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GNRO-2005/00072

December 19, 2005

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Subject: LER 2005-003-00 - Mode Change Contrary To Technical Specification LCO 3.0.4
Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29

Dear Sir or Madam:

Attached is Licensee Event Report (LER) 2005-003-00 which is a final report.

This letter does not contain any commitments.

Yours truly,

CAB/WBA

Attachment: LER 2005-003-00
cc: (See Next Page)

cc: NRC Senior Resident Inspector
Grand Gulf Nuclear Station
Port Gibson, MS 39150

U. S. Nuclear Regulatory Commission
ATTN: Dr. Bruce S. Mallet (w/2)
Regional Administrator, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

U. S. Nuclear Regulatory Commission
ATTN: Mr. Bhalchandra Vaidya, NRR/DORL (w/2)
ATTN: ADDRESSEE ONLY
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Washington, DC 20555-0001

Mr. D. E. Levanway (Wise Carter)
Mr. L. J. Smith (Wise Carter)
Mr. N. S. Reynolds
Mr. J. N. Compton

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 06/30/2007

Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@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 an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Grand Gulf Nuclear Station, Unit 1	05000 416	1 OF 4

4. TITLE LER 2005-003-00 - Mode change contrary to Technical Specification LCO 3.0.4

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	N/A
10	7	2005	2005	- 003 -	00	12	19	2005	FACILITY NAME: N/A	DOCKET NUMBER: N/A

9. OPERATING MODE

2

10. POWER LEVEL

0

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

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☒ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
Grand Gulf Nuclear Station - William B. Abraham, Senior Engineer Associate	601-437-2319

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 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

NRC FORM 366 (6-2004)

The Division I Load Shed and Sequencer power supply was replaced on October 7, 2005 as part of routine preventative maintenance. During a Technical Specification (TS) Surveillance performed on October 25, the as found voltages for the Division I Engineered Safety Features Degraded Voltage set points were found to be higher than the TS Allowable Values. This condition was immediately corrected; however, since the cause of the setpoints being outside the allowed values occurred during the power supply replacement on October 7, the setpoints had been out of the allowable values from October 7 until October 25. TS require that the setpoints be brought to within allowable values within 12 hours or declare the associated emergency diesel generator (EDG) inoperable (which prohibits changing plant operational modes). Since the impact of the power supply replacement on the Bus Under Voltage bistable setpoints was not recognized and the appropriate TS action statement was not entered, the station violated TS 3.0.4 when the plant was brought into Mode 2 on October 16 and again on October 18 when the plant was brought into Mode1.

This condition was determined to be reportable in accordance with 10CFR50.73(a)(2)(i)(B) since the plant was in an Operation or Condition prohibited by TS 3.0.4. There was no loss of safety function since it was limited to a single division and was a deviation in a setpoint. The system would have actuated somewhat earlier on a low voltage transient but would have functioned properly otherwise.

A. REPORTABLE OCCURRENCE

The Division I Load Shed and Sequencer (LSS) power supply was replaced on October 7, 2005 as part of routine preventative maintenance during a Refueling Outage. During a Technical Specification Surveillance performed on October 25, the as found voltages for the Division I Engineered Safety Features (ESF) Degraded Voltage set points were found to be higher than the Technical Specification Allowable Values. This condition was immediately corrected; however, since the cause of the setpoints being outside the allowed values occurred during the power supply replacement on October 7, the setpoints had been out of the allowable values from October 7 until October 25. Technical Specifications require that the setpoints be brought to within allowable values within 12 hours or declare the associated emergency diesel generator (EDG) [DG] inoperable (which prohibits changing plant operational modes). Since the impact of the power supply replacement on the Bus Under Voltage (BUV) bistable setpoints was not recognized and the appropriate Technical Specification action statement was not entered, the station violated Technical Specifications 3.0.4 when the plant was brought into Mode 2 on October 16 and again on October 18 when the plant was brought into Mode 1.

This condition was determined to be reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) since the plant was in an Operation or Condition prohibited by Technical Specification Limiting Condition for Operation (LCO) 3.0.4. There was no loss of safety function since it was limited to a single division and was a deviation in a setpoint. The system would have actuated somewhat earlier on a low voltage transient but would have functioned properly otherwise.

B. INITIAL CONDITIONS

At the time of the event, the reactor was in OPERATIONAL MODE 2 (STARTUP), at zero percent power.

C. DESCRIPTION OF OCCURRENCE

The Division I Load Shed and Sequencer power supply was replaced on October 7, 2005 as part of routine preventative maintenance in a Refueling Outage. This power supply provides the reference voltage for the Division 1 ESF Degraded Voltage bistable setpoints. A functional test of the power supply output was performed per the retest matrix contained in Administrative Procedure, 01-S-07-2 (Test Control), Revision 104.

During a Technical Specification Surveillance performed on October 25, the as found voltages for the Division I ESF Degraded Voltage set points were found to be higher than the Technical Specification Allowable Values. (The Load Shed and Sequencer uses a series of BUV bistables with a setpoint of 90 percent BUV and a series of BUV bistables with a setpoint of 70 percent BUV.

Only the 90 percent bistables were found out of Technical Specification Allowable Values. The 70 percent bistables were within Technical Specification Allowable.) This condition was immediately corrected; however, since the cause of the setpoints being outside the allowed values occurred during the power supply replacement on October 7, the setpoints had been out of the allowable values from October 7 until October 25.

Technical Specifications require that the setpoints be brought to within allowable values within 12 hours or declare the associated EDG inoperable (which prohibits changing plant operational modes). Since the impact of the power supply replacement on the BUV bistable setpoints was not recognized and the appropriate Technical Specification action statement was not entered, the station violated Technical Specification LCO 3.0.4 when the plant was brought into Mode 2 on October 16 and again on October 18 when the plant was brought into Mode 1.

D. APPARENT CAUSE

The cause has been determined to be a failure to recognize that a BUV bistable setpoint check was needed following the replacement of the power supplies within the LSS panel. Although the power supplies were within the manufacturer's specified voltage range, a difference in output voltage from the previously installed power supply altered the reference voltage utilized by the LSS logic, thus altering the setpoints to some degree.

E. CORRECTIVE ACTIONS

Immediate Corrective Actions:

- Bistable setpoints were adjusted within Technical Specification limits per Surveillance Work Order.

Long Term Corrective Actions:

- Condition Report (CR)-GGN-2005-04665 was initiated.

F. SAFETY ASSESSMENT

There was no loss of safety function since it was limited to a single division and was only a deviation in a setpoint. The system would have actuated somewhat earlier on a low voltage transient but would have functioned properly otherwise.

Therefore, there were no adverse safety consequences or implications as a result of the condition and the condition did not adversely affect the safe operation of the plant or health and safety of the public.

The condition would not have prevented the fulfillment of the safety function and did not result in a safety system functional failure as defined by 10 CFR 50.73(a)(2)(v).

G. ADDITIONAL INFORMATION

There have been no LERs written on a similar GGNS event in the past two years. Additionally reviewed CR's in the past 2 years and found no similar setpoint issues.