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 FACIL:50-305 Kewaunee Nuclear Power Plant, Wisconsin Public Service 05000305
 AUTH.NAME AUTHOR AFFILIATION
 ROZELL,D.L. Wisconsin Public Service Corp.
 SCHROCK,C.A. Wisconsin Public Service Corp.
 RECIPIENT NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-004-00:on 920321,Train B containment ventilation isolation occurred,constituting ESF.Caused during performance of design change procedure to replace test relays.LER will be routed to personnel.W/920413 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 8
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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April 13, 1992

10 CFR 50.73

U. S. Nuclear Regulatory Commission
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Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Reportable Occurrence 92-004-00

In accordance with the requirements of 10 CFR 50.73, "Licensee Event Report System," the attached Licensee Event Report for reportable occurrence 92-004-00 is being submitted.

Sincerely,

C.A. Schrock

C. A. Schrock
Manager-Nuclear Engineering

VJC/jac

Attach.

cc - INPO Records Center
Mr. Patrick Castleman, US NRC
US NRC, Region III

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Kewaunee Nuclear Power Plant	DOCKET NUMBER (2) 0 5 0 0 0 1 3 0 1 5	PAGE (3) 1 OF 0 1 7
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TITLE (4) Containment Ventilation Actuation (ESF) Due to Containment Ventilation System Startup During Performance of Design Modification

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		
									N/A		
0	3	12	92	004	00	0	4	13	DOCKET NUMBER(S) 0 5 0 0 0 0		

OPERATING MODE (8) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)									
	POWER LEVEL (10) 0.0 b	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)					
	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.406(a)(1)(vi)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME Dennis L. Rozell - Plant Nuclear Engineer	TELEPHONE NUMBER
	AREA CODE: 4 1 4 3 1 8 8 - 1 2 5 6 1 0

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

CAUSE	SYSTEM	COMPONENT	MANUFAC. TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC. TURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) N/A MONTH DAY YEAR

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

On March 12, 1992, at 2155 hours, with the plant in refueling shutdown, a Train B containment ventilation isolation occurred, which is an engineered safety feature (ESF). The plant condition at the time of this event did not require the operability of either channel of this feature. Train A radiation monitor R-21 remained operable. This event occurred during the performance of a design change procedure that was replacing test relays in the ESF system relay cabinets. When the power lead for one relay was re-terminated the containment ventilation isolation alarm actuated in the control room, and a partial containment vent isolation occurred. The containment purge/vent supply and exhaust valves, RBV-2 and RBV-3, closed, and the containment purge and ventilation supply fan and containment ventilation exhaust fans tripped off as designed.

The root cause of this event was the sequence of events associated with performing the design change procedure and the startup of the containment ventilation system.

This LER will be routed to the Operations Department, Operations Training, I&C, and Design Modification groups.

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		YEAR 9 2	SEQUENTIAL NUMBER 0 0 4	REVISION NUMBER 0 0			

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

Description of Event

On March 12, 1992, at 2155 hours, with the plant in refueling shutdown, a Train B containment ventilation isolation occurred, which is an engineered safety feature (ESF). The plant condition did not require the operability of this ESF feature. The plant was in a condition where containment integrity was not required. This event occurred during the performance of a design change request (DCR) procedure that was replacing test relays [RLY] in the ESF system relay cabinets [CAB]. When the power lead for one relay was re-terminated the containment ventilation isolation alarm [ALM] actuated in the control room and the following containment vent isolation actions occurred:

1. RBV-2, the containment purge/vent supply valve [ISV] closed,
2. RBV-3, the containment purge/vent exhaust valve [ISV] closed,
3. the containment purge and ventilation supply fan [FAN] tripped off, and
4. the containment purge and ventilation exhaust fan [FAN] tripped off.

