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MECREDY,R.C. Rochester Gas & Electric Corp.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 90-014-00:on 901206,potential technical inoperability of pressurizer PORV during certain procedures.Caused by procedure inadequacy.Periodic Test Procedures PT-5.10 & PT-5.30 changed.W/910107 ltr.

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AREA CODE 716 546-2700

January 7, 1991

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

Subject: LER 90-014, Inadvertent Pressurizer PORV Inoperability During Pressurizer Pressure Channel Defeat (Procedure Inadequacy) May Have Caused a Condition Prohibited by Technical Specifications.
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

In accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(i)(B), which requires a report of, "any operation prohibited by the plant's technical specifications", the attached Licensee Event Report LER 90-014 is hereby submitted.

This event has in no way affected the public's health and safety.

Very truly yours,

Robert C. Mecredy

Robert C. Mecredy

xc: U.S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Ginna USNRC Senior Resident Inspector

Cert No P249194209

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NRC Form 366
(5-83)

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 9

TITLE (4) Inadvertent Pressurizer PORV Inoperability During Pressurizer Pressure Channel Defeat (Procedural Inadequacy) May Have Caused a Condition Prohibited by Tech Specs

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)
1 2	0 6	9 0	9 0	0 1 4	0 0	0 1	0 7	9 1		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 9 7	20.402(b)	20.405(c)	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)	X 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
Wesley H. Backus Technical Assistant to the 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

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 December 6, 1990 at approximately 1030 EST, with the reactor at approximately 97% full power, a possible condition prohibited by Technical Specifications was discovered. This condition was the potential technical inoperability of a pressurizer power operated relief valve (PORV) during certain procedures.

The intermediate cause of the event was that during the defeat of certain pressurizer pressure instrument channels, the PORV interlock was not defeated. This was due to procedure inadequacy.

The underlying cause of the event was failure to apply a rigorous interpretation of the Technical Specification definition of operability.

Corrective action taken will be to ensure the PORV interlock defeat actions are correct in all involved procedures.

I. PRE-EVENT PLANT CONDITIONS

The reactor was at approximately 97% steady state full power with no major activities in progress.

II. DESCRIPTION OF EVENT

A. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

- o June 1981: Approximate Event Date
- o December 6, 1990, 1030 EST: Discovery Date and Time
- o December 6, 1990: Periodic Test procedures PT-5.10 (Process Instrumentation Reactor Protection Channel Trip Test (Channel 1 Red)) and PT-5.30 (Process Instrumentation Reactor Protection Channel Trip Test (Channel 3 Blue)) were changed to reflect placing the PORV interlock switches to the defeat position.

B. EVENT:

On December 6, 1990 at approximately 1030 EST, with the reactor at approximately 97% full power, a review and re-write of Equipment Restoration procedure ER-INST.1 (Reactor Protection Bistable Defeat After Instrumentation Loop Failure) was in progress. At approximately this time it was determined that the existing ER-INST.1 procedure did not defeat the pressurizer power operated relief valve (PORV) interlocks when the affected channels were defeated.

These interlocks, which receive their signals from the affected pressurizer pressure instrument channels, supply one of the inputs to the 2 out of 2 logic for opening the pressurizer PORVs on high pressurizer pressure. The other input is received from an unaffected pressurizer pressure instrument channel. Both inputs are set to trip at $\geq$ 2335 psig. Since the pressurizer PORV interlock was not defeated, an actual high pressurizer pressure condition would not have opened the affected PORV. Therefore, the affected pressurizer PORV would be considered technically inoperable when the affected pressurizer pressure instrument channel was out of service and the interlock for that channel was not defeated.

A review of other plant procedures that involve defeat of the affected pressurizer pressure instrument channels was conducted to determine if they also did not defeat the pressurizer PORV interlock when the channel was defeated. Results of this review are as follows:

- Periodic Test procedure PT-5.10 (Process Instrumentation Reactor Protection Channel Trip Test (Channel 1 Red)) defeated an affected pressurizer pressure instrument channel, but did not defeat the pressurizer PORV interlock.

- Periodic Test procedure PT-5.30 (Process Instrumentation Reactor Protection Channel Trip Test (Channel 3 Blue)) defeated an affected pressurizer pressure instrument channel, but did not defeat the pressurizer PORV interlock.

- Applicable Calibration procedures defeated an affected pressurizer pressure instrument channel, including defeat of the pressurizer PORV interlock.

o Applicable Maintenance procedures for filling and venting pressurizer pressure transmitters did not defeat the pressurizer PORV interlock.

Amendment 42 (dated May 11, 1981) to the Ginna Technical Specifications made numerous changes in the operability requirements of specific systems and components. For one of those changes Technical Specification 3.1.1.4(a) now states in part, "Both pressurizer power operated relief valves (PORVs) and their associated block valves shall be operable whenever the reactor is at or above an RCS temperature of 350°F OR with one or more PORV(s) inoperable, within one hour either restore the PORV(s) to operable status or close the associated block valve(s); otherwise be in at least hot shutdown within the next six hours and below an RCS temperature of 350°F within the following six hours". A review was conducted of previous instances of performing Periodic Test procedures PT-5.10 and PT-5.30, to determine if the PORV status had been contrary to Technical Specification 3.1.1.4(a).

