEAM GENERATOR

SG-23-1- Oil at reservoir and reservoir to body connection. Re-inspection

Showed no active leak.

ACCEPTED BY EXAMINATION.

SG-23-3- Failed functional test on high compression bleed rate. Piston Threads damaged. As left A dimension is beyond acceptance criteria.

ACCEPTED BY EXAMINATION AFTER CORRECTION

ACCEPTED BY ANALYSIS

SG-23-5- Failed functional test on high compression bleed rate.

ACCEPTED BY ANALYSIS

24 STEAM GENERATOR

SG-24-5- Failed functional test on high compression bleed rate.

ACCEPTED BY ANALYSIS

ISI INDICATIONS- QUALITY GROUP B PIPE SUPPORT

LINE 1

MSR-2V- Two hilti bolts not installed in base plate #14.

Lock nuts not installed on top threaded rod.

Heavy tape residue on snubber piston.

Snubber alignment rotated approx. 10°

counterclockwise causing contact with pipe clamp.

ACCEPTED BY EXAMINATION AFTER CORRECTION

SR-M5A- Score marks on piston. Low as left oil level.

ACCEPTED BY EXAMINATION AFTER CORRECTION

ACCEPTED BY ANALYSIS

SR-M5B- Low as left oil level.

ACCEPTED BY ANALYSIS

LINE 3	<p>MSR-1V- Light scratches on piston. Tape residue on piston. Clamp has gap and top stud and nut are not snug against clamp. Bottom nuts are not fully engaged. Snubber and pipe clamp not aligned with cold setting per cut sheet. ACCEPTED BY EXAMINATION AFTER CORRECTION ACCEPTED BY ANALYSIS</p>
LINE 2	<p>SR-M2- Bracket on base plate not installed as per cut sheet. ACCEPTED BY ANALYSIS</p> <p>SR-M51- Low as left oil level. ACCEPTED BY ANALYSIS</p>
LINE 3	<p>SR-8AA- Loose turnbuckle nut. ACCEPTED BY EXAMINATION AFTER CORRECTION</p>
LINE 4	<p>SR-10A- Bolt installed in clamp. Minor wear on piston rod adjacent to snubber body. ACCEPTED BY EXAMINATION AFTER CORRECTION</p> <p>SR-M56- Snubber attachment to building not per cut sheet. ACCEPTED BY ANALYSIS</p>
LINE 9	<p>SR-55- Low oil. As left A+B less than 6 ¾" ACCEPTED BY ANALYSIS</p>
LINE 10	<p>SR-65- Spherical bearings are frozen. Paddle and pin corroded. Thread engagement at plate is insufficient. Glue like substance on piston. ACCEPTED BY EXAMINATION AFTER CORRECTION</p>
LINE 60	<p>SR-73A- Low as left oil level. ACCEPTED BY ANALYSIS</p> <p>SR-746A- Threads not visible in turnbuckle. Item 4 not installed. Snubber attachment not installed per cut sheet. ACCEPTED BY EXAMINATION AFTER CORRECTION ACCEPTED BY ANALYSIS</p>
LINE 293	<p>SR-761- Snubber rubbing against unistrut and cannot rotate. ACCEPTED BY EXAMINATION AFTER CORRECTION</p>
LINE 355	<p>SR-748- Snubber rubbing on adjacent hanger. ACCEPTED BY EXAMINATION AFTER CORRECTION</p>

LINE 356 SR-716- Bolts dry. Light rust. Loose bolt on snubber to
 support rod.
 ACCEPTED BY EXAMINATION AFTER CORRECTION

LINE 358 SR-738B- Reservoir oil indicator tag missing.
 ACCEPTED BY ANALYSIS

Summary of Inservice Inspection Pressure Tests

Performed on Quality Groups A and B (ASME Section XI

Classes 1 and 2) Pressure Retaining Components

INSERVICE SYSTEM PRESSURE TESTS OF QUALITY GROUPS A AND B SYSTEMS AND COMPONENTS WERE CONDUCTED AT THE INDIAN POINT UNIT NO. 2 NUCLEAR POWER PLANT IN ORDER TO MEET ASME SECTION XI REQUIREMENTS FOR THE INTERVAL. THIS TESTING OCCURRED AT THE END OF THE REFUELING AND STEAM GENERATOR REPLACEMENT OUTAGE IN DECEMBER, 2000. THE QUALITY GROUP A AND B SYSTEMS AND COMPONENTS WERE INSPECTED USING PROCEDURES UPDATED TO THE CURRENT PROGRAM REQUIREMENTS.

THIS PROGRAM UTILIZED VISUAL EXAMINATION METHODS IN ACCORDANCE WITH THE REQUIREMENTS OF:

- A) ASME B&PV CODE, SECTION XI, 1989 EDITION
- B) PLANT TECHNICAL SPECIFICATIONS, AND
- C) CON EDISON TEN YEAR INSERVICE INSPECTION PROGRAM INCLUDING RELIEF REQUESTS.

THE AREAS TESTED AND INDICATIONS REPORTED ARE SUMMARIZED IN TABLES 1 AND 2 OF THIS ATTACHMENT.

THE QUALITY GROUP A EXAMINATIONS REVEALED FIVE INDICATIONS AT FITTINGS AND FLANGES (MECHANICAL PRESSURE BOUNDARY) AND THREE INDICATIONS AT VALVE PACKING (MECHANICAL NON-PRESSURE BOUNDARY). ALL INDICATIONS WERE REPAIRED EXCEPT ONE IN EACH CATEGORY. A BODY TO BONNET LEAK WAS STOPPED BY RETORQUING, BUT ACTION TO REPLACE THE GASKET AND DAMAGED BOLTING HAS BEEN DEFERRED TO THE NEXT REFUELING OUTAGE. A PACKING LEAK WAS DETERMINED NOT TO BE ACTIVE, BUT ACTION TO REPACK THE VALVE HAS BEEN DETERMINED TO BE NECESSARY AND WAS DEFERRED TO THE NEXT REFUELING OUTAGE.

THE QUALITY GROUP B EXAMINATIONS REVEALED TEN INDICATIONS. ALL INDICATIONS WERE REPAIRED EXCEPT ONE VALVE REPACKING WHICH WAS DEFERRED TO THE NEXT REFUELING OUTAGE.

TABLE 1
AREAS TESTED

<u>TEST NO.</u>	<u>TITLE</u>	<u>QUALITY GROUP</u>	<u>DRAWINGS</u>
PT-R75	RCS INTEGRITY INSPECTION	A	9321-F-2738, 9321-F-2745, 208168
PI-3Y74	STEAM GENERATOR SYSTEMS INSERVICE INSPECTION	B	9321-F-2019 9321-F-2729

TABLE 2
SUMMARY OF REPORTED INDICATIONS
QUALITY GROUPS A AND B PRESSURE RETAINING COMPONENTS

QUALITY GROUP A PRESSURE RETAINING COMPONENTS			
LEAKAGE TYPE	# FOUND	# REPAIRED	# DEFERRED
THROUGH WALL	0	0	0
MECHANICAL PRESSURE BOUNDARY	5	4	1
MECHANICAL NON-PRESSURE BOUNDARY	3	2	1
TOTAL ITEMS BY STATUS	8	6	2

QUALITY GROUP B PRESSURE RETAINING COMPONENTS			
LEAKAGE TYPE	# FOUND	# REPAIRED	# DEFERRED
THROUGH WALL	0	0	0
MECHANICAL PRESSURE BOUNDARY	2	2	0
MECHANICAL NON-PRESSURE BOUNDARY	8	7	1
TOTAL ITEMS BY STATUS	10	9	1

FORM NIS-1 OWNER'S REPORT FOR INSERVICE INSPECTIONS

(As required by the Provisions of the ASME Code Rules)

1. Owner Consolidated Edison Company of New York, Inc. 4 Irving Place, New York, NY 10003

(Name and Address of Owner)

2. Plant Indian Point Station Broadway and Bleakley Ave. Buchanan, NY 10511

(Name and Address of Plant)

3. Plant Unit 2

4. Owner Certificate of Authorization (if required)

N/A

5. Commercial Service Date 07/01/1974

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	65201		20756
Class 1 & 2 Piping	United Engineers & Constructors	---	---	---
Steam Generator 21	Westinghouse	MMGL-11058	---	25*
Steam Generator 22	Westinghouse	MMGL-11059	---	26*
Steam Generator 23	Westinghouse	MMGL-11060	---	27*
Steam Generator 24	Westinghouse	MMGL-11061	---	28*
RHR Heat Exchange 22	Atlas	IPPACAHRS - 2	---	659

(*) See Code Data sheets contained in Attachment 2 NIS-2.

Note: Supplemental sheets in form of lists, sketches, or drawings may be used, provided (1) size is 8-1/2 in. x 11 in., (2) information in items 1 through 6 on this 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.

This form (E00029) may be obtained from the ASME Order Dept., 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300

FORM NIS-1 (Back)

8. Examination Dates 04/20/2000 to 01/03/2001
9. Inspection Period Identification: September 19, 1998 to December 2, 2002 **
10. Inspection Interval Identification: July 1, 1994 to April 6, 2006 **
11. Applicable Edition of Section XI 1989 Addenda None
12. Date/Revision of Inspection Plan: January 19, 1994; Rev 0
13. Abstract of Examinations and Tests. Include a list of examinations and tests and a statement concerning status of work required for the Inspection Plan.
See NIS-1 Examinations, attached.
14. Abstract of Results of Examinations and Tests.
All items accepted, except as identified below.
15. Abstract of Corrective Measures.
See NIS-1 Corrective Measures, attached.

We certify that a) the statements made in this report are correct, b) the examinations and tests meet the Inspection Plan as required by the ASME Code, Section XI, and c) corrective measures taken conform to the rules of the ASME Code, Section XI.

Certificate of Authorization No. (if applicable) _____

Expiration Date _____

Date 3/28/01 Signed Consolidated Edison of NY By P. E. Deen
Owner Q2 / 3-28-01

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or provinces of NEW YORK and employed by HARTFORD STEAM BOILER INSP. INS. CO. of HARTFORD, CT have inspected the components described in this Owner's Report during the period 4/20/00 to 1/3/01, and state that to the best of my knowledge and belief, the Owner has performed examinations and tests and taken corrective measures described in this Owner's Report in accordance with the inspection plan and as required by the ASME Code, Section XI.

By signing this certificate neither the Inspector nor his employer makes and any warranty, expressed or implied, concerning the examinations, tests, and corrective measures described in this Owner's 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.