This event occurred during the performance of design change procedure DCR #2279-69, "TRB1/TRB4 Relay Replacement/Addition." The purpose of the design change was to replace test relay TRB1, and to install a new test relay, TRB4. To replace relay TRB1, the power lead (J1) to the TRB1 contacts was lifted (refer to note 2 and 3 on figure 1). This interrupted power to various relays including relays V20X and V21X in the Train B containment ventilation isolation circuitry. Power to the radiation monitoring circuitry for both A and B trains was not interrupted.

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						OF

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At the same time the control room operators were placing the containment ventilation system in service using operating procedure N-RBV-18B, "Reactor Bldg Vent System Cold Operation and Making Releases". The system had been removed from service for an unrelated DCR. This procedure requires the operator to position the containment system air particulate radiation monitor, R-11, "Sample Selector" control switch to "VENT". The R-11 switch is a "break-before-make" device. As designed, when the sample selector switch was repositioned a high radiation alarm was actuated, which energized relay VB and closed contacts 4/8 and 9/13 in the containment ventilation circuitry (see figure 2). At this time no actuation or alarms occurred because power had been removed from relays V20X and V21X as part of DCR 2279.

The sequence of events and pertinent facts follows:

1. Relay TRB1 was de-energized by procedure DCR #2279-69 which also de-energized relays V20X and V21X.
2. The operator moved the R-11 sample select switch [HS] to VENT during the startup of the containment vent system. This actuated the Control Room high radiation alarm and energized the containment vent isolation relay VB. This in turn closed the 4/8 and 9/13 VB contacts.
3. The 8/4 contacts on TRB2 and TRB3 are normally closed contacts.

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4. The operator did not receive either the containment vent isolation or associated alarm since relays V20X and V21X were not energized and therefore did not reset the containment vent isolation signal (Procedure N-RBV-18B does not refer to this alarm).

5. At 2155 hours the J1 power lead was laid down on terminal 19 and then 18 of TRB1 by procedure DCR #2279-69. This immediately energized relays V20X and V21X, causing the containment vent isolation alarm to actuate (V21X) and actuation of a Train B containment vent isolation (V20X).

Cause of Event

The root cause of this event was the equipment status that resulted from activities associated with performing the design change procedure and the startup of the containment ventilation system. Due to the DCR procedure being performed at the same time the containment ventilation system was started up, the operator did not reset the containment ventilation isolation signal after repositioning the R-11 "Sample Selector" switch. The operator was aware that the relays for the containment isolation function were de-energized for the DCR procedure, but was unaware of the lock-in feature of the radiation monitoring circuitry contacts. Actions to reset the circuitry were not identified as being necessary because neither the containment ventilation isolation nor associated alarm were received.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Analysis of Event

This event is being reported in accordance with 10 CFR 50.73 (a)(2)(iv) as a condition that resulted in the automatic ESF actuation of the containment vent isolation system. This incident was reported to the Nuclear Regulatory Commission at 2352 on March 12, 1992, in accordance with 10 CFR 50.72(b)(2)(ii).

There were no safety consequences as a result of the actuation. Radiation levels remained normal throughout the event and the cause of the incident was quickly identified. All automatic safety equipment actuated as designed. Had high radiation levels been detected, operational automatic safety features would have performed their designed functions.

At 2336 hours the containment isolation circuitry was reset.

