

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P.630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

FACILITY NAME (1)

Shoreham Nuclear Power Station Unit 1

DOCKET NUMBER (2)

0 5 0 0 0 3 2 2

PAGE (3)

1 OF 0 4

TITLE (4)

Unplanned Actuation of Engineered Safety Feature Systems while Lifting a Jumper

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)
12	13	90	90	010	000	10	09	91			0 5 0 0 0
											0 5 0 0 0

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

LICENSEE CONTACT FOR THIS LER (12)													
NAME											TELEPHONE NUMBER		
Robert A. Pauly, Operational Compliance Engineer (Acting)											5 1 6 9 2 9 - 8 3 1 0 1 0		
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)													

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRDOS

SUPPLEMENTAL REPORT EXPECTED (14)											EXPECTED SUBMISSION DATE (15)		
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO											MONTH: DAY: YEAR:		

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

On 12/13/90 at 1038, an unplanned actuation of the ESF systems Reactor Building Standby Ventilation System (RBSVS) and Control Room Air Conditioning (CRAC) "B" occurred when removing a jumper across the Low Reactor Building D/P contact in an initiating circuit for RBSVS and CRAC. The Reactor Building Normal Ventilation System was being operated in a recirculation mode at the time. The jumper was originally installed in order to prevent RBSVS and CRAC initiations which might occur if Reactor Building pressure control proved to be difficult in this newly developed recirculation mode. Following the event, plant management personnel were informed and the NRC was notified at 1150 per 10CFR50.72 (b)(2)(ii). The cause of this event involved an inadequate procedure and lapses in communications between the persons involved. Corrective actions include a procedure revision and making a report of this event Required Reading for engineers, technicians and mechanics.

*Reactor Defueled

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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 800 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Shoreham Nuclear Power Station Unit 1	DOCKET NUMBER (2) 06000322	LER NUMBER (6)			PAGE (3)	
		YEAR 90	SEQUENTIAL NUMBER 010	REVISION NUMBER 000	2	OF 4

TEXT (if more space is required, use additional NRC Form 366A-1 (17))
PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

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

IDENTIFICATION OF THE EVENT

Unplanned ESF Actuations (Control Room Air Conditioning [VI] "B" and Reactor Building Standby Ventilation System [BH] "B") while removing a jumper.

Event Date: 12/13/90

Report Date: 01/09/91

CONDITIONS PRIOR TO THE EVENT

Reactor Defueled - All fuel assemblies stored in the Spent Fuel Pool.
Mode Switch - Shutdown
RPV Drained

DESCRIPTION OF THE EVENT

In order to reduce humidity and protect layed up equipment in the Reactor Building, the Reactor Building Normal Ventilation System (RBNVS) has been modified. Instead of drawing in outside air and then exhausting Reactor Building air, this modification allows the RBNVS to operate in a recirculation mode where no outside air is drawn in, the air inside the building is recirculated, and only enough air is exhausted to maintain the Reactor Building pressure at less than atmospheric.

When this modification was placed in service on 12/7/90 it was believed that Reactor Building pressure control might be difficult and so jumpers were used to override the Low Reactor Building D/P initiations of Reactor Building Standby Ventilation System (RBSVS) and Control Room Air Conditioning (CRAC). In order to perform a surveillance test on 12/13/90 and because Reactor Building pressure had been stable, it was decided to remove the jumpers. The jumper on the "A" initiating logic was removed without any incident. Then at 1038, on 12/13/90, when the jumper across the "B" Low Reactor Building D/P contact was removed, an unplanned actuation of the ESF systems RBSVS and CRAC "B" occurred. Plant management personnel were notified of the event and the NRC was notified at 1150. At 1250, the RBSVS and CRAC initiation signals were reset and the systems restored to their normal lineups.

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TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503

FACILITY NAME (1) Shoreham Nuclear Power Station Unit 1	DOCKET NUMBER (2) 105000322	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (if more space is required, use additional NRC Form 366A's) (17)

CAUSE OF THE EVENT

There were several factors that led to this event. Station Procedure 23.418.01, HVAC-Reactor Building, stated that to inhibit or restore automatic initiation of RBSVS on low Reactor Building D/P, jumpers should be installed or removed, respectively. However, in these circuits, both installing or removing jumper wires with ring lugs causes a relay to deenergize which in turn causes the actuation of RBSVS and CRAC. The procedure did not address this and this fact was not discovered during initial testing of the modification because at that time only temporary jumper wires were used and these had alligator clips rather than ring lugs.

When the RBNVS was initially placed into the recirculation mode on a long term basis, it was realized that installation of jumper wires with ring lugs would cause RBSVS and CRAC to actuate. But, at this time, installing the jumpers per the procedure did not have any effect on the systems because RBSVS and CRAC were already operating. Thus, no precautions or special instructions were placed on the Lifted Lead & Jumper Permit to warn others upon removal of the jumpers.

Communications between I&C and Operations prior to removal of the jumpers were informal and not specific. I&C personnel requested that the jumpers be removed in order to permit the performance of a Reactor Building D/P - Low Functional Surveillance. Operations personnel were concerned about the effect that jumper removal would have on RBSVS and CRAC. However, this concern was misunderstood by I&C personnel and was never fully resolved.

The technician removed the jumper on the "A" side logic without causing an initiation because RBSVS and CRAC "A" had already been initiated due to an unrelated event. The technician realized that relays had changed state but he did not report this to the Watch Engineer before he removed the jumper on the "B" side. Removal of the latter jumper caused the initiation of RBSVS and CRAC "B".

ANALYSIS OF THE EVENT

There was no safety significance to this event. The plant is shutdown and has been defueled since August 1989.

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FACILITY NAME (1) Shoreham Nuclear Power Plant Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 2 9 0	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		0 1	0	0 0	0 4	OF 0 4

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

CORRECTIVE ACTIONS

1. Station Procedure 23.418.01, HVAC - Reactor Building, will be revised by adding precautions to preclude an unplanned initiation of RBSVS and CRAC when installing and removing the jumpers.
2. A review of Station Procedure 12.035.01, Control of Lifted Leads and Jumpers, will be conducted to determine if a procedure revision could prevent recurrence of this event. If necessary, a station procedure change will be made.
3. A Incident Report covering this event will be made Required Reading for operations personnel, technicians, mechanics and engineers. This report discusses the causes of this event, corrective actions and lessons learned.
4. The Plant Manager established a policy which requires that no lifted leads and jumpers be installed or removed from the RBSVS without the explicit sign-off of an I&C Foreman and the I&C Engineer.

ADDITIONAL INFORMATION

- a. LER numbers of previous similar events

LER 85-050, 86-026, 86-038, 86-044, 88-003, 89-010, 90-002,
90-007