

## LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)

RIVER BEND STATION

DOCKET NUMBER (2)

05000 458

PAGE (3)

1 OF 4

TITLE (4)

DAMPER ISOLATIONS AND AUTOMATIC SWAP OF DIVISIONAL CONTROL BUILDING VENTILATION/CHILLER TRAINS DUE TO INADEQUATE WORK PLAN

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	22	91	91	003	03	03	16	93		05000
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
1			20.402(b)			20.405(c)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			73.71(b)	
100			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(v)	
			20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(vi)	
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(vii)(A)	
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(viii)(B)	
									50.73(a)(2)(ix)	

## LICENSEE CONTACT FOR THIS LER (12)

NAME

L.A. ENGLAND, DIRECTOR - NUCLEAR LICENSING

TELEPHONE NUMBER (include Area Code)

(504) 381-4145

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

## SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED  
SUBMISSION  
DATE (15)

MONTH DAY YEAR

YES

(If yes, complete EXPECTED SUBMISSION DATE)

☒

NO

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

At 1055 on 3/22/91, during maintenance on the Division II control building local air intake radiation monitor 1RMS\*RE13B, the Division II control power circuit was de-energized. This resulted in the de-energization of the Division II charcoal filter train suction dampers 1HVC\*AOD19D and 1HVC\*AOD19F, and isolation of the air operated dampers (AODs) to the Division II air handling units, 1HVC\*AOD6B and 1HVC\*AOD8B. Note that dampers 19D and 19F were closed at the time of the event. The isolations resulted in a trip of the Division II control building ventilation system/chiller and automatic swap to the Division I ventilation system/chiller. This report is submitted pursuant to 10CFR50.73 to document the engineered safety feature (ESF) actuations described above. The event occurred during the implementation of Modification Request (MR) 90-0071. This MR specified that the RM-80 mother board was to be removed from 1RMS\*RE13B. The root cause of this event is that the maintenance planner overlooked the 115 VAC control power to the RM-80 mother board and thus, the potential for the ESF actuations.

This event concerned the engineering/maintenance planning interface and responsibility. As previously reported in LER 90-033, Revision 3, a task force evaluation of this issue was performed and the task force recommendations have been approved by management and are being implemented.

REQUIRED NUMBER OF DIGITS/CHARACTERS  
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 - FACILITY NAME 8 TOTAL - DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
RIVER BEND STATION	05000 458	91	003	03	2 OF 4

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

**REPORTED CONDITION**

At 1055 on 3/22/91, during maintenance on the Division II control building local air intake radiation monitor 1RMS\*RE13B (\*RA\*), the Division II control power circuit was de-energized. This resulted in the deenergization of the Division II charcoal filter train suction dampers (\*DMP\*), 1HVC\*AOD19D and 1HVC\*AOD19F, and isolation of the air operated dampers (\*DMP\*) (AODs) to the Division II air handling units, 1HVC\*AOD6B and 1HVC\*AOD8B. Note that dampers 19D and 19F were closed at the time of the event. The isolations resulted in a trip of the Division II control building ventilation (\*VI\*) system/chiller and automatic swap to the Division I ventilation (\*VI\*) system/chiller. This report is submitted pursuant to 10CFR50.73 to document the engineered safety feature (ESF) actuations described above.

**INVESTIGATION**

The event occurred during the implementation of Modification Request (MR) 90-0071. This modification was written to swap electronic components between radiation monitors (\*RA\*) 1RMS\*RE13B and 1RMS\*RE14B in an effort to mitigate noise problems. This MR specified that the RM-80 mother board was to be removed from 1RMS\*RE13B. The design ESF actuation of the unit had been disabled by disconnecting the vendor wiring from the neutral side connection on the control interface junction box. However, the 115 VAC control power supplied by circuit 1HVCB14 was left connected. The circuit overload apparently resulted from the removal of the RM-80 mother board while the control power was still connected. Fuse (\*FU\*) 1HVCB14-F2 failed, resulting in a loss of power to the components supplied by the control circuit, and thus, the ESF actuations described above.

The root cause of this event is that the maintenance planner overlooked the 115 VAC control power to the RM-80 mother board and thus, the potential for the ESF actuations. During the development of the work plan, lifting of the neutral lead was specified to defeat the design ESF actuation of 1RMS\*RE13B. This is a standard practice when performing routine maintenance on the radiation monitors, and was a correct step in this case. However, the removal of the RM-80 mother board is non-routine maintenance and required the additional step of isolating the control power. A contributing factor to the event was that voltage monitoring was not performed to ensure that the mother board was not powered prior to removal.

A review of previous reports has identified three similar events. LER 90-033 identified an isolation of the reactor water cleanup (RWCU) system during modifications to power supply wiring in a control room panel. LER 89-016 reported isolations of valves (\*ISV\*) 1DER\*AOV126 and 1DFR\*AOV101 during a modification in panel (\*PL\*) 1H13\*P852. An engineering analysis

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		91	003	03	

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completed prior to the implementation of the modification (to install an emergency operating procedure actuation switch) did not reveal the potential for relay 3B-2-IISCB04 to react before relay 3B-IISCB04 when the AC daisy chain neutral for the Division II BOP loss of coolant accident (LOCA) initiation circuit was reestablished. LER 90-035 reported a loss of shutdown cooling when a cable (\*CBL3\*) was disconnected from control room panel (\*PL\*) 1H13-P692. The system engineer prepared a cable-effects list for a modification. This was caused by the system engineer not recognizing that the removal of the cable would result in the isolation of valve 1E12\*MOVF009.

Each of these events concerned the engineering/maintenance planning interface and responsibility. As previously reported in LER 90-033, Revision 3, a task force evaluation of this issue was performed and the task force recommendations have been approved by management and are being implemented.

## **CORRECTIVE ACTION**

The immediate corrective action was the lifting of the vendor wiring to the hot side of circuit 1HVCB14. The work plan was revised to document correct removal and restoration of both the hot and neutral wiring. Fuse 1HVCB14-F2 was replaced. The control building ventilation system was restored to its pre-event line-up by operations personnel.

All instrumentation and controls (I&C) personnel will be instructed on the actuation interfaces which are typical of the ESF digital radiation monitoring system (DRMS) units, and emphasis will be placed on the fact that lifting the neutral lead alone is not sufficient for non-routine maintenance such as mother board removal. The Industry Events training material in the I&C training program will be revised to incorporate this information by 11/25/91. I&C personnel will complete instruction by 01/30/92. In addition, the associated condition report was added to required reading for all I&C personnel and I&C planners. This required reading was completed on 05/02/91.

In addition, the maintenance planning department has an ongoing enhancement program which will strengthen the planning process. A lead planner position was created with the responsibility to review selected packages after planning and before issuance to the field. This selective review permits the lead planners to oversee the quality of the MWOs produced within their groups. Any noticeable trends or programmatic issues are then discussed with the responsible planners to ensure that the quality of maintenance planning activities is maintained at a high standard.

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SAFETY ASSESSMENT

The ESF actuations all occurred per design. The control room ventilation system automatically shifted to its redundant standby train, as designed. Therefore, this event did not adversely affect the health and safety of the public.