



BOSTON EDISON

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May 7, 1992
BECo Ltr 92-056

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

Docket No. 50-293
License No. DPR-35

The enclosed supplemental Licensee Event Report (LER) 90-018-01, "Inadvertent Actuation of a Portion of the Secondary Containment System During Surveillance Testing Due to Procedure Error," is submitted in accordance with 10 CFR Part 50.73.

Please do not hesitate to contact me if there are any questions regarding this report.

Roy A. Anderson
R. A. Anderson

WJM/bal

Enclosure: LER 90-018-01

cc: Mr. Thomas T. Martin
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LICENSEE EVENT REPORT (LER)

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-30), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TITLE (4) **Inadvertent Actuation of a Portion of the Secondary Containment System During Surveillance Testing Due to Procedure Error**

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)														
1	0	2	2	9	0	9	0	9	0	1	8	0	1	0	0	5	0	0	0	N/A	0	5	0	0	0
1	0	2	2	9	0	9	0	9	0	1	8	0	1	0	0	5	0	0	0	N/A	0	5	0	0	0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)									
POWER LEVEL (10) 1 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(i)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(a)(1)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(i)						
	<input type="checkbox"/> 20.405(a)(1)(vi)	<input type="checkbox"/> 50.38(a)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 306A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(B)							
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME William Munro - Senior Compliance Engineer		AREA CODE 5 0 8	7 4 7 - 8 4 7 4

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRCDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRCDS

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

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

On October 22, 1990 at 1045 hours, an inadvertent actuation of the Channel 'A' portion of the Reactor Building Isolation Control System (RBIS) occurred during a semi-annual surveillance test. The actuation resulted in the automatic closing of the Train 'A' secondary Containment System (SCS)/Reactor Building ventilation dampers and the automatic start of Train 'A' of the SCS/Standby Gas Treatment System (SGTS). The RBIS circuitry was reset, the affected SCS dampers were reopened, and the SGTS was returned to normal standby status at 1049 hours. The cause was a procedure error. The surveillance procedure was previously revised to reflect a modification that was scheduled to be implemented during power operation. The modification was not implemented because of the potential for adverse operational impact during power operation. The procedure was not revised again prior to performing the surveillance to reflect the unmodified RBIS circuit. The procedure has now been revised to reflect the unmodified RBIS circuit. Additional corrective actions taken included revision of the Conduct of Operations procedure incorporating guidelines regarding restoration of equipment should a procedural activity be interrupted or cannot be completed as written. This actuation was an isolated occurrence. A directive was issued by the Plant Department Manager emphasizing that all procedure owners are responsible for having up-to-date procedures stressing that these procedures must be current with plant design. The actuation occurred during power operation with the reactor mode selector switch in the RUN position. The reactor power level was 100 percent. The Reactor Vessel (RV) pressure was 1036 psig with the RV water temperature at 548 degrees Fahrenheit. This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv) and the actuation posed no threat to the public health and safety.

LICENSEE EVENT REPORT (LER)
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.

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		0 1 8	0 1	0 2	OF	0 5

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

REASON FOR SUPPLEMENT

This supplemental report is being submitted to identify changes to some of the corrective actions that were planned when the initial report was submitted.

EVENT DESCRIPTION

On October 22, 1990 at 1045 hours, an inadvertent actuation of the Channel 'A' portion of the Reactor Building Isolation control System (RBIS) occurred during a semi-annual surveillance test.

The actuation resulted in the automatic closing of the Secondary containment System (SCS/Reactor building Train 'A' supply and exhaust ventilation dampers and the automatic start of Train 'A' of the SCS/Standby Gas Treatment System (SGTS).

