

DUKE POWER COMPANY

POWER BUILDING

422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

March 11, 1982

TELEPHONE AREA 704  
373-4083

Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

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

Dear Mr. O'Reilly:

Pursuant to 10 CFR 50.55e, please find attached Significant Deficiency  
Report SD 413-414/82-05.

Very truly yours,

*William O. Parker, Jr.*

William O. Parker, Jr.

RWO/php  
Attachment

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

Mr. P. K. Van Doorn  
NRC Resident Inspector  
Catawba Nuclear Station

Mr. Robert Guild, Esq.  
Attorney-at-Law  
314 Pall Mall  
Columbia, South Carolina 29201

Palmetto Alliance  
2135½ Devine Street  
Columbia, South Carolina 29205



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DUKE POWER COMPANY  
CATAWBA NUCLEAR STATION

Report Number: SD 413-414/82-05

Report Date: March 11, 1982

Facility: Catawba Nuclear Station Units 1 & 2

Identification of Deficiency:

Failure of E30AA switches to establish continuity due to contact film buildup. This deficiency was identified February 5, 1982.

Initial Report:

On February 12, 1982 Frank J. Long, NRC Region II, Atlanta, Georgia was notified of the deficiency by W. O. Henry, T. C. McMeekin, and J. E. Thomas of Duke Power Company, Charlotte, North Carolina.

Component and/or Supplier:

The components which failed to operate properly are E30KLA3 and E30KLA4 contact blocks (on E30AA switchoperators) manufactured by Cutler-Hammer.

Description of Deficiency:

On December 12, 1981 while performing testing on the Engineered Safety Feature circuits at McGuire Unit 1, several initiate and reset switches failed to establish continuity when depressed. The switch assemblies consisted of E30AA operators with combinations of E30KLA3 and E30KLA4 contact blocks manufactured by Cutler-Hammer. This application controls 48 vdc and 15 vdc circuits and are exercised on an infrequent basis. (The NRC inspector onsite was notified of this problem the day of the incident and a formal Reportable Occurrence Report No. 81-188 was filed December 30, 1981.)

On December 23, 1981 a group of the E30 switches, including five failed units, were sent to Cutler-Hammer for evaluation. Cutler-Hammer concluded in their February 2, 1982 letter (received February 5, 1982) that the failure was due to an insulating film of silver sulfide on the silver contact faces. They indicated that this would normally not be a problem, but the infrequent use allowed enough silver sulfide to accumulate to prohibit continuity at the applied voltage.

Analysis of Safety Implications:

Several switch failures could result in inoperable system level manual initiation/reset of the Engineered Safety Features.

Corrective Actions:

All contacts in safety-related applications controlling 48 volts or less which are operated on an infrequent basis will be replaced with goldplated contacts prior to fuel load.