

December 11, 2003

Mr. Robert L. Clark
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

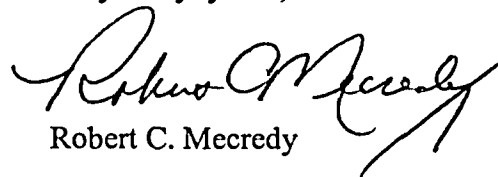
Subject: LER 2003-004, Auxiliary Feedwater Flowpath Inoperable
During Mode Changes, Due to Personnel Error, Resulted in
Condition Prohibited by Technical Specifications
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Clark:

The attached Licensee Event Report (LER) 2003-004 is submitted 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".

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

Very truly yours,


Robert C. Mecredy

An equal opportunity employer

89 East Avenue | Rochester, NY 14649
tel (585) 546-2700

www.rge.com

1000910

JE22

xc: Mr. Robert Clark (Mail Stop O-8-C2)
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852

Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

U.S. NRC Ginna Senior Resident Inspector

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 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC

1. FACILITY NAME

R. E. Ginna Nuclear Power Plant

2. DOCKET NUMBER

05000244

3. PAGE

1 OF 7

4. TITLE

Auxiliary Feedwater Flowpath Inoperable During Mode Changes, Due to Personnel Error, Resulted in Condition Prohibited by Technical Specifications

5. EVENT DATE

MO DAY YEAR

10 12 2003

6. LER NUMBER

YEAR SEQUENTIAL
NUMBER REV
NO

2003 - 004 - 00

7. REPORT DATE

MO DAY YEAR

12 11 2003

8. OTHER FACILITIES INVOLVED

FACILITY NAME

DOCKET NUMBER

05000

FACILITY NAME

DOCKET NUMBER

05000

9. OPERATING
MODE

5

10. POWER
LEVEL

000

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

20.2201(b)

20.2203(a)(3)(ii)

50.73(a)(2)(ii)(B)

50.73(a)(2)(ix)(A)

20.2201(d)

20.2203(a)(4)

50.73(a)(2)(iii)

50.73(a)(2)(x)

20.2203(a)(1)

50.36(c)(1)(i)(A)

50.73(a)(2)(iv)(A)

73.71(a)(4)

20.2203(a)(2)(i)

50.36(c)(1)(ii)(A)

50.73(a)(2)(v)(A)

73.71(a)(5)

20.2203(a)(2)(ii)

50.36(c)(2)

50.73(a)(2)(v)(B)

OTHER

20.2203(a)(2)(iii)

50.46(a)(3)(ii)

50.73(a)(2)(v)(C)

Specify in Abstract below or in
NRC Form 366A

20.2203(a)(2)(iv)

50.73(a)(2)(i)(A)

50.73(a)(2)(v)(D)

20.2203(a)(2)(v)

X

50.73(a)(2)(i)(B)

50.73(a)(2)(vii)

20.2203(a)(2)(vi)

50.73(a)(2)(i)(C)

50.73(a)(2)(viii)(A)

20.2203(a)(3)(i)

50.73(a)(2)(ii)(A)

50.73(a)(2)(viii)(B)

12. LICENSEE CONTACT FOR THIS LER

NAME

Thomas L. Harding, Senior Licensing Engineer

TELEPHONE NUMBER (Include Area Code)

(585)771-3384

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

CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

YES (If yes, complete EXPECTED SUBMISSION DATE)

X

NO

15. EXPECTED
SUBMISSION
DATE

MONTH

DAY

YEAR

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 14, 2003, at approximately 2300 EDST, the plant was in Mode 2 at approximately 2% steady state reactor power. Surveillance testing was in progress as part of a return to power following a refueling outage. It was discovered that one of two turbine driven auxiliary feedwater (TDAFW) flowpath was isolated, and had been inoperable during the transition from Mode 4 to Mode 3 on October 12, 2003 at 1320 and from Mode 3 to Mode 2 on October 14, 2003 at 0446. This condition is contrary to Ginna Station Improved Technical Specifications Limiting Condition for Operation 3.0.4.

The conditions initiating this event were traced to the performance of procedures utilized for the filling of the steam generators during shutdown, which invalidated the auxiliary feedwater system lineup previously performed.

Corrective action was immediately taken to restore the TDAFW flowpath to operable status, and further procedural and process controls will be implemented to prevent recurrence.

