

NRC FORM 366 (5-92)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95							
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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.				
FACILITY NAME (1) Dresden Nuclear Power Station, Unit 2					DOCKET NUMBER (2) 05000237			PAGE (3) 1 OF 5				
TITLE (4) Inadvertent Start Of The 2/3 Diesel Generator Due To Personnel 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 NAME	DOCKET NUMBER		
07	20	96	96	--- 012 ---	00	08	27	96	Dresden, Unit 3	05000249		
OPERATING MODE (9)		N (N)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10)		000 (000)	20.2201(b)		20.2203(a)(3)(i)		50.73(a)(2)(iii)		73.71(b)			
			20.2203(a)(1)		20.2203(a)(3)(ii)		X 50.73(a)(2)(iv)		73.71(c)			
			20.2203(a)(2)(i)		20.2203(a)(4)		50.73(a)(2)(v)		OTHER			
			20.2203(a)(2)(ii)		50.36(c)(1)		50.73(a)(2)(vii)		(Specify in Abstract below and in Text, NRC Form 366A)			
			20.2203(a)(2)(iii)		50.36(c)(2)		50.73(a)(2)(viii)(A)					
			20.2203(a)(2)(iv)		50.73(a)(2)(i)		50.73(a)(2)(viii)(B)					
			20.2203(a)(2)(v)		50.73(a)(2)(ii)		50.73(a)(2)(x)					
LICENSEE CONTACT FOR THIS LER (12)												
Name: Ralph M. Fenili, Operations Staff					Ext. 2917			Phone: (815) 942-2920				
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 15 single-spaced typewritten lines) (16)

With both Dresden Units 2 and 3 in the Shutdown mode, during planned special operability testing of the Unit 2/3 Emergency Diesel Generator (EDG), an operator incorrectly manipulated the EDG following maintenance of Safety Related 4Kv Bus 33-1 breakers and cubicles. The switch manipulation challenged the start circuitry of the EDG and constituted an inadvertent Engineered Safety Feature (ESF) actuation. Engineering evaluation concluded no adverse affects on the EDG. The cause of the ESF actuation was determined to be a personnel error by the operator. Corrective actions included removing the operator from licensed duties and upgrading his self-checking skills. The safety significance of the event was minimal.

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LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - boiling water reactor - 2527 Mwt rated core thermal power. Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

EVENT IDENTIFICATION:

Inadvertent Start of the 2/3 Diesel Generator due to personnel error.

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: 2(3) Event Date: July 20, 1996 Event Time: 2351
 Reactor Mode: N(N) Mode Name: Shutdown (Shutdown) Power Level: 0 (0)
 Reactor Coolant System Pressure: 0 psig (0 psig)

B. DESCRIPTION OF EVENT:

This report is submitted in accordance with 10CFR73(A)(2)(iv) which requires the reporting of any event or condition which results in manual or automatic actuation of any Engineered Safety Feature (ESF). This event occurred on 7/20/96 with the report date of discovery being 7/29/96, as discussed below.

On 7/20/96, during the afternoon shift, with both Units 2 and 3 in the Shutdown mode, testing was being performed to prove operability of the Unit 2/3 Emergency Diesel Generator (EDG) [EK] following maintenance of Safety Related 4Kv Bus 33-1 breakers and cubicles. The testing utilized Type I Special Procedure (SPI) 96-7-13, "Bus 33-1 Integrated Functional Test" to demonstrate; (1) 4Kv Bus 33-1 load shed capability on bus undervoltage, (2) perform the 2/3 EDG Emergency Core Cooling System (ECCS) Auto Start and Automatic loading functional test, and (3) perform a Unit 3 and 2/3 EDG simultaneous start. Operations understood that many of the EDG trips would be inactive from the auto start of the EDG, and placed an Operator at each EDG to perform enhanced monitoring.

On 7/20/96, prior to 2212, the auto start of the 2/3 EDG was performed which concluded the actual testing portion of the SPI. A procedural transition was made from SPI 96-7-13 to Dresden Operating Surveillance (DOS) 6600-06, "Unit 2/3 Diesel Generator Operability", allowing performance of the normal monthly EDG surveillance operability test concurrent with plant systems realignment from SPI testing. The afternoon shift Operating Team synchronized and loaded the 2/3 EDG to Bus 33-1, increasing the output to rated. The Operating Team was aware that Unit 2/3 EDG control switch was in AUTO instead of START, as it would be during the normal monthly surveillance, but this configuration was acceptable for operability testing. The control switch would remain in this position per the SPI for the duration of the surveillance.

About 2300 on 7/20/96, the oncoming Nuclear Station Operator (NSO) [Licensed Reactor Operator] performed shift turnover, with special attention to SPI 96-7-13, the current EDG surveillance, and EDG trips which were defeated.

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At 2351 on 7/20/96, the NSO unloaded the 2/3 EDG, opened the EDG output breaker to Bus 33-1, and set the EDG speed and voltage for standby operation in accordance with DOS 6600-06. The Unit 2/3 EDG start control switch was manipulated from the AUTO position to the STOP position, then the NSO performed a reflexive action, inadvertently placing the Unit 2/3 EDG control switch to the START position instead of the AUTO position, as directed in DOS 6600-06. This action constituted a manual ESF actuation because the switch manipulation challenged the starting circuitry of the EDG. The NSO immediately recognized that voltage was present on the EDG output meter and considering that he may not have paused long enough in the STOP position to cause the field breaker to open, returned the control switch to the STOP position.