Inspector's Signature [Signature] Commissions NB 10011 "I, N" NYS 3084
Date 3/28/01 National Board, State, Province, and Endorsements

FORM NIS-1 (Back), continued.

Notes:

- ** The Inservice Inspection Interval has been extended per IWA-2430(e) to the dates indicated.
These were documented in letters to the NRC dated April 9, 1999 and January 4, 2001.

NIS 1 Examinations
Item 13

CODE ITEM	COMPONENT	DESCRIPTION	ISO	VOL	SUR	VIS	NOTES
Reactor Vessel							
B6.10	RFN 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 & 28	Reactor Vessel Nut	206913		X		
B6.30	RFS 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 & 28	Reactor Vessel Stud	206913		X		
B6.50	RFW 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 & 28	Reactor Vessel Washer	206913			X	
B7.80	RHMJ L15	CONOSEAL 92	206913			X	
	RHMJ R11	CONOSEAL 93	206913			X	
B13.10	RV V INT	Vessel Interior	206913			X	
Pressurizer							
B3.120	PZRN3	IN RAD LN342	206918			X	
RCP 24							
B17.10	PFW 24	Flywheel	206923	X		X	
Steam Generator 21							
B2.40	SGC 21- 8	TS-CH Weld	206914	X			1
B3.140	SGN 21- 4R & 5R	IN RAD	206914	X			1
B5.70	SGS 21- 4 & 5	CW-DM LP 21	206914	X	X		1
B7.30	SGB 21- 1C, 1H, 2C, 2H, 3C, 3H, 4C, 4H, 5C, 5H, 6C, 6H, 7C, 7H, 8C, 8H, 9C, 9H, 10C, 10H, 11C, 11H, 12C, 12H, 13C, 13H, 14C, 14H, 15C, 15H, 16C & 16H	MWY Bolts 21	206914			X	1
BF1.40	SG 21	Support-GFA	206914			X	1
C1.10	SGC 21- 3, 4 & 6	Circ Weld	206914	X			1
C1.20	SGC 21- 1	CW HD-SHELL	206914	X			1
C1.30	SGC 21- 7	CW TS-SHELL	206914	X			1
C2.21	SGN 21- 1	NOZ-SHELL MS	206914	X	X		1
	SGN 21- 2	NOZ-SHELL FW	206914	X	X		1
C2.22	SGN 21- 2R	IN NOZ FW	206914	X			1
Steam Generator 22							
B2.40	SGC 22- 8	TS-CH Weld	206915	X			1
B3.140	SGN 22- 4R & 5R	IN RAD	206915	X			1
B5.70	SGS 22- 4 & 5	CW-DM LP 22	206915	X	X		1
B7.30	SGB 22- 1C, 1H, 2C, 2H, 3C, 3H, 4C, 4H, 5C, 5H, 6C, 6H, 7C, 7H, 8C, 8H, 9C, 9H, 10C, 10H, 11C, 11H, 12C, 12H, 13C, 13H, 14C, 14H, 15C, 15H, 16C & 16H	MWY Bolts 22	206915			X	1
BF1.40	SG 22	Support-GFA	206915			X	1

NIS 1 Examinations

Item 13

CODE ITEM	COMPONENT	DESCRIPTION	ISO	VOL	SUR	VIS	NOTES
Steam Generator 23							
B2.40	SGC 23- 8	TS-CH Weld	206916	X			1
B3.140	SGN 23- 4R & 5R	IN RAD	206916	X			1
B5.70	SGS 23- 4 & 5	CW-DM LP 23	206916	X	X		1
B7.30	SGB 23- 1C, 1H, 2C, 2H, 3C, 3H, 4C, 4H, 5C, 5H, 6C, 6H, 7C, 7H, 8C, 8H, 9C, 9H, 10C, 10H, 11C, 11H, 12C, 12H, 13C, 13H, 14C, 14H, 15C, 15H, 16C & 16H	MWY Bolts 23	206916			X	1
BF1.40	SG 23	Support-GFA	206916			X	1
Steam Generator 24							
B2.40	SGC 24- 8	TS-CH Weld	206917	X			1
B3.140	SGN 24- 4R & 5R	IN RAD	206917	X			1
B5.70	SGS 24- 4 & 5	CW-DM LP 24	206917	X	X		1
B7.30	SGB 24- 1C, 1H, 2C, 2H, 3C, 3H, 4C, 4H, 5C, 5H, 6C, 6H, 7C, 7H, 8C, 8H, 9C, 9H, 10C, 10H, 11C, 11H, 12C, 12H, 13C, 13H, 14C, 14H, 15C, 15H, 16C & 16H	MWY Bolts 24	206917			X	1
BF1.40	SG 24	Support-GFA	206917			X	1
Piping - Quality Group A							
B7.50	19 F 2	Flange Bolting	206684			X	
	27 F 4	Flange Bolting	206685			X	
B7.70	19 374	Valve Bolting	206684			X	
B9.11	10 17	CW-Pipe-Elbow	206669	X	X		
	10 18	CW-Elbow-Pipe	206669	X	X		
	353 3	CW-Bent Pipe-Elbow	206905	X	X		
B9.21	19 1AA	CW-Tee-Elbow	206684		X		
	19 5AA	CW-Valve-Flange	206684		X		
	27 7AA	CW-Pipe	206685		X		
	27 12AA	CW-Valve-Flange	206685		X		
B9.31	353 1	BW-Branch Connection	206905	X	X		
B9.40	27 17	SW-3" Tee-2" Pipe	206685		X		
	27 18	SW-Pipe-Elbow	206685		X		
	41 1	SW-Pump-1 1/2" Pipe	206687		X		
	41 2	SW-1 1/2" Pipe-2" Red	206687		X		
	41 3	SW-2" Reducer-Pipe	206687		X		
	41 4	SW-Pipe-3/4" Tee	206687		X		
	41 6	SW-3/4" Tee-Pipe	206687		X		
	42 6	SW-2" Pipe-3/4" Tee	206689		X		
	42 7	SW-Elbow-Pipe	206689		X		
	42 8	SW-Pipe-Elbow	206689		X		
	42 9	SW-Valve-Pipe	206689		X		
	42 10	SW-Bent Pipe-Valve	206689		X		
	43 52	SW-Pipe-Bent Pipe	206690		X		

**NIS 1 Examinations
Item 13**

CODE ITEM	COMPONENT	DESCRIPTION	ISO	VOL	SUR	VIS	NOTES
B9.40	43 53	SW-Bent Pipe-Pipe	206690		X		
	44 46	SW-Valve-Pipe	206692		X		
	44 47	SW-Pipe-Valve	206692		X		
	56 2	SW-Pipe-Coupling	206702		X		
	56 3	SW-Elbow-Pipe	206702		X		
	56 4	SW-Pipe-Elbow	206702		X		
	56 5	SW-Coupling-Pipe	206702		X		
	56 6	SW-Pipe-Coupling	206702		X		
	56 7	SW-Pipe	206702		X		
	56 10	SW-2" Tee-3/4" Flange	206702		X		
	56 11	SW-Pipe-Tee	206702		X		
	56 12	SW-Elbow-Pipe	206702		X		
	56 13	SW-Pipe-Elbow	206702		X		
	84 4	SW-Elbow-Pipe	206718		X		
	84 5	SW-Pipe-Valve	206718		X		
	84 6	SW-Valve-Pipe	206718		X		
B12.50	10 731	Valve Internals	206669			X	
Piping - Quality Group B							
C5.11	10 22	CW-Elbow-Penetration	206669	X	X		
	358 2	CW-Pipe-Flange	206908	X	X		
	358 3	CW-Flange-Pipe	206908	X	X		
	358 5	CW-Elbow-Pipe	206908	X	X		
	358 6	CW-Pipe-Elbow	206908	X	X		
	361 34	CW-Pipe-Elbow	206909	X	X		
	361 35	CW-Elbow-Pipe	206909	X	X		
	361 37	CW-Pipe-Elbow	206909	X	X		
	9 37	CW-Pipe-Elbow	206668	X	X		
	9 45	CW-Pipe	206668	X	X		
C5.30	56 74	SW-Pipe-Coupling	206701		X		
	56 119	SW-Pipe-Coupling	206700		X		
C5.51	1 18	CW-Elbow-Penetration	206655	X	X		
	1 1AA, 2AA & 3AA	Circ Weld	206655	X	X		1
	2 1AA, 2 & 2AA	Circ Weld	206657	X	X		1
	3 1AA, 2AA & 3AA	Circ Weld	206659	X	X		1
	4 1AA, 2AA & 3AA	TE	206661	X	X		1
	5 1AA, 2AA & 3AA	Circ Weld	206663	X	X		1
	6 1AA, 2AA, 3AA & 4AA	Circ Weld	206664	X	X		1
	7 1AA & 2AA	Circ Weld	206665	X	X		1
	8 1AA & 2AA	Circ Weld	206666	X	X		1
Piping Supports - Quality Group A							
BF1.10	42 H 6	HDFB-Clevis-Hanger	206688			X	
	56 SR 11A	RUFA-U-Bolt-Restraint	206702			X	
	PWR 94	RGFA-Guide-Restraint	206707			X	
	R SR 8	HUFWA-U-Bolt-Hanger	206688			X	
	SIH 213	SWFMW-Welded-Support	206908			X	
	SR 895	RFCW-Clamp-Restraint	206684			X	
Piping Supports - Quality Group B							
CF1.20	HBF 1	Hanger-WSW	206664			X	1
	HBF 2	Hanger-WSW	206663			X	1
	HBF 3	Hanger-WSW	206665			X	1
	HBF 4	Hanger-WSW	206666			X	1

NIS 1 Examinations
Item 13

CODE ITEM	COMPONENT	DESCRIPTION	ISO	VOL	SUR	VIS	NOTES
CF1.20	HBF 12	Restraint-RWFM	206666			X	1
	HMS 1	Hanger-WSW	206657			X	1
	HMS 2	Hanger-WSW	206655			X	1
	HMS 3	Hanger-WSW	206659			X	1
	HMS 4	Hanger-WSW	206661			X	1
	HMS 6	Restraint-RWFM	206655			X	
	HMS 18	Support-WSA	206659			X	
	MSR 1V	Restraint-CHA	206659			X	1
	MSR 2V	Support-CHA	206655			X	1
	PR 6 & 7	Restraint-WCM	206655			X	1
	PR 8 & 9	Restraint-GCM	206657			X	1
	PR 12	Restraint-WCM	206659			X	1
	PR 13	Restraint-GCM	206659			X	1
	PR 14	Restraint-WCM	206661			X	1
	PR 18	Restraint-WCM	206665			X	1
	SIH 151	Hanger-HCFW	206704			X	
	SIH 153	Support-SWFM	206704			X	
	SIH 188	Support-SGFA	206908			X	
	SR 700	Restraint-RCFW	206704			X	
	SR 723	Restraint-RGFW	206909			X	
	27 SR 40	Seismic Restraint	206685			X	
Notes:							
1. Preservice inspection of Steam Generator Replacements							

