

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)										DOCKET NUMBER (2)										PAGE (3)	
D. C. COOK NUCLEAR PLANT - UNIT 1										050003151										OF 02	
TITLE (4)																					
INOPERABLE AUXILIARY FEED PUMP																					
EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)												
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES			DOCKET NUMBER(S)									
10	27	85	85	058	00	11	25	85				050000									
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																		
3			20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)									
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			X 50.73(a)(2)(v)			73.71(c)									
0100			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
			20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(viii)(A)												
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(vii)(B)												
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)												
LICENSEE CONTACT FOR THIS LER (12)																					
NAME								TELEPHONE NUMBER													
L. S. GIBSON - TECHNICAL ENGINEERING SUPERINTENDENT								61116 46151-15191011													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS											
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
X YES (If yes, complete EXPECTED SUBMISSION DATE)												01	31	86							
NO																					
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																					
<p>ON OCTOBER 27, 1985, AT 2027 HOURS, WITH THE UNIT IN HOT STANDBY THE WEST MOTOR DRIVEN AUXILIARY FEED PUMP TRIPPED ON LOW SUCTION PRESSURE COINCIDENT WITH THE TURBINE DRIVEN AUXILIARY FEED PUMP INOPERABLE FOR TESTING. THE ACTION STATEMENT OF TECHNICAL SPECIFICATION 3.7.1.2, WHICH REQUIRES AT LEAST THREE AUXILIARY FEED PUMPS OPERABLE, HAD BEEN VOLUNTARILY ENTERED ON OCTOBER 25, 1985, AT 1056 HOURS, FOR OPERABILITY TESTING OF THE TURBINE DRIVEN PUMP. HOWEVER, THE COINCIDENT LOSS OF THE MOTOR DRIVEN PUMP CAUSED ENTRY INTO THE TECHNICAL SPECIFICATION 3.0.3 REQUIREMENT THAT ACTION BE INITIATED WITHIN ONE HOUR TO PLACE THE UNIT INTO AT LEAST HOT SHUTDOWN (MODE 4) WITHIN THE FOLLOWING SIX HOURS.</p> <p>OPERATOR ACTION RESTORED THE INOPERABLE MOTOR DRIVEN PUMP TO OPERABLE STATUS IN 18 MINUTES. THE UNIT WAS THEN UNDER THE ACTIONS STATEMENT REQUIREMENTS OF TECHNICAL SPECIFICATION 3.7.1.2. THE TURBINE DRIVEN PUMP WAS SUBSEQUENTLY DECLARED OPERABLE AT 0923 HOURS ON OCTOBER 28, WITHIN THE 72 HOUR LIMIT.</p> <p>THIS EVENT DOES NOT CONSTITUTE AN UNREVIEWED SAFETY QUESTION AS DEFINED IN 10 CFR 50.59 BECAUSE THE LENGTH OF TIME THAT THE TWO PUMPS WERE INOPERABLE WAS WITHIN THE ACTION STATEMENT LIMITS.</p> <p>THIS IS AN INTERIM REPORT PENDING THE PREVENTIVE ACTION RECOMMENDATIONS OF A SPECIAL TASK FORCE TO RESOLVE PROBLEMS ENCOUNTERED WITH AUXILIARY FEED PUMPS.</p>																					

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1) D.C. COOK PLANT - UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 5 8 5 - 0 5 8 - 0 0 0 2 OF 0 2	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 366A's) (17)

ON OCTOBER 27, 1985, AT 2027 HOURS, WITH THE UNIT IN HOT STANDBY, THE WEST MOTOR DRIVEN AUXILIARY FEED PUMP (IEEE/P) TRIPPED ON A LOW SUCTION PRESSURE SIGNAL COINCIDENT WITH THE TURBINE DRIVEN AUXILIARY FEED PUMP (IEEE/F) INOPERABLE FOR TESTING. THE ACTION STATEMENT OF TECHNICAL SPECIFICATION 3.7.1.2, WHICH REQUIRES AT LEAST THREE AUXILIARY FEED PUMPS OPERABLE, HAD BEEN VOLUNTARILY ENTERED ON OCTOBER 25, 1985, AT 1056, FOR OPERABILITY TESTING OF THE TURBINE DRIVEN PUMP. HOWEVER, THE COINCIDENT LOSS OF THE MOTOR DRIVEN PUMP CAUSED ENTRY INTO THE TECHNICAL SPECIFICATION 3.0.3 REQUIREMENT THAT ACTION BE INITIATED WITHIN ONE HOUR TO PLACE THE UNIT INTO AT LEAST HOT SHUTDOWN (MODE 4) WITHIN THE FOLLOWING SIX HOURS.

INVESTIGATION REVEALED THAT AN UNUSUAL COMBINATION OF FACTORS WAS INVOLVED. DURING TESTING OF THE TURBINE DRIVEN AUXILIARY FEED PUMP (TDAFP) (IEEE/P) A FAULTY GOVERNOR (IEEE/65) CAUSED THE TURBINE SPEED TO OSCILLATE AT APPROXIMATELY 2.2 CYCLES PER SECOND. THIS RESULTED IN PRESSURE OSCILLATIONS ON THE SUCTION SIDE OF THE MOTOR DRIVEN AUXILIARY FEED PUMP (MDAFP) (IEEE/P) WHICH WAS IN SERVICE. FOREIGN MATERIAL IN THE SUCTION GAUGE PROTECTORS ON THE MDAFP ACTED AS A CHECK VALVE TO PERMIT THE PRESSURE SENSORS TO SENSE ONLY THE LOW PRESSURES OF THE OSCILLATIONS BY PREVENTING THE HIGHER PULSES FROM REACHING THE SENSORS. THIS CAUSED THE SENSORS TO RATCHET PROGRESSIVELY LOWER, RESULTING IN A 2 OUT OF 3 LOW SUCTION PRESSURE COINCIDENCE AND TRIPPED THE MDAFP.

OPERATOR ACTION WAS TO DISLODGE THE FOREIGN MATERIAL IN THE GAUGE PROTECTORS AND RESTORE THE PRESSURE SENSORS RESULTING IN AN OPERABLE MDAFP.

FOLLOWING AN ENGINEERING JUSTIFICATION, THE AUTOMATIC LOW SUCTION PRESSURE TRIPS WERE DISABLED ON THE AUXILIARY FEED SYSTEM AND REPLACED WITH THE EQUIVALENT SAFETY FUNCTION USING THE OPERATOR/ALARM. THE SUCTION PRESSURE GAUGE PROTECTORS AND ASSOCIATED INSTRUMENT PIPING WERE THEN CLEANED AND RETURNED TO SERVICE.

THE TDAFP GOVERNOR, GOVERNOR VALVE LINKAGE, GOVERNOR VALVE CAM, AND GOVERNOR VALVE STEM WERE ALL REPLACED.

THE TDAFP WAS SUCCESSFULLY TESTED AND RETURNED TO SERVICE AT 0923 HOURS ON OCTOBER 28, 1985, WITHIN THE 72 HOUR TECHNICAL SPECIFICATION LIMIT.

THIS EVENT DOES NOT CONSTITUTE AN UNREVIEWED SAFETY QUESTION AS DEFINED IN 10 CFR 50.59 BECAUSE THE LENGTH OF TIME THAT THE TWO PUMPS WERE INOPERABLE WAS WITHIN THE ACTION STATEMENT LIMITS.

THIS IS AN INTERIM REPORT PENDING THE PREVENTIVE ACTION RECOMMENDATIONS OF A SPECIAL TASK FORCE TO RESOLVE PROBLEMS ENCOUNTERED WITH AUXILIARY FEED PUMPS.