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U. S. Nuclear Regulatory Commission
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Washington, DC 20555

Gentlemen:

LER 354/2001-010-00
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NO. NPF-57
DOCKET NO. 50-354

This Licensee Event Report entitled "Rod Block Monitor Channel Inoperable Due to Failed Local Power Range Monitor Card" was originally submitted as LER 354/2001-009-00 on February 11, 2002. It is being resubmitted as LER 354/2001-010-00 to differentiate it from Special Report (SR) 354/2001-009-00 submitted on January 10, 2002.

The attached LER contains no new information or commitments.

Sincerely,

G Salamon/MK

G. Salamon
Manager - Nuclear Safety & Licensing

Attachment

/PRD

C Distribution
LER File 3.7

IE22

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

LICENSEE EVENT REPORT (LER)

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

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4. TITLE

Rod Block Monitor Channel Inoperable Due to Failed Local Power Range Monitor Card

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 05000
12	12	2001	2001	– 010	– 00	02	28	2002	FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	1
10. POWER LEVEL	58

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 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)
Paul Duke, Licensing Engineer	856-339-1466

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
X	IG	MON	G080	Y					

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 12/20/01, it was noted that local power range monitor (LPRM) 48-41A was providing an upscale input to the rod block monitoring (RBM) system despite being bypassed. LPRM 48-41A failed low on 12/12/01 and had been bypassed in accordance with plant procedures. The cause of the erroneous input to the RBM was a failed LPRM card in the 10-C-608, Power Range Monitoring Panel. The LPRM card was pulled to eliminate the erroneous signal. The effect of the erroneous upscale output from LPRM 48-41A was to cause the RBM channel "A" gain change circuit to produce a lower than required gain, so that RBM channel "A" may not have been capable of imposing a rod block when required for 15 control rods in the vicinity of LPRM 48-41A. Since this condition existed for longer than the time permitted by TS 3.1.4.3, it is reportable as a condition prohibited by plant Technical Specifications in accordance with 10 CFR 50.73(a)(2)(i)(B). There were no safety consequences associated with this event. The applicable operating procedure will be revised to add a step requiring that the four rod display be checked when bypassing an LPRM to confirm that the output for the bypassed LPRM is zero.

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

PLANT AND SYSTEM IDENTIFICATION

General Electric – Boiling Water Reactor (BWR/4)
Rod Block Monitor System {IG}*

* Energy Industry Identification System {EIIS} codes and component function identifier codes appear as {SS/CCC}

IDENTIFICATION OF OCCURRENCE

Event Date: December 12, 2001
Discovery Date: December 20, 2001

CONDITIONS PRIOR TO OCCURRENCE

The plant was in OPERATIONAL CONDITION 1 (POWER OPERATION). No other structures, systems or components were inoperable at the start of this event that contributed to the event.

DESCRIPTION OF OCCURRENCE

Local power range monitor (LPRM) {IG/MON} 48-41A was identified to have failed low on 12/12/01 and was bypassed in accordance with plant procedures. On 12/20/01, during troubleshooting for an unrelated problem, it was noted that LPRM 48-41A was providing an upscale input to the rod block monitoring (RBM) system despite being bypassed. The cause of the erroneous input to the RBM was a failed LPRM card in the 10-C-608, Power Range Monitoring Panel. The LPRM card was pulled to eliminate the erroneous signal.

The effect of the erroneous upscale output from LPRM 48-41A was to cause the RBM channel "A" gain change circuit to produce a lower than required gain, so that RBM channel "A" may not have been capable of imposing a rod block when required for 15 control rods in the vicinity of LPRM 48-41A. Technical Specification (TS) 3.1.4.3 requires that an inoperable RBM channel be restored to OPERABLE status within 24 hours. Otherwise, the inoperable RBM channel is required to be placed in the tripped condition within the next hour.

Since this condition existed for longer than the time permitted by TS 3.1.4.3, it is reportable as a condition prohibited by plant Technical Specifications in accordance with 10 CFR 50.73(a)(2)(i)(B).

CAUSE OF OCCURRENCE

This event was caused by the failure of the bypass circuit on the LPRM flux amplifier card for LPRM 48-41A. For a selected control rod, each RBM channel averages up to eight LPRM inputs and applies the resultant voltage to a trip circuit for comparison with a flow bias voltage generated in the flow

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

CAUSE OF OCCURRENCE (continued)

control trip reference unit. If the LPRM average exceeds the flow bias voltage, the trip circuit trips and a rod withdrawal block is generated. RBM "A" receives signals from LPRM flux amplifier cards associated with "A" and "C" level detectors and RBM "B" receives signals from "B" and "D" level LPRM detectors surrounding the selected rod. When the LPRM averaging amplifier output is less than the core average power as determined by comparison to one of the Average Power Range Monitor (APRM) outputs, the gain of the averaging amplifier is increased until its output is at least equal to the APRM output. The effect of the erroneous upscale input to RBM "A" was to cause the gain change circuit to produce a lower than required gain. In addition, because the input from LPRM 48-41A was constant, the increase in output from the LPRM averaging circuit in response to a control rod withdrawal was lower than it would have been if LPRM 48-41A was properly bypassed. The procedure for bypassing LPRMs did not require verification that the input to the RBM is removed.

PREVIOUS OCCURRENCES

A review of reportable events within the last two years identified no similar occurrences of LPRM component failure resulting in RBM channel inoperability.

SAFETY CONSEQUENCES AND IMPLICATIONS

There were no safety consequences associated with this event. The LPRM card failure did not affect the associated APRM channel or the RBM channel "B" which remained capable of performing its function for the control rods associated with LPRM 48-41A. During the period covered by this report, the reactor was not operated on a LIMITING CONTROL ROD PATTERN. There was no impact to the public health and safety.

This event does not constitute a Safety System Functional Failure (SSFF) as defined in NEI 99-02.

CORRECTIVE ACTIONS

1. Removed LPRM card 48-41A to eliminate the erroneous signal to the RBM.

2. The applicable operating procedure will be revised to add a step requiring that the four rod display be checked when bypassing an LPRM to confirm that the output for the bypassed LPRM is zero.

COMMITMENTS

The corrective actions cited in this LER are voluntary enhancements and do not constitute commitments.