NIS 1 Corrective Measures

Item 15

CODE ITEM	COMPONENT	DESCRIPTION	EXAM	ISO	VOL	SUR	VIS
Quality Group A							
B06.50	RFW 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 & 28	Reactor Vessel Washers - Reported pitting on Id. Surface.	ISI	206913			X
Accepted as pre-existing condition.							
B07.50	19 F 2	Flange Bolting - Reported loose bolting, incomplete thread engagement and a boron leak.	ISI	206684			X
Condition corrected, reexamined and accepted.							
B07.50	19 374	Valve Bolting - Reported general corrosion of the valve bolting.	ISI	206684			X
Accepted as meeting code, <5% reduction in diameter.							
B07.70	351 895A	Valve Bolting - Reported leakage and incomplete thread engagement.	ISI	206903			X
Recommended correction. Completed, reexamined and accepted.							
B12.50	10 731	Valve Internals - visual indications, minor indentations were reported in the valve body.	ISI	206669			X
This previously identified condition determined to be acceptable.							
BF1.10	R SR 8	Hanger-HUFWA - Reported bent hanger rods.	ISI	206688			X
Accepted as being operational. Recommended correction to be scheduled.							
BF1.10	SR 895	Restraint-RCFW - Reported misalignment and clamp movement.	ISI	206684			X
Accepted as being operational. Recommended correction to be scheduled.							
Quality Group B							
CF1.20	SIH 188	Support-SGFA - Reported chipped grout.	ISI	206908			X
Accepted as being operational. No corrective action required.							
CF1.20	SR 700	Restraint-RCFW - Reported misalignment and frozen bearings.	ISI	206704			X
Accepted as being operational. Recommended correction. Completed, reexamined and accepted.							

ATTACHMENT 2 TO NL-01-038

Code Repair & Replacement,
Steam Generator Replacement
Form NIS-2

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247

FORM NIS -2, OWNER'S REPORT FOR REPAIRS OR REPLACEMENT
AS REQUIRED BY THE PROVISIONS OF THE ASME CODE SECTION XI

Page 1 of 4

1. OWNER.

Revision Date 11/9/00

Consolidated Edison of New York, Inc. Date:
4 Irving Place
New York, New York 10003

2. PLANT

Indian Point Station Unit:No.2
Broadway and Bleakely Avenue
Buchanan, New York 10511

3. DESCRIPTION OF WORK

Four Westinghouse Model 44 Steam Generators were replaced with four Westinghouse model 44F Steam generators. This entailed installing temporary piping supports ;cutting of Reactor Coolant , Main Steam ,Boiler Feedwater and Boiler Blowdown piping ;and removing the Model 44 SG's . The Model 44F SG'S were then installed , the piping rewelded and the temporary supports removed. Minor modifications were also made to the upper SG lateral supports and the Model 44F SG's.

4. IDENTIFICATION OF SYSTEMS

The plant systems affected by the SG replacement project were the Reactor Coolant, Main Steam, Boiler Feedwater and Boiler Blowdown Systems.

5. WORK PERFORMED

VENDOR

Purchase Order Number

Replacement of Steam Generators	SGT	028806
Primary Head Drain Plug Installation	SGT	022806
Primary Manway Insert Fastener Installation	Westinghouse	31150
Secondary Manway Stud,Nut,Washer Changeout	WestingHouse	31143

6. APPLICABLE CODES

Model 44F SG's	Design Code	Primary and Secondary Side	ASME III Class A 1965/S66
	Fabrication Code	Primary and Secondary side	ASME III Class A 1980/w81
Piping	Design Code	ANSI B31.1-1973 with ANSI B31.1b1973 Addenda	
	Installation Code	ASME III 1989 Edition	
Supports		AISC 9 th Edition	
Applicable ASME Section XI Edition		ASME XI 1989	

7.IDENTIFICATION OF REPLACEMENT COMPONENTS

Name	Manufacturer	Serial No.	National Board Number	Year Built	ASME Code Stamped	Construction Code
SG21	Westinghouse	MMGL-11058	25	1987	YES (N)	ASME III 80/81
SG22	"	MMGL-11059	26	"	"	"
SG23	"	MMGL-11060	27	"	"	"
SG24	"	MMGL-11061	28	"	"	"

8, TESTS CONDUCTED

Page 2 of 4

The following tests were conducted under the auspices of ASME XI CODE CASE N-416-1.

Primary side – inservice leakage test at normal operating pressure and temperature; approximately 2235 psig and 574F.

Secondary side.- inservice leak test at normal operating pressure and temperature; ranging from 775 psig minimum to 1005 psig maximum at corresponding saturation temperatures.

9. REMARKS

Work activities which are related to ASME Section XI Repair and Replacement Rules and which were accomplished during the Steam Generator Replacement Project are included in the attached NIS-2 Table.1. These work activities occurred between August 8, 2000 and January 3, 2001.

Attached are copies of Form N-1, Certificate Holders Data Report For Nuclear Vessels for the four replacement steam generators.

**WORK ACTIVITIES INCLUDED IN THE STEAM GENERATOR REPLACEMENT
PROJECT THAT ARE WITHIN THE SCOPE OF ASME XI 1989.**

ACTIVITY	WORK PACKAGE NUMBER	MOD PACKAGE
Stage and prep RSG	3020 A-D	N/A
Install RSG	3040 A-D	N/A
Install RSG Supports	3050 A-D	MP-03-FMX- 00-52429-C
RCS prep	3065 A-D	GM-01-FMX- 00-52429-A
Install MS piping	3080 A-D	GM-01-FMX- 00-52429-A
Install FW piping	3085A-D	GM-01-FMX- 00-52429-A
Install Secondary Small Bore Piping	3520A-D	GM-01-FMX- 00-52429-A & GM-02-FMX- 00 -52429-A
Secondary Manway Stud,Nut,Washer Changeout	N/A	FMX-00- 52429-I
Channel Head Drain Plug Installation	N/A	FXM-00- 52429-G
Primary Manway Insert Fastener Installation	N/A	FMX-00- 52429-E

CERTIFICATE OF COMPLIANCE

We certify that the statements made in this report are correct and these repairs/replacements conform to the rules of the ASME Code, Section XI.

Type code symbol stamp: None

Certificate of Authorization No.: None

Expiration date: NA

Signed A. Man Blum VP Nuclear Power
Owner or Owner's designee, Title

Date 3/26/01,

CERTIFICATE OF INSERVICE INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the state or province of NEW YORK and employed by HSB I: I Co. of HARTFORD, CT have inspected the components described in this owner's report during the period 8/8/00 to 1-3-01, and state that to the best of my knowledge and belief, the owner has performed examinations and taken corrective measures described in this owner's 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 owner's 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 3/26/01,



Inspector's Signature

Commissions 10011, "I", "N" NYS 3084
National Board, State, Province
& Endorsements

FORM N-1 IN CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 1 of 3

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

1. Manufactured by WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
 (Name and address of Certificate Holder)
2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
 (Name and address of Purchaser)
3. Type Vertical Kind Steam Generator Vessel No. 11058 CRN No. --- Nat'l Bd. No. 25 Yr. Built 1987
 (Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfrs. Serial No.)
- 3a. Applicable ASME Code: Section III, Edition 1980; Addenda date W '81; Case No. N-20 Class 1

Items 4-8 inclusive to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA-533 GRA C12 T.S. 90,000 psi Nom. Thk. 3.50 in. Corr. Allow. .06 in. Diam. 13.3 ft. Length 63.1 ft. n.
 (Kind & Spec. No.) (Min. of range specified) Min.
5. Seams: Long Weld Dbl Butt H.T. Full R.T. Full Efficiency 100 %
 Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses 6

6. Heads: (a) Material SA-533 GRA C12 T.S. 90,000 psi (b) Material ----- T.S. -----
- | Location (top, bottom, ends) | Thickness | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diam. | Side to Pressure (convex or concave) |
|------------------------------|------------------|--------------|----------------|------------------|--------------------|----------------------|------------|--------------------------------------|
| *1 (a) Top | <u>3.50 min.</u> | <u>--</u> | <u>--</u> | <u>2:1</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>Concave</u> |
| (b) ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |

If removable, bolts used ----- Other fastening -----
 (Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

- *1 7. Jacket Closure Girth Weld - Dbl Butt: Full H.T.: Full R.T.
 (Describe as ogee & weld, bar, etc. if bar, give dimensions, describe, or sketch)
8. (a) Design Pressure 1085 psig at 556 °F (b) Min. Pressure-Test Temp. 180 Max. °F
 (c) Pneumatic, Hydrostatic, or Combination Test Pressure 1357 psig 100 Min. °F

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary: Material SA-508 C12A Diam. 129.25 in. Thk. 21.81 in. Attachment Welded Item 12)
 (Kind & Spec. No.) (Subject to pres.) Min. (Welded, bolted)
- Floating: Material ----- Diam. ----- in. Thk. ----- in. Attachment -----
 (Kind & Spec. No.)
10. Tubes: Material SB-163, Alloy UNS N06600 O.D. .875 in. Thk. .050 in. or gage -- Number 3214 Type U
 (Kind & Spec. No.) (Straight or U)

Items 11 to 14 inclusive to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

- NA 11. Shell: Material ----- T.S. ----- Nom. Thk. ----- in. Corr. Allow. ----- in. Diam. ----- ft. Length ----- ft. in.
 (Kind & Spec. No.) (Min. of range specified)
12. Seams: Long ----- H.T. ----- R.T. ----- Efficiency ----- %
 (Welded, ovl., single) (Yes or no)
- Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses -----
13. Heads: (a) Material ----- T.S. ----- (b) Material SA216 GrWCC T.S. 70,000 psi (c) Material ----- T.S. -----
- | Location | Thickness | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diam. | Side to Pressure (convex or concave) |
|-----------------------|-------------|--------------|----------------|------------------|--------------------|----------------------|--------------|--------------------------------------|
| (a) Top, bottom, ends | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| (b) Channel | <u>5.22</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>59.25</u> | <u>IR Concave</u> |
| (c) Floating | ----- | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
- If removable, bolts used: (a) ----- (b) ----- (c) ----- Other fastening -----
 (Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)
14. (a) Design Pressure 2485 psig at 650 °F (b) Min. Pressure-Test Temp. 250 Max. °F
 (c) Pneumatic, Hydrostatic, or Combination Test Pressure 3107 psig 100 Min. °F

*If postweld heat-treated. *List other internal or external pressures with coincident temperature when applicable.

