

NRC 2001-051

August 1, 2001

Document Control Desk
U.S. NUCLEAR REGULATORY COMMISSION
Mail Station P1-137
Washington, D.C. 20555

10 CFR 50.73

Ladies/Gentlemen:

DOCKET NUMBERS 50-266 AND 50-301
LICENSEE EVENT REPORT 266/2001-004-00
FAILURE TO COMPLY WITH LCO ACTION STATEMENT
TO START REDUNDANT STANDBY EMERGENCY POWER SUPPLY
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

Enclosed is Licensee Event Report 266/2001-004-00 for the Point Beach Nuclear Plant Units 1 and 2. This report is provided in accordance with 10 CFR 50.73(a)(2)(i)(B) for "Any operation or condition prohibited by the plant's Technical Specifications." This report documents the failure to perform a timely (within 24 hours) common cause evaluation or testing of the redundant standby emergency power supplies following the trip of an emergency diesel generator during monthly surveillance testing. These evaluation and testing requirements are contained in the Technical Specification bases and LCOs respectively.

New commitments in this event report are identified in the corrective action section by italics.

Please contact us if you require additional information concerning this report.

Sincerely,



Fred Cayia
Plant Manager,

Enclosure

CWK/tyf

IE22

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August 1, 2001

cc: NRC Resident Inspector
NRC Regional Administrator
NRC Project Manager

PSCW
INPO Support Services

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1) POINT BEACH NUCLEAR PLANT UNIT 1	DOCKET NUMBER (2) 05000266	PAGE (3) 1 OF 4
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TITLE (4)
FAILURE TO COMPLY WITH LCO ACTION STATEMENT TO START REDUNDANT STANDBY EMERGENCY POWER SUPPLIES

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
06	24	2001	2001	- 004 -	00	08	01	2001	Point Beach Unit 2	05000301	
									FACILITY NAME	DOCKET NUMBER	
										05000	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR (11) (Check all that apply)									
1		20.2201(b)			20.2203(a)(3)(ii)			50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)	
POWER LEVEL (10)		20.2201(d)			20.2203(a)(4)			50.73(a)(2)(iii)		50.73(a)(2)(x)	
100		20.2203(a)(1)			50.36(c)(1)(i)(A)			50.73(a)(2)(iv)(A)		73.71(a)(4)	
		20.2203(a)(2)(i)			50.36(c)(1)(ii)(A)			50.73(a)(2)(v)(A)		73.71(a)(5)	
		20.2203(a)(2)(ii)			50.36(c)(2)			50.73(a)(2)(v)(B)		OTHER	
		20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A	
		20.2203(a)(2)(iv)			50.73(a)(2)(i)(A)			50.73(a)(2)(v)(D)			
		20.2203(a)(2)(v)			X 50.73(a)(2)(i)(B)			50.73(a)(2)(vii)			
		20.2203(a)(2)(vi)			50.73(a)(2)(i)(C)			50.73(a)(2)(viii)(A)			
		20.2203(a)(3)(i)			50.73(a)(2)(ii)(A)			50.73(a)(2)(viii)(B)			

LICENSEE CONTACT FOR THIS LER (12)

NAME Charles Wm. Krause, Senior Regulatory Compliance Engineer	TELEPHONE NUMBER (Include Area Code) (920) 755-6809
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO		MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On June 24, 2001, with both Point Beach Nuclear Plant (PBNP) Units operating at full load, one of the PBNP standby emergency power supplies, emergency diesel generator (EDG) G-03, tripped from near full power during performance of a monthly surveillance test. The redundant standby emergency power supplies were aligned to the proper safeguards buses in accordance with plant procedures and the Technical Specifications. G-03 was declared out of service and investigated for the cause of the trip. Contrary to the statements in the bases for TS 15.3.7, neither the common cause evaluation of the G-03 trip nor the requirement to start the redundant standby emergency power supplies were completed within 24 hours of the failure. This constitutes a condition prohibited by the TS and is reportable under 10 CFR 50.73. The evaluation of the G-03 trip determined that the components which caused the trip, which occurred while the EDG was in the exercise mode, would not have prohibited the EDG from performing its safety function in the event of an actual demand. Proposed corrective actions, including additional procedure remarks and implementation of ITS, should make it unlikely to overlook these testing and evaluation requirements in the future. The safety significance of this event was negligible.

