

BOSTON EDISON

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

March 19, 1992
BECo Ltr. 92-030

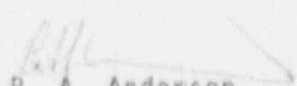
Roy A. Anderson
Senior Vice President - Nuclear

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

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

The enclosed Licensee Event Report (LER) 92-002-00, "Inadvertent Actuation of a Portion of the Secondary Containment System during Surveillance Testing due to Limited Access to an Actuating Relay", 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.


R. A. Anderson

JPC/bal

Enclosure: LER 92-002-00

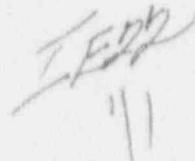
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Standard BECo LER Distribution

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LICENSEE EVENT REPORT (LER)

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-300), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0101), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Pilgrim Nuclear Power Station

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050002193

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TITLE (4) Inadvertent Actuation of a Portion of the Secondary Containment System during Surveillance Testing due to Limited Access to an Actuating Relay

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)	
02	27	92	92	002	00	03	19	92	N/A	0500000	
									N/A	0500000	

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)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(2)(i)	20.405(a)(2)(ii)	20.405(a)(2)(iii)	20.405(a)(2)(iv)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	50.73(a)(2)(iv)	72.71(a)	72.71(b)	OTHER (Specify in Abstract, Attach and in Text NRC Form 306A)
100															

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Jeffery P. Calfa - Senior Compliance Engineer	508 747 8108

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

On February 27, 1992 at 1008 hours, an inadvertent actuation of the Channel 'A' portion of the Reactor Building Isolation Control System (RBIS) occurred during a once-per-18 month 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 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 1018 hours.

Limited access to the RBIS Channel 'A' relay created the difficult evolution which resulted in the actuation. The functions of the RBIS channel 'A' relay were to be bypassed by installation of jumpers. The isolation was caused during the difficult evolution of jumpering this relay while working in a limited space. It was determined it was not necessary to energize this relay while bypassing its functions since it is tested by similar initiation signals in other procedures. The procedure has been revised to maintain the RBIS channel 'A' relay de-energized.

The actuation occurred during power operation with the reactor mode selector switch in the RUN position. The reactor power level was 100 percent. Reactor pressure was approximately 1030 psig and reactor water temperature was approximately 550 degrees Fahrenheit. This report is submitted in accordance with 10 CFR 50.73(a)(2)(iv). 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: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530) U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20549, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0194), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

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YEAR SEQUENTIAL NUMBER REVISION NUMBER

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TEXT (if more space is required, use additional NRC Form 356A's) (17)

EVENT DESCRIPTION

On February 27, 1992 at 1008 hours, an inadvertent actuation of the channel 'A' portion of the Reactor Building Isolation Control System (RBIS) occurred during a once-per-18 month surveillance test. The actuation resulted in the automatic closing of the Secondary Containment System/Reactor Building Train 'A' supply and exhaust ventilation dampers and the automatic start of Train 'A' of the Standby Gas Treatment System (SGTS).

Instrumentation and Control (I&C) personnel were performing Revision 18 of surveillance Procedure 8.M.2-1.5.8.1, "High Drywell Pressure, Low Water Level, and High Radiation Logic System A - Inboard Functional Test". The event occurred at Step 19 [(d)(2)b] of Attachment 1 of the procedure. Personnel were required to install a jumper in Panel C-7 to RBIS Channel 'A' relay RPWA contacts 9-10. Access to the relay within Panel C-7 is limited. This jumper was required in order to maintain electrical continuity across the normally-closed contacts. The 125 VDC coil of relay RPWA is normally de-energized but the coil would later be energized in a subsequent procedural step. The I&C personnel were using a special jumper with retractable clamping arms. After connecting the jumper to the lead of stationary contact number 9, the other end of the jumper was being connected to armature contact number 10. Contact 10 is located in close proximity to contact 12, the armature side of the RPWA seal-in contacts. The jumper clamping arms had to be extended prior to attachment to contact number 10. As the arms were extended, the outside of the uninsulated jumper arm made an electrical connection with contact number 12. Relay RPWA became energized causing actuation of the Channel 'A' portion of RBIS.