*Supplemental sheets in form of lists, sketches, or drawings may be used provided: (1) size is 8 1/2 in. x 11 in.; (2) information in Items 1 through 3 of this Data Report is included on each sheet; and (3) each sheet is numbered and the number of sheets is recorded in Item 19, Remarks.

(12/31/79)

This form (E00038) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

00008

FORM N-1 (Back)

Items below to be completed for all vessels where applicable.

- *2 15. Safety Valve Outlets: Number _____ Size _____ Location _____
16. Nozzles: SEE SCHEDULE ON SHEET 2
- | Purpose (Inlet, outlet, drain) | Number | diam. or Size | Type | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|---------------|------|----------|-----------|------------------------|--------------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
- INSPECTION AND ACCESS OPENINGS PER SCHEDULE ON SHEET 2
17. Inspection Manholes: No. _____ Size _____ Location _____
- Openings: Manholes: No. _____ Size _____ Location _____
- Threaded: No. _____ Size _____ Location _____
18. Supports: Skirt No Lugs --- Legs --- Other FOUR SUPPORT PADS Attached CHANNEL HEAD & INTERGRALLY
- (Yes or no) (Number) (Number) (Describe) (Where & how)
19. Remarks: The Design Report was prepared in compliance with the 1965 edition through Summer 1966 addenda.

(Brief description of service for which vessel was designed.)

We certify that the statements made in this report are correct and that this nuclear vessel conforms to the rules of construction of the ASME Code, Section III.

Date Dec 15, 1987 Signed Westinghouse Electric Corporation By [Signature]
(N Certificate Holder)

Certificate of Authorization Expires March 11, 1989 Certificate of Authorization No. N-1669

CERTIFICATION OF DESIGN

Design information on file at Westinghouse Electric Corp., Nuclear Components Div., Pensacola, FL

Stress analysis report on file at Westinghouse Electric Corp., Nuclear Components Div., Pensacola, FL

Design specifications certified by R. L. Sylvester Prof. Eng. State PA Reg. No. 15441-E

Stress analysis report certified by D. J. Green Prof. Eng. State FL Reg. No. 31085

CERTIFICATE OF SHOP INSPECTION

Vessel made by Westinghouse Electric Corporation at Pensacola, Florida

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Louisiana and employed by Lumbermens Mutual Cas. Co. of Long Grove, Illinois

have inspected the pressure vessel described in this Manufacturer's Data Report on 12/15, 1987 and state that, to the best of my knowledge and belief, the N Certificate Holder has constructed this pressure vessel in accordance with the ASME Code, Section III.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this N Certificate Holder's 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 15, 1987

W. Y. Jones [Signature] Commissions NB 7245 N LA754
Inspector's Signature National Board, State, Province and No.

NA

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of _____ and employed by _____ of _____

have compared the statements in this Data Report with the described pressure vessel and state that parts referred to as data items inspected by me and that to the best of my knowledge and belief the N Certificate Holder has constructed and assembled this pressure vessel in accordance with the ASME Code, Section III. The described vessel was inspected and subjected to a hydrostatic test and/or pneumatic test of _____ psi.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this 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 _____, 19____

Inspector's Signature _____ Commissions _____
National Board, State, Province and No.

00009

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*
As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

Sheet 2 of

1. Manufactured by WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of Manufacturer)
2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)
3. Type Vertical Kind Steam Generator Vessel No. 11058 CRN No. --- Mat'l Bd. No. 25 Yr. Built 1987
(Horiz. or vert.) (Type, jacketed, heat ex.) (Mfrs. Serial No.)
3a. Applicable ASME Code: Section III, Edition 1980 Addenda date W '81 Case No. N-20 Class 1

PURPOSE	NO.	DIA.	TYPE	MAT'L	THK.	MAT'L	HOW ATTACHED
*3 Primary Side Inlet	1	31.00 ID	Cast Integral	SA 216 Gr WCC	3.55	SA 216 Gr WCC	Integrally Cast
*3 Primary Side Outlet	1	31.00 ID	Cast Integral	SA216 GR WCC	3.55	SA 216 GR WCC	Integrally Cast
Shell Blowdown	2	2.5"	Weld End	SA 508 CI 1A	.92		Welded
Secondary Shell Drain	1	1.00"	Weld End	SA 508 CI 1A	.67		Welded
Feedwater Inlet	1	16.31" ID	Weld End	SA 508 CI 2A	.84	SA 508 CI 2A	Welded
Wide Range Water Level Tap	2	.75"	Weld End	SA 508 CI 1A	.65		Welded
Narrow Range Water Level Tap	6	.75"	Weld End	SA 508 CI 1A	.65		Welded
Steam Outlet	1	28.00" ID	Weld End	SA 508 CI 2A	1.38	SA 508 CI 2A	Welded
Steam Drum Pressure Tap	1	1.00"	Weld End	SA 508 CI 1A	.67		Welded
Wet Layup Nozzle	1	2.00"	Weld End	SA 508 CI 1A	.88		Welded

INSPECTION & ACCESS OPENINGS:

Description	No.	Diameter
Manway - Primary Side	2	16"
Manway - Secondary Side	2	16"
Secondary Side Inspection Port	1	3"
Secondary Side Handholes	6	6"

*1 Reference Westinghouse Electric Corp. Dwg. 6136E16 for supplemental information.

*2 Provided by Others.

*3 Primary coolant nozzles fabricated with Type 308 stainless steel safe ends.

00010

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
 1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
 (Name and address of N Certificate Holder)
 2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
 (Name and address of Purchaser)
 3. Type Vertical Kind Steam Generator Vessel No. 11058 CRN No. --- Nat'l Bd. No. 25 Yr. Built 1987
 (Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfg. Serial No.)
 3a. Applicable ASME Code: Section III, Edition 1980; Addenda date V '81 Case No. N-20 Class 1

ASME: Section III: Paragraph NB 4622.10 applies.

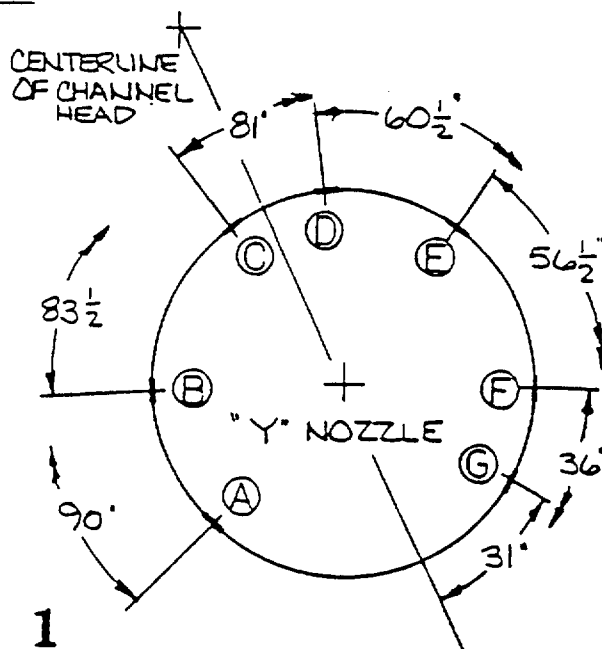
SCOPE: Cladding repairs after post weld heat treat.

PROCEDURE: Repair weld techniques were utilized in accordance with approved procedures commensurate with applicable ASME Code requirements. Supportive documentation is on file as part of Quality Assurance records.

DETAILS: Repair Area:

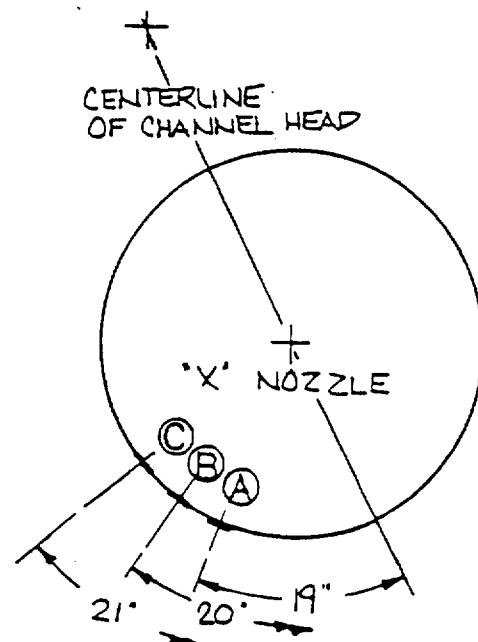
① Y-nozzle, OD at Inconel band.
Refer to sketch below for size and location.

② X-nozzle, ID at nozzle radius (knuckle) area in stainless clad. Size and location below.



