

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

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CON'T

0	1
7	8

REPORT SOURCE

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

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

On April 24, 1983, at 0710 hours, with the Unit at 80% power, "B" Service Water Booster Pump (SWBP) was declared inoperable due to loss of bearing oil. At 1407 hours on April 24, 1983, and again at 1501 hours, "A" SWBP failed apparently due to blown control power fuses. A unit shutdown was then commenced with hot shutdown conditions being achieved at 1759 hours. These events resulted in operation less conservative than the least conservative aspect of a limiting condition for operation as defined by Technical Specification 3.3.4.2 and is reported pursuant to 6.9.2.a.2.

09		SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE				COMP. SUBCODE		VALVE SUBCODE	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
0	9	W	A	E		A		C	K	T	B	R	K	X	Z
LER/RO REPORT NUMBER		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.					
23	24	25	26	27	28	29	30	31	32	33	34				
17		8	3		0	0	5	/	0	1	T				
ACTION TAKEN		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		PRIME COMP. SUPPLIER					
35	36	37	38	39	40	41	42	43	44	45	46				
B	E	A		A		0	0	1	0	Y	N				
FUTURE ACTION		ACTION		ACTION		ACTION		ACTION		ACTION					
47	48	49	50	51	52	53	54	55	56	57	58				

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | The failure of "B" SWBP was due to the bearing oil slinger being positioned
1 1 | near the vent hole causing loss of bearing oil. "B" SWBP was inspected, the
1 2 | bearing oil was replenished, and the pump was declared operable at 1925 hours
on April 24, 1983. The failure of "A" SWBP is attributed to a loose connection
1 3 | internal to the motor contactor. The motor contactor was replaced with a new unit
1 4 | and "A" SWBP was returned to service at 2105 hours on April 24, 1983.

FACILITY STATUS										% POWER										OTHER STATUS										METHOD OF DISCOVERY										DISCOVERY DESCRIPTION									
1	5	E	28	0	8	0	29	N/A										A	31	Operator Observation																													
ACTIVITY CONTENT										AMOUNT OF ACTIVITY										LOCATION OF RELEASE																													
1	6	Z	33	Z	34	N/A										N/A																																	
PERSONNEL EXPOSURES										DESCRIPTION										8305110256 830506 PDR ADOCK 05000261 S PDR																													
1	7	0	0	0	37	Z	38	N/A																																									
PERSONNEL INJURIES										DESCRIPTION																																							
1	8	0	0	0	40	N/A																																											
LOSS OF OR DAMAGE TO FACILITY										DESCRIPTION																																							
1	9	Z	42	N/A																																													
PUBLICITY										DESCRIPTION										NRC USE ONLY																													
2	0	N	44	N/A																																													

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SUPPLEMENTAL INFORMATION TO

LER 83-005

I Cause Description and Analysis

On April 24, 1983, at 0710 hours, with the Unit at 80% power, "B" Service Water Booster Pump (SWBP) was declared inoperable following pump startup due to loss of bearing oil and imminent bearing failure. Maintenance efforts were immediately initiated. At 1407 hours, the redundant "A" SWBP tripped, and Plant shutdown was commenced in accordance with Technical Specification 3.3.4.2. Investigation by Operations Personnel into this second event led to the control power fuses being replaced, and "A" SWBP was restarted. The Plant shutdown was terminated at approximately 1424 hours. At 1501 hours, "A" SWBP tripped again, and the Plant shutdown was recommenced. The control power fuses were again replaced, and the pump was restarted; however, Plant shutdown continued pending further investigation of these failures. Hot shutdown conditions were achieved at 1759 hours on April 24, 1983.

Investigation of the "B" SWBP failure revealed that the bearing oil slinger had apparently moved on the shaft to a position near the vent/oiler supply hole. This movement of the oil slinger is not prevented by the pump design. When the pump was started, bearing oil was thrown out the hole by the slinger. There was no apparent damage to the bearing due to stopping the pump immediately after the loss of oil was detected.

The failure of "A" SWBP was discovered to be the result of a loose connection between a wire terminal and a stationary contact in the motor contactor. This connection is an internal screw connection which allows the stationary contact to be replaced. The loose connection resulted in burning of the stationary contact/terminal lug assembly on one phase, apparently causing an overcurrent condition in the other two phases which tripped the motor breaker. The motor breaker tripping also causes a loss of control power which led operations personnel to initially replacing the control power fuses.

This event resulted in operation less conservative than the least conservative aspect of the limiting condition for operation as defined by Technical Specification 3.3.4.2 and is reported pursuant to 6.9.2.a.2. Throughout this event, the four service water pumps were operable, and the Unit was shut down in a safe, orderly manner. Therefore, there was no threat to the public health and safety.

II Corrective Action

"B" SWBP was disassembled and inspected, and there was no apparent damage to the bearing. "B" SWBP was reassembled, tested and declared operable at 1925 hours on April 24, 1983. The motor contactor for "A" SWBP was replaced with a new unit, and the pump was returned to service at 2105 hours on April 24, 1983.

III Corrective Action To Prevent Recurrence

The failure of "B" SWBP is continuing to be evaluated. In the interim, standpipes will be installed prior to startup from the current outage on each vent hole to help prevent oil release. In addition, the probability of a recurrence of this event is believed to be remote, and the current lubrication frequency is considered adequate to detect abnormal bearing oil level.

The failure of "A" SWBP was determined to be the result of a loose connection internal to the motor contactor. A visual inspection of circuit breakers and motor contactors on Motor Control Centers containing safety related equipment has been conducted. Visually detectable discrepancies such as evidence of abnormal heating or potentially loose connections were noted, and Maintenance Work Requests have been initiated to correct each item noted. Evaluation of this event is continuing, and further corrective actions are being considered.

Any additional corrective actions determined to be necessary as a result of the above evaluations and a schedule for the completion of those actions will be submitted as a supplement to this report. Evaluation for 10CFR21 reportability is also in progress.