DUKE POWER COMPANY
POWER BUILDING
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

October 23, 1981

TELEPHONE: AREA 704
373-4083

Mr. James P. O'Reilly, Director
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 10CFR 50.55e, please find attached Significant Deficiency Report SD-413, 414/81-22.

Very truly yours,

William O. Parker, Jr.

William O. Parker, Jr.

RWO:scs
Attachment

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

Resident Inspector
Nuclear Regulatory Commission
Catawba Nuclear Station

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Report: SD-413, 414/81-22

Report Date:

Facility: Catawba Nuclear Station Units 1 & 2

Identification of Deficiency:

Cracks were found in the jacketing material of a Medium Voltage Power Cable (8KV)

Initial Report:

On September 25, 1981, Mr. A. Ignatonis of the NRC Region II, Atlanta, GA. was notified of this deficiency by Mr. W. O. Henry, Mr. W. J. Foley, and Mr. J. L. Crenshaw of Duke Power Company, Charlotte, NC 28242.

Supplier and/or Component:

Cracking occurred in the jacketing of EP insulated cable constructed with a copper rip wire and a chlorinated polyethylene (CPE) jacket over interlocked armor. This cable is manufactured by Anaconda Ericsson Company in Indianapolis, Indiana in accordance with Duke Power specification CNS-1354.01-00-0001.

Description of Deficiency:

After installation of this cable had been completed, it was noticed the jacket had split in several places. A definite cause has not been determined but it is postulated to be due to a combination of the use of a chlorinated polyethylene jacket over the copper rip wire and/or the rigors of installation. Water penetrating the cable jacket through the cracks may cause degradation of the cable shielding which could lead to the failure of the cable.

Analysis of Safety Implication:

Cable constructed with a CPE jacket and copper rip wire has been limited to non-class 1E applications. The CPE jacketed cable with copper rip wire in stock could have been used in class 1E applications which would have had the potential of affecting the safety of operations. The jacket splitting was random in nature but could have affected redundant circuits.

This matter represents a design deficiency and if the cable had been used for class 1E applications, the safety of operations could have been adversely affected.

This deficiency was noted during the construction phase as a part of routine inspections.

Corrective Action:

All of the Medium Voltage Power Cable (8KV) supplied to Duke Power Company with a chlorinated polyethylene jacket over a copper rip wire has been identified. All remaining cable has been returned to vendor for rejacketing with a PVC compound over a non metallic rip cord. All cable used has been limited to non-class 1E applications.

Duke Power specification will be revised deleting the chlorinated polyethelene jacketing compound.