1

Ⓐ	L=2.250	W=.180	D=.130
Ⓑ	L=1.750	W=.200	D=.127
Ⓒ	L=2.000	W=.180	D=.125
Ⓓ	L=.750	W=.180	D=.125
Ⓔ	L=1.000	W=.080	D=.110
Ⓕ	L=3.000	W=.200	D=.120
Ⓖ	L=1.750	W=.200	D=.120



2

Ⓐ	L=.510	W=.200	D=.076
Ⓑ	L=.411	W=.125	D=.035
Ⓒ	L=.500	W=.100	D=.050

S/G-22

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 1 of 3

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
 1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
 (Name and address of N Certificate Holder)
 2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
 (Name and address of Purchaser)
 3. Type Vertical Kind Steam Generator Vessel No. (11059) CRN No. --- Nat'l Bd. No. 26 Yr. Built 1987
 (Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfrs. Serial No.)
 3a. Applicable ASME Code: Section III, Edition 1980; Addenda date W '81; Case No. N-20 Class 1

Items 4-8 inclusive to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA-533 T.S. 90,000 psi Nom. Thk. 3.50 in. Corr. Allow. .06 in. Diam. 13.3 ft. Length 63.1 ft.
 (Kind & Spec. No.) (Min. of range specified) Min.
 5. Seams: Long Weld Dbl Butt H.T. Full R.T. Full Efficiency 100 %
 Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses 6

6. Heads: (a) Material SA-533 GrA C12 T.S. 90,000 psi (b) Material --- T.S. ---
 Location (top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diam. Side to Pressure (convex or concave)
 *1 (a) Top 3.50 min. -- -- 2:1 -- -- -- Concave
 (b) --- --- --- --- --- --- --- --- ---

If removable, bolts used --- (Material, Spec. No., T.S., Size, Number) Other fastening --- (Describe or attach sketch)

*1 7. Jacket Closure Girth Weld - Dbl Butt: Full H.T.: Full R.T.
 (Describe as ogee & weld, bar, etc. If bar, give dimensions, describe, or sketch)

8. (a) Design Pressure 1085 psig at 556 °F (b) Min. Pressure-Test Temp. 180 Max. °F
 (c) Pneumatic, Hydrostatic, or Combination Test Pressure 1357 psig 100 Min. °F

Items 9 and 10 to be completed for tube sections. (See Item 11)
 9. Tube Sheets: Stationary: Material SA-508 C12A Diam. 129.25 in. Thk. 21.81 in. Attachment Welded
 (Kind & Spec. No.) (Subject to pres.) Min. (Welded, bolted)

Floating: Material --- Diam. --- in. Thk. --- in. Attachment ---
 (Kind & Spec. No.)
 10. Tubes: Material SB-163, Alloy O.D. .875 in. Thk. .050 in. or gage -- Number 3214 Type U
 (Kind & Spec. No.) (Straight or U)

Items 11 to 14 inclusive to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

NA 11. Shell: Material --- T.S. --- Nom. Thk. --- in. Corr. Allow. --- in. Diam. --- ft. Length --- ft. in.
 (Kind & Spec. No.) (Min. of range specified)

12. Seams: Long --- H.T. --- R.T. --- Efficiency --- %
 (Welded, dbl., angle) (Yes or no)
 Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses ---

13. Heads: (a) Material --- T.S. --- (b) Material SA216 GrWCC T.S. 70,000 psi Material --- T.S. ---
 Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diam. Side to Pressure (convex or concave)
 (a) Top, bottom, ends --- --- --- --- --- --- --- --- 59.25 IR Concave
 (b) Channel 5.22 -- -- -- -- -- -- -- --- --- ---
 (c) Floating --- --- --- --- --- --- --- --- --- --- ---

If removable, bolts used: (a) --- (b) --- (c) --- Other fastening --- (Describe or attach sketch)

14. (a) Design Pressure 2485 psig at 650 °F (b) Min. Pressure-Test Temp. 250 Max. °F
 (c) Pneumatic, Hydrostatic, or Combination Test Pressure 3107 psig 100 Min. °F

*If postweld heat-treated. *List other internal or external pressures with coincident temperature when applicable.
 *Supplemental sheets in form of lists, sketches, or drawings may be used provided: (1) size is 8 1/2 in. x 11 in.; (2) information in Items 1 through 3 of this Data Report is included on each sheet; and (3) each sheet is numbered and the number of sheets is recorded in item 19. Remarks.

This form (E00038) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

(12/31/79)

00008

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 2 of 3

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
 1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)
 2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)
 3. Type Vertical Kind Steam Generator Vessel No. (11059) CRN No. --- Nat'l Bd. No. 26 Yr. Built 1987
(Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfrs. Serial No.)
 3a. Applicable ASME Code: Section III, Edition 1980; Addenda date W '81 Case No. N-20 Class 1

PURPOSE	NO.	DIA.	TYPE	MAT'L	THK.	MAT'L	HOW ATTACHED
*3 Primary Side Inlet	1	31.00" ID	Cast Integral	SA 216 Gr WCC	3.55	SA 216 Gr WCC	Integrally Cast
*3 Primary Side Outlet	1	31.00 ID	Cast Integral	SA 216 GR WCC	3.55	SA 216 GR WCC	Integrally Cast
Shell Blowdown	2	2.5"	Weld End	SA 508 CI 1A	.92		Welded
Secondary Shell Drain	1	1.00"	Weld End	SA 508 CI 1A	.67		Welded
Feedwater Inlet	1	16.31" ID	Weld End	SA 508 CI 2A	.84	SA 508 CI 2A	Welded
Wide Range Water Level Tap	2	.75"	Weld End	SA 508 CI 1A	.65		Welded
Narrow Range Water Level Tap	6	.75"	Weld End	SA 508 CI 1A	.65		Welded
Steam Outlet	1	28.00" ID	Weld End	SA 508 CI 2A	1.38	SA 508 CI 2A	Welded
Steam Drum Pressure Tap	1	1.00"	Weld End	SA 508 CI 1A	.67		Welded
Wet Layup Nozzle	1	2.00"	Weld End	SA 508 CI 1A	.88		Welded

INSPECTION & ACCESS OPENINGS:

Description	No.	Diameter
Manway - Primary Side	2	16"
Manway - Secondary Side	2	16"
Secondary Side Inspection Port	1	3"
Secondary Side Handholes	6	6"

*1 Reference Westinghouse Electric Corp. Dwg. 6136E16 for supplemental information.

*2 Provided by Others.

*3 Primary coolant nozzles fabricated with Type 308 stainless steel safe ends.

00010

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 3 of 3

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION

1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)

2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)

3. Type Vertical Kind Steam Generator Vessel No. 11059 CMN No. --- Nat'l Bd. No. 26 Yr. Built 1987
(HORIZ. or VERT.) (Tank, jacketed, heat ex.) (MFR. Serial No.)

3a. Applicable ASME Code: Section III, Edition 1980; Addenda date V '81 Case No. N-20 Class 1

ASME: Section III: Paragraph NB 4622.10 applies.

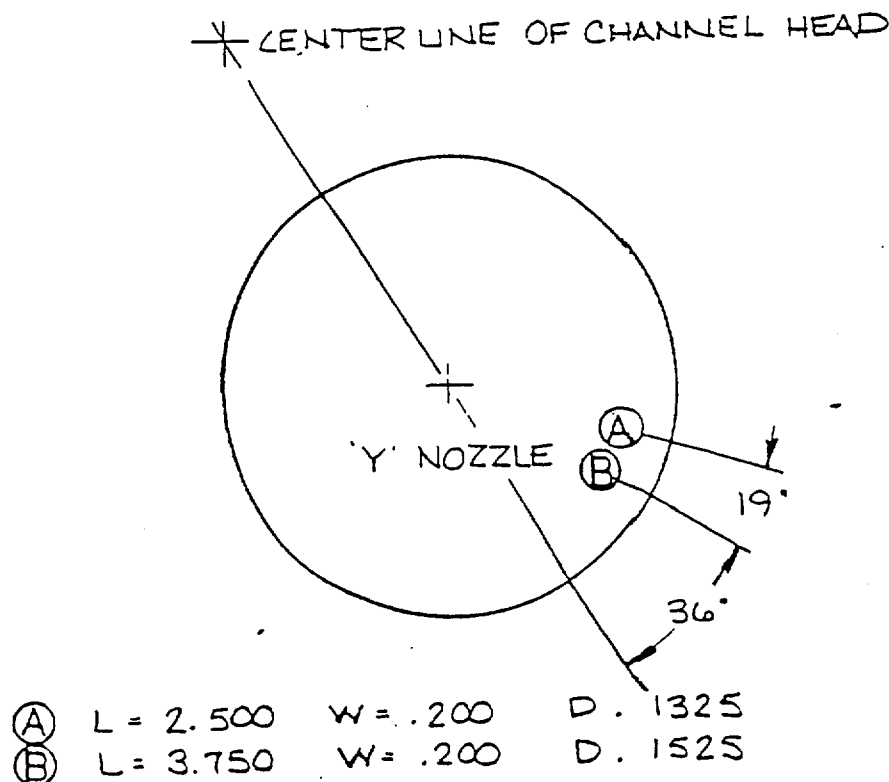
SCOPE: Cladding repairs after post weld heat treat.

PROCEDURE: Repair weld techniques were utilized in accordance with approved procedures commensurate with applicable ASME Code requirements. Supportive documentation is on file as part of Quality Assurance records.

DETAILS: Repair Area:

Y-nozzle, OD at Inconel band.
Refer to sketch below for size and location.

#2 X-nozzle, ID at nozzle radius (knuckle) area in stainless clad. Size and location below.



00011

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 1 of 5

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)
2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)
3. Type Vertical Kind Steam Generator Vessel No. (11060) CRN No. --- Nat'l Bd. No. 27 Yr. Built 1987
(Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfrs. Serial No.)
4a. Applicable ASME Code: Section III, Edition 1980; Addenda date W '81 Case No. N-20 Class 1

Items 4-8 inclusive to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA-533 GrA C12 T.S. 90,000 psi Nom. Thk. 3.50 in. Corr. Allow. .06 in. Diam. 13.3 in. Length 63.1.62 ft. in.
(Kind & Spec. No.) (Min. of range specified) Min.
5. Seams: Long Weld Dbl Butt H.T. Full R.T. Full Efficiency 100 %
Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses 6
6. Heads: (a) Material SA-533 GrA C12 T.S. 90,000 psi (b) Material --- T.S. ---
Location (top, bottom, ends) Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diam. Side to Pressure (convex or concave)
*1 (a) Top 3.50 min. -- -- 2:1 -- -- -- Concave
(b) --- --- --- --- --- --- --- ---

If removable, bolts used --- (Material, Spec. No., T.S., Size, Number) Other fastening --- (Describe or attach sketch)*1 7. Jacket Closure Girth Weld - Dbl Butt: Full H.T.: Full R.T.
(Describe as ogee & weld, bar, etc. If bar, give dimensions, describe, or sketch)

8. (a) Design Pressure? 1085 psig at 556 °F (b) Min. Pressure-Test Temp. 180 Max. 100 °F
(c) Pneumatic, Hydrostatic, or Combination Test Pressure 1357 psig

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary: Material SA-508 C12A Diam. 129.25 in. Thk. 21.81 in. Attachment Welded Item 1.
(Kind & Spec. No.) (Subject to pres.) Min. (Welded, bolted)
Floating: Material --- Diam. --- in. Thk. --- in. Attachment ---
(Kind & Spec. No.)
10. Tubes: Material SB-163, Alloy UNS N06600 O.D. .875 in. Thk. .050 in. or gage --- Number 3214 Type U
(Kind & Spec. No.) (Straight or U)

Items 11 to 14 inclusive to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

NA 11. Shell: Material --- T.S. --- Nom. Thk. --- in. Corr. Allow. --- in. Diam. --- ft. in. Length --- ft. in.
(Kind & Spec. No.) (Min. of range specified)

12. Seams: Long --- H.T. --- R.T. --- Efficiency --- %
(Welded, dbl., single) (Yes or no)
Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses ---

13. Heads: (a) Material --- T.S. --- (b) Material SA216 GrWCC T.S. 70,000 psi (c) Material --- T.S. ---
Location Thickness Crown Radius Knuckle Radius Elliptical Ratio Conical Apex Angle Hemispherical Radius Flat Diam. Side to Pressure (convex or concave)
(a) Top, bottom, ends 5.22 -- -- -- -- -- 59.25 IR Concave
(b) Channel --- --- --- --- --- --- --- ---
(c) Floating --- --- --- --- --- --- --- ---

If removable, bolts used: (a) --- (b) --- (c) --- Other fastening ---
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)

14. (a) Design Pressure? 2485 psig at 650 °F (b) Min. Pressure-Test Temp. 250 Max. 100 °F
(c) Pneumatic, Hydrostatic, or Combination Test Pressure 3107 psig

*If postweld heat-treated. *List other internal or external pressures with coincident temperature when applicable.

