NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
ESTI[redacted]BURDEN PER RESPONSE TO COMPLY WITH THIS INFOR[redacted]ON COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U7.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)	DOCKET NUMBER(2)	PAGE (3)
Susquehanna Steam Electric Station - Unit 1	0 5 0 0 0 3 8 7	1 OF 0 3

TITLE (4)
Unplanned ESF Actuation - 'B' Emergency Diesel Generator Automatic Start

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)
0 4	2 7	9 5	9 5	— 0 0 8	— 0 0	0 5	3 0	9 5	SSES - Unit 2	0 5 0 0 0 3 8 8
										0 5 0 0 0

OPERATING MODE (9)	4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		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(1)(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
Richard R. Wehry - Licensing Engineer	AREA CODE 7 1 7 5 4 2 - 3 6 6 4

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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 27, 1995 at 1313 hours, with Unit 1 in Condition 4 (Cold Shutdown) at 0% power and Unit 2 in Condition 1 (Power Operation) at 100% power, an unplanned Engineered Safety Feature (ESF) actuation occurred when the 'B' Emergency Diesel Generator (EDG) started automatically in the emergency run mode. The cause of the unplanned automatic start was due to deenergization of a 125 VDC control power circuit. The deenergization of the 125 VDC circuit was attributed to mechanical operation (i.e., physical bumping or mechanical shock) at the time that test personnel were installing a test light in the 'B' EDG engine control panel. The EDG response to the loss of the 125 VDC circuit was proper. There have been no previous occurrences of this nature and, as such, this was determined to be an isolated incident. Three EDGs remained fully operable and capable of performing their safety design function per the Susquehanna Safety Analysis. The EDG was shut down, the 125 VDC control power circuit was restored following investigation and verification of proper equipment operation, and the EDG was returned to its standby condition. Corrective actions include review of the event with all test personnel to reinforce awareness of potentially impacting work activities and replacement of the subject breaker when replacement parts are available to enable additional testing and evaluation of any additional warranted actions.

DESCRIPTION OF EVENT

On April 27, 1995 at 1313 hours, with Unit 1 in Condition 4 (Cold Shutdown) at 0% power and Unit 2 in Condition 1 (Power Operation) at 100% power, an unplanned Engineered Safety Feature (ESF) actuation occurred when the 'B' Emergency Diesel Generator (EDG; EIISE Code: EK) started automatically in the emergency run mode. The EDG properly started upon the loss of a 125 VDC (EIISE Code: EJ) control power circuit.

CAUSE OF EVENT

The cause of this event was attributed to the deenergization of a 125 VDC control power circuit. At the time of the unplanned automatic start of the 'B' EDG, an electrician and an test engineer (both utility, non-licensed) were in the process of installing a test light circuit in the 'B' EDG engine control panel in preparation for an 18 month EDG surveillance test. Following the unplanned automatic start, a 125 VDC circuit breaker located inside the engine control panel was found in the 'open' position. The investigation concluded that the breaker had opened mechanically (i.e., physical bumping or mechanical shock). No previous occurrences of this nature could be found and, as such, this was determined to be an isolated incident.

REPORTABLILITY / ANALYSIS

This event was determined to be reportable per 10CFR50.73(a)(2)(iv) in that an unplanned ESF actuation occurred when the 'B' EDG automatically started in the emergency run mode. The 'B' EDG properly started per design upon the loss of the 125 VDC control power circuit. Due to the loss of the 125 VDC circuit, the 'B' EDG would not have properly loaded had it been called upon to do so. However, three EDGs remained operable during this event as required by the Susquehanna Safety Analysis. As such, no safety consequences or compromises to public health or safety occurred.

In accordance with the guidelines provided in NUREG-1022, Supplement 1, Item 14.1 and 10CFR50.4(d), the required submission date for this report was determined toe be May 30, 1995.

CORRECTIVE ACTIONS

Following verification that the 'B' EDG had automatically started due to deenergization of the 125 VDC control power circuit, the EDG was shut down by operations personnel using the emergency fuel cutoff handle, since the 125 VDC control power was unavailable to enable shutting down the EDG using the normal engine control panel switches.

All test light and test lead assemblies were examined and tested. No deficiencies were found. Investigation by electrical maintenance and engineering personnel determined that the 125 VDC breaker had apparently been opened mechanically (i.e., physical bumping or mechanical shock). Evaluation of the situation by engineering and maintenance personnel determined that the 125 VDC circuit breaker could be reclosed and subsequent testing of the 'B' EDG was successfully completed. The event was reviewed with all test personnel to reinforce awareness of potentially impacting work activities.

Although it is believed that the deenergization of the subject 125 VDC circuit on the 'B' EDG was an isolated event and was attributed to mechanical opening, the subject 125 VDC breaker will be replaced when replacement parts are available. The subject breaker will be examined and any additional corrective actions, as warranted, will be taken following evaluation by engineering.

ADDITIONAL INFORMATION

Failed component Identification: None

Previous Similar Events: The following Licensee Event Reports documented unplanned start of EDGs during 18 month surveillance testing:

50-387 / 88-007-00

50-387 / 90-022-00