NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Pilgrim Nuclear Power Station	0 5 0 0 0 2 9 3	1 OF 0 4

TITLE (4)
Inadvertent Manual Start of the 'B' Emergency Diesel Generator

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)
									N/A	0 5 0 0 0
0 4	2 5	8 8	8 8	— 0 1 3	— 0 0	0 5	2 5	8 8	N/A	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)			
N		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 0	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Douglas W. Ellis - Compliance Division Engineer	AREA CODE 6 1 7 7 4 7 - 1 8 1 6

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
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On April 25, 1988 at 1430 hours, an inadvertent manual start of the 'B' Emergency Diesel Generator (EDG) occurred. The generator started but did not supply power to its Bus (A-6) because the Bus was already energized. Following immediate investigation by the operating shift personnel, the generator was returned to normal standby service at approximately 1445 hours.

The cause for the manual start was utility technician personnel error. The technician mistakenly pushed the manual start switch instead of an annunciator reset switch during a work activity involving the local control panel of the generator.

Improvements to the local control panels of both EDGs ('A' and 'B') hav been identified and are being tracked. The improvements include possible relocation of the annunciator reset switch(es) and modification of the manual start switch(es).

This event occurred during an extended outage while in cold shutdown. The reactor mode switch was in the SHUTDOWN position. The control rods were in the inserted position. The Reactor Vessel water temperature was 95 degrees Fahrenheit with negligible core decay heat. The Reactor Vessel pressure was zero psig. The reactor power level was zero megawatts-thermal. The 'A' EDG was operable and in standby service. Emergency Busses A-5 and A-6 were energized with 4160 VAC power from the offsite transmission system.

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

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

EVENT DESCRIPTION

On April 25, 1988 at 1430 hours, an inadvertent manual start of the 'B' Emergency Diesel Generator (EDG) occurred. The generator did not supply power to its emergency 4160 VAC Bus (A-5) because the Bus was already energized, but was capable of this function at the time of the event.

Following immediate investigation by the operating shift personnel, the diesel generator was returned to normal standby service at approximately 1445 hours.

Failure and Malfunction Report 88-91 was written to document the event. The NRC Operations Center was notified on April 25, 1988 at 1627 hours.

This event occurred during an extended outage while in cold shutdown with the following plant conditions. The reactor mode selector switch was in the SHUTDOWN position. The control rods were in the inserted position. The Reactor Vessel water temperature was approximately 95 degrees Fahrenheit with negligible core decay heat. The Reactor Vessel pressure was zero psig. The reactor power level was zero megawatts-thermal. The 'A' EDG was operable and in normal standby service. Emergency Busses A-5 and A-6 were energized with 4160 VAC power from the offsite 345 KV transmission system.

CAUSE

The cause for the manual start of the diesel generator was utility technician personnel error. An Instrumentation and Control (I&C) technician mistakenly pushed the manual start switch instead of the annunciator reset switch on the local control panel (C-104B) of the diesel generator.

Factors contributing to the error were the location of the manual start switch and its proximity to the annunciator reset switch on the panel. The switches are located at the same level above the floor (i.e., at hip level) and are approximately six inches apart. The annunciator windows located on the panel are approximately five to six feet above the floor (i.e., at eye level).

The technician was calibrating the discharge pressure switch (PS-PLPS-B) for the electrically driven prelube oil pump of EDG 'B' (X-107B). The calibration was being performed in accordance with Procedure 8.E.38 (Revision 14) Attachment C, "Diesel Generator Instrumentation, Calibration and Functional Test". During the calibration the annunciator reset switch on the panel was to be pushed. While looking at the annunciator window the technician mistakenly pushed the manual start switch instead of the adjacent annunciator reset switch.

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

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

CORRECTIVE ACTION

Immediate corrective action consisted of investigating the cause of the manual start and returning the diesel generator to normal standby service.

A critique of the event was conducted on April 27, 1988 at approximately 1000 hours. The critique was attended by personnel including the responsible I&C technician. The critique was conducted to establish facts related to the event and to make recommendations regarding additional corrective actions.

An I&C workshop discussion of this event was conducted on May 13, 1988 with appropriate I&C technicians. Possible long term corrective actions have been identified via an Engineering Service Request (ESR 88-365). The ESR proposes the possible relocation of the annunciator reset switch on Panels C-103B and C-104B to the vicinity of the annunciator test and acknowledge switches. A possible modification of the existing manual start switch(es) to a single error resistant, double action type switch is also being considered.

The workshop discussion of the event, and the possible relocation of the annunciator reset switch(es) and possible modification of the manual start switch(es), is expected to reduce the likelihood of a similar event in the future.

SAFETY CONSEQUENCES

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

The generator functions to supply 4160 VAC power to Bus A-5 if the Bus becomes de-energized. The generator was capable of this function but did not supply power to the Bus because the Bus was energized at the time of the event. Therefore, the start was an unnecessary challenge to the starting function of the diesel generator.

A manual start of an EDG from its local control panel is signalled in the Control Room on Panel C-3. Control Room operator actions for response to the signal are addressed in "Alarm Response Procedure", ARP-C3L (Left).

This event was determined to be reportable pursuant to 10 CFR 50.73(a)(2)(iv) because an unplanned (manual) start of the 'B' EDG occurred. The generator supplies power to accident mitigating systems if Bus A-5 becomes de-energized (i.e., loss of offsite power).

SIMILARITY TO PREVIOUS EVENTS

A review of Pilgrim Station Licensee Event Reports (LERs) written since January 1984 did not identify an LER(s) submitted pursuant to 10 CFR 50.73 (a)(2)(iv) that involved the unplanned manual start of EDG 'A' or 'B'.

ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) CODES

The EIIS codes for this event are as follows:

SYSTEMS	CODES
Emergency Onsite Power Supply System (EDG)	EK
Engineered Safety Features Actuation System (Panel C-104B)	JE

COMPONENTS	
Annunciator (Panel C-104B)	ANN
Panel (C-104B)	PL
Switch, Hand (Manual Start and Reset)	HS

10CFR50.73

BOSTON EDISON
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

Ralph G. Bird
Senior Vice President — Nuclear

May 25, 1988
BECo Ltr. #88-083

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

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

Dear Sir:

The attached Licensee Event Report (LER) 88-013-00 "Inadvertent Manual Start of the 'B' Emergency Diesel Generator" is submitted in accordance with 10CFR Part 50.73.

Please do not hesitate to contact me if you have any questions regarding this report.

R.G. Bird

DWE/bl

Enclosure: LER 88-013-00

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

Sr. Resident Inspector - Pilgrim Station

Standard BECo LER Distribution

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