

WOLF CREEK

NUCLEAR OPERATING CORPORATION

John A. Bailey
Vice President
Operations

May 10, 1991
NO 91-0143

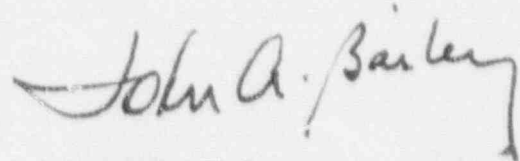
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station PL-137
Washington, D. C. 20555

Subject: Docket No. 50-482: Licensee Event Report 90-026-00

Gentlemen:

The attached Licensee Event Report (LER) is being submitted pursuant to 10 CFR 50.73 (a)(2)(i) concerning a Technical Specification violation.

Very truly yours,



John A. Bailey
Vice President
Operations

JAB/jra

Attachment

cc: L. L. Gundrum (NRC), w/a
A. T. Howell (NRC), w/a
R. D. Martin (NRC), w/a
D. V. Pickett (NRC), w/a

1622 1/1

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)										DOCKET NUMBER (2)										PAGE (3)									
Wolf Creek Generating Station										050004821										OF 05									
TITLE (4) Technical Specification Violation - Safety-Related Class 1E Battery Bank Powered From A Spare Battery Charger																													
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)															
														05000															
1	1	2	3	9	0	9	0	0	2	6	0	0	0	5	1	0	9	1	05000										
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																										
1			20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)														
POWER LEVEL (10)			20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)														
100			20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract Below and in Text, NRC Form 366A)														
			20.405(a)(1)(iii)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(A)																		
			20.405(a)(1)(iv)				50.73(a)(2)(iii)				50.73(a)(2)(vii)(B)																		
			20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)																		
LICENSEE CONTACT FOR THIS LER (12)																													
NAME										TELEPHONE NUMBER																			
Merlin G. Williams - Manager Plant Support										AREA CODE 316 364 - 8831																			
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)										EXPECTED SUBMISSION DATE (15)																			
YES (If yes, complete EXPECTED SUBMISSION DATE)										MONTH DAY YEAR																			
X NO																													

An engineering evaluation conducted on May 6, 1991 concluded that certain design requirements were not satisfied when spare battery charger NK025 was used as a temporary replacement for battery charger NK023 between November 23 and 27, 1990. This resulted in inoperability of one independent DC electrical source, contrary to Technical Specifications 3.8.2.1 and 3.8.3.1, which require operability of two independent DC electrical sources.

This event resulted from an error in the safety evaluation for procedure MCE E051Q-01, allowing the use of NK025. The safety evaluation for this procedure was based on a portion of the Updated Safety Analysis Report (USAR) which describes the spare charger but not its associated support equipment. The engineer failed to consult additional USAR sections and design documents which describe the use of the spare charger in better detail. Procedure MCE E051Q-01 has been deleted. A sample of safety evaluations will be reviewed to ensure that this is an isolated occurrence.

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 (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.

FACILITY NAME (1) Wolf Creek Generating Station	DOCKET NUMBER (2) 0 5 0 0 0 4 8 2	LER NUMBER (6)			PAGE (3)		
		YEAR 9 0	SEQUENTIAL NUMBER 0 2 6	REVISION NUMBER 0 0	0 2	OF	0 5

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

INTRODUCTION

Following an engineering evaluation, it was recognized that a violation of Technical Specifications 3.8.2.1 and 3.8.3.1 had occurred when spare battery charger NK025 [BYC-EJ] was used as a temporary replacement for battery charger NK023 [BYC-EJ]. Technical Specifications 3.8.2.1 and 3.8.3.1, require, in part, that two independent DC electrical groups, each group consisting of two battery banks and chargers associated with the same safety-related load group, be operable [Figure 1]. This event is being reported pursuant to 10 CFR 50.73(a)(2)(i) concerning a condition prohibited by the plant's Technical Specifications.

