

CATEGORY 1

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ACCESSION NBR: 9612060102 DOC. DATE: 96/11/27 NOTARIZED: NO DOCKET #
 FACIL: 50-244 Robert Emmet Ginna Nuclear Plant, Unit 1, Rochester G 05000244
 AUTH. NAME AUTHOR AFFILIATION
 MARTIN, J.T. Rochester Gas & Electric Corp.
 MECREDY, R.C. Rochester Gas & Electric Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 VISSING

SUBJECT: LER 96-013-00: on 961029, circuit breakers closed while in Mode 3, occurred. Due to personnel error, resulted in condition prohibited by TS.MOV-878B & MOV-878D were immediately re-opened. W/961127 ltr.

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ROBERT C. MCCRERY
Vice President
Nuclear Operations

November 27, 1996

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Guy S. Vissing
Project Directorate I-1
Washington, D.C. 20555

Subject: LER 96-013, Circuit Breakers Closed While in Mode 3, Due to Personnel Error,
Resulted in Condition Prohibited by Technical Specifications
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Vissing:

In accordance with 10 CFR 50.73, Licensee Event Report System, item (a) (2) (i) (B), which requires a report of, "Any operation or condition prohibited by the plant's Technical Specifications", the attached Licensee Event Report LER 96-013 is hereby submitted.

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

Very truly yours,

Robert C. McCredy

xc: Mr. Guy S. Vissing (Mail Stop 14C7)
PWR Project Directorate I-1
Washington, D.C. 20555

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

Ginna Senior Resident Inspector

IE 221

9612060102 961127
PDR ADOCK 05000244
S PDR

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS
MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS.
REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE
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COMMENTS REGARDING BURDEN ESTIMATE TO THE
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U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC
20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT

FACILITY NAME (1)

R.E. Ginna Nuclear Power Plant

DOCKET NUMBER (2)

05000244

PAGE (3)

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TITLE (4)

Circuit Breakers Closed While in Mode 3, Due to Personnel Error, Resulted in Condition Prohibited by
Technical Specifications

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 NAME	DOCKET NUMBER
10	29	96	96	-- 013	-- 00	11	27	96	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		000	20.2201(b)		20.2203(a)(2)(v)		<input checked="" type="checkbox"/>		50.73(a)(2)(i)	50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)				50.73(a)(2)(ii)	50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)				50.73(a)(2)(iii)	73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)				50.73(a)(2)(iv)	OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)				50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)				50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

John T. St. Martin - Technical Assistant

TELEPHONE NUMBER (Include Area Code)

(716) 771-3641

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)

YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 29, 1996, at approximately 1855 EST, the plant was shut down in Mode 3 and being cooled down to Mode 5. A cooldown was in progress, and reactor coolant system temperature was approximately 353 degrees F. It was discovered that the circuit breakers for valves MOV-878B and MOV-878D had just been closed. This resulted in two trains of ECCS being considered inoperable, which required entry into Ginna Station Improved Technical Specifications Limiting Condition for Operation 3.0.3.

Immediate corrective action was to re-open the two circuit breakers, restoring compliance with Improved Technical Specifications.

The underlying cause of closing the circuit breakers in Mode 3 was personnel error.

Corrective action to prevent recurrence is outlined in Section V.B.

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

I. PRE-EVENT PLANT CONDITIONS:

On October 29, 1996, the plant was shut down in Mode 3, and being cooled down to Mode 5 in accordance with Normal Operating Procedure O-2.2, "Plant Shutdown from Hot Shutdown to Cold Conditions". A cooldown of the reactor coolant system (RCS) was in progress, with RCS temperature at approximately 353 degrees F and pressurizer (PRZR) pressure at approximately 350 PSIG.

Early during the afternoon shift (at approximately 1600 EST), the Shift Supervisor briefed the Operating shift concerning the activities to be accomplished during the upcoming shift, which would include a transition from Mode 3 to Mode 4. After being notified of the transition to Mode 4, one of these activities would be for the primary Auxiliary Operator (AO) (a non-licensed operator) to enter the Auxiliary Building and locally close the circuit breakers for two motor-operated valves (MOV-878B and MOV-878D) in the Safety Injection (SI) system.

