

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Catawba Nuclear Station, Unit 1DOCKET NUMBER (2)
0 5 0 0 0 4 1 1 3 1 CF 0 1 3TITLE (4)
Removal of Seismic Spacers Renders Vital Battery Bank InoperableEVENT DATE (5)
MONTH DAY YEAR
0 5 2 3 8 5
LER NUMBER (6)
YEAR SEQUENTIAL NUMBER REVISION NUMBER
8 5 0 3 9 0 0
REPORT DATE (7)
MONTH DAY YEAR
0 7 0 3 8 5
OTHER FACILITIES INVOLVED (8)
FACILITY NAMES
DOCKET NUMBER(S)
0 5 0 0 0 0 0 0 0 0 0 0OPERATING MODE (9)
4
POWER LEVEL (10)
0 1 0 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)
20.402(b) 20.406(a)(1)(i) 20.406(a)(1)(ii) 20.406(a)(1)(iii) 20.406(a)(1)(iv) 20.406(a)(1)(v) 20.406(c) 50.36(c)(1) 50.36(c)(2) 50.73(a)(2)(i) 50.73(a)(2)(ii) 50.73(a)(2)(iii) 50.73(a)(2)(iv) 50.73(a)(2)(v) 50.73(a)(2)(vi) 50.73(a)(2)(vii) 50.73(a)(2)(viii)(A) 50.73(a)(2)(viii)(B) 50.73(a)(2)(ix) 73.71(b) 73.71(c) OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME
Roger W. Ouellette, Associate Engineer, Licensing
TELEPHONE NUMBER
AREA CODE
7 0 4 3 7 3 - 7 5 3 0

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

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

On May 23, 1985, several spacers required for seismic qualification of channel 2 vital battery bank 1EBB were not reinstalled after the cells of the bank were replaced. This was discovered on June 4, 1985, at approximately 1330 hours, at which time the unit was in Mode 4 (Hot Shutdown) and the bank was required to be operable. The spacers were replaced on June 6, 1985. Because the technician replacing the battery cells failed to reinstall the seismic spacers, this incident is classified as a Personnel Error.

This incident is reportable pursuant to 10 CFR 50.73, Section (a)(2)(i)(B).

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Catawba Nuclear Station, Unit 1	0 5 0 0 0 4 1 3 8 5	—	0 3 9	—	0 0 0	2	OF 0 3

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

The 125V DC Vital Instrumentation and Control Power System (EPL) provides a source of reliable and continuous power for class 1E loads. It is divided into four independent and physically separated channels that are comprised of one battery, one battery charger, one 125 VDC distribution center, and 125 VDC power panel board. Each battery bank consists of 59 cells mounted in a rack assembly. Universal corner fittings are provided on the racks that allow adjustment of the end stringers (members).

On March 19, 1985, in order to resolve seismic qualification problems, it was determined that the clearance between the end cell and the rack end member should be a maximum of 1/4 inch. If this distance was exceeded, the installation had to be corrected by moving the end stringer closer to the end cell. If clearances of greater than the required 1/4 inch still existed after the stringer had been moved, styrofoam spacers of appropriate thickness were to be installed between the end cell and the rack end member to achieve the required clearance. These spacers were to be of the same open-cell styrofoam type used between the cells.

On March 22, 1985, Temporary Station Modification (TSM) Work Request 3622 IAE was issued to adjust the end stringers of the Unit 1 Vital Batteries (1EBA, 1EBB, 1EBC, and 1EBD) so that the seismic requirements would be met. Also, styrofoam spacers were to be added to the rack ends, as necessary. Technicians completed the work on March 24, 1985, and placed TSM brown tags on the end of each battery rack assembly.