Corrective Actions

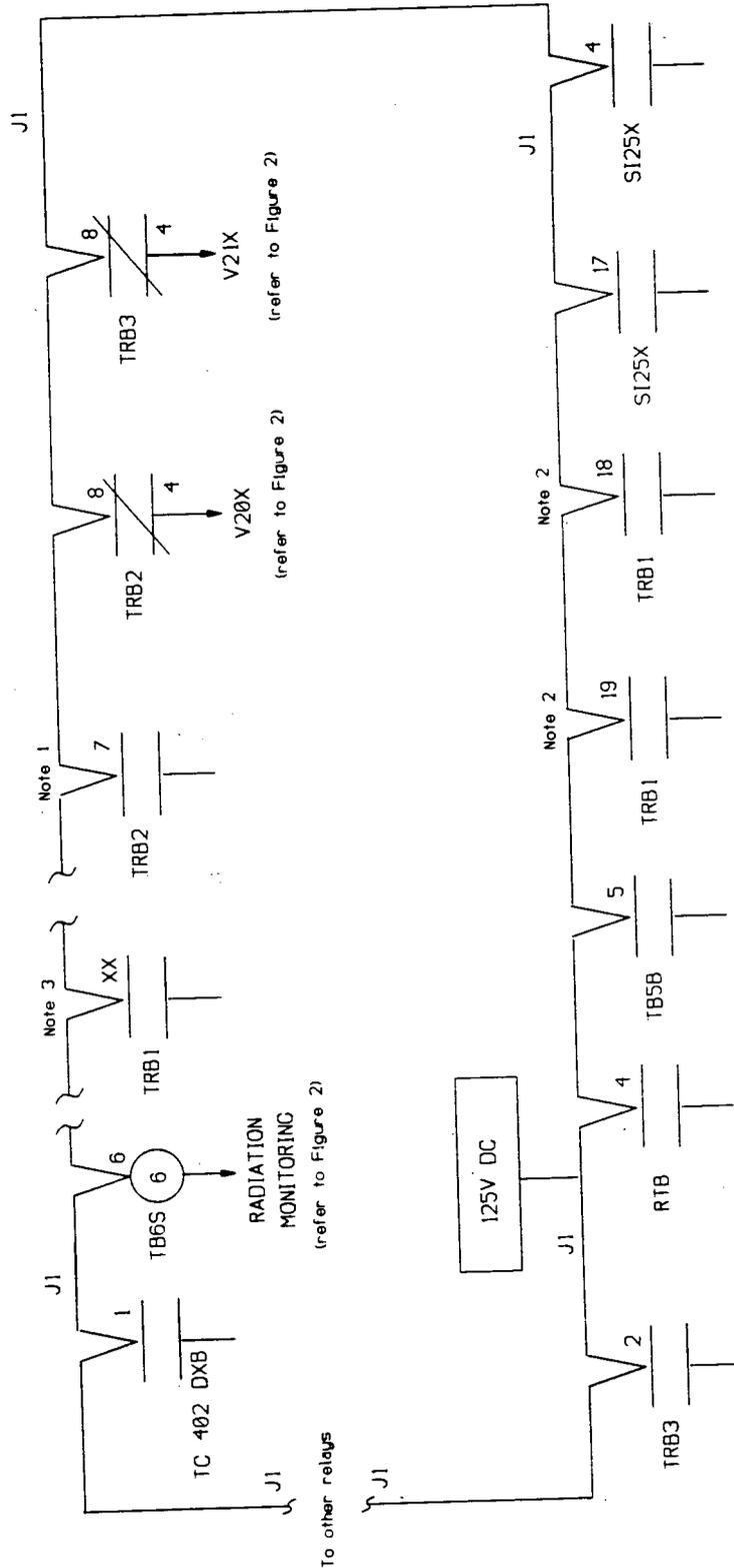
Shortly following this event the control room operators were provided a description of the design of the R-11 sample selector switch and the fact that it will initiate a high radiation alarm and containment vent isolation. This LER will also be routed to the Operations Department, Operations Training, I&C, and Design Modification groups.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 2	- 0 0 4	- 0 0	0 6	OF 0 7

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Figure 1



Conditions at time of event

- Note 1 - TRB1 contact 8 was not re-energized yet, therefore, TRB2 contact 7 was not powered
- Note 2 - J1 was re-connected to TRB1 contact 19 and then to contact 18 which then supplied power to relays V20X and V21X.
- Note 3 - the leads were lifted from relay TRB1 contacts 13, 5, 14, 6, 15, 7, 16, and 8, respectively. Contacts 19 and 18 shown separately

FACILITY NAME (1)

Kewaunee Nuclear Power Plant

DOCKET NUMBER (2)

05000305

LER NUMBER (6)

