LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	N Y I P S 2 (2)	0 0 - 0 0 0 0 0 - 0 0 (3)	4 1 1 1 1 (4)	(5)
7	8	9 LICENSEE CODE 14	15 LICENSE NUMBER 25	26 LICENSE TYPE 30	57 CAT 58

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0	1	REPORT SOURCE L (6)	0 5 0 0 0 2 4 7 (7)	0 3 0 1 8 3 (8)	0 3 3 1 8 3 (9)
7	8	60	61 DOCKET NUMBER 68	69 EVENT DATE 74	75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During normal operation it was determined that the material of the shaft in

0 3 Residual Heat Removal Pump No. 22 is carbon steel instead of the originally

0 4 specified stainless steel. This event is reportable in accordance with Technical

0 5 Specification 6.9.1.7.2.c. A Safety Evaluation concluded this condition does not

0 6 involve an unreviewed safety question. The health and safety of the public were

0 7 not affected. There were no previous similar events.

0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	C F (11)	B (12)	B (13)	M O T O R X (14)	X (15)	Z (16)
7 8	9 10	11	12	13 18	19	20

(17) LER/RO REPORT NUMBER

EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
8 3	—	0 0 4	/	0 3	L	—	0
21 22	23	24 26	27	28 29	30	31	32

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
Z (18)	A (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	N (25)	W 1 2 0
33	34	35	36	37 40	41	42	43	44 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The R.H.R. motor and pump use a common shaft with no coupling. The motor is a

1 1 Westinghouse model 5008-P20 and the pump is an Ingersoll Rand Model 8 x 20W.

1 2 Records indicate the error occurred at Westinghouse when the replacement motors and

1 3 shafts were ordered. The present motor/pump shaft will be replaced with the originally

1 4 specified stainless steel material within 24 months.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	1 0 0 (29)	NA	C (31)	Special Testing

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)
2 0	N (44)	NA

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NRC USE ONLY

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ATTACHMENT

Docket 50-247
LER 83-004/03L-0

Consolidated Edison Co. of New York, Inc.
Indian Point Station Unit 2

On March 1, 1983 Con Edison determined the shaft material used in the Westinghouse supplied square motor housing of Residual Heat Removal (RHR) Pump No. 22 is carbon steel instead of stainless steel. A sample of the shaft from a square type motor which had previously been removed from service was analyzed by Con Edison's Astoria Laboratory. The metallurgical analysis showed 0.35% carbon content and no additional alloying elements.

An examination was made of the shafts of the two installed RHR pumps. The field test kit analysis indicated that the shaft for RHR Pump No. 21 also Westinghouse supplied (round motor) is stainless steel while that for RHR Pump No. 22 (square motor) is carbon steel. Westinghouse was notified on March 2, 1983 and the notification was confirmed on March 3, 1983.

This event is reportable in accordance with Technical Specification 6.9.1.7.2.c.

Investigation by Westinghouse and Con Edison included a review of documentation concerning the procurement of the original and replacement pumps and shafts. This investigation revealed that the original Westinghouse Nuclear Services Division (NSID) purchase order for the pumps specified austinitic stainless steel or an equivalent corrosion resistent material for the shafts. These pumps were furnished to Westinghouse NSID through INGERSOLL RAND which acquired the pump motors from Westinghouse Large Motor Division (LMD). The order from INGERSOLL RAND specified "standard material" for the pump shafts. At Westinghouse LMD "standard material" is carbon steel which was therefore the material provided in the shafts.

Prior to initial unit startup, the discrepancy with the original purchase order was recognized and the pumps were refurbished with stainless steel shafts. The nameplates of the refurbished pumps were stamped RMR (Returned Material Report) to indicate future orders should refer to the Returned Material Report rather than the original purchase order.

Subsequently, Con Edison placed an order for a replacement motor on April 26, 1976. This order referred to the nameplate reorder number. However, the internal ordering process to Westinghouse LMD from Westinghouse NSID inadvertently resulted in a change of the RMR number to RHR. As a result, it is presumed that Westinghose LMD was not aware of the RMR number when the replacement was furnished and a duplicate of the original motor with carbon steel shaft was therefore furnished. Subsequent orders resulted in the shipment of carbon steel shafts once the original replacement error was made.

The three spare replacement shafts for the square motor were chemically field tested by the Quality Assurance Department with an I.D.Q. Alloy Identification System, Material Identification Kit Model 101 to determine if the material was stainless steel. These tests showed that the shafts did not contain either chromium or nickel. In addition, the shafts were found to be highly magnetic. Therefore, it was concluded that the shafts were carbon steel, rather than stainless steel.

The evaluation referred to in our letter dated March 16, 1983 to you which was performed to evaluate the longer term use of an alternative RHR pump shaft material has been completed. The evaluation included an engineering study of shaft torsional shear stresses considering corrosion material losses after ten years of service. Under this condition the torsional stress encountered during pump starting would still be well below the allowable stress for this material. Other failure mechanisms were also evaluated and found to be very unlikely.

Con Edison has concluded its evaluation and has determined that this situation is not reportable under 10 CFR Part 21. It is Con Edison's understanding that Westinghouse is performing its own evaluation of the situation and that this evaluation is still continuing.

The existing spare shafts have been removed from stock. New shafts fabricated from 316 stainless steel have been ordered as replacements. The carbon steel shaft will be replaced with a stainless steel shaft during the next extended maintenance outage or during the next scheduled refueling outage. The period of operation will not exceed 24 months and will occur no later than March 1, 1985.