A Work Request was written on March 26, 1985, to replace the cells in 1EBB because of bad seals between the top plate of the cells and the cell casing caused by the glue weakening when it interacted with the electrolyte. On May 22, 1985, at 0020 hours, 1EBB was declared inoperable in the Technical Specification Action Item Logbook (TSAIL) for work to begin. The technician removed all 59 of the defective cells and replaced them with new cells. However, he failed to notice the TSM brown tag hanging on the end of the rack, which referred to the correct seismic mounting criteria. Subsequently, the cells were not remounted as they were found. Several styrofoam spacers were not replaced, causing the clearance between the end cell and the rack end stringer to be greater than the allowable 1/4 inch. On May 24, 1985, at 2130 hours, vital battery bank 1EBB was declared operable in the TSAIL, when in actuality it was inoperable due to failure to meet seismic qualifications.

On June 4, 1985, at approximately 1330 hours, this deficiency was identified by the NRC Resident Inspector and 1EBB was declared inoperable in the TSAIL. The work request was re-issued, and the missing styrofoam spacers were returned to the rack ends on June 6, 1985, at approximately 0715 hours. At 1330 hours, 1EBB was declared operable.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Catawba Nuclear Station, Unit 1	0500041385	-	039	-00	03	OF 03

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

Because Technical Specification 3.8.2.1 requires that battery bank 1EBB be operable in Modes 1 through 4, entering Mode 4 on May 26, 1985, with the battery inoperable was a violation of Technical Specification 3.0.4, which states that entry into an Operational Mode must be made with the full complement of required systems, equipment, or components operable.

This incident is classified as a Personnel Error, because the technician performing work on the battery rack failed to see the TSM brown tag hanging on the end of the battery rack. The tag was located at a conspicuous location and should have been seen. This would have referred him to the TSM Work Request, which provided proper instructions for seismic mounting of the battery bank and would have prevented him from leaving out the styrofoam end-spacers. Without knowledge of the seismic inoperability of the battery, the technician allowed the work request to be cleared from the TSAIL. This enabled the plant to enter Mode 4 two days later.

CORRECTIVE ACTION

- 1) The work request was re-issued to install spacers missing between the end cells and rack end stringers.
- 2) A Variation Notice was implemented per a work request to permanently install styrofoam spacers between the vital I&C battery cells and the end stringers.
- 3) Training on the use of TSM's has been included as part of the Employee Training and Qualification System (ETQS).
- 4) A procedure change will be made by July 26, 1985, to IP/O/A/3710/02, Battery Removal and Replacement, to inform the technician of the seismic qualification requirements of the battery.
- 5) This incident will be reviewed by all appropriate personnel.

SAFETY ANALYSIS

In the event of a seismic occurrence, the effect of the end spacers not being in place may have caused the battery cell jars of 1EBB to vibrate and possibly break. This would result in a loss of electrolyte, which would cause the battery to be inoperable.

However, the 125VDC Vital Instrumentation and Control (EPL) System is designed so that each battery is sized to carry the loads assigned to its associated distribution center plus the loads of another battery in a "backup" capacity for one hour. So, on a loss of 1EBB, 1EBD (channel 4 battery bank), would provide a redundant source of power to the loads normally supplied by 1EBB.

The health and safety of the public were not affected by this incident.

DUKE POWER COMPANY

P.O. BOX 33182
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

July 3, 1985

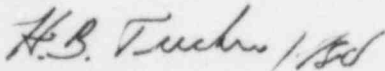
Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Catawba Nuclear Station, Unit 1
Docket No. 50-413

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/85-39 concerning the removal of seismic spacers rendering a vital battery bank inoperable. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



Hal B. Tucker

RWO:slb

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Palmetto Alliance
2135½ Devine Street
Columbia, South Carolina 29205

Mr. Jesse L. Riley
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28207

Robert Guild, Esq.
P. O. Box 12097
Charleston, South Carolina 29412

American Nuclear Insurers
c/o Dottie Sherman, ANI Library
The Exchange, Suite 245
270 Farmington Avenue
Farmington, CT 06032

M&M Nuclear Consultants
1221 Avenue of the Americas
New York, New York 10020

INPO Records Center
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

NRC Resident Inspector
Catawba Nuclear Station

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