DESCRIPTION OF EVENT

In October of 1989, a safety evaluation was conducted for procedure MCE E051Q-01, "Emergency Supply to an NK Bus From Spare Charger NK025", Revision 0. This procedure provides the means to maintain power on a 125V DC System bus when its normal charger fails by utilizing spare charger NK025 and temporary jumper cables. Section 8.3.2 of the Updated Safety Analysis Report (USAR), states in part "... In the event of the failure of a charger or inverter, the spare is connected to the affected system. Therefore, the malfunctioning equipment may be repaired without imposing long-term disruption of the system." Based on this portion of the USAR system description, the evaluating engineer concluded that the use of NK025 in lieu of a normal battery charger would not affect nuclear safety in a way not previously evaluated in the USAR. On November 22, 1989, the procedure was approved by the Plant Safety Review Committee.

On November 23, 1990 at 1929 CST, while in Mode 1, Power Operation, battery charger NK023 was taken out of service to facilitate repairs and the appropriate action statements were entered. This was accomplished in belief that operability would be maintained as long as NK025 was energized from the same safety train as the charger it was replacing. At 2015 CST, battery charger NK025 was placed in service in accordance with procedure MCE E051Q-01, "Emergency Supply to an NK Bus From Spare Charger NK025", as a temporary replacement for battery charger NK023 and the action statements were exited.

On November 27, 1990 at 2107 CST, following maintenance on battery charger NK023, battery charger NK025 was secured and the appropriate action statements were entered. At 2205 CST, battery charger NK023 was restored to service and the action statements were exited.

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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		9 0	0 2 6	0 0	0 3	OF 0 5

TEXT (If more space is required, use additional NRC Form 386A's) (17)

On April 10, 1991, during an internal review of a Technical Specification Change Request to incorporate spare charger NK025 into the Technical Specifications, a question arose regarding the requirements for cooling the nonvital AC switchgear room (NK025 location). The switchgear room is cooled by a nonsafety-related cooling unit (Spare charger NK025 is qualified to operate under the same conditions as the other four Class IE battery chargers). An engineering evaluation was initiated to determine the effect on DC electrical source operability.

Technical Specifications 3.8.2.1 and 3.8.3.1 require, in part, that two independent Class IE electrical groups, each group consisting of two battery banks and chargers associated with the same safety-related load group, be operable during Mode 1, Power Operation, through Mode 4, Hot Shutdown. With one of the required battery banks or chargers inoperable, these Technical Specifications require the restoration of the inoperable battery bank or charger to operable status within two hours. Otherwise the Technical Specifications require the unit be placed in at least Hot Standby within the next 6 hours and in Cold Shutdown within the following 30 hours.

The engineering evaluation concluded that certain design requirements were not fulfilled when NK025 was utilized to power a safety-related battery bank. The requirements governing the installation of Class IE cable would not have been satisfied when temporary cables were routed from spare charger NK025 to charger NK023. The requirements for providing cooling to all Class IE battery chargers during and following a Design Basis Event would not be satisfied. The related cooling unit associated with NK025 would be de-energized with a loss of offsite power. With the door open between the Class IE and non-Class IE rooms, only minimal cooling would be provided to NK025 by the Class IE Air Conditioning Unit. Additionally, a potential flood hazard in the Class IE Low Voltage switchgear room with the door blocked open has not been analyzed. The Class IE room has not been evaluated for flooding because it contained no water carrying piping. With the door blocked open, water from the non-Class IE room could flow to the Class IE room. Therefore, a violation of Technical Specifications 3.8.2.1 and 3.8.3.1 occurred when spare charger NK025 was inservice between November 23, 1990 and November 27, 1990, in accordance with procedure MCE E051Q-01.

The engineering evaluation also concluded that the use of NK025 would not have violated the requirements of the fire hazard analysis and that there was no adverse impact upon the ability to achieve and maintain safe shutdown following a fire, solely because of the fire.

