NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
D. C. COOK NUCLEAR PLANT, UNIT 2	0 5 0 0 0 3 1 6	1 OF 0 2

TITLE (4)
AUTOMATIC ESF ACTUATION RESULTING IN A REACTOR TRIP

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)
										0 5 0 0 0
0 1	1 2	8 5	8 5	0 0 2	0 0	0 2	0 8	8 5		0 5 0 0 0

OPERATING MODE (9)	2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 2	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		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)(viii)(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
K. R. BAKER, OPERATIONS SUPERINTENDENT	AREA CODE 6 1 6 4 6 5 - 5 9 0 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

ON 1-12-85 AT 1503 HOURS, WITH THE REACTOR IN MODE 2 (STARTUP) AND AT 2 PERCENT REACTOR THERMAL POWER, AN AUTOMATIC ENGINEERED SAFETY FEATURES (ESF) ACTUATION OCCURRED RESULTING IN A REACTOR TRIP. THE INITIATING EVENT WAS A LOW-LOW LEVEL IN STEAM GENERATOR 22.

THE LOW STEAM GENERATOR LEVEL WAS DUE TO AN UNEXPECTED INCREASE IN STEAM FLOW EXPERIENCED WHILE RETURNING AN ISOLATED STEAM DUMP VALVE (URV-120) TO SERVICE. THE REACTOR TRIP AND AUTOMATIC ESF ACTUATION FUNCTIONED AS DESIGNED.

TO PREVENT RECURRENCE, THE SHIFT SUPERVISOR DISCUSSED THIS EVENT WITH SHIFT PERSONNEL AND AN OPERATING MEMO WAS WRITTEN TO ALL OPERATORS DISCUSSING THIS EVENT.

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

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

ON 1-12-85 AT 1503 HOURS, WITH THE REACTOR IN MODE 2 (STARTUP) AND AT 2 PERCENT REACTOR THERMAL POWER, AN AUTOMATIC ENGINEERED SAFETY FEATURES (ESF) (JE) ACTUATION OCCURRED RESULTING IN A REACTOR TRIP. THE INITIATING EVENT WAS A LOW-LOW LEVEL IN STEAM GENERATOR 22.

DURING THE REACTOR COOLANT SYSTEM HEATUP A CONDENSER STEAM DUMP VALVE, URV-120, WAS ISOLATED DUE TO EXCESSIVE LEAKAGE. THIS WAS ACCOMPLISHED BY CLOSING THE HAND SHUTOFF VALVE, TBA-104-20. HOWEVER, DUE TO STEAM DUMP CONTROL (JI) PROBLEMS BEING EXPERIENCED ONCE THE REACTOR WAS CRITICAL, THE DECISION WAS MADE TO RETURN THE ISOLATED STEAM DUMP VALVE TO SERVICE AND PLACE STEAM DUMP CONTROL IN AUTOMATIC. AN UNLICENSED AUXILIARY EQUIPMENT OPERATOR WAS DISPATCHED TO OPEN THE HAND SHUTOFF VALVE. THIS WAS DONE WITHOUT CONSIDERING THE FACT THAT URV-120 WAS ALREADY OPEN TO THE POSITION DEMANDED BY THE STEAM DUMP CONTROLLER. COMMUNICATION BETWEEN THE DISPATCHED OPERATOR AND THE REACTOR OPERATOR IN THE CONTROL ROOM WAS DIFFICULT DUE TO THE HIGH NOISE LEVEL AT THE VALVE. AN INCREASE IN STEAM FLOW WAS THE FIRST INDICATION TO THE CONTROL ROOM OPERATOR THAT THE HAND VALVE WAS OPEN. THE REACTOR OPERATOR CORRECTLY REACTED TO THE INCREASED STEAM FLOW BY MANUALLY REDUCING THE STEAM DUMP DEMAND SIGNAL. DESPITE THIS EFFORT A STEAM FLOW TRANSIENT RESULTED, DECREASING STEAM GENERATOR LEVELS AND REACTOR COOLANT TEMPERATURES.

THE DECREASE IN STEAM GENERATOR LEVELS WAS FURTHER AMPLIFIED BY THE REQUIRED CORRECTIVE ACTION OF INCREASING THE FEEDWATER FLOW. THE COLD FEEDWATER, COMBINED WITH THE INCREASED STEAM GENERATOR PRESSURE (DUE TO REDUCED STEAM FLOW), RESULTED IN A "SHRINK" EFFECT WITHIN THE STEAM GENERATORS. THE LEVEL IN STEAM GENERATOR 22 REACHED THE LOW-LOW LEVEL SETPOINT WHICH RESULTED IN THE AUTOMATIC ESF ACTUATION AND SUBSEQUENT REACTOR TRIP. THE REACTOR TRIP AND AUTOMATIC ESF ACTUATION FUNCTIONED AS DESIGNED.

TO PREVENT RECURRENCE, THE SHIFT SUPERVISOR DISCUSSED THIS EVENT WITH SHIFT PERSONNEL AND AN OPERATING MEMO WAS WRITTEN TO ALL OPERATORS DISCUSSING THIS EVENT.