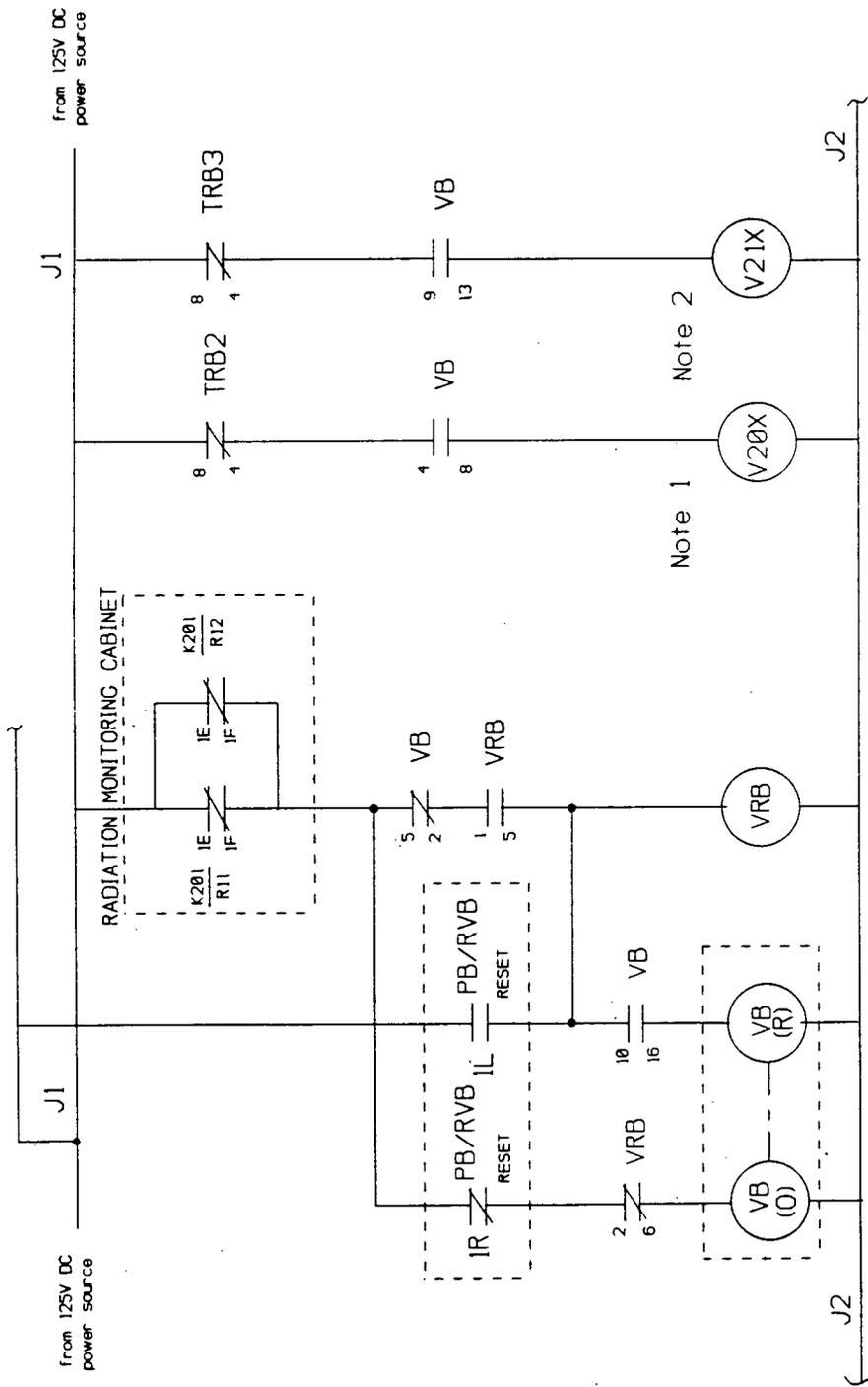
YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
912	0104	00

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Figure 2



Note 1
Note 2

Note: 1. V20X Initiates Containment Vent Isolation
2. V21X Initiates alarms only

Drawing reference E2712