

LICENSEE EVENT REPORT

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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REPORT SOURCE L 6 0 5 0 0 0 3 7 3 7 1 2 2 8 8 2 2 0 1 2 6 8 3 9

DOCKET NUMBER 58 69

EVENT DATE 74 75

REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

08		09		SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE				COMP. SUBCODE		VALVE SUBCODE	
7	8	7	8	9	10	11	12	12	13	14	15	16	17	18	19	20	
				C	F	D	Z	P	U	M	P	X	Y	B	Z		
LER/RO REPORT NUMBER		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.							
17	18	19	20	21	22	23	24	25	26	27	28						
		8	2	1	7	6	0	3	X	1							
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED							
29	30	31	32	33	34	35	36	37	38	39	40						
B	X			Z	Z	0	0	0	0	Y	N						
PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER															
41	42	43	44														
A	1	0	7														

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

Upon disassembly, the bearings had signs of excessive wear per Ingersoll Rand, the

pump manufacturer, recommended tolerances. Measurements on the upper pump column indicated misalignment. The bearings were replaced and the upper column was machined to allowable tolerances. Instrumentation was installed on the pump casing to determine the cause of the previous failure. (See Attached)

8404030059 830126  
PDR ADCK 05000373  
S PDR

NRC USE ONLY

PHONE: 815/357-6761. Ex. 323

- I. LER NUMBER: 82-176/03X-1
- II. LASALLE COUNTY STATION: Unit 1
- III. DOCKET NUMBER: 050-373
- IV. EVENT DESCRIPTION:

On December 28, 1982 at 2030 hours, while the RHR B System was in the Suppression Pool Cooling Mode, excessive vibration was noted on the RHR 1B pump shaft. The pump was immediately shut down and declared inoperative.

V. PROBABLE CONSEQUENCES OF THE OCCURRENCE:

At the time of the occurrence the reactor was in the RUN mode producing 1428 MWT, 330 MWE. Pursuant to Technical Specification 3.6.2.3 reactor shutdown commenced within 72 hours of the discovery for major repairs to the RHR B Pump. The HPCS, LPCS, RHR A, and RHR C Systems were operable and in the standby mode for vessel injection. Safe plant operation was maintained at all times.

VI. CAUSE:

Upon pump disassembly, the bearings had signs of excessive wear as per Ingersoll Rand, the pump manufacturer, recommended tolerances. The stuffing box bronze bushing and journal sleeve had one-sided wear. The journal sleeve for the uppermost Graphalloy bearing also showed signs of one-sided wear. All of the Graphalloy bearings were removed for replacement. Four of the journal sleeves were also replaced.

The impeller wear rings showed no sign of contact. All set screws and discharge column flanges were properly torqued. The motor shaft and bearings showed no sign of damage.

Measurements of the upper pump column found significant misalignment which required machining to bring it within allowable tolerances. The pump-motor coupling was also found to have a slight misalignment.

Following pump reinstallation with sensitive vibration equipment, testing indicated that pump shaft/bearing instability is the most probable cause of the vibration problem.

VII. CORRECTIVE ACTION:

Work Request L21352 was written to repair the RHR 1B Pump. The pump was pulled from its sump and disassembled for measurements. All bearings and journal sleeves which had out-of-tolerance wear were removed for replacement.

Work Request L21633 was written to provide for the machining of the upper pump column. This work was completed on 1-14-83.

Modification M-1-1-83-04 was written to provide for the installation of vibration instrumentation at points along the pump casing as delineated in

CAUSE (Cont'd)

Analysis of vibration indicated that pump shaft/bearing instability was most probable cause of failure. G.E. has designed a new short pump shaft successful in Unit 2 RHR Pumps. The RHR 1B Pump was modified with the new short shaft design during the February, 1984, outage of Unit 1. The RHR 1B Pump was tested satisfactorily and declared operable on 2/29/84.



**Commonwealth Edison**  
LaSalle County Nuclear Station  
Rural Route #1, Box 220  
Marseilles, Illinois 61341  
Telephone 815/357-6761

DMB

March 10, 1984

James G. Keppler  
Regional Administrator  
Region III  
U.S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Dear Sir:

Reportable Occurrence Report #82-176/03X-1 Docket #050-373 is being submitted to your office to supersede previously submitted Reportable Occurrence Report #82-176/03L-0, in accordance with NUREG-0161. "Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File"; General Instruction No. 3.

G. J. Diederich  
Superintendent  
LaSalle County Station

GJD/GW/msh

Enclosure

cc: Director of Inspection & Enforcement  
Director of Management Information & Program Control  
U.S. NRC Document Management Branch  
INPO-Records Center  
File/NRC

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