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TEXT CONTINUATION

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

Event Description:

The purpose of this LER is to report the failure to comply with Technical Specification (TS) requirements following the trip of an Emergency Diesel Generator (EDG). On June 24, 2001, at approximately 11:17 (all times are CDT), EDG [EK, DG] G-03 tripped while operating at full load during the performance of procedure TS-83, "Emergency Diesel Generator G-03 Monthly," (CR 01-2135). The EDG had been running at approximately 2600kW for about seven minutes when it tripped. Both Point Beach Nuclear Plant (PBNP) units were operating at full load at the time of this event. In accordance with operating instructions, EDG G-03 had been lined up to supply standby emergency power to 4160V safeguards buses 2A06 and 1A06 [EB,BU]. During the conduct of the TS-83 monthly test, TS LCO 15.3.7.B.1.h is entered for both Unit 1 and 2 since the standby emergency power supply to those buses is considered to be out of service with the EDG G-03 in test mode. TS LCO 15.3.7.B.1.h permits the normal power supply or the standby emergency power supply to Unit 1 A06 and Unit 2 A06 to be out of service for a period not exceeding seven days provided the redundant engineered safety features are operable and the required redundant standby emergency power supplies, in this case the "A" Train EDGs G-01 and G-02, are started within 24 hours before or after entry into the LCO and every 72 hours thereafter. During a normal conduct of TS-83, the test is typically completed in 3 to 4 hours and the standby emergency power supplies restored to a normal lineup. Under those circumstances, the TS bases state that if the LCO is exited within the 24 hours of the initial entry into the LCO, starting of the redundant standby emergency power supplies is not required.

Subsequent to the G0-3 EDG trip, the G-04 EDG was aligned in accordance with plant procedures as the standby emergency power for the 1A06 and 2A06 safeguards buses. At approximately 12:05 these alignments were completed and the LCOs for TS 15.3.7.B.1.f, g, and h were exited. Trouble shooting to identify the reason for the EDG G-03 trip was initiated.

The PBNP TS bases at Page 15.3.7-7 include the following additional information concerning the LCOs for standby emergency power supplies: "If the LCO was entered due to a standby emergency power supply failure and the LCO was exited within 24 hours, then an evaluation must be completed as soon as possible within 24 hours of entry into the LCO to show that the redundant standby power supplies are not susceptible to that failure by common cause or the redundant standby emergency power supplies must be started to prove that failure by common cause does not exist within 24 hours of entry into the LCO." Unfortunately, the applicability of this bases statement was not recognized until after 12:00 on June 25, 2001. At that time the redundant standby emergency power supplies, the Train "A" EDGs G-01 and G02, had not been tested and the evaluation of the reason for the G-03 failure had not yet been completed. A new condition report was written to document this discrepancy (CR 01-2152), and this event evaluated as being an operation or condition which was prohibited by the plant's Technical Specifications. This event is; therefore, reportable in accordance with 10 CFR 50.73(a)(2)(i)(B).

Cause:

The cause of the trip of EDG G-03 while operating in the exercise mode at near full power is addressed in the "Safety Assessment."

After the trip of the G-03 EDG, the focus and intent of the operating crew was to exit the existing LCO and line up the G04 EDG as the standby emergency power supply for the "B" Train safeguards buses. The crew was also focused on calling in the appropriate personnel and "fixing the G-03 diesel." As a result of these operational focuses, the crew that experienced the diesel failure did not adequately review the bases section of these Technical Specifications and did not recognize the impact of the bases statement discussed in the event description.

The operators on the subsequent shifts "assumed" the TS actions were complete because the units were not in an LCO condition and did not review the bases section of the TS. Although all the operating crews were aware of a November 2000 event (LER 301/2000-003-00) which involved a failure to test a EDG when a standby EDG was taken

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out of service for bus maintenance, the circumstances of this situation were significantly different and the presence of this bases statement which modified the EDG testing requirements constituted a human factors deficiency which contributed to this event.

