

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

*Contable*  
50-269  
270  
387

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

TELEPHONE AREA 704  
373-4083

December 8, 1977

Mr. J. P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Suite 1217  
230 Peachtree Street, Northwest  
Atlanta, Georgia 30303

Re: RII:JPO  
50-269, -270, -287

Dear Mr. O'Reilly:

Please find attached responses to IE Bulletin Nos. 77-05 and 77-05A,  
which were forwarded by your letters of November 8 and 15, 1977.

Very truly yours,

*William O. Parker Jr.*  
William O. Parker, Jr.

RLG:vr  
Attachments

7912110 844 07 Q

DUKE POWER COMPANY

Oconee Nuclear Station  
(50-269, 50-270, 50-287)

Response to IE Bulletin No. 77-05 & 77-05A

In response to your letter of November 8, 1977, which transmitted Nuclear Regulatory Commission IE Bulletin 77-05, and your letter of November 15, 1977, which transmitted Nuclear Regulatory Commission IE Bulletin 77-05A expanding the action requested in Bulletin 77-05, we wish to advise that a review of the design of Oconee Nuclear Station has been conducted. This review has revealed that electrical connector assemblies of the type or manufacture tested by Sandia Laboratories and which would be subjected to LOCA or high energy line break accident conditions are not being utilized within the safety systems of the facility. The application of two types of connectors of different manufacturers than those tested at Sandia have been identified as used in safety systems that could be subjected to LOCA or high energy line break accident conditions within the facility. One type is Viking Industries' single and multi-pin connectors which is used in conjunction with the electrical penetrations associated with the containment. We have reviewed the adequacy of the qualification testing for the assemblies and have determined them to be sufficient for the normal and accident environment they may see. The Staff has also reviewed the documentation of the environmental testing and has determined, "on a preliminary basis, that the environmental testing of the electrical connectors used in your facilities and the documentation thereof, appear to be satisfactory." (See letter of Edson G. Case to Duke Power Company dated November 18, 1977.)

The second type of connector is manufactured by Elastimold, a Division of Ambracy Corporation, (Type 154LR) and is used as a power connector to the High Pressure Injection Pump Motors outside of containment. These connectors could be subjected to a maximum environmental condition of 130°F and 85% humidity due to a postulated high energy line accident condition. The connectors are qualified for 90° centigrade (194°F) conduction temperature while submerged in water at 55° centigrade (131°F).

Therefore, the connectors utilized in our facility that are within safety systems that may be subject to LOCA or high energy line break accident conditions are qualified for the accident environment as specified.

Supporting documentation of the connectors qualification as listed on Page 2 is attached as required. Further test data on the Elastimold connectors will be supplied upon receipt from the manufacturer.

DUKE POWER COMPANY

Oconee Nuclear Station  
Electrical Connectors Qualification Data

1. VTR 363 on Part No. 085-0003-000, #4 Slide Lock and Wire Seal.
2. May 28, 1971, letter to G. R. Archibald from R. C. Peterson, transmitting total radiation exposure calculation results.
3. July 23, 1970, letter to G. R. Archibald from R. C. Peterson summarizing irradiation testing of elastomeric sealant and electrical insulator samples, and transmitting VTR-363 on Part No. 16-0039-000, Receptacle Assy. 5 #12.
4. QTP 118, Revision B, Qualification Test Procedure for Electrical Penetration Assembly Type "B," January, 1970.
5. QTP 119, Revision C, Qualification Test Procedure for Electrical Penetration Assemblies, January, 1970.
6. QTP 120, Revision B, Qualification Test Procedures for Electrical Penetration Assemblies, January, 1970.
7. QTP 124, Revision N/C, Qualification Test Procedure for Electrical Penetration Component Assemblies, January, 1970.
8. Quality Assurance Instruction No. 003-70, Material Evaluation Procedure for Ethylene Propylene Terpolymer Elastomeric (Rubber) Compound Type-R Grade - RS 610B, F1, Z1, Z2, Z3, and Z4, March, 1970.
9. VTR 363, Material Evaluation Test Report for Use in Nuclear Power Electrical Penetration Assemblies, July, 1970.
10. December 7, 1977 telex to L. Johnson, Duke Power Company from M Malia, Elastimold Division of Ambracy Corporation in Hackettstown, New Jersey, confirming environmental qualification of Type 154LR Elastimold connector.