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October 1, 1990

10 CFR Part 50
Section 50.73

Director of Nuclear Reactor Regulation
U S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Inadvertent Mispositioning of the Control Switch
of 11 Shield Building Ventilation Heater Control

The Licensee Event Report for this occurrence is attached.

Please contact us if you require additional information related to this event.

Thomas M Parker
Manager
Nuclear Support Services

c: Regional Administrator - Region III, NRC
NRR Project Manager, NRC
Senior Resident Inspector, NRC
MPCA
Attn: Dr J W Ferman

Attachment

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NRC FORM 366 (5-89)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Prairie Island Nuclear Generating Plant Unit 1	0 5 0 0 0 2 8 2	1 OF 0 4

TITLE (4) Inadvertent Mispositioning of the Control Switch of 11 Shield Building Ventilation Heater Control

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	DOCKET NUMBER(S)
0 8	3 0	9 0	9 0	0 1 3	0 0	1 0	0 1	9 0	Prairie Island Unit 2	0 5 0 0 0 3 0 6
										0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	XX 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Arne A Hunstad	6 1 2 3 8 8 - 1 1 2 1

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

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

On August 30, 1990, Unit 1 was at 100% power. Surveillance procedure SP1172, Ventilation System Monthly Operation, was in progress. During the test, at 1804, the control room operator noticed that the monitor light indicating proper operation of No. 11 Shield Building Vent Filter Heater was not lit. Investigation showed that the local control switch for the heater was in the OFF position. The switch was immediately returned to the ON position.

It is known that the switch was in its proper position on August 22, so the heater could have been inoperable for 8 days. From the investigation of the event, it is concluded that the switch was moved inadvertently and unknowingly by a workman in the area.

Corrective action will include the installation of protective covers over this switch and those with similar function to prevent inadvertent operation.

EVENT DESCRIPTION

On August 30, 1990, Unit 1 was at 100% power. Surveillance procedure SP1172, Ventilation System Monthly Operation, was in progress. During the test, at 1804, the control room operator noticed that the monitor light indicating proper operation of No. 11 Shield Building Vent Filter Heater was not energized. Investigation showed that the local control switch (EIIS Component Identifier HS) for the heater was in the "OFF" position. The switch was immediately returned to the "ON" position.

It is known that the switch was in its proper position on August 22, 1990, so the heater could have been inoperable for 8 days.

CAUSE OF THE EVENT

Investigation of work records showed that no work was done on the system which would have resulted in changing the switch position.

A search of the component tagging record system showed that no equipment control tags were issued for this switch.

The switch position is not changed as part of any routine operations procedures.

Personnel who would have had a reason to be in the area were interviewed; no one was aware of repositioning of the switch.

A change in switch position is not annunciated, so inadvertent movement would not be noticed by local operators or control room operators.

From the above investigation, it is concluded that the switch was moved inadvertently and unknowingly by a workman in the area.

ANALYSIS OF THE EVENT

If a Safety Injection Signal had been actuated, both trains of the Shield Building Ventilation System would have started automatically, but the heater for one train of filtration would not have been energized. The heater is used to maintain relative humidity below 70% as air is drawn through the filter. With the heater off, the charcoal filter would have lost some of its effectiveness in removing iodine. The heater was not capable of performing its related support function; therefore, one train of the Shield Building Ventilation System was inoperable. The redundant train was operable.

Prairie Island Technical Specification 3.6.H.1 requires both Shield Building Ventilation System trains to be operable when reactor coolant system temperature is above 200°F. Technical Specification 3.6.H.2 allows one train of Shield Building Ventilation System to be inoperable up to seven days. Conservatively assuming that the filter heater control switch was off for the entire period of 8 days, this Technical Specification was violated. Therefore, this event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

Assuming a reduced iodine removal efficiency for the charcoal filter, a preliminary evaluation was performed. This evaluation concluded that the site boundary dose (0-2 hours) and the low population zone dose (0-30 days) would have been less than the 10 CFR Part 100 guidelines in the event of a LOCA. A more detailed evaluation will be performed to verify these results. This evaluation will be completed by November 30, 1990.

CORRECTIVE ACTION

Upon discovery, the switch was returned to the "ON" position and the heater verified to be energized. Switches in similar applications (7 others) were inspected and found to be in their proper positions.

An investigation was begun immediately, and an independent investigation was undertaken by the plant's Error Reduction Task Force.

Protective covers will be installed over the 8 switches to prevent inadvertent operation. Until that time, daily verification of proper switch position is being done.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

There have been other instances of inadvertent switch operation, but none reported on this system.