Shortly before entering Mode 4 (defined as RCS temperature less than 350 degrees F and greater than 200 degrees F), the Control Room Foreman and primary AO discussed the upcoming activities associated with cooling down below 350 degrees F. As per step 5.3.8 of procedure O-2.2, when less than 350 degrees F, the circuit breakers for MOV-878B and MOV-878D would be closed to restore AC power to the valves, and the valves would be repositioned to the closed position. It is estimated that this discussion occurred at approximately 1830 EST.

II. DESCRIPTION OF EVENT:

A. DATES AND APPROXIMATE TIMES OF MAJOR OCCURRENCES:

- October 29, 1996, 1855 EST: Event date and time.
- October 29, 1996, 1855 EST: Discovery date and time.
- October 29, 1996, 1855 EST: Circuit breakers for MOV-878B and MOV-878D are re-opened.

B. EVENT:

On October 29, 1996, after the discussion, the primary AO proceeded to the Auxiliary Building. Without prior notification from the Control Room operators that the plant had transitioned to Mode 4 and with RCS temperature at approximately 353 degrees F, the AO locally closed the circuit breakers for these safety injection (SI) system valves, MOV-878B (Safety Injection Pump A Discharge to Loop B Cold Leg) and MOV-878D (Safety Injection Pump B Discharge to Loop A Cold Leg). This occurred at approximately 1855 EST.

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The AO then notified the Control Room operators that the two circuit breakers were closed. The Control Room operators immediately recognized that these two breakers had been closed prematurely and were not allowed to be closed while the plant was still in Mode 3. With the breakers closed, AC power was provided to the valves. The Control Room operators directed the primary AO to immediately re-open the two breakers. The valves were not repositioned from the open position; therefore, MOV-878B and MOV-878D remained in their safeguards position and proper SI flow would have been provided on an SI actuation while in Mode 3. The circuit breakers were re-opened within a minute of being closed.

The Ginna Station Improved Technical Specifications (ITS), Section 3.5.2, addresses operability requirements for the SI system. In Modes 1, 2, and 3, an emergency core cooling system (ECCS) train consists of an SI subsystem and a Residual Heat Removal (RHR) subsystem. To ensure an operable flowpath, this includes securing listed motor operated isolation valves in position by removing the power sources. For MOV-878B and MOV-878D, AC power must be removed. The AO restored AC power with the plant still in Mode 3 (at 353 degrees F, which is 4 degrees F above Mode 4).

The Control Room operators proceeded with the RCS cooldown. At approximately 1900 EST (5 minutes later), RCS temperature was less than 350 degrees F, and the plant had transitioned to Mode 4. Some time after this, the Control Room operators directed the primary AO to locally close the two circuit breakers, as directed by procedure O-2.2, steps 5.3.8.2 and 5.3.8.3.

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 Control Room operators were made aware of this condition when the primary AO notified them that the breakers for MOV-878B and MOV-878D were closed.

F. OPERATOR ACTION:

The Control Room operators immediately directed that these two breakers be re-opened. With these breakers closed and the plant still in Mode 3, the Control Room operators recognized that this configuration did not conform to the requirements listed in the Basis for ITS Section 3.5.2. Due to AC power being restored to one valve in each train of the ECCS, two trains of ECCS were considered inoperable, notwithstanding the facts that neither valve was repositioned and that after a slight cooldown of four more degrees F, the valves would be allowed to be repositioned.

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ITS Limiting Condition for Operation (LCO) Required Action 3.5.2.C.1 requires immediate entry into LCO 3.0.3 if two ECCS trains are inoperable. Thus, the plant was in LCO 3.0.3 for less than a minute, until the two breakers were re-opened. When the breakers were opened, LCO 3.0.3 was exited. Being in LCO 3.0.3 for any reason is a condition prohibited by Technical Specifications.

Subsequently, the Control Room operators notified higher supervision and the NRC Senior Resident inspector.

G. SAFETY SYSTEM RESPONSES:

None

III. CAUSE OF EVENT:

A. IMMEDIATE CAUSE:

The immediate cause of being in a condition prohibited by Technical Specifications was a brief entry into LCO 3.0.3, since two ECCS trains were considered inoperable with one valve in each train having AC power restored.

