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M. A. Krupa
Director
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GNRO-2004/00027

April 15, 2004

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

Attention: Document Control Desk

Subject: LER 2004-001-00 - Unplanned Loss of Alternate Decay Heat Removal System Operability

Grand Gulf Nuclear Station
Docket No. 50-416
License No. NPF-29

Dear Sir or Madam:

Attached is Licensee Event Report (LER) 2004-001-00 which is a final report.
This letter does not contain any commitments.

Yours truly,

M. A Krupa

MAK/DMC:dmc
attachment: LER 2004-001-00

cc: (See Next Page)

cc:

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NRC FORM 366 (7-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 7-31-2004

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 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

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	05000
02	24	2004	2004	001	00	04	15	2004	FACILITY NAME N/A	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)		50.36I(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 Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		
	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	TELEPHONE NUMBER (Include Area Code)
Dennis M. Coulter, Senior Licensing Specialist	601-437-6595

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

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

On 2/24/04 Residual Heat Removal System A was the operating shutdown decay heat removal (DHR) system with the Alternate Decay Heat Removal System (ADHR) as the operable alternate. Division 2 Electrical Bus 16AB was de-energized at 0503 for a planned bus outage. This outage de-energized isolation valves E12-F004C and E12-F064C. These valves must have power or be closed for ADHR to be operable. It was identified at 0630 that these valves were open with their motors de-energized. ADHR was declared inoperable and LCO 1-OTS-04-0015 was entered.

Technical Specification (TS) 3.9.9 action A requires verification of an alternate method of decay heat removal (DHR) within one hour for each inoperable required DHR subsystem. ADHR was discovered to be inoperable 1- hour and 27- minutes after the event occurred. This resulted in exceeding the one hour TS time limit. TS 3.9.9 action B was not met due to not meeting the one hour time limit of action A.

At 0817 the two valves were closed. ADHR was declared operable and the LCO exited.

ADHR remained functional during the event due to installed check valve E12-F031C. This check valve would have prevented flow through the isolation valves. ADHR was inoperable per the SOI, which does not consider the check valve in determining operability.

This event is not considered risk significant. There were no safety system functional failures.

A. REPORTABLE OCCURRENCE

Residual Heat Removal System (RHR) A [BO] was in service operating in shutdown cooling mode with the Alternate Decay Heat System (ADHR) as the backup system. For ADHR to be considered operable per the System Operating Instruction (SOI), valves 1E12-F004C (RHR Pump Suction from Suppression Pool Valve) and 1E12F064C (RHR C Minimum Flow to Suppression Pool Valve) must either be closed or have electrical power available to their motor operators.

Contrary to this requirement, at 0503 hrs (event occurrence) on 2/24/04, the 16AB bus outage was commenced and subsequently de-energized power to the valves motor operators. The valves were not closed prior to de-energizing the 16AB bus.

This ADHR inoperable condition was discovered at 0630 hrs during shift turnover by an oncoming licensed operator. LCO 1-OTS-04-0015 was entered. Technical Specification (TS) 3.9.9 LCO action A is to verify an alternate means of decay heat removal within one hour. If LCO requirement A has not been completed within one hour then LCO action B requires steps be taken to immediately restore Secondary Containment, Standby Gas Treatment, and Containment Isolation Valves to operable. With the event occurring at 0503 hrs and discovery at 0630 hrs, one hour and twenty seven minutes passed without verification that an alternate system was available as required by LCO action A. Failing to meet TS 3.9.9 LCO action A within one hour resulted in LCO condition B not being initiated immediately after one hour and is reportable per 10CFR50.73(a)(2)(i)(B).

ADHR remained functional during the entire event due to installed check valve E12-F031C (RHR C discharge check valve). This check valve would have prevented flow to the Suppression Pool through either E12-F004C or E12-F064C. ADHR was inoperable per the SOI, which does not take credit for the installed and tested check valve in determining ADHR operability.

B. INITIAL CONDITIONS

At the time of the event, the reactor was in refueling mode with low water level in the refueling cavity. RHR A was operating in shutdown cooling mode with the ADHR System as the backup system. Electrical Bus 16AB was energized supplying power to valves 1E12F004C and 1E12F064C.

C. DESCRIPTION OF OCCURRENCE

At the beginning of night shift on 2/23/04 plans were made to start the Division 2 16AB bus outage later in the shift. Briefings were held, temporary power installed, and danger tag outs hung in preparation for the bus outage.

On 2/24/04 at 0503 hrs the 16AB bus breaker was opened to de-energize the 16AB bus. At this time RHR A was in service operating in shutdown cooling mode with ADHR as the backup system. For ADHR to be considered operable, valves 1E12-F004C (RHR Pump Suction from Suppression Pool Valve) and 1E12F064C (RHR C Minimum Flow to Suppression Pool Valve) must either be closed or have electrical power available to their motor operators. The motor operators for these two valves are supplied by the 16AB bus. The valves had neither temporary power nor were they closed in preparation for the 16AB bus outage. The ADHR system was rendered inoperable at 0503 hrs.

The inoperable condition of ADHR was discovered at 0630 hrs during shift turnover by an oncoming licensed operator. LCO 1-OTS-04-0015 was entered to restore the ADHR system, secondary containment, gas treatment, and containment isolation valves to service. Valve E12F064C was closed at 0748 hrs followed by valve E12F004C at 0817 hrs. At 0818 hrs, ADHR was declared operable and LCO-1-OTS-04-15 was exited.

D. APPARENT CAUSE

ROOT CAUSES

1) Assignment of personnel resources to the bus outage coordination function was ineffective.

2) Bus outage planning lacks appropriate rigor.

E. CORRECTIVE ACTIONS

Immediate Corrective Actions:

ADHR was declared inoperable and LCO 1-OTS-04-0015 was initiated. TS 3.9.9 action statement A was initiated to manually close the E12-F004C and E12-F064C valves to restore ADHR to operable. TS 3.9.9 action statement B was initiated to restore secondary containment, gas treatment, and containment isolation valves to service. At 0817 hrs E12-F004C and E12-F064C were closed. ADHR was declared operable and LCO 1-OTS-04-0015 action statements A and B were exited.

Long Term Corrective Actions:

Condition Report CR-GGN-2004-0651 was written.

F. SAFETY ASSESSMENT

The ADHR system was inoperable per the SOIs even though it was fully capable of performing its decay heat removal function. Check valve E12-F031C (RHR C discharge check valve) would have prevented flow to the Suppression Pool through either path, E12-F004C or E12-F064C. Credit for the check valve function is not permitted in making the operability determination. ADHR was functional but administratively inoperable.

Based on ADHR being fully functional this event is not considered safety-significant.

Because the RHR A system was working throughout this event, this event did not result in a Safety System Functional Failure.

There were no identified challenges to industrial, radiological, or public safety as the result of this event.

G. ADDITIONAL INFORMATION

Energy Industry Identification System (EIIS) codes are identified in the text within brackets [ ].

Previously submitted GGNS LERs:
There are no similar LERs written in the last four years.