The results of this review were inconclusive in identifying any instances where the Technical Specifications were actually violated. However, Rochester Gas and Electric Corporation (RG&E), following the conservative approach, concluded that the plant may have operated at times (i.e. during PT-5.10 and PT-5.30 testing) contrary to Technical Specification 3.1.1.4(a), (i.e. having one of the affected pressurizer pressure instrument channels defeated without defeating the PORV interlock or closing the affected block valve within the required time).

C. INOPERABLE STRUCTURES, COMPONENTS, OR SYSTEMS THAT CONTRIBUTED TO THE EVENT:

None

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None

E. METHOD OF DISCOVERY:

The event was made apparent during a review and re-write of ER-INST.1 (Reactor Protection Bistable Defeat After Instrumentation Loop Failure).

F. OPERATOR ACTION:

As the event was procedural inadequacy and discovered during a procedure review and re-write, no operator action was necessary.

G. SAFETY SYSTEM RESPONSE:

None

III. CAUSE OF EVENT

A. IMMEDIATE CAUSE:

The possible condition prohibited by the plant's Technical Specifications was caused by a pressurizer PORV being inoperable due to having one of its affected pressurizer pressure Instrument Channels defeated without defeating the PORV interlock or closing the affected block valve.

B. INTERMEDIATE CAUSE:

The affected pressurizer pressure instrument channel being defeated without defeating the PORV interlock or closing the affected block valve was due to procedure inadequacy.

C. ROOT CAUSE:

The underlying cause of the procedure inadequacy was determined to be failure to apply a rigorous interpretation of the Technical Specification definition of operability of components, in that the PORV was technically inoperable (it would not perform its design function of opening on an actual high pressure condition), and actions required by Technical Specifications were not specified in the procedures. (This Technical Specification amendment, dated May 11, 1981, was received and implemented in June, 1981.)

IV. ANALYSIS OF EVENT

This event is reportable in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(i)(B), which requires a report of, "any operation prohibited by the plant's Technical Specifications," in that a pressurizer PORV being inoperable due to having one of its affected pressurizer pressure instrument channels defeated without defeating the PORV interlock or closing the affected block valve may have placed the plant in a condition prohibited by Technical Specifications.

An assessment was performed considering both the safety consequences and implications of this event with the following results and conclusions:

During the time period in which the channel was defeated, the affected PORV would not have automatically opened when actual pressurizer pressure reached 2350 psia. This condition does not create a significant safety hazard for the following reasons:

- Chapter 15 events described in the UFSAR do not rely upon the PORVs to mitigate or reduce the consequences of an overpressure event. Therefore, no assumptions specified in the accident analysis of Chapter 15 were violated during the event.

- The basis of Technical Specification 3.1.1.4 action statement is to isolate the inoperable PORV by closing the block valve to prohibit inadvertent opening or leakage causing a pressurizer steam space leak. Since the PORV was not capable of opening during the periodic testing procedures, the basis of Technical Specification 3.1.1.4 action statement was not violated during the event.

- Had the PORV been declared inoperable during the performance of the Periodic Testing, the associated block valve would have been required to be closed within one hour. With the block valve closed, the PORV would have been unable to mitigate the consequences of an overpressure event. Plant Technical Specifications allows this condition to exist indefinitely.

- The affected PORV would have been capable of manual opening from the Main Control Board should the operator wish to use the PORV to relieve pressurizer pressure.

- One of the two pressurizer PORVs would have been capable of automatic opening if pressurizer pressure exceeded 2350 psia during the actual performance of the two periodic test procedures.

Based on the above, it can be concluded that the public health and safety was assured at all times.

V. CORRECTIVE ACTION

A. ACTION TAKEN AS A RESULT OF EVENT:

- Periodic Test procedures PT-5.10 and PT-5.30 were changed to add a step to defeat the pressurizer PORV interlock and another step to re-instate the pressurizer PORV interlock.
- Calibration procedures were reviewed an determined to be adequate. No changes will be made to these procedures.

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

- ER-INST.1 changes were identified, as stated above. The formal change process to revise this procedure will be completed in January, 1991.
- Applicable Maintenance procedures will be revised, prior to the next use, to ensure proper actions are taken to comply with our rigorous interpretation of Technical Specification 3.1.1.4(a).

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

VI. ADDITIONAL INFORMATION

A. FAILED COMPONENTS:

None.

B. PREVIOUS LERS ON SIMILAR EVENTS:

A similar LER event historical search was conducted with the following results: No documentation of similar LER events with the same root cause at Ginna Station could be identified.

C. SPECIAL COMMENTS:

None