Corrective Actions:

- The redundant standby emergency power supplies, G-02 and G-01, were tested successfully with no abnormalities noted on June 26 at 16:20 and 19:03 respectively.
- The troubleshooting and post maintenance testing of EDG G-03 was completed at 03:42 on June 26, 2001. The reasons for the G-03 trip and their safety significance are discussed in the "Safety Assessment" section of this report.
- PBNP is planning to implement Improved Technical Specifications (ITS) later this year. The ITS will address both the requirement for evaluation of the emergency standby power inoperability for common cause failure or the need to test the standby emergency power source(s) in an LCO action statements for LCO Condition 3.8.1.E. Relocating the testing and evaluation statements now contained in the bases of the existing TS into an LCO action statement will help ensure these requirement will not be missed in the future.
- *This event and the similar event from November 2000 (LER 301/2000-003-00) will be the subject of an Operating Experiences training session for licensed operators.*

Component and System Description:

The standby emergency power for the safe guards electrical buses at the PBNP is provided by four emergency diesel generators (EDGs) which are shared by the two units. Two Train "A" and two Train "B" EDGs are normally available. The two Train "A" EDGs, G01 and G02, are normally aligned as standby emergency power: G01 to the Unit 1 Train "A" 4160 volt bus (1A05) and G02 to the Unit 2 Train "A" 4160 volt bus (2A05). The two Train "B" EDGs, G03 and G04, are likewise, normally aligned as standby emergency power: G03 to the Unit 1 Train "B" 4160 volt bus (1A06) and G04 to the Unit 2 Train "B" 4160 volt bus (2A06).

The two "B" Train EDGs automatically provide power to their respective safeguards buses if normal power from the 4160 V switching buses, 1A04 or 2A04, is lost. G03 normally is aligned as the standby emergency power source for 1A06 and G-04 is aligned to 2A06. To enhance flexibility and to support EDG maintenance and inspections, G04 may be manually aligned to provide the automatic standby emergency power function to 1A06, and G03 maybe manually aligned to provide automatic emergency standby power to 2A06. Additionally, if G03 or G04 is out of service, the other "B" Train EDG may be aligned to automatically provide power to both 1A06 and 2A06. The G01 and G02 EDGs have the same capabilities in the "A" Train. Additional information concerning the electrical systems at PBNP may be found in FSAR Chapter 8.

Safety Assessment:

The trip of EDG G-03 which occurred at approximately 11:17 on June 24, 2001, while the unit was loaded for monthly test TS-83. occurred about seven minutes after the diesel generator had reached full load. Initial indication included the " Unit Trip/Lockout" annunciator window. Inputs to this window are: Fail to Start, Emergency Shutdown, Generator Differential, Overspeed Trip, Lube Oil Low Pressure, and High Jacket Water Temperature. A comprehensive troubleshooting effort revealed that the Jacket Water High Temperature Shutdown Switch [TS] (TS-3342A) had spuriously actuated. Additionally, the Jacket Water High Temperature Alarm Switch (TS-3312A) and the #3 Radiator

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Fan (W-181A1) Control Switch [IS] (TS-3343A) were found failed. All failed switches were replaced and the TS-83 was successfully completed on June 26, 2001.

These component failures did not degrade G-03's ability to perform it's intended safety function in response to a valid emergency demand (Undervoltage or Safety Injection signal). The TS-3342A switch is intended to preclude engine damage when the EDG is running for planned maintenance or surveillances. This switch function is defeated by the fast start relay when the EDG start is initiated by a valid signal. The #3 radiator fan is not required to support the design basis accident heat loads; therefore, there was no safety significance associated with the failure of the TS-3343A switch. The TS-3312A switch provides an input to an alarm annunciator window and has no control function. Based on this information, we could conclude that these failures would not have prohibited the G-03 EDG from performing its safety related function in the event of an actual demand.

Regarding the missed testing surveillance which is the basis for this report, we have concluded that the testing of the redundant standby emergency power supplies was completed successfully, although later than the 24 hours specified in the TS, with no abnormalities noted, Accordingly, the actual safety significance of this event was negligible and the health and safety of the public and plant staff was not impacted by this condition. Since the capability to provide standby emergency power to the safeguard buses was not compromised during this event, we have also concluded that this event did not constitute a safety system functional failure.

Similar Occurrences:

A review of recent LERs (past three years) identified the following event involved the failure to test the redundant standby emergency power supply within 24 hours of entering a LCO.

<u>LER NUMBER</u>	<u>Title</u>
301/2000-003-00	Failure To Comply With LCO Action Statement To Start Redundant Standby Emergency Power Supply