



BOSTON EDISON

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

Ralph G. Bird
Senior Vice President — Nuclear

November 19, 1990
BECo Ltr 90-144

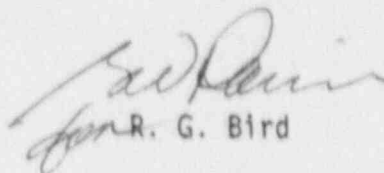
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

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

Dear Sir:

The enclosed Licensee Event Report (LER) 90-018-00, "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.



R. G. Bird

DWE/bal

Enclosure: LER 90-018-00

cc: Mr. Thomas T. Martin
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Rd.
King of Prussia, PA 19406

Sr. NRC Resident Inspector - Pilgrim Station

Standard BECo LER Distribution

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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-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) Pilgrim Nuclear Power Station		DOCKET NUMBER (4) 0 5 0 0 0 2 9 3 1	PAGE (3) 1 OF 0 5
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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	0	1	8	0	0	1	1	9	9	0	N/A	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 § (Check one or more of the following) (11)									
POWER LEVEL (10) 1 0 0	20.402(b)	20.405(e)	60.73(a)(2)(iv)	73.71(b)						
	20.405(a)(1)(i)	60.36(e)(1)	60.73(a)(2)(v)	73.71(c)						
	20.405(a)(1)(ii)	60.36(e)(2)	60.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	20.405(a)(1)(iii)	60.73(a)(2)(i)	60.73(a)(2)(vii)(A)							
	20.405(a)(1)(iv)	60.73(a)(2)(ii)	60.73(a)(2)(vii)(B)							
	20.405(a)(1)(v)	60.73(a)(2)(iii)	60.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME Douglas W. Ellis - Senior Compliance Engineer	TELEPHONE NUMBER AREA CODE: 5 0 8 7 4 7 - 8 1 6 0
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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)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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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 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. Corrective actions to be taken include strengthening interdepartmental controls governing the issuance of a procedure associated with a modification.

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: 50.0 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.

FACILITY NAME (1) Pilgrim Nuclear Power Station	DOCKET NUMBER (2) 05000293	LER NUMBER (6)			PAGE (8)	
		YEAR 90	SEQUENTIAL NUMBER -018	REVISION NUMBER -010	02	OF 05

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

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 90-02-13) 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 discontinue 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 thereby resulted in the event.

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. The completion of the surveillance test will be tracked via the Master Surveillance Tracking Program.

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.

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 approximately 1036 psig with the RV water temperature at 548 degrees Fahrenheit.

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-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 306A's) (17)

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.

The cause for the actuation was a 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

Nuclear Organization Procedure 8.0E1 (dated 3/15/90), "Control of Modifications for Pilgrim Station", will be revised. The purpose of the revision is to improve the (interdepartmental) controls governing the issuance of a document (e.g. procedure) associated with a modification.

Procedure 1.3.4-1.9 (currently Rev. 0), "Temporary and Special Test Procedures Formatting Guide", will be revised. The purpose of the revision is to uniquely identify a procedure to be used for pre-operational testing and thereby preclude the use of an operational procedure (e.g. surveillance) until a modification has been implemented.

Guidelines will be issued regarding the restoration of equipment if a procedural activity is interrupted (i.e., such as 8.M.2-1.5.8.1 on October 22, 1990).

The procedure (8.M.2-1.5.8.1) was revised (to Rev. 17) to reflect the existing RBIS Channel 'A' circuitry (i.e., FRN 90-02-13 not yet implemented).

The modification (FRN 90-02-13) has been scheduled to be implemented during the next refueling outage (RFO 8).

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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS
INFORMATION COLLECTION REQUEST 60.0 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.

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TEXT (If more space is required, use alternate NRC Form 360A'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 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.

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.

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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

The EIIS codes for this report are as follows:

COMPONENTS

Switch, Hand (RPWA)

CODES

HS

SYSTEMS

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