

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Shoreham Nuclear Power Station Unit #1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 2 1	PAGE (3) 0 4
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TITLE (4) RBSVS "A" Side Initiation During An I&C Surveillance Procedure When A Technician Accidentally Brushed A Relay With A Lifted Lead

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		
1	0	4	8	6	8	0	3	8	0 5 0 0 0 0		
1	0	4	8	6	8	0	3	8	0 5 0 0 0 0		

OPERATING MODE (8) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
	20.402(b)	20.406(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
POWER LEVEL (10) 0 10 1 0	20.406(a)(1)(i)	50.36(a)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)					
	20.406(a)(1)(ii)	50.36(a)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
20.406(a)(1)(iii)	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)							
20.406(a)(1)(iv)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)							
20.406(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME	AREA CODE	NUMBER	
Robert W. Grunseich, Operational Compliance Engineer	5 1 1 6	9 1 2 9 1 - 1 8 3 1 0 0	

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

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

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

On October 4, 1986 at 1044, a RBSVS "A" side initiation occurred during an I&C surveillance test when an I&C technician accidentally brushed a lifted lead against a relay. The plant was in Operational Condition 4 (Cold Shutdown) at the time with the mode switch in Shutdown and all rods inserted in the core. The technician was performing a channel functional test on the "A" Reactor Building Differential Pressure Transmitter, 1T46\*PDT043A, in accordance with SP44.650.16 (Reactor Building Differential Pressure - Low Channel Functional Test). As he was lifting the leads to prevent an inadvertant RBSVS and CRAC initiation, the technician accidentally brushed one of the leads against a relay in the RBSVS initiation logic circuitry. Unaware of whether or not the relay had changed state, he stopped work and notified the Control Room who informed him that conditions had not changed. He then proceeded with the test. As he reterminated the lifted leads, the Reactor Building Normal Ventilation System (RBNVS) isolated and an "A" side RBSVS initiation occurred. The Control Room instructed the technician to return the leads to the as found position, secured the RBSVS, and returned the RBNVS to normal at 1052. Plant Management was notified of the event and the NRC was notified at 1230 per 10CFR50.72. To prevent recurrence, procedural revisions will be implemented.

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USE IF MORE SPACE IS REQUIRED FOR ADDITIONAL NRC Form 204a (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

Reactor Building Standby Ventilation System (RBSVS) [VA] "A" side initiation occurred during an Instrument and Controls (I&C) Surveillance procedure when an I&C technician accidentally brushed a relay with a lifted lead.

Event Date: 10/4/86

Report Date: 10/24/86

CONDITIONS PRIOR TO THE EVENT

Operational Condition 4 (Cold Shutdown)

Mode Switch - Shutdown

RPV Pressure = 0 psig

RPV Temperature = 145 Degrees F

All rods inserted in the core.

DESCRIPTION OF THE EVENT

On October 4, 1986 at 1044, a RBSVS "A" side initiation occurred during an I&C surveillance test when an I&C technician accidentally brushed a lifted lead against a relay. The technician was performing a channel functional test on the "A" Reactor Building Differential Pressure Transmitter, 1T46\*PDT043A, in accordance with SP44.650.16 (Reactor Building Differential Pressure - Low Channel Functional Test). As he was lifting the leads to prevent an inadvertent RBSVS and CRAC initiation, the technician accidentally brushed one of the leads against a relay in the RBSVS initiation logic circuitry. Unaware of whether or not the relay had changed state, he stopped work and notified the Control Room who informed him that conditions had not changed. He then proceeded with the test. As he reterminated the lifted leads, the Reactor Building Normal Ventilation System (RBNVS) isolated and

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\*LF\* If more space is required use additional NRC Form 206A (117)

an "A" side RBSVS initiation occurred. The Control Room instructed the technician to return the leads to the as found position, secured the RBSVS, and returned the RBNVS to normal at 1052. Plant Management was notified of the event and the NRC was notified at 1230 per 10CFR50.72.

CAUSE OF THE EVENT

This event occurred because the accessibility to the terminals is extremely difficult. The relay is located in the lower portion of the panel (1H21\*PNL-VX1) forcing the technician to crouch in order to perform the procedure. This relay (3-1T46-A35) is part of the RBSVS "A" initiation logic circuitry and had changed state when the technician brushed a lead against it. However, the RBSVS did not initiate due to its initiating signal being jumpered out. When the lead was replaced, the RBSVS initiated. The technician notified the Control Room immediately, and Operations secured RBSVS at 1052 and returned RBNVS to normal. The technician was fully qualified to perform the surveillance test.

ANALYSIS OF THE EVENT

This event resulted in an unplanned automatic initiation of an Engineered Safety Feature (RBSVS) and is reportable per 10CFR50.73(a)(2)(iv). There is no safety significance to the event. The RBSVS operated as designed and operators carried out all required actions. No other systems were challenged or required as a result of the event. Had this event occurred under a more severe set of circumstances (5% power) there would still be no safety significance.

