NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

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 6	8 5	8 5	— 0 0 7	— 0 0	0 5	0 6	8 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 1 1 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
G.F. Larizza, Operations Manager	AREA CODE 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	T G	- 1 - 2 0	P 0 7 0	N							
B	T G	- 1 - 1 5	W 1 2 0	N							

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

On April 6, 1985, while operating at approximately 12% reactor power with the turbine latched and being brought up to synchronous speed, a reactor trip occurred. The turbine failed to trip automatically and also failed to trip from actuation of the manual turbine trip pushbutton on the Main Control Board. The turbine was subsequently manually tripped locally less than one minute following the reactor trip. The reactor trip was the result of the "B" Steam Generator level, which was being manually controlled, reducing below 17% narrow range level. The failure of the turbine to trip was due to mechanical binding of the 20ET trip solenoid and to the adjustment of a mechanical stop for the tripper bar actuated by the 20AST trip solenoid. The trip solenoid failure mechanisms have been repaired and the solenoids have been successfully tested.

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

At 2341 hours on April 6, 1985, while operating at approximately 12% reactor power with the turbine latched and being brought up to synchronous speed, a reactor trip occurred. The turbine failed to trip automatically and also failed to trip from actuation of the manual turbine trip pushbutton on the Main Control Board. The Operations personnel immediately closed the main steam isolation valves to limit the RCS cooldown and dispatched personnel to the local turbine trip station to manually trip the turbine. The turbine was manually tripped less than one minute following the reactor trip at the turbine. Following the reactor trip both steam generator levels reduced below 16% narrow range level for a short period of time, which made both reactor coolant loops inoperable (Technical Specification 3.1.1.1a and 4.3.5.5). The reactor coolant system was stabilized at hot shutdown conditions.

The reactor trip was the result of the "B" Steam Generator level, which was being manually controlled, reducing below 17% narrow range level on two out of three channels. The Operations personnel were unable to stabilize the steam generator levels while heating up the turbine and a level oscillation was generated which eventually went below the low level trip setpoint. The steam flow and feed flow indications are inaccurate at low power levels and were not available for level control.

The failure of the turbine to trip, both automatically and from the Main Control Board, was determined to be the result of two separate failure mechanisms. Electro-mechanical tripping of the turbine is accomplished by two trip solenoids, the 20ET (emergency trip) solenoid which directly releases the high pressure trip fluid from the stop valves, and the 20AST (Auto Stop Trip) solenoid which actuates a tripper bar to release the auto stop oil fluid allowing the interface valve to open and dump the high pressure trip fluid. The 20 ET solenoid is operated by the opening of the reactor trip breakers and by low auto stop oil pressure and the 20 AST solenoid is operated by the reactor trip breakers and by the Main Control Board manual turbine trip pushbutton. The failure of the 20 ET solenoid to cause a turbine trip was determined to be due to mechanical binding of the solenoid plunger. An inspection at that time of the 20 AST solenoid failed to determine the cause of the failure, and the solenoid was successfully tested six times prior to the subsequent reactor startup. Subsequent investigation on April 13, 1985 revealed that the cause of the failure of the 20 AST solenoid to cause a turbine trip was due to the adjustment of a mechanical stop for the auto stop tripper bar. This mechanical stop intermittently would not allow the tripper bar to release the auto stop oil fluid.

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

The 20 ET solenoid was replaced and the new solenoid was tested prior to startup. An adjustment was made to the mechanical stop and the trip mechanism was successfully tested. A procedural change has been submitted which will allow independent verification of operability of both trip solenoids prior to taking the reactor critical. This should provide assurance of turbine trip capability.

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VICE PRESIDENT
ELECTRIC & STEAM PRODUCTION

TELEPHONE
AREA CODE 716 546-2700

May 6, 1985

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

Subject: LER 85-007, 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 85-007 is hereby submitted.

Very truly yours,

Roger W. Kober

Roger W. Kober

RWK/eeg

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