

ATTACHMENT A

Docket # 50-247
Control # 12434
Date 12-1-76 of Document
REGULATORY DOCKET FILE

Regulatory Docket File

Reactor Containment Building Integrated Leak
Rate Test - Type "B" and "C" Test Results

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

December 1, 1976

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PDR ADOCK 05000247
P PDR

Attachment A

Reactor Containment Building Integrated Leak
Rate Test - Type "B" and "C" Test Results

A. Summary

Type "B" and "C" testing was performed on the Containment Isolation Valves listed in Table 4.4-1 (Attached) between April, 1976 and September, 1976. The following Acceptance Criteria were used:

1. The combined leakage rate for A) Valves listed in Table 4.4-1 subject to gas or nitrogen pressurization tests, B) air locks and C) portions of the Sensitive Leakage Rate Test which pertain to containment penetrations and double gasketed seals shall be less than 0.6 La as per Appendix J to 10 CFR 50. 0.6 La is equivalent to 4.57 SCFM.
2. The leakage rate into containment for the isolation valves sealed with the service water system shall not exceed 0.36 GPM per fan cooler.
3. The leakage rate for the Isolation Valve Seal Water System shall not exceed 14,700 cc/hr.
4. Leakage from the Residual Heat Removal System components located outside containment shall not exceed two gallons per hour.

The "As Left" conditions were:

1. The combined leakage rate per criteria A.1 was 3.85 SCFM.
2. The leakage rate into containment for those valves sealed by service water was <0.01 GPM for each of Fan Cooler Units 21, 22, 23, 24 and 25.
3. The leakage rate for the Isolation Valve Seal Water System was 3,019 cc/hr.
4. The leakage rate from RHR system components outside of containment was considered to be zero since absolutely no evidence of physical leakage was observed.

B. Description

Five test procedures were developed to fulfill the requirements of Appendix J to 10 CFR 50 and Technical Specifications.

1. PT-R27 Containment Isolation Valves Leakage Rate Determination (Includes Service Water System)
2. PT-R26 Isolation Valve Seal Water System Test (Includes Nitrogen Seal Injected Valves)
3. PT-SA10 Containment Air Locks Test
4. PT-R11 Sensitive Leakage Rate Test
5. PT-R12 Residual Heat Removal System Test

PT-R27 - The combined "As Found" leakage rate for three containment isolation valves subject to gas or nitrogen pressurization testing was in excess of 30,660 standard cc/min. The valves were repaired by lapping seat and plug or disc. A retest was performed. The "As Left" leak rate for the three valves combined was 10,220 standard cc/min (0.36 SCFM). Valves 867B, 1875-8 and PCV-1228 were repaired. The combined "As Left" leak rate for all containment isolation valves subject to gas or nitrogen pressurization testing was 1.10 SCFM. This is considered acceptable.

The "As Found" leakage rate from 22, 23 and 24 Fan Cooler Unit containment isolation valves sealed by the service water system was in excess of 0.36 GPM in each case. The valves were repaired by lapping seat and plug. A retest was performed. The "As Left" leakage rate was <0.01 GPM each for Fan Cooler Units 22, 23 and 24. SWN-44 and SWN-71 valves were repaired to reduce leakage. The "As Found" leakage rate from 21 and 25 Fan Cooler Unit containment isolation valves sealed by the service water system was <0.01 GPM in each case. This is considered acceptable.

PT-R26 - The combined "As Found" leakage rate for thirteen containment isolation valves sealed by the water IVSWS was in excess of 19,000 cc/hr., which exceeds the total allowable IVSWS limit of 14,700 cc/hr. The leaking valves were repaired by lapping seat and plug. A retest was performed. The "As Left" leak rate for the thirteen valves combined was 1,305 cc/hr. The following valves were repaired: PCV-1214/1214A, PCV-1215/1215A, PCV-1226/1226A, MW-17, SA-24, 201/202, UH-43, UH-44 and 851A. The "As Left" leak rate for the entire IVSWS was 3,019 cc/hr. This is considered acceptable.