The surveillance was being performed per procedure 8.M.2-1.5.8.1 (Rev. 16), "High Drywell Pressure, Low Water Level and High Radiation Logic System A-Inboard Functional Test". The event occurred when a utility licensed operator intentionally moved the keylocked RBIS channel 'A' control switch from the TEST LOGIC position to the STANDBY position. This operator action was taken after the removal of jumpers and insulating boots that had been installed for the surveillance. This action was taken as requested and as a result of a problem discovered at step 19[(d)(2)] of Attachment 1 of the procedure. For step 19[(d)(2)], jumpers were to be installed at Panel C-7 terminal block K (from points 41 to 42 and from points 45 to 46). Prior to installing the jumpers, the Instrumentation and Control technicians noted that no wires were connected to/from the terminal block. [The terminal block enables the installation of jumpers to the terminal block instead of jumpering contacts 5-6 and 9-10 of RBIS Channel 'A' relay RPWA. A modification (FRN 90-02-15) that had been approved for the connection of the terminal block to the circuitry had not yet been implemented.] The jumpers were not installed per step 19[(d)(2)] because the terminal block was not connected. The Nuclear Watch Engineer (senior shift licensed operator) was notified and the surveillance test was halted. After review by the technicians and Operations personnel, a decision was made to abort the surveillance test (i.e., remove the previously installed jumpers and insulating boots in reverse order. After the jumpers and insulating boots had been removed, the technicians requested that the control switch be moved from the TEST LOGIC position to the (normal) STANDBY position; however, the control and seal-in circuit (containing relays 16A-K17 and 16A-K17X) that becomes de-energized as part of the surveillance and is reset at step 21 of the test, was not reset prior to the movement of the control switch and remained de-energized, thereby generating an isolation signal.

The RBIS circuitry was reset. The affected Reactor Building ventilation dampers were reopened and the SGTS was returned to normal standby status at 1049 hours.

Failure and Malfunction Report 90-363 was written to document the event. The NRC Operations Center was notified on October 22, 1990 at 1220 hours.

LICENSEE EVENT REPORT (LER)
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 (F-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.

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TEXT (If more space is required, use additional NRC Form 305A's) (17)

CAUSE

A critique of the event was conducted and attended by appropriate personnel including the Instrumentation and Control (I&C) technicians who performed the test.

The cause of the actuation was procedure error. The procedure (8.M.2-1.5.8.1) was revised (to Rev. 16) and issued on July 14, 1990 for the modification (FRN 90-02-13). The modification was originally scheduled for implementation during power operation on July 17, 1990. The procedure was revised by the I&C Division as requested by the Modification Management Division (responsible for modification co-ordination). The modification's implementation was postponed (i.e., not implemented) as scheduled because of the operational impact during power operation. However, the I&C Division was not notified of the implementation change and, therefore, the procedure was not revised (to its previous version) prior to performing the surveillance test.

There were no component or system failures that caused or resulted from this event.

CORRECTIVE ACTION

The initial Licensee Event Report committed to corrective actions that included the revision of Nuclear Organization Procedure 83E1, "Control of Modifications for Pilgrim Station", and Procedure 1.3.4-1.9, "Temporary and Special Test Procedures Formatting Guide". Management review of these documents and the isolated nature of this event resulted in the subsequent determination that revising these procedures is not warranted. A directive from the Plant Department Manager was issued emphasizing that all procedure owners are responsible for having up-to-date procedures and stressing that these procedures must be current with plant design.

Procedure 1.3.34, "Conduct of Operations", was revised (to Rev. 32) and issued on May 16, 1991. The revision provided guidelines regarding restoration of equipment if a procedural activity is interrupted or cannot be completed (such as procedure 8.M.2-1.5.8.1 on October 22, 1990).

Procedure 8.M.2-1.5.8.1 was revised (to Rev. 17) on November 7, 1990 to reflect the existing RBIS Channel "A" circuitry.

As a result of corrective actions taken as part of LER 92-002-00, the need to install FRN 90-02-03 has been eliminated. The steps that initiate Reactor Building Isolation and Standby Gas Treatment start relays (RPWA and RPWA1) have been removed from Procedure 8.M.2-1.5.8.1, Rev. 19, and this procedure will no longer test the energizing or seal-in function of relays RPWA or RPWA1. These functions are currently accomplished in Procedure 8.M.2-1.5.9.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THE INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-330), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT: If more space is required, use additional NRC Form 386A's (17)

SAFETY CONSEQUENCES

This event posed no threat to the public health and safety.

The RBIS actuation that occurred was the designed response to the movement of the RBIS Channel 'A' control switch to the STANDBY position with the seal-in circuitry (including relay 16A-K17) not reset.