*Supplemental sheets in form of lists, sketches, or drawings may be used provided: (1) size is 8 1/2 in. x 11 in.; (2) information in items 1 through 3 of this Data Report is included on each sheet; and (3) each sheet is numbered and the number of sheets is recorded in item 19. Remarks

(12/31/78)

This form (E00038) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

00011

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 3 of 5

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION

1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)

2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)

3. Type Vertical Kind Steam Generator Vessel No. 11060 CRN No. --- Net'l Bd. No. 27 Yr. Built 1987
(Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfrs. Serial No.)

4a. Applicable ASME Code: Section III, Edition 1980 Addenda date W 81 Case No. N-20 Class 1

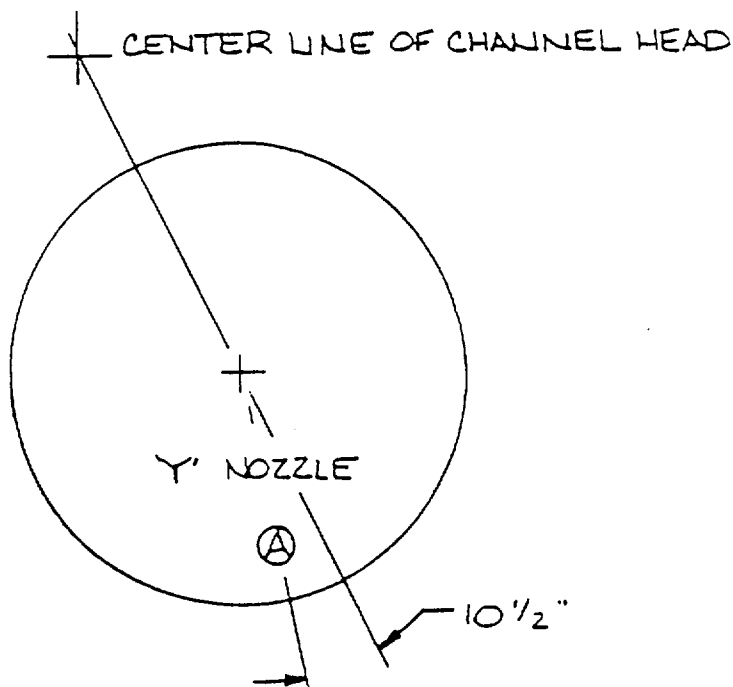
ASME: Section III: Paragraph NB 4622.10 applies.

SCOPE: Cladding repairs after post weld heat treat.

PROCEDURE: Repair weld techniques were utilized in accordance with approved procedures commensurate with applicable ASME Code requirements. Supportive documentation is on file as part of Quality Assurance records.

DETAILS: Repair Area:

Y-nozzle, OD at inconel band.
Refer to sketch below for size and location.



Ⓐ L = 3.500 W = .200 D = .053

00014

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 4 of 5

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

1. Manufactured by WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)
2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)
3. Type Vertical Kind Steam Generator Vessel No. 11060 CRN No. --- Nat'l Bd. No. 27 Yr. Built 1987
(HORIZ. or VERT.) (Tens. jacketed, Root etc.) (Mfrs. Serial No.)
- 3a. Applicable ASME Code: Section III, Edition 1980; Addenda data V 181 Case No. N-20 Class 1

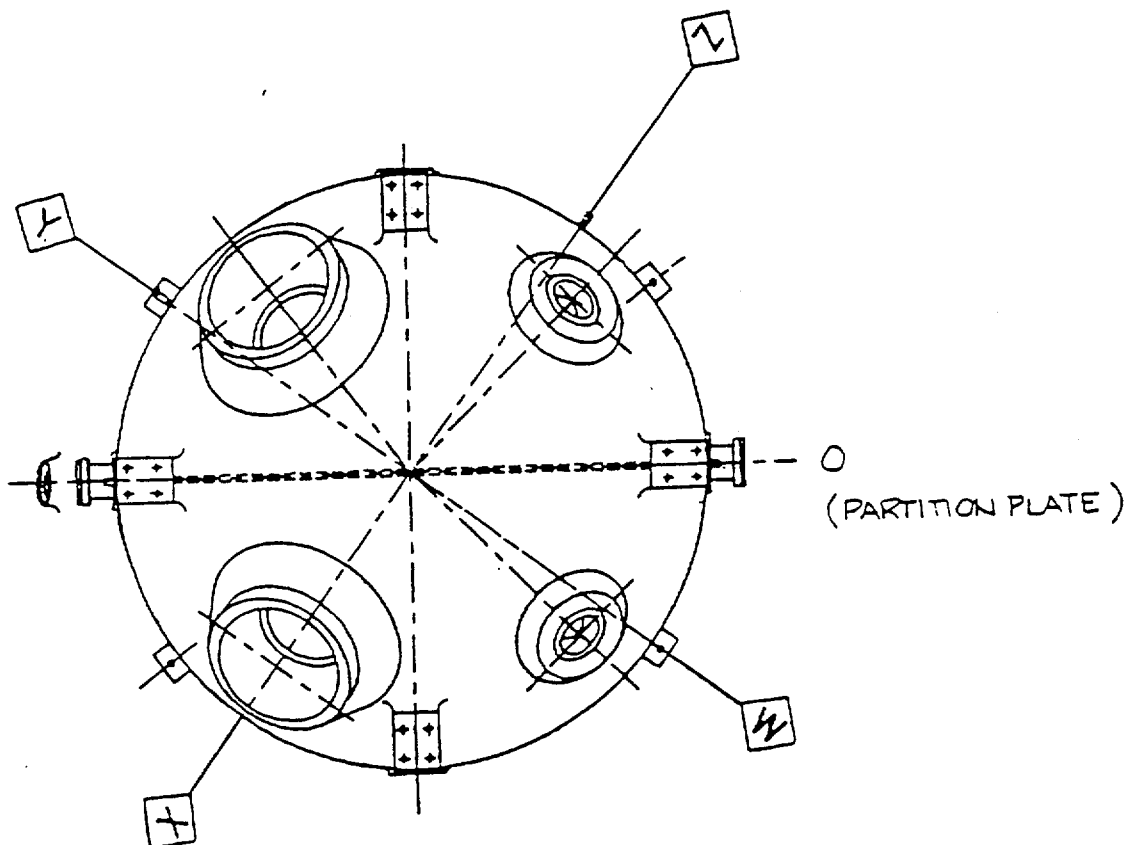
ASME: Section III: Paragraph NB 4622.10 applies.

SCOPE: Cladding repairs after post weld heat treat.

PROCEDURE: Repair weld techniques were utilized in accordance with approved procedures commensurate with applicable ASME Code requirements. Supportive documentation is on file as part of Quality Assurance records.

DETAILS: Repair Area: Twenty areas in channel head-to-tube plate weld seam in the inconel clad overlay in the "W" axis quadrant. The dimensions are referenced from the partition plate, running radially around the channel head I.D. in a clockwise direction.

Note: Refer to sketch below and page 5 for size and location.



CHANNEL HEAD

00015

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 5 of 5

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

1. Manufactured by WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)

2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)

3. Type Vertical Kind Steam Generator Vessel No. (11060) CRN No. --- Mkt'g Bd. No. 27 Yr. Built 1987
(HORIZ. or VERT.) (TANK, JACKETED, HEAT EX.) (Mfrs. Serial No.)

3a. Applicable ASME Code: Section III, Edition 1980; Addenda date W '81 Case No. N-20 Class 1

	<u>Length</u> (In.)	<u>Width</u> (In.)	<u>Depth</u> (In.)	<u>Distance from</u> <u>Partition Plate</u>	<u>Distance from</u> <u>Tube Sheet</u>
1	1.800"	.600"	.100"	.250"	3.500"
2	4.000	1.300	.300	.500	1.250
3	2.300	.780	.150	20.00	4.500
4	3.000	.700	.100	23.00	4.600
5	2.100	.600	.100	26.00	4.250
6	1.900	.800	.100	39.00	4.250
7	2.000	.600	.100	41.50	4.200
8	2.000	.700	.100	49.50	4.000
9	2.400	.680	.150	65.00	4.000
10	3.400	1.100	.150	68.50	4.200
11	2.200	.700	.100	84.00	4.250
12	2.300	.500	.100	88.00	4.500
13	1.500	.700	.100	89.00	4.250
14	2.000	.600	.150	91.00	4.200
15	1.500	.800	.100	93.00	4.250
16	2.300	.800	.150	95.50	4.200
17	1.000	.900	.100	97.50	4.250
18	3.000	1.000	.150	104.00	4.250
19	2.000	.900	.100	114.00	4.250
20	2.400	.800	.150	118.00	4.250

00016

S/G-24

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 1 of 1

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

- WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
1. Manufactured by 8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)
2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)
3. Type Vertical Kind Steam Generator Vessel No. 11061 CRN No. --- Nat'l Bd. No. 28 Yr. Built 1987
(Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfr. Serial No.)
- 3a. Applicable ASME Code: Section III, Edition 1980, Addenda date W '81, Case No. N-20, Class 1

Items 4-8 inclusive to be completed for single wall vessels, jackets of jacketed vessels, or shells of heat exchangers.