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

I. PRE-EVENT PLANT CONDITIONS:

On October 10, 2003, while in Mode 5, preparations were being made to heat up the plant as the 2003 refueling outage was being completed. One of the activities in progress was the alignment of the Auxiliary Feedwater System, which is required to be operable prior to entering Mode 3. Procedure T-41A, Alignment of Auxiliary Feedwater System Prior to Power Operation, was completed with the exception of the turbine driven auxiliary feedwater (TDAFW) pump lube oil system at approximately 0800 that morning. This alignment verified that valve V-4006 (manual isolation valve in the TDAFW flowpath to the "B" steam generator) was open, as required for the mode transition.

At approximately 1430 on the same day, the initial conditions for a test of the motor driven auxiliary feedwater (MDAFW) pump B discharge valves required the system to be aligned by procedure T-41G, Alignment of Auxiliary Feedwater System to Fill S/G's While in Modes 4, 5, 6, Defueled. Procedure T-41G is sectionalized for various lineups to fill either steam generator and places valve V-4006 in the closed position. The Operations Work Control Center personnel recognized that valve V-4006 would be closed and made an entry in the operations outage log book that procedure T-41A would need to be performed again following the testing.

II. DESCRIPTION OF EVENT:

A. EVENT:

On October 12, 2003, at approximately 1320 EDST, the plant transitioned to Mode 3 and on October 14, 2003, at approximately 0446 EDST, the plant transitioned to Mode 2.

On October 14, 2003, at approximately 2300 EDST, the plant was in Mode 2 at approximately 2% steady state reactor power and preparations for a return to power were being performed in accordance with Normal Operating Procedure O-1.2, "Plant Startup from Hot Shutdown to Full Load". Surveillance testing of the turbine driven auxiliary feedwater (TDAFW) pump was in progress per Performance Testing Procedure PT-16Q-T, "Auxiliary Feedwater Turbine Pump - Quarterly".

With the TDAFW pump running per PT-16Q-T, testing personnel were unable to obtain any flow to the "B" steam generator (SG). There was acceptable flow to the "A" SG. The testing personnel stopped the test and investigated for the cause of no flow to the "B" SG. During the investigation it was discovered that valve V-4006 (manual isolation valve in the flowpath to the "B" SG) was closed. In ensuing discussions, it was realized that having the manual isolation valve in the TDAFW flowpath to the "B" SG closed does not satisfy the requirements of Ginna Station Improved Technical Specifications (ITS) Limiting Condition for Operation (LCO) 3.7.5 and ITS LCO 3.0.4.

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ITS LCO 3.7.5 addresses operability requirements for the Auxiliary Feedwater (AFW) systems, is applicable in Modes 1, 2, and 3, and states:

“Two motor driven AFW (MDAFW) trains, one turbine driven AFW (TDAFW) train, and two standby AFW (SAFW) trains shall be OPERABLE.”

ITS LCO 3.0.4 addresses mode changes and states:

“When an LCO is not met, entry into a MODE or other specified condition in the Applicability shall not be made except when the associated ACTIONS to be entered permit continued operation in the MODE or other specified condition in the Applicability for an unlimited period of time. This Specification shall not prevent changes in MODES or other specified conditions in the Applicability that are required to comply with ACTIONS. Exceptions to this Specification are stated in the individual Specifications.”

The Control Room operators then realized that Mode changes had been performed without the required TDAFW flowpath operable per ITS LCO 3.7.5, which was a condition prohibited by ITS LCO 3.0.4. The Control Room operators immediately initiated actions to restore the TDAFW flowpath to the “B” SG. After the valve V-4006 was opened, they completed the testing of the TDAFW pump and declared the train operable at approximately 2347 EDST on October 14, 2003.

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

None

C. DATES AND APPROXIMATE TIMES OF OCCURRENCES:

- October 10, 2003, 0800: TDAFW flowpath aligned for startup completed.
- October 10, 2003, 1530 EDST: TDAFW flowpath isolated.
- October 12, 2003, 1320 EDST: Event date and time.
- October 14, 2003, 0446 EDST: Second event date and time.
- October 14, 2003, 2300 EDST: Discovery date and time.
- October 14, 2003, 2347 EDST: TDAFW flowpath restored.

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D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None

E. METHOD OF DISCOVERY:

This condition was discovered by the testing personnel during performance of procedure PT-16Q-T, "Auxiliary Feedwater Turbine Pump - Quarterly". The Control Room operators concluded that Mode 3 and Mode 2 had been entered without the required TDAFW flowpath operable, which was a condition prohibited by ITS LCO 3.0.4. The Control Room operators initiated actions to open the isolation valve so that the TDAFW flowpath could be restored to operable status. Subsequently, the Control Room operators notified higher supervision.