The combined "As Found" leakage rate for three containment isolation valves sealed by the nitrogen IVSWS was greater than 0.36 SCFM. This was considered excessive. Two valves, 732 and 743, were repaired by lapping seat and plug. The third valve, 1870, was replaced. A retest of the entire nitrogen IVSWS was performed. The "As Left" leak rate was 0.05 SCFM. This is considered acceptable.

PT-SA10 - The "As Found" leakage rate for the 85' El. Air Lock was 0.35 SCFM; for the 95' El. Air Lock the leakage rate was 0.35 SCFM. This is considered an acceptable leakage rate.

PT-R11 - The combined "As Found" leak rate for the containment penetrations and double gasketed seals was 2.00 SCFM. This is considered acceptable.

PT-R12 - The leakage rate from RHR system components outside containment was considered to be zero since absolutely no physical leakage was observed.

C. Conclusion

All containment isolation valves which leaked excessively were repaired. The repaired valves were retested using the appropriate leakage measurement determination test. The "As Left" leak rate of containment isolation valves met the requirements of Appendix J to 10 CFR 50 and Technical Specifications.

TABLE 4.4-1(Page 1 of 9)

CONTAINMENT ISOLATION VALVES

Valve No.	(1) System	(2) Test Fluid	Minimum Test Pressure (PSIG)
549	PRT to Gas Analyzer	Water (4)	52
548	" " "	Water (4)	52
518	PRT N ₂ Supply	Gas	47
550	" " "	Gas	47
552	PRT Makeup Water	Water (4)	52
519	" " "	Water (4)	52
741	RHR return to RCS	Water (5)	52 (3)
744	" " "	Nitrogen (4)	47 (3)
888A	RHR to S.I. Pumps	Nitrogen (4)	47
888B	" " "	Nitrogen (4)	47
958	RHR to Sample System	Nitrogen (4)	47
959	" " "	Nitrogen (4)	47
990C	" " "	Nitrogen (4)	47
1870	RHR from RCS	Nitrogen (4)	47
743	" " "	Nitrogen (4)	47
732	" " "	Nitrogen (4)	47 (3)
885A	Cont. Sump Recirc.Line	Water (5)	52
885B	" " " "	Water (5)	52
201	Letdown Line (CVCS)	Water (4)	52
202	" " " "	Water (4)	52
205	Charging Line (CVCS)	Water (4)	52
226	" " " "	Water (4)	52
227	" " " "	Water (4)	52
250A	RCP Seal Water (CVCS)	Water (4)	52
241A	" " " "	Water (4)	52

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CONTAINMENT ISOLATION VALVES

Valve No.	(1) System	(2) Test Fluid	Minimum Test Pressure (PSIG)
250B	RCP Seal Water (CVCS)	Water (4)	52
241B	" " " "	Water (4)	52
250C	" " " "	Water (4)	52
241C	" " " "	Water (4)	52
250D	" " " "	Water (4)	52
241D	" " " "	Water (4)	52
222	" " " "	Water (4)	52
956E	RCS to Sample System	Water (4)	52
956F	" " " "	Water (4)	52
869A	Cont. Spray System	Water (4)	52
867A	" " " "	Gas	47
878A	" " " "	Gas	47
869B	" " " "	Water (4)	52
867B	" " " "	Gas	47
878B	" " " "	Gas	47
851A	Safety Inj. System	Water (4)	52
850A	" " " "	Water (4)	52
851B	" " " "	Water (4)	52
850B	" " " "	Water (4)	52
859A	S.I. Test Line	Water (4)	52
859C	" " " "	Water (4)	52
891A	Acc. N ₂ Supply	Gas	47

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CONTAINMENT ISOLATION VALVES

