

DUKE POWER COMPANY

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HAL B. TUCKER
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NUCLEAR PRODUCTION

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March 30, 1984

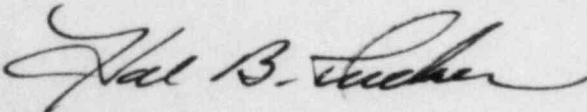
Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Re: Catawba Nuclear Station
Units 1 and 2
Docket Nos. 50-413 and 50-414

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55(e), please find attached a final response to
Significant Deficiency Report SD 413-414/82-27.

Very truly yours,



Hal B. Tucker

LTP/php

Attachment

cc: Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC Resident Inspector
Catawba Nuclear Station

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Duke Power Company
Catawba Nuclear Station

Report Number: SD 413-414/82-27

Initial Report Date: January 26, 1983

Final Report Date: March 30, 1984

Facility: Catawba Nuclear Station, Units 1 and 2

Identification of Deficiency:

The nickel cadmium batteries which are used for diesel starting have developed cracks in the cell containers which may allow electrolyte leakage.

Initial Report:

On December 30, 1983, Mr. John Rogge of the NRC, Region II, Atlanta, Georgia office was notified of this deficiency by Mr. W. O. Henry, Mr. J. D. Heffner, Mr. J. L. Crenshaw, and Mr. T. J. Al-Hussaini of Duke Power Company, Charlotte, North Carolina 28242.

Supplier and/or Component:

The original batteries (type MDP-24) were supplied by Transamerica Delaval, Inc. of Oakland, California as part of the diesel generator package. The batteries were manufactured by SAB Nife, Inc. of Lincoln, Rhode Island.

The replacement batteries (type MDP-24) were purchased directly from Nife under Mill Power order numbers J-19633-32 and K-09127-32.

Description of Deficiency:

The original Unit 1 and 2 diesel generator batteries cracked due to a solvent which attacked the polystyrene cases. Subsequently, 184 replacement cells were procured, and the cracked cells were returned to Nife on December 30, 1983 for testing and new polystyrene jars.

During battery inspection prior to diesel start-up and testing, 58 new replacement cells were found to have cracked cell containers. At this time, the new cells have surface cracks causing no electrolyte leakage; therefore, battery capacity has not been affected by the cracked cells. Due to this recent cracking, rejarrring of the original cells has been canceled and the batteries have been scrapped.

Analysis of Safety Implication:

The diesel generators are required to start and be ready for load acceptance. Battery deterioration could prevent the starting of the diesel generator.

Corrective Action:

Six (6) of the cracked replacement cells were returned to Nife for analysis. It was determined that the plate group dimensions in these cells exceeded maximum requirements. The oversized plate groups in conjunction with trapped gases and heat created during charge/discharge conditions caused the cell jars to crack along natural stress lines inherent in molded polystyrene containers.

Corrective action includes replacement of all existing Unit 1 and 2 cells. The replacement cell (type L307) is a block design constructed of polypropylene-copolymer and manufactured by SAB Nife, Inc. The new container material is flexible and not subject to the type of stress cracking seen in the polystyrene material.

Corrective action will be completed by May 1, 1984.