This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv) because the RBIS actuation, although a designed response, was not an expected part of the test being performed.

SIMILARITY TO PREVIOUS EVENTS

A review was conducted of Pilgrim Station Licensee Event Reports (LERs) written since January 1984. The review focused on LERs submitted in accordance with 10 CFR 50.73(a)(2)(iv) involving an RBIS actuation that occurred during a surveillance type activity. The review identified related events reported in LERs 50-293/85-015-00, 85-017-00, 88-011-00, 89-003-00 and 89-035-00, and 92-002-00.

For LER 85-015-00, an RBIS actuation occurred during power operation while performing a daily check (procedure 2.1.15) of the SCS/Reactor Building refuel floor ventilation exhaust radiation monitors. The event occurred on June 24, 1985 at 0718 hours when the cover of an RBIS Channel 'A' monitor (located at Panel C-910) was closed too hard. The closure of the cover resulted in an upscale trip signal that together with a concurrent RBIS Channel 'B' trip signal, resulted in the event. The cause was attributed to utility licensed operator error.

For LER 85-017-00, an RBIS actuation occurred during power operation while performing a semi-annual surveillance test (procedure 8.M.2-1.5.8.2). The event occurred on July 12, 1985 at 1500 hours when the contacts of two logic relays (RBIS Channels 'A' and 'B') were incorrectly opened contrary to the procedure. The cause was attributed to utility non-licensed technician error.

For LER 88-011-00, an RBIS actuation occurred during an outage while performing a daily check (procedure 2.1.15) of the four SCS/Reactor Building refuel floor exhaust radiation monitors located at Panel C-910. The event occurred on March 31, 1988 at 1242 hours as a result of incorrectly resetting each of the first three monitors prior to checking the fourth monitor. The cause was attributed to utility licensed operator error.

For LER 89-003-00, an RBIS actuation occurred during an outage while performing a semi-annual surveillance test (procedure 8.M.2-1.5.8.1). The event occurred on January 15, 1989 at 1620 hours when the keylocked RBIS Channel 'A' control switch, located at Panel C-7, was inadvertently moved to the TEST position instead of the TEST LOGIC position during the test. The cause was attributed to utility licensed operator error.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 300 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-830), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555 AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (if more space is required, use additional NRC Form 306A's) (17)

For LER 89-035-00, an RBIS actuation occurred during power operation while performing a semi-annual surveillance test (8.M.2-1.5.8.1). The event occurred on November 11, 1989 at 1411 hours while installing a jumper to relay RPWA contacts 9-10 in Panel C-7. The cause for the event was the location of the relay (RPWA) that adversely affected the ability to jumper the normally closed pair of contacts (9-10) for the test. Corrective action taken for the event included the issuance of the modification (FRN 90-02-13) to facilitate the surveillance testing (e.g. 8.M.2-1.5.8.1) of the RBIS Channel 'A' logic circuitry.

For LER 92-002-00, an RBIS actuation occurred during power operation while performing surveillance test 8.M.2-1.5.8.1 (Rev. 18). The event occurred on February 27, 1992 at 1008 hours, while installing a jumper to relay RPWA contacts 9-10 in Panel C-7. The cause of the event was limited access to relay RPWA which created the actuation after an I&C technician had connected a jumper to stationary contact 9. While attempting to connect the jumper to armature contact 10, the clamping arm of the jumper came in contact with adjacent armature contact 12 and, thereby, resulted in the event. Corrective action taken for the event, was a revision of procedures 8.M.2-1.5.8.1 and 8.M.2-1.5.8.2 to eliminate the need to install a jumper to relay RPWA and RPWB for the test.

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

The EIIS codes for this report are as follows:

<u>COMPONENTS</u>	<u>CODES</u>
Switch, Hand (RPWA)	HS
 <u>SYSTEMS</u>	
Containment Isolation Control System (RBIS)	JM
Engineered Safety Features Actuation System (RBIS)	JE
Panels System (C-7)	JL
Reactor Building (SCS)	NG
Reactor Building Environmental Control System (RBIS)	VA
Standby Gas Treatment System (SGTS)	BO