F. SAFETY SYSTEM RESPONSES:

None. This condition does not meet the definition for the NRC Performance Indicator (PI) "Safety System Functional Failure" (SSFF), because both MDAFW trains were operable, both SAFW trains were operable, and the redundant TDAFW flowpath was operable.

III. CAUSE OF EVENT:

The immediate cause of being in a condition prohibited by Technical Specifications was not fully meeting the requirements of ITS LCO 3.7.5 during the transition from Mode 4 to Mode 3 and from Mode 3 to Mode 2, since the TDAFW flowpath was considered inoperable in Mode 2 with the manual isolation valve V-4006 closed.

The intermediate cause of TDAFW flowpath to the "B" SG being considered inoperable was that the manual isolation valve V-4006 was closed as part of the system lineup used to fill the SGs, and this condition was not recognized as prohibited by Technical Specifications during the transition from Mode 4 to Mode 3 and from Mode 3 to Mode 2.

The underlying cause of not recognizing this condition during the transition from Mode 4 to Mode 3 and from Mode 3 to Mode 2 was personnel error. The organizational support established to ensure all pre-heatup requirements were satisfied was not adequately implemented. Alignment procedures T-41A and T-41G were performed essentially in parallel, and there was insufficient coordination of these activities to ensure T-41A was "re-performed" for components repositioned by T-41G.

This event is NUREG-1022 Cause Code (A), "Personnel Error".

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IV. ASSESSMENT OF THE SAFETY CONSEQUENCES OF THE 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". During the transition from Mode 4 to Mode 3 and from Mode 3 to Mode 2, having the TDAFW flowpath inoperable is prohibited by the Technical Specifications.

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 the TDAFW flowpath inoperable during the Mode changes because:

- Since the plant was in the process returning to power from a refueling outage at the time of discovery and was operating at approximately 2% reactor power, the safety significance was minimal due to the reduced decay heat potential.
- Ginna has five sources of safety related auxiliary feedwater including; two motor driven AFW (MDAFW) pumps rated at 200 GPM each, one TDAFW pump rated at > 400 GPM, and two standby AFW (SAFW) pumps rated at 200 GPM each. The minimum auxiliary feedwater flow for the most limiting UFSAR Chapter 15 accident is 200 GPM at 10 minutes. In an accident situation, the MDAFW pumps and the TDAFW pump will automatically start and supply flow which far exceeds the required amount of flow. In addition, the SAFW pumps would be manually started if required by Ginna Emergency Operating Procedures. The total available flow was approximately five times the minimum required for postulated events.
- The REQUIRED ACTIONs of the ITS LCO were complied with. These actions allow the plant a considerable time to be in this condition before a required transition back to Mode 4:

From the bases describing the REQUIRED ACTION for "One TDAFW train flowpath inoperable" (LCO 3.7.5, Condition).

- A.1 If one of the TDAFW train flow paths is inoperable, action must be taken to restore the flow path to OPERABLE status within 7 days. The 7 day Completion Time is reasonable, based on the following reasons:
- a. The redundant OPERABLE turbine driven AFW pump flow path;
 - a. The availability of redundant OPERABLE MDAFW and SAFW pumps; and

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- b. The low probability of an event occurring that requires the inoperable TDAFW pump flow path.

A TDAFW train flow path is defined as the steam supply line and SG injection line from/to the same SG.

If these Required Action and associated Completion Times are not met, the ITS LCO REQUIRED ACTIONS require that the plant be in Mode 3 within the next 6 hours and be in Mode 4 in the next 12 hours.

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

V. CORRECTIVE ACTIONS:

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

The manual isolation valve V-4006 to the "B" SG was restored to the open position. The flowpath was tested and declared operable.

- B. ACTION TAKEN OR PLANNED TO PREVENT RECURRENCE:

- Procedure T-41G will be revised to require a realignment when procedure T-41A is in affect.
- RG&E is currently evaluating enhancements to the process for maintaining configuration control during the plant realignment following an outage.

VI. ADDITIONAL INFORMATION:

- A. FAILED COMPONENTS:

None

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B. ENERGY INDUSTRY IDENTIFICATION SYSTEM COMPONENT FUNCTION IDENTIFIER:

COMPONENT	IEEE 803 FUNCTION	IEEE 805 SYSTEM IDENTIFICATION
auxiliary feedwater pump valve, isolation	P ISV	BA BA

C. PREVIOUS LERs ON SIMILAR EVENTS:

An historical search of LERs was conducted with the following results: LER 2000-004, "Two Fans Inoperable During Transition from Mode 5 to Mode 4, Due to Personnel Error, Resulted in Condition Prohibited by Technical Specifications", was a similar event at the Ginna Nuclear Power Plant.