Valve No.	(1) System	(2) Test Fluid	Minimum Test Pressure(PSIG)
891B	Acc. N ₂ Supply	Gas	47
891C	" " "	Gas	47
891D	" " "	Gas	47
863	" " "	Gas	47
956G	Acc. to Sample System	Water (4)	52
956H	" " " "	Water (4)	52
1786	RCDT to Vent Header	Water (4)	52
1787	" " "	Water (4)	52
1610	RCDT N ₂ Supply	Gas	47
1616	" " "	Gas (4)	47
1788	RCDT to Gas Analyzer	Water (4)	52
1789	" " "	Water (4)	52
1702	RCDT to WHT (WDS)	Water (4)	52
1705	" " " "	Water (4)	52
797	RCP Comp. Cooling (CCS)	Water (4)	52
784	" " " "	Water (4)	52
FCV-625	" " " "	Water (4)	52
791	Excess Letdown Cool.(CCS)	Water (4)	52
798	" " " "	Water (4)	52
796	" " " "	Water (4)	52
793	" " " "	Water (4)	52
1728	Cont. Sump to WHT (WDS)	Water (4)	52
1723	" " " "	Water (7)	52
1234	Cont. Air Sample	Gas (7)	47
1235	" " "	Gas	47

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CONTAINMENT ISOLATION VALVES

Valve No.	System (1)	Test Fluid (2)	Minimum Test Pressure (PSIG)
1236	Cont. Air Sample	Gas (7)	47
1237	" "	Gas (7)	47
PCV-1229	Air Ejector to Cont.	Gas (7)	47
PCV-1230	" " "	Gas (7)	47
PCV-1214	Steam Gener. Blowdown	Water (4)	52
PCV-1214A	" " "	Water (4)	52
PCV-1215	" " "	Water (4)	52
PCV-1215A	" " "	Water (4)	52
PCV-1216	" " "	Water (4)	52
PCV-1216A	" " "	Water (4)	52
PCV-1217	" " "	Water (4)	52
PCV-1217A	" " "	Water (4)	52
PCV-1223	S.G. to Sample System	Water (4)	52
PCV-1223A	" " "	Water (4)	52
PCV-1224	" " "	Water (4)	52
PCV-1224A	" " "	Water (4)	52
PCV-1225	" " "	Water (4)	52
PCV-1225A	" " "	Water (4)	52
PCV-1226	" " "	Water (4)	52
PCV-1226A	" " "	Water (4)	52
SWN-41	Cont. Fan Cooler-Ser.Wtr.	Water (6)	52
SWN-43	" " " "	Water (6)	52

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CONTAINMENT ISOLATION VALVES

Valve No.	System (1)	Test Fluid (2)	Minimum Test Pressure (PSIG)
SWN-42	Cont. Fan Cooler-Ser. Wtr.	Water (6)	52
SWN-41	" "	Water (6)	52
SWN-43	" "	Water (6)	52
SWN-42	" "	Water (6)	52
SWN-41	" "	Water (6)	52
SWN-43	" "	Water (6)	52
SWN-42	" "	Water (6)	52
SWN-41	" "	Water (6)	52
SWN-43	" "	Water (6)	52
SWN-42	" "	Water (6)	52
SWN-41	" "	Water (6)	52
SWN-43	" "	Water (6)	52
SWN-42	" "	Water (6)	52
SWN-41	" "	Water (6)	52
SWN-43	" "	Water (6)	52
SWN-42	" "	Water (6)	52
SWN-44	" "	Water (6)	52
SWN-51	" "	Water (6)	52
SWN-44	" "	Water (6)	52
SWN-51	" "	Water (6)	52
SWN-44	" "	Water (6)	52
SWN-51	" "	Water (6)	52
SWN-44	" "	Water (6)	52
SWN-51	" "	Water (6)	52

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CONTAINMENT ISOLATION VALVES

Valve No.	System	(1)	Test Fluid	(2)	Minimum Test Pressure(PSIG)
SWN-44	Cont.Fan Cooler-Ser. Wtr.		Water	(6)	52
SWN-51	" " " " "		Water	(6)	52
SWN-71	" " " " "		Water	(6)	52
SWN-71	" " " " "		Water	(6)	52
SWN-71	" " " " "		Water	(6)	52
SWN-71	" " " " "		Water	(6)	52
SWN-71	" " " " "		Water	(6)	52
SWN-71	" " " " "		Water	(6)	52
SA-24	Service Air to Cont.		Water	(4)	52
SA-24	" " " " "		Water	(4)	52
580A	Dead Weight Tester		Gas		47
580B	" " " "		Gas		47
UH-43	Auxiliary Steam System		Water	(4)	52
UH-44	" " " "		Water	(4)	52
MW-17	City Wtr. to Cont.		Water	(4)	52
MW-17	" " " " "		Water	(4)	52
1170	Cont. Purge System		Gas	(7)	47
1171	" " " "		Gas	(7)	47
1172	" " " "		Gas	(7)	47
1173	" " " "		Gas	(7)	47
1190	Cont. Pressure Relief		Gas	(7)	47
1191	" " " "		Gas	(7)	47
1192	" " " "		Gas	(7)	47
990A	Recirc. Pump to Samp.Sys.		Nitrogen	(4)	47
990B	" " " " "		Nitrogen	(4)	47