CORRECTIVE ACTIONS

1. LER 86-026 discusses a similar occurrence while performing the exact same procedure (SP44.650.16). The corrective action taken was to initiate an Engineering request to propose the installation of test switches to disable the RBSVS/CRAC initiation logic in lieu of lifting leads. This request (EEAR 86-116) was initiated and is currently being reviewed.



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\* LER (if more space is required use additional NRC Form 2664's (17))

2. In order to minimize inadvertant RBSVS/CRAC initiations during the performance of this procedure (SP44.650.16), I&C will coordinate with Operations the revision of their surveillance procedures to combine the channel functional test with the operability test. SP44.650.16 will be revised to initiate RBSVS/CRAC in lieu of lifting leads and this test will be performed in conjunction with SP24.405.01 (RBSVS Filter Train Operability Test) to satisfy the Technical Specification Surveillance requirements.

ADDITIONAL INFORMATION

- a. Manufacturer and model number of failed component (s)  
None
  
- b. LER numbers of previous similar events  
  - LERs 85-030, 050 and 057
  - LER 86-026



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\*LF\* (If more space is required use additional NRC Form 204A's (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

Reactor Building Standby Ventilation System (RBSVS) [VA] "B" initiation while performing maintenance.

Event Date: 10/6/86

Report Date: 10/24/86

CONDITIONS PRIOR TO THE EVENT

Operational Condition 4 (Cold Shutdown)

Mode Switch - Shutdown

RPV Pressure = 0 psig                      RPV Temperature = 145 degrees F

All rods inserted in the core

DESCRIPTION OF THE EVENT

On October 6, 1986 at 1346 there was an unplanned initiation of the Reactor Building Standby Ventilation System (RBSVS) "B" Train. The Equipment Operator (EO) was clearing a tag on Reactor Building Normal Ventilation System (RBSVS) valve 1T46\*AOV-035B as required by Station Equipment Clearance Permit (SECP) 86-10-28. The jacking screw on the valve actuator had been fully inserted to block the system intake isolation valve open and allow I&C to repair an instrument air leak on the actuator. The EO was backing the jacking screw out when air pressure to the actuator ejected the screw and loss of air caused the valve to isolate. In response to the isolation signal, the RBSVS "B" Train initiated. Plant Management was notified at 1456 and the NRC was notified at 1455 per 10CFR50.72. The jacking screw was re-installed and the RBSVS was returned to service. The RBSVS was in service for approximately one (1) hour prior to being secured.



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		YEAR	SEQUENCE NUMBER	REVISION NUMBER			

\*ER\* If more space is required use additional NRC Form 256A's (17)

CAUSE OF THE EVENT

The cause of the incident was that the design did not require a retaining device or some indication that the screw was nearing the end of its thread engagement. Nor was it specified in any Station Procedure that the screw was part of the pressure boundary of the actuator. The EO involved in this incident is qualified per SP21.006.01.

ANALYSIS OF THE EVENT

The event was an unplanned actuation of an Engineered Safety Feature (RBSVS), and is reportable per 10CFR50.73(a)(2)(iv). There was minimal safety significance to the event. The RBSVS initiated on an isolation signal per design. Had the event occurred under a more severe set of circumstances (5% power) there would be no appreciable increase in significance.

CORRECTIVE ACTIONS

Twelve Maintenance Work Requests have been initiated, MWR's 86-5008 through 86-5019, inclusive, to accomplish the marking of the jacking screw on this and similar valves to the limit the screw can safely be withdrawn, and warning signs will be affixed to each actuator to delineate the hazard, consequences and the reason for the markings. Engineering will be requested to evaluate the feasibility of a permanent retaining device to eliminate the potential for recurrence of this event. To prevent recurrence, the Incident Report, IR 86-022, will become required reading for all operators, mechanics, and technicians.

ADDITIONAL INFORMATION

- a. Manufacturer and model number of failed component (s)  
Fisher Controls Company - 72" Type 9220 Valve Assembly with Bettis T-316 SR2-M3 Rotary Actuator.
- b. LER numbers of previous similar events  
None



**LONG ISLAND LIGHTING COMPANY**

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TEL. (516) 929-8300

October 24, 1986

PM-86-285

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Dear Sir:

In accordance with 10CFR50.73, enclosed are copies of Shoreham's Nuclear Power Station Unit 1's Licensee Event Reports 86-038 and 86-039.

Sincerely yours,

William E. Steiger, Jr.  
Plant Manager

WES/pz

Enclosure

cc: Dr. Thomas E. Murley, Regional Administrator  
John Berry, Senior Resident Inspector  
Institute of Nuclear Power Operations, Records Center  
American Nuclear Insurers

SR.A21.0200

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