With the control switch in STOP, the NSO verified that EDG output voltage dropped to zero, and again placed the control switch back to START instead of AUTO (second manual ESF actuation). EDG voltage returned due to auto closure of the field breaker from EDG start logic. Visually checking all his available indications, the NSO realized that he had inadvertently twice placed the EDG control switch into the START position instead of AUTO, as he had intended. The NSO placed the control switch to STOP, verified the output voltage to zero, and properly placed the control switch to AUTO in accordance with DOS 6600-06. The NSO did not recognize the event as a manual ESF actuation.

The NSO completed his week of operating the midnight shift on 7/26/96. During his following days off, the NSO reflected on the week's events and came to the realization that his actions were inappropriate and needed to be reported per DAP 02-27, "Integrated Reporting Process", as a performance error. Not recognizing the event as reportable, he decided to report the inappropriate action to his supervisor upon returning to work on 7/29/96.

DAP 02-27 requires that an inappropriate action taken by any individual be reported. The NSO finally reported the inappropriate manipulation of the EDG control switch to Station Management, but was 9 days late in that notification. As a result, Station Management was not notified of the manual ESF actuation which occurred on 7/20/96 until 7/29/96, and therefore the required ENS notification was not made until 7/29/96.

On 7/29/96, the event was properly documented by the NSO in accordance with DAP 02-27 and presented to Operations Management for reportability screening. Operations Management determined the event as reportable and an ENS notification for the ESF was made at 1045 on 7/29/96.

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C. CAUSE OF EVENT:

The primary cause of the event was cognitive personnel error (NRC Cause Code A) by an NSO (NRC Licensed Reactor Operator). The licensed operator failed to acknowledge the actual component configuration and incorrectly manipulated the control switch twice due to inadequate task self-checking. Additionally, the NSO failed to report the inappropriate switch manipulation to management, causing a delay of 9 days between the event date and the ENS notification.

The error was reflexive in nature, as the normal switch manipulation is to reverse its position, passing through the STOP position. No unusual adverse environmental conditions contributed to the event.

A contributing cause to this event was ineffective corrective actions for LER 96-006(05000237) entitled "Inadvertent Manual Scram While in Refuel Mode During Planned Periodic Surveillance Testing Due to Human Error. The personnel error performed in LER 96-006(05000237) and the error of the subject LER were performed by the same NSO.

D. SAFETY ANALYSIS:

The manual start signal applied to the Emergency Diesel Generator logic caused closure of the EDG field breaker and the field to flash. The Unit 2/3 EDG had just completed its loaded run and was at operating temperature prior to the event. Engineering evaluation of the event concluded that there is no detrimental effect or degradation of the EDG, other than normal component wear. Should a loss of normal offsite power had occurred with the EDG control switch in START, the EDG would have operated as designed, with trips bypassed during an ECCS initiation still intact. Units 2 and 3 were maintained in a cold shutdown condition during the duration of the event, mitigating the consequences of a DBA Loss Of Coolant Accident. For these reasons, the safety significance of this event is considered minimal.

E. CORRECTIVE ACTIONS:

1. The involved operator was removed from licensed duties and his performance evaluated through an interview with the Operations Manager. This interview determined that he understands his responsibilities toward self checking prior to taking action.
2. The involved operator was assigned as part of a team tasked with performing a self-assessment in the area of self-check at the Quad-Cities Nuclear Power Station.
3. Appropriate notifications were made to Station Senior Management. A 4 hour ENS reportability notification was made.
4. Engineering evaluated the effects of EDG field flashing while at rated speed during the cooldown cycle and determined that this presents no detrimental effects to the EDG.

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5. This event will be covered during an Operations Lessons Learned lecture, which will stress the importance of self checking prior to taking action and prompt reporting of personnel errors to station management. (2371809601201)
6. The Operations Manager and Shift Managers are closely monitoring the operator's performance for indication of a step increase in accepted self-checking behavior, after which the individual may be released to perform licensed duties. Upon release to licensed duties, close behavior monitoring will continue until there is high assurance of inherent cultural behavior correction displayed by the operator.
7. Dresden Station has assembled a committee to evaluate Self-Check performance. The committee will provide an output report with recommendations to correct self check errors to the Operations Manager for consideration and implementation. (2371809601202)
8. The Operations Manager will revise and implement a change to the Operations Standards requiring enhanced communications prior to manipulation of any Control Room controls which perform multiple functions. (2371809601203)

F. PREVIOUS OCCURRENCES:

<u>LER/Docket Number</u>	<u>Title</u>
96-001/05000249	Inadvertent Start of Unit 3 Diesel Generator Due to Personnel Error. Corrective actions taken included counseling by the Operations Manager and placement of the involved individual in a skills upgrade program to increase his knowledge of the concepts of self-checking. This individual has not been involved in a significant event since completion of the training.
96-006/05000237	Inadvertent Manual Scram While in Refuel Mode During Planned Periodic Surveillance Testing Due to Human Error. Corrective actions taken included removing the individual from licensed duties and his performance was evaluated through an interview with the Operations Manager. This interview determined that he understands his responsibilities toward self checking prior to taking action. The Operator received voluntary remediation and was reinstated to normal licensed duties. Additionally, Lessons Learned training was provided to all shift Operations personnel. These actions were unsuccessful in preventing a recurrent self-checking error by the same individual (96-012/05000237).

G. COMPONENT FAILURE DATA:

No component failure.