B. INTERMEDIATE CAUSE:

The intermediate cause of two trains of ECCS being considered inoperable was having the AC power restored to MOV-878B and MOV-878D with the plant in Mode 1 or 2 or 3. During the short time that the two circuit breakers were closed, AC power was restored to these two valves.

C. ROOT CAUSE:

The underlying cause of having AC power restored to these two valves was the premature closing of the two circuit breakers while still in Mode 3. A Human Performance Enhancement System (HPES) evaluation was initiated for this event. The underlying cause of this event was Personnel Error.

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This error was a cognitive error on the part of the AO, who is a non-licensed operator. The AO assumed that he had permission to close these breakers after the initial discussion with the Control Room Foreman, while the Control Room Foreman assumed that the AO would enter the Auxiliary Building and stand by until specifically directed to perform the task. This activity was contrary to procedure O-2.2, which requires that the RCS be cooled down less than 350 degrees F and the transition to Mode 4 be officially logged prior to closing these breakers. There were no unusual characteristics of the location where these circuit breakers are located. Causal factors that contributed to this event were: Verbal Communications (pre-job discussion between the Control Room Foreman and AO less than adequate) and Supervisory Methods (task not made clear to worker).

This event does not meet the NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants", definition of a "Maintenance Preventable Functional Failure".

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 or condition prohibited by the plant's Technical Specifications". In Mode 3, having the circuit breakers for MOV-878B or MOV-878D closed results in two trains of ECCS being considered inoperable, which requires immediate entry into LCO 3.0.3 .

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

There were no operational or safety consequences or implications attributed to having these breakers closed in Mode 3 because:

- MOV-878B and MOV-878D, which would be closed in the next steps of procedure O-2.2, were not actually closed. With the valves still open while in Mode 3, both SI flowpaths to the RCS cold legs were still available as required by the ITS. Since power was restored to both valves at the same time, two trains were considered inoperable, even though the valves were still open as required, and would have provided a flowpath for SI, if required after a SI actuation.
- In Modes 1, 2 and 3, two trains of ECCS must be operable to ensure that at least one train is available in the event of a single failure. The SI pump performance requirements are based on a small break loss of coolant accident (LOCA) while in Mode 1. Mode 2 and 3 requirements are bounded by the Mode 1 analysis. Since the RCS temperature was only four degrees above the entry into Mode 4, the safety significance was minimal.

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- The ITS allows for closing MOV-878B or MOV-878D for up to 12 hours to perform pressure isolation valve testing per ITS Surveillance Requirement (SR) 3.4.14.1. This is based on the fact that the flow path is readily restorable either remotely from the Control Room or locally. Since the flow paths were not actually isolated and the power was restored to the valves for less than a minute, the safety significance was minimal. AC power was immediately removed from the valves by the AO (after being directed by the Control Room operators), demonstrating that this condition was indeed readily restorable.
- With two ECCS trains considered inoperable, ITS LCO 3.5.2 REQUIRED ACTION C was to enter LCO 3.0.3 immediately. This was done, and corrective measures that permit operation in accordance with LCO 3.5.2 were completed when the circuit breakers were immediately re-opened. At the same time, actions continued to place the plant in Mode 4 within 12 hours, as required by LCO 3.0.3. The plant was in Mode 4 within 5 minutes of this event.

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

V. CORRECTIVE ACTION:

A. ACTION TAKEN TO RETURN AFFECTED SYSTEMS TO PRE-EVENT NORMAL STATUS:

- The circuit breakers for MOV-878B and MOV-878D were immediately re-opened after the Control Room operators were notified that they had been closed.
- The plant transitioned to Mode 4.

B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

- Expectations concerning proper notification prior to operating safeguards equipment were discussed with the AO and Control Room Foreman. These expectations will be reinforced at a future meeting between the Operations Manager and the Shift Supervisors.
- These expectations were discussed with all operating shifts.
- A Training Work Request (TWR) has been initiated to ensure that continuing training reinforces these expectations for activities conducted outside the Control Room.

VI. ADDITIONAL INFORMATION:

A. FAILED COMPONENTS:

None

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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 Nuclear Power Plant could be identified. LERs 90-006, 95-003, 96-003, and 96-010 were caused by personnel errors related to communications issues, but were not similar events.

C. SPECIAL COMMENTS:

None