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FROM: Wisconsin Public Svc. Corp., Green Bay, Wisconsin, E. W. James

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DESCRIPTION

Consisting of info. addressing concerns expressed in IE Bulletin No. 77-06 re. electrical