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)
R. E. Ginna Nuclear Power Plant	0 5 0 0 0 2 4 4	1 OF 0 3

TITLE (4)
Automatic Actuation of Reactor Protection System

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 4	0 8	8 5	8 5	— 0 0 9	— 0 0	0 5	0 8	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
	N	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 0 3	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
	AREA CODE
G. F. Larizza, Operations Manager	3 1 5 5 2 4 - 4 4 4 6

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	
B	A A	- R L Y	S 4 4 0	Y		B	S B	- - 3 3	N 0 1 5	N	
A	S D	- - H S	W 1 2 0	N		B	I G	- - F U	B 5 6 9	N	

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 April 8, 1985, a load reduction was in progress in preparation for a turbine overspeed trip test. During a secondary system pressure transient, the condensate bypass valve automatically opened which eventually resulted in a main feedwater pump trip causing the turbine to trip. Due to the plant cooldown the "A" steam generator level reduced below the 17% low level trip setpoint and a reactor trip occurred. The cause of the event has been attributed to the condensate bypass valve switch being in the automatic position, rather than the closed position. No procedural controls were present for the switch position prior to 30% reactor power. A procedure change has been initiated to improve control of the bypass valve position at low power.

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

At 0536 hours on April 8, 1985, while reducing load for a turbine overspeed trip test, a turbine trip occurred with a subsequent reactor trip.

With reactor power at approximately 18% and a load reduction in progress, the "B" condensate pump started automatically due to a condensate system oscillation and condenser reject valve opening. Due to the low power level, the condensate system pressure increased to approximately 420 psig and the pump was manually stopped to avoid overpressurizing the main feedwater pump suction relief valves. Following the stopping of the "B" condensate pump, a feedwater pump low suction pressure alarm occurred which automatically restarted the "B" condensate pump and opened the condensate bypass valve (this allows condensate to bypass the low pressure heat exchangers). This allowed the seal water differential pressure at the running "B" main feedwater pump to reduce below 15 psid for greater than five seconds, which caused the pump breaker to open. Both main feedwater pump breakers open provided the logic for a subsequent turbine trip. Following the turbine trip the steam generator levels decreased due to the combination of a decrease in feedwater flow, cold auxiliary feedwater injection, and a manual reactor power reduction which cooled down the primary system. At approximately 2% reactor power a reactor trip occurred on two out of three channels of "A" steam generator narrow range level reducing below 17%. Following the reactor trip the main steam line isolation valves (MSIV's) were manually closed from the Control Room to limit the cooldown. As a result of the cooldown, both steam generator levels reduced below 16% narrow range level for approximately four minutes and the pressurizer reduced below 12%, for one minute. This made both reactor coolant loops (Technical Specification 3.1.1.a and 4.3.5.5) and the pressurizer (Technical Specification 3.1.1.5) inoperable. The reactor coolant system was stabilized at hot shutdown conditions.

Various mechanical and electrical problems were encountered following the reactor trip. The control rod bottom indicating light failed to illuminate for control rod I3, although the rod position indicator verified that the control rod was fully inserted. This problem was determined to be the result of oxidation on a relay contact. The "B" MSIV indicating lights showed the valve to be in mid-position, although it was physically verified to be in the closed position. This was determined to be due to the sticking of a valve position limit switch. A control power fuse in the nuclear instrument system intermediate range channel N-35 failed, resulting in the bistables for that channel tripping. No apparent cause was determined for this.

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

The cause of the event has been attributed to the condensate bypass valve switch, on the Main Control Board, being in the automatic position. The opening of the condensate bypass valve early in the event led to the subsequent trips, due to the high condensate system pressures at low power levels resulting in low seal water differential pressure at the main feedwater pumps. The switch is normally placed in the manual closed position prior to startup, and is not procedurally placed in the automatic position until approximately 30% reactor power. Following maintenance on the bypass valve, the day before the event, the switch was inadvertently left in the automatic position. No procedural controls were present to maintain the switch position closed prior to 30% power. The positioning of the bypass valve prior to the event was a cognitive error on the part of Operations personnel, in that it was a failure to recognize the effect of the opening of the bypass valve at low power on the secondary system. A procedure change to the Operations startup procedure, O-1.2, has been initiated to specify that the condensate bypass valve switch be maintained in the closed position until 30% power.

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TELEPHONE
AREA CODE 716 546-2700

May 8, 1985

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Subject: LER 85-009, Automatic Actuation of the Reactor Protection System (RPS)
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

In accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv) which requests a report of, "any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF) including the Reactor Protection System (RPS)," the attached Licensee Event Report LER 85-009 is hereby submitted.

Very truly yours,

Bruce A. Snow for
Roger W. Kober

RWK/eeg

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