4. Shell: Material SA-533 GRA C12 T.S. 90,000 psi Nom. Thk. 3.50 in. Corr. Allow. .06 in. Diam. 13.3 ft. in. Length 63.1.62 ft. in.
(Kind & Spec. No.) (Min. of range specified) Min.
5. Seams: Long Weld Dbl Butt H.T. Full R.T. Full Efficiency 100 %
Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses 6
6. Heads: (a) Material SA-533 GRA C12 T.S. 90,000 psi (b) Material --- T.S. ---
- | Location (top, bottom, ends) | Thickness | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diam. | Side to Pressure (convex or concave) |
|------------------------------|------------------|--------------|----------------|------------------|--------------------|----------------------|------------|--------------------------------------|
| *1 (a) Top | <u>3.50 min.</u> | <u>--</u> | <u>--</u> | <u>2:1</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>Concave</u> |
| (b) | | | | | | | | |

If removable, bolts used _____ (Material, Spec. No., T.S., Size, Number) Other fastening _____ (Describe or attach sketch)

- *1 7. Jacket Closure Girth Weld - Dbl Butt: Full H.T.: Full R.T.
(Describe as open & weld, bar, etc. If bar, give dimensions, describe, or sketch)
8. (a) Design Pressure¹ 1085 psig at 556 °F (b) Min. Pressure-Test Temp. 180 Max. °F
(c) Pneumatic, Hydrostatic, or Combination Test Pressure 1357 psig 100 Min. °F

Items 9 and 10 to be completed for tube sections.

9. Tube Sheets: Stationary: Material SA-508 C12A Diam. 129.25 in. Thk. 21.81 in. Attachment Welded Item 1
(Kind & Spec. No.) (Subject to pres.) Min. (Welded, bolted)
- Floating: Material --- Diam. --- in. Thk. --- in. Attachment ---
(Kind & Spec. No.)
10. Tubes: Material SA-163 Alloy O.D. .875 in. Thk. .050 in. or gage -- Number 3214 Type U
(Kind & Spec. No.) (Two plugged) (Straight or U)

Items 11 to 14 inclusive to be completed for inner chambers of jacketed vessels or channels of heat exchangers.

- NA 11. Shell: Material --- T.S. --- Nom. Thk. --- in. Corr. Allow. --- in. Diam. --- ft. in. Length --- ft. in.
(Kind & Spec. No.) (Min. of range specified)
12. Seams: Long --- H.T. --- R.T. --- Efficiency --- %
(Welded, dbl., single) (Yes or no)
- Girth Weld Dbl Butt H.T. Full R.T. Full No. of Courses ---
13. Heads: (a) Material --- T.S. --- (b) Material SA216 GrWCC T.S. 70,000 psi (c) Material --- T.S. ---
- | Location | Thickness | Crown Radius | Knuckle Radius | Elliptical Ratio | Conical Apex Angle | Hemispherical Radius | Flat Diam. | Side to Pressure (convex or concave) |
|-----------------------|-------------|--------------|----------------|------------------|--------------------|----------------------|--------------|--------------------------------------|
| (a) Top, bottom, ends | | | | | | | | |
| (b) Channel | <u>5.22</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>--</u> | <u>59.25</u> | <u>Concave</u> |
| (c) Floating | | | | | | | | |
- If removable, bolts used: (a) _____ (b) _____ (c) _____ Other fastening _____
(Material, Spec. No., T.S., Size, Number) (Describe or attach sketch)
14. (a) Design Pressure² 2485 psig at 650 °F (b) Min. Pressure-Test Temp. 250 Max. °F
(c) Pneumatic, Hydrostatic, or Combination Test Pressure 3107 psig 100 Min. °F

¹ If postweld heat-treated. ² List other internal or external pressures with coincident temperature when applicable.

*Supplemental sheets in form of lists, sketches, or drawings may be used provided: (1) size is 8 1/2 in. x 11 in.; (2) information in Items 1 through 3 of this Data Report is included on each sheet; and (3) each sheet is numbered and the number of sheets is recorded in item 19. Remarks.

(12/31/79)

This form (E00038) may be obtained from the Order Dept., ASME, 345 E. 47th St., New York, N.Y. 10017

00009

FORM N-1 (Back)

Items below to be completed for all vessels where applicable.

- *2 15. Safety Valve Outlets: Number _____ Size _____ Location _____
16. Nozzles: SEE SCHEDULE ON SHEET 2
- | Purpose (Inlet, outlet, drain) | Number | diam. or Size | Type | Material | Thickness | Reinforcement Material | How Attached |
|--------------------------------|--------|---------------|------|----------|-----------|------------------------|--------------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
- INSPECTION AND ACCESS OPENINGS PER SHEDULE ON SHEET 2
17. Inspection Manholes: No. _____ Size _____ Location _____
- Openings: Manholes: No. _____ Size _____ Location _____
- Threaded: No. _____ Size _____ Location _____
18. Supports: Skirt No Lugs --- Legs --- Other FOUR SUPPORT PADS Attached CHANNEL HEAD & INTERGRALLY
- (Yes or no) (Number) (Number) (Describe) (Where & how)
19. Remarks: The Design Report was prepared in compliance with the 1965 edition through Summer 1966 addenda.

(Brief description of service for which vessel was designed.)

We certify that the statements made in this report are correct and that this nuclear vessel conforms to the rules of construction of the ASME Code, Section III.

Date Dec 15, 1987 Signed Westinghouse Electric Corporation By [Signature]

(N Certificate Holder)

Certificate of Authorization Expires March 11, 1989 Certificate of Authorization No. N-1669

CERTIFICATION OF DESIGN

Design information on file at Westinghouse Electric Corp., Nuclear Components Div., Pensacola, FL

Stress analysis report on file at Westinghouse Electric Corp., Nuclear Components Div., Pensacola, FL

Design specifications certified by R. L. Sylvester Prof. Eng. State PA Reg. No. 15441-E

Stress analysis report certified by D. J. Green Prof. Eng. State FL Reg. No. 31085

CERTIFICATE OF SHOP INSPECTION

Vessel made by Westinghouse Electric Corporation at Pensacola, Florida

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of Louisiana and employed by Lumbermens Mutual Cas. Co. of Long Grove, Illinois on 12/15, 1987 and have inspected the pressure vessel described in this Manufacturer's Data Report on _____ and state that, to the best of my knowledge and belief, the N Certificate Holder has constructed this pressure vessel in accordance with the ASME Code, Section III.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this N Certificate Holder's 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 15, 1987

W. Y. Jones

Inspector's Signature [Signature]

Commissions NB 7245 N LA754

National Board, State, Province and No.

NA

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by the National Board of Boiler and Pressure Vessel Inspectors and the State or Province of _____ and employed by _____ of _____ have compared the statements in this Data Report with the described pressure vessel and state that parts referred to as data items inspected by me and that to the best of my knowledge and belief the N Certificate Holder has constructed and assembled this pressure vessel in accordance with the ASME Code, Section III. The described vessel was inspected and subjected to a hydrostatic test and/or pneumatic test of _____ psi.

By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the pressure vessel described in this 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 _____, 19____

Inspector's Signature _____

Commissions _____

National Board, State, Province and No.

00010

FORM N-1 N CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS*

Sheet 2 of 2

As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

1. Manufactured by WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)

2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)

3. Type Vertical Kind Steam Generator Vessel No. 11061 CRN No. --- Nat'l Bd. No. 28 Yr. Built 1987
(Horiz. or vert.) (Tank, jacketed, heat ex.) (Mfrs. Serial No.)

3a. Applicable ASME Code: Section III, Edition 1980; Addenda date W '81 Case No. N-20 Class 1

PURPOSE	NO.	DIA.	TYPE	MAT'L	THK.	MAT'L	HOW ATTACHED
*3 Primary Side Inlet	1	31.00 ID	Cast Integral	SA 216 Gr WCC	3.55	SA 216 Gr WCC	Integrally Cast
*3 Primary Side Outlet	1	31.00 ID	Cast Integral	SA 216 GR WCC	3.55	SA 216 GR WCC	Integrally Cast
Shell Blowdown	2	2.5"	Weld End	SA 508 CI 1A	.92		Welded
Secondary Shell Drain	1	1.00"	Weld End	SA 508 CI 1A	.67		Welded
Feedwater Inlet	1	16.31" ID	Weld End	SA 508 CI 2A	.84	SA 508 CI 2A	Welded
Wide Range Water Level Tap	2	.75"	Weld End	SA 508 CI 1A	.65		Welded
Narrow Range Water Level Tap	6	.75"	Weld End	SA 508 CI 1A	.65		Welded
Steam Outlet	1	28.00" ID	Weld End	SA 508 CI 2A	1.38	SA 508 CI 2A	Welded
Steam Drum Pressure Tap	1	1.00"	Weld End	SA 508 CI 1A	.67		Welded
Wet Layup Nozzle	1	2.00"	Weld End	SA 508 CI 1A	.88		Welded

INSPECTION & ACCESS OPENINGS:

Description	No.	Diameter
Manway - Primary Side	2	16"
Manway - Secondary Side	2	16"
Secondary Side Inspection Port	1	3"
Secondary Side Handholes	6	6"

*1 Reference Westinghouse Electric Corp. Dwg. 6136E16 for supplemental information.

*2 Provided by Others.

*3 Primary coolant nozzles fabricated with Type 308 stainless steel safe ends.

00011

FORM N-1 IN CERTIFICATE HOLDERS' DATA REPORT FOR NUCLEAR VESSELS
As Required by the Provisions of the ASME Code Rules, Section III, Div. 1

Sheet 3 of 3

1. Manufactured by WESTINGHOUSE ELECTRIC CORPORATION - NUCLEAR COMPONENTS DIVISION
8301 Scenic Highway - Pensacola, Florida 32514 - Plant No. 5
(Name and address of N Certificate Holder)

2. Manufactured for Consolidated Edison Company, Indian Point Unit #2, Buchanan, New York
(Name and address of Purchaser)

3. Type Vertical Kind Steam Generator Vessel No. 11061 CRN No. --- Net Bd. No. 28 Yr. Built 1987
(Horiz. or vert.) (Type, pressure, heat ex.) (Serial No.)

3a. Applicable ASME Code: Section III, Edition 1980 Addenda date W '81 Case No. N-20 Class 1

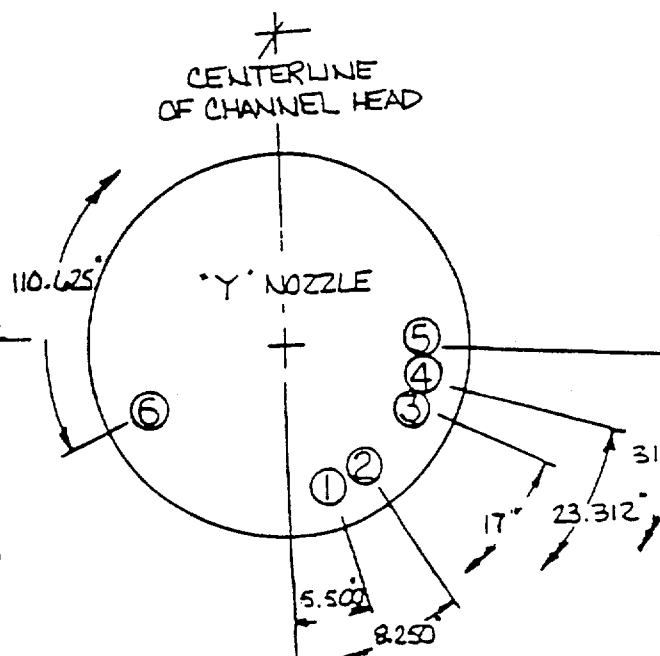
ASME: Section III: Paragraph NB 4622.10 applies.