The RBIS circuitry was reset. The affected Reactor Building ventilation dampers were reopened and the SGTS was returned to normal standby status at 1018 hours.

Failure and Malfunction Report 92-51 was written to document the event. The NRC Operations Center was notified on February 27, 1992 at 1049 hours.

The actuation occurred during power operation with the reactor mode selector switch in the RUN position. The reactor power level was 100 percent. Reactor pressure was approximately 1030 psig and reactor water temperature was approximately 550 degrees Fahrenheit.

CAUSE

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

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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-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.

FACILITY NAME (1)

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

Limited access to relay RPWA created the difficult evolution which resulted in the actuation. The need to perform the difficult jumpering of RPWA contacts 9-10 in the relatively inaccessible area of panel C-7 has been evaluated. The jumper was procedurally required along with five other jumpers in order to bypass the actuation functions of relay RPWA. The RPWA relay would be energized later in the procedure as a result of a simulated high drywell pressure/reactor vessel low water level signal. A review of the six overlapping surveillances that satisfy the SGTS logic system functional test requirements found that the actuation of relay RPWA is accomplished in a similar fashion by other procedures with the same frequency as 8.M.2-1.5.8.1. Procedure 8.M.2-1.5.9, "Primary Containment Isolation Valve Testing", verifies RPWA will become energized by a simulated high drywell pressure/reactor vessel low water level signal. Procedure 8.M.2-1.5.8.3, "Logic System Functional Test of System "A" Standby Gas Treatment Initiation, Reactor Building Isolation and Inboard Drywell Isolation Valves", verifies all the functions of relay RPWA occur when it is energized. There was procedural overlap. This overlap will allow deletion of the difficult jumpering procedure steps.

Since RPWA is verified energized and capable of performing its functions in other procedures, Revision 19 to Procedure 8.M.2-1.5.8.1 was approved on February 27, 1992. Power to energize RPWA is blocked during the procedure by placing the RBIS Test Logic/Trip Channel "A" key switch to the "TEST LOGIC" position.

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

CORRECTIVE ACTION

Procedure 8.M.2-1.5.8.1 (Rev. 19) was recommended for approval by ORC and subsequently approved by station management on February 28, 1992. The procedure was successfully performed on March 2, 1992.

Procedure 8.M.2-1.5.8.2, "High Drywell Pressure, Low Water Level and High Radiation Logic System B - Outboard Functional Test", which bypasses relay RPWB in a similar fashion as RPWA in 8.M.2-1.5.8.1, was also revised. No other procedures were identified in which jumpers were used to bypass the RBIS actuation relays.

SAFETY CONSEQUENCES

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

The RBIS/SGTS actuation that occurred was the designed response to relay RPWA becoming energized from inadvertent electrical connection across contacts 9-12.

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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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-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.

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TEXT (If more space is required, use additional NRC Form 380A's) (17)

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 from jumpering during a surveillance type activity. The review identified related events reported in LERs 50-293/89-035-00 and 90-018-00.

For LER 89-035-00, an RBIS actuation occurred during power operation while performing 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 of the event was identified to be the location of the RPWA relay in Panel C-7. This location adversely affected the I&C technician's ability to jumper the normally-closed 9-10 contacts. As discussed in this LER, procedural overlap will allow deletion of the difficult jumpering steps.

For LER 90-018-00, an RBIS actuation occurred during power operation while performing surveillance test 8.M.2-1.5.8.1 on October 22, 1990 at 1045 hours. The procedure had been revised to reflect a proposed modification of the jumpering points of RPWA contacts 9-10. The modification had not been implemented due to schedule constraints. The procedure was not revised again prior to performing the surveillance to reflect the unmodified RBIS circuit. I&C personnel realized this after the surveillance had been started. The isolation occurred while I&C personnel reversed the performance of steps while backing out of the procedure. The proposed modification discussed in LER 50-018-00 is no longer necessary as a result of the procedure revisions described in this report.

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

The EIIS codes for this report are as follows:

COMPONENTS

Relay (RPWA)

CODES

RLY

SYSTEMS

Containment Isolation Control System (RBIS)
Engineered Safety Features Actuation System (RBIS)
Panels System (C-7)
Reactor Building (SCS)
Reactor Building Environmental Control System (RBIS)
Standby Gas Treatment System (SGTS)

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