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-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) Wolf Creek Generating Station	DOCKET NUMBER (2) 0 5 0 0 0 4 8 2 9 0	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	0 2 6	0 0	0 4	OF 0 5

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

ROOT CAUSE AND CORRECTIVE ACTIONS

This event resulted from an error in the safety evaluation for procedure MCE E051Q-01, allowing the use of NK025. The safety evaluation for this procedure was based on a portion of the USAR which describes the spare charger but not its associated support equipment. The engineer failed to consult additional USAR sections and design documents which describe the use of the spare charger in better detail.

This event will be reviewed with all personnel performing safety evaluations in Results Engineering. Also, a reference to this event will be added to the Safety Evaluation Guidelines used by Results Engineering. It is anticipated that these corrective actions will be completed by May 31, 1991. Procedure MCE E051Q-01 has been deleted.

As stated previously, the safety evaluation was conducted in October of 1989. Training on the mechanics of performing safety evaluations was provided to plant personnel during November of 1989. In order to ensure that there are no other cases of an incorrect conclusion in a safety evaluation, a sample of safety evaluations conduct by Results Engineering from 1985 to 1990 will be reviewed. This review will be completed by July 1, 1991.

ADDITIONAL INFORMATION

During the time that NK025 was inservice, the remaining three battery banks and chargers were operable and capable of performing their intended function. Therefore, there was no threat to the health and safety of site personnel or the public.

There have been no previous occurrences.

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-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.

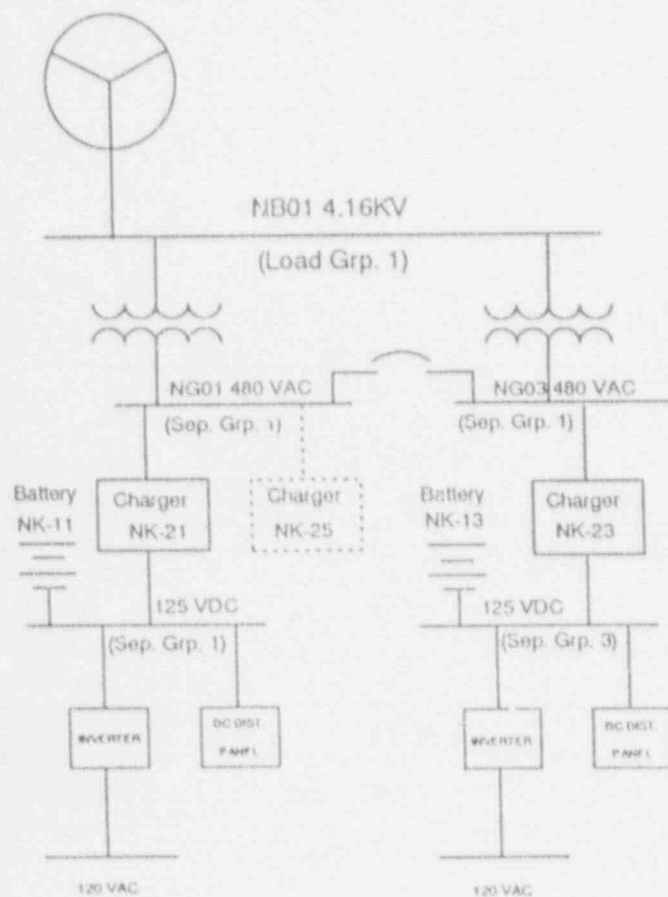
FACILITY NAME (1) Wolf Creek Generating Station	DOCKET NUMBER (2) 0 5 0 0 0 4 8 2 9 0	LER NUMBER (6)			PAGE (3)		
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		0 2 6	0 0	0 5	OF	0 5	

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

Figure 1

SIMPLIFIED SCHEMATIC
125 VDC BATTERIES AND CHARGERS

Emerg. Diesel Generator



Emerg. Diesel Generator