SCOPE: Cladding repairs after post weld heat treat.

PROCEDURE: Repair weld techniques were utilized in accordance with approved procedures commensurate with applicable ASME Code requirements. Supportive documentation is on file as part of Quality Assurance records.

DETAILS: Repair Area: Y-nozzle, OD at Inconel band.
Refer to sketch below for size and location.

	LENGTH	WIDTH	DEPTH
①	.970	.540	.080
②	.950	.370	.065
③	.650	.490	.040
④	.890	.400	.045
⑤	2.360	.660	.100
⑥	1.450	.500	.090



00012

ATTACHMENT 3 TO NL-01-038

Containment Inservice Report

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247

IWE/IWL CONTAINMENT INSPECTIONS

The First Period Examinations under the Containment Inservice Inspection Program were conducted between March 10, 2000 and June 1, 2000. These examinations were performed for Consolidated Edison by Sargent & Lundy. The examinations required for the First Period were as follows:

- General Visual Examination of the Containment Liner
- VT-3 Examination of 1/3 of the Moisture Barrier
- VT-1 Examination of 1/3 of the bolted connections
- VT-1C & VT-3C Examinations of the Containment concrete surfaces

Results of the Examinations listed above are summarized below.

1. Liner General Visual Examination

General visual examination was performed for all accessible areas of the Containment Liner, including penetrations and airlocks, in accordance with Table IWE-2500-1, category E-A, Item E1.11. The examinations were conducted by inspection zones as delineated in zone drawings of the containment developed exclusively for this inspection. Some of the inspections, (including most of the liner above 95' elevation), were performed by remote visual examination as permitted by 10CFR50.55a(b)(2)(ix)(B). These examinations revealed the following:

- Minor surface corrosion and or coating deterioration was observed on several electrical and mechanical penetrations. This deterioration was reviewed by the Responsible Engineer and was determined to not be significant relative to containment integrity
- Some minor coating deterioration was observed on various portions of the liner above elevation 95' and the dome area. Based on a review by the Responsible Engineer, the minor coating deterioration observed was determined not to be significant relative to containment integrity.
- Portions of the moisture barrier at the intersection point of the liner to the containment base mat were deteriorated. Closer inspection of these areas showed evidence of liner corrosion. As a result, the moisture barrier and liner insulation was removed at several areas around the circumference to determine the extent of liner degradation. Removal of the insulation revealed liner corrosion had occurred primarily 1" above to 4" below the liner/mat intersection. Based on UT readings taken in these areas, the remaining minimum general area liner thickness exceeded the design limit thickness. Additional evaluations performed by Sargent and Lundy demonstrate that the anticipated rate of future corrosion can be conservatively estimated at less than 1.1mils/year. This corrosion rate was based on chemical analysis of corrosion products from the liner and estimated environmental conditions (temperature and humidity). A corrosion rate of 1.1mils/year provides a minimum of

18 years before the minimum liner thickness will reach the design limit thickness. Based on the above, it was determined by the Responsible Engineer that observed corrosion did not prevent the liner from performing its intended safety function at the present time. Due to a lack of oxygen available to promote corrosion, and industry experience at other facilities, potential corrosion and corrosion rates on areas of the liner inaccessible (greater than 4" below the liner/mat intersection) will be much less than that observed as a result of these examinations. Future inspections of the liner in these areas are anticipated to verify that the corrosion rates are less than or equal to those estimated

2.0 Moisture Barrier

VT-3 examination was performed on the moisture barrier (caulk between the concrete and insulation jacket at the liner/slab interface) in accordance with Table IWE-2500-1, Category E-D, Item E5.30. To meet the requirements of Table IWE-2412-1, 1/3 of the moisture barrier was examined. These examinations revealed the following:

- Several areas were found to have the caulking degraded. As discussed in the liner section above, this necessitated that the insulation be removed in representative areas to determine the extent of potential liner degradation. All areas of degraded caulking were repaired to re-establish the moisture barrier.

3.0 Bolting

VT-1 examination was performed on the bolted connections in accordance with table IWE-25001, Category E-G, Item E8.10. No indications were identified.

4.0 Concrete Containment Inspections

Visual inspections were performed on all accessible surfaces of the containment exterior concrete in accordance with Table IWL-2500-1, Category L-A, Item L1.11 & L1.12. The concrete was divided into 47 inspection zones as presented in inspection drawings developed specifically for this examination. VT-3C examinations were performed on all of the concrete surfaces. Where suspect areas were identified, VT-1C examinations were performed.

Most of the examinations were performed by remote visual examination as permitted in Relief Request RR-45. High-powered binoculars and a spotting scope were used as optical aids. Several areas inside the plant could not be inspected at the distances required for direct visual examination, but were too close to view with optical aids. These areas were visually examined at distances up to 25 feet under sufficient lighting to reveal any significant indications.

Prior to the initiation of the concrete inspections discussed above, Raytheon Engineers and Constructors were contracted to develop the visual acceptance criteria for the in-

service inspection of the IP2 concrete containment structure. Included in this report were the margins available in the existing concrete reinforcing steel to resist the design basis forces when compared to the allowable code stresses. To capture the variations in the actual stresses and resulting margins within the reinforcing steel at various locations in the containment structure, the Raytheon evaluation divided the containment into three distinct zones:

- **Red Zone:** Areas where small margin exists in the existing rebar. This area is located in the cylinder portion of the containment near transition areas such as the equipment hatch, personnel air lock, large mechanical/electrical penetrations and the intersection of the containment cylinder to the base-mat.
- **Green Zone:** All areas in the cylindrical portion of the containment structure with the exception of the areas contained in the red zone. The reinforcing steel in this zone contains large margins and concrete irregularities such as cracking and spalling can be tolerated in this region.
- **Yellow Zone:** Dome portion of the containment. This area also has large margins for the reinforcing steel and can tolerate concrete irregularities such as cracking and spalling. The difference between the yellow and green zones is the amount of available margins. The yellow zone has slightly less margin than the green zone.

The results of the concrete inspections revealed several areas with spalling and exposed cadweld splices and reinforcing bars. After reviewing and evaluating the IWL inspection observations internally within engineering, (32 total indications), discussing them with Sargent and Lundy, and utilizing the Raytheon report, none of these indications represent structural concerns for the containment structure. These indications do not reduce the structural capacity or ability of the containment structure to perform its safety function based on the following:

- Some corrosion was exhibited for all of the situations where rebar and or cadwelds were exposed to the environment as a result of concrete spalling. Cadwelds are heavy walled cylinders used to splice together two pieces of rebar. Molten metal is injected into the cadweld cylinder to fuse together the two ends of rebar. These splices typically have a diameter twice that of the rebar they are joining. However, no flaking or aggressive corrosion processes were observed. The exposed areas of cadweld splices and reinforcing steel were approximately 4 inches by 8 inches.
- Of the Sargent and Lundy inspection zones (47) recorded during the IWL examination of the concrete containment structure, only two zones (IWL-043-002 and IWL-088-004) were located within the red zone. Within inspection zone IWL-043-002, delaminations were found near the floor line and penetrations but no evidence of staining or exposure of reinforcing steel was observed. Per the Raytheon acceptance criteria report, the reinforcing steel provides the structural strength to the concrete containment and is the primary concern. Staining of the concrete is the indication of possible corrosion of the reinforcing steel and is the first screening criteria for acceptance. Since no staining was observed, the reinforcing steel has not degraded in this area, and, per the Raytheon report, the structural capacity of the VC wall in this location is not degraded. Inspection zone IWL-088-004 is marginally located in the red zone and contained exposed steel that was

identified as a cadweld splice. The exposed cadweld splices are located in the upper end of the inspection zone, which borders the green stress zone. Based on the corrosion evaluation performed by Raytheon in their acceptance criteria report, ongoing corrosion for 40 years would only result in a decrease of 10% in the reinforcing steel cross-section. Since these indications are located on the border between the red and green stress zones, sufficient margins exist in the reinforcing steel in the green zone to allow for redistribution of forces if required. In addition, the location of this indication is removed from the personnel air lock penetration, which was the main area of concern in the Raytheon acceptance criteria report. Also, Sargent and Lundy observed no significant loss of wall section for the exposed cadweld splice in this area. These conclusions were discussed in detail with both the Responsible Professional Engineer for the IWL program and the Sargent and Lundy Project Engineer. Both agreed that no further analysis is required.

- The remaining Sargent and Lundy IWL inspection zones with exposed steel are located in the green and yellow stress zones as defined in the Raytheon acceptance criteria report. Per the Raytheon acceptance criteria report, for indications in the green and yellow stress zones, the maximum postulated reduction in reinforcing steel cross-section based on 40 years of corrosion will not result in any overstress conditions in the reinforcing steel. As a result, corrosion of reinforcing steel in the green and yellow zones due to spalling or cracking of concrete will not affect the structural integrity of the containment structure.
- Of the 49 identified findings in the 47 inspection zones, 19 findings concerned exposed cadweld splices and 13 concrete related findings were noted. These 32 findings were primarily isolated conditions and not grouped in any one location. In addition, and as mentioned earlier, the total area of exposed cadweld splices were very small, each being approximately 4 inches by 8 inches, when compare to the total surface area of the containment structure.

All of the observations/findings resulting from the IWL inspection will be monitored as required by the IWL portion of ASME code to document and track any potential changes to the observations noted.

ATTACHMENT 4 TO NL-01-038

Regulatory Commitments

Consolidated Edison Company of New York, Inc.
Indian Point Unit No. 2
Docket No. 50-247

The following list identifies those actions committed to by Con Edison in this document. No further regulatory commitments are contained herein.

Commitment	Due Date
The Owner's Code Repair and Replacement Documentation and associated NIS-2 form for Class 1 & 2 components will be provided in a separate transmittal.	May 2, 2001