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CONTAINMENT ISOLATION VALVES

Valve No.	System (1)	Test Fluid (2)	Minimum Test Pressure (PSIG)
956A	Pressurizer to Samp. Sys.	Water (4)	52
956B	" " " "	Water (4)	52
956C	" " " "	Water (4)	52
956D	" " " "	Water (4)	52
1814A	Cont. Pressure Instr. Line	Gas	47
1814B	" " " "	Gas	47
1814C	" " " "	Gas	47
1875D	Post Acc. Cont. Sampling	Gas	47
1875E	" " " "	Gas	47
1875A	" " " "	Gas	47
1875C	" " " "	Gas	47
1875F	" " " "	Gas	47
1875B	" " " "	Gas	47
1875G	" " " "	Gas	47
1875H	" " " "	Gas	47
1875J	" " " "	Gas	47
1882A	O ₂ Supply to Cont.	Gas	47
1882-9	" " " "	Gas	47
IV-2A	" " " "	Gas	47
IV-2B	" " " "	Gas	47
1875A	H ₂ supp. to H ₂ Recomb.	Gas	47
1875-8	" " " "	Gas	47
IV-3A	" " " "	Gas	47

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TABLE 4.4-1 (Page 8 of 9)

CONTAINMENT ISOLATION VALVES

Valve No.	System (1)	Test Fluid (2)	Minimum Test Pressure (PSIG)
1876A	H ₂ Supply to H ₂ Recomb.	Gas	47
1876-8	" " "	Gas	47
IV-5A	" " "	Gas	47
1875B	" " "	Gas	47
1875-9	" " "	Gas	47
IV-3B	" " "	Gas	47
1876B	" " "	Gas	47
1876-9	" " "	Gas	47
IV-5B	" " "	Gas	47
IA-39	Inst. Air to Cont.	Gas	47
PCV-1228	" " "	Gas	47
E-2	Post Acc. Vent Exhaust Line	Gas (7)	47
E-1	" " " "	Gas (7)	47
E-3	" " " "	Gas (7)	47
E-5	" " " "	Gas (7)	47
85A	Personnel Airlock	Gas	47
85B	" " "	Gas (7)	47
85C	" " "	Gas (7)	47
85D	" " "	Gas	47
95A	Equipment Airlock	Gas	47
95B	" " "	Gas (7)	47
95C	" " "	Gas (7)	47
95D	" " "	Gas	47

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CONTAINMENT ISOLATION VALVES

Notes:

1. System description in which valve is located.
2. Gas Test Fluid indicates either nitrogen or air as test medium.
3. Testable only when at cold shutdown.
4. Isolation Valve Seal Water System.
5. Sealed by Residual Heat Removal System fluid.
6. Sealed by Service Water System.
7. Sealed by Weld Channel and Penetration Pressurization System.

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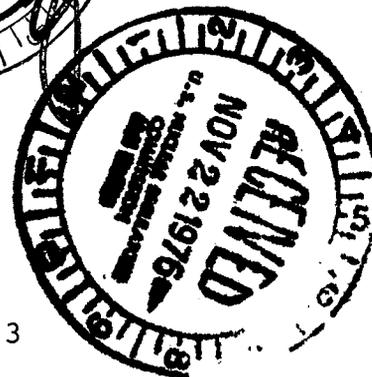
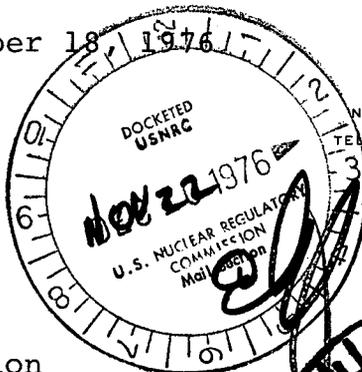
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November 18, 1976



* RESIDENT PARTNERS WASHINGTON OFFICE
† ADMITTED TO THE DISTRICT OF COLUMBIA BAR

Director of Nuclear Reactor Regulation
Attn: Mr. George W. Knighton, Chief
Environmental Projects Branch No. 1
Division of Site Safety and
Environmental Analysis
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Indian Point Station, Units 2 and 3
Docket Nos. 50-247 and 50-286

Dear Mr. Knighton:

In accordance with Paragraph 2.E(4) of Facility Operating License No. DPR-26 and Paragraph 2.E(1)(f) of Facility Operating License No. DPR-64, we hereby submit an affidavit executed on November 15, 1976 by Mr. John R. Jannarone, a Vice President of Consolidated Edison Company of New York, Inc., and six (6) copies of the University of Rhode Island, Narragansett Marine Laboratory report entitled "Life Stages Duration Studies on Hudson River Striped Bass *Morone saxatilis* (Walbaum)" dated September 1976.

By copy hereof, two copies of the report and the original and twenty (20) copies of Mr. Jannarone's affidavit are being filed with the Secretary of the Commission.

Very truly yours,

Leboeuf, Lamb, Leiby & MacRae

Enclosures

cc: See page 2.

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Mr. Knighton
November 18, 1976
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cc (w/encl): Samuel W. Jensch, Esq.
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Dr. Franklin C. Daiber
Dr. Richard Rush (3)
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Carl d'Alvia, Esq.
Hon. George V. Begany
Mr. Arthur Glowka
Secretary, USNRC (2)

BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
CONSOLIDATED EDISON COMPANY)
OF NEW YORK, INC. and) Docket Nos. 50-247
POWER AUTHORITY OF THE STATE) 50-286
OF NEW YORK)
(Indian Point Station, Unit)
Nos. 2 and 3))

STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

AFFIDAVIT OF JOHN R. JANNARONE

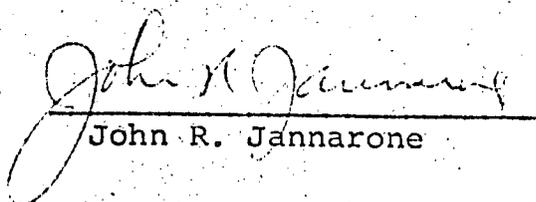
John R. Jannarone, being duly sworn, states: That he is Vice President in the Office for Environmental Affairs of Consolidated Edison Company of New York, Inc; that he is familiar with the contents of the following document prepared by the University of Rhode Island entitled:

Life Stages Duration Studies on
Hudson River Striped Bass
Morone saxatilis (Walbaum)

FINAL REPORT

September, 1976

and that the same is true to the best of his knowledge and belief.


John R. Jannarone

Sworn to before me this
15th day of November, 1976



ANGELA ROBERTI
Notary Public, State of New York
No. 41-0500213
Qualified in Queens County
Commission Expires March 30, 1978

BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION



In the Matter of)
)
CONSOLIDATED EDISON COMPANY)
OF NEW YORK, INC. and)
POWER AUTHORITY OF THE STATE)
OF NEW YORK)
(Indian Point Station,)
Unit Nos. 2 and 3))

Docket Nos. 50-247
50-286

CERTIFICATE OF SERVICE

I hereby certify that I have this 18th day of November, 1976, served the foregoing affidavit of John R. Jannarone dated November 15, 1976, and the report entitled "Life Stages Duration Studies on Hudson River Striped Bass Morone saxatilis (Walbaum)" dated September 1976, by mailing copies thereof, first class postage prepaid and properly addressed, to the following persons:

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Board
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Washington, D.C. 20555

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Attn: Chief, Docketing and
Service Section

Eugene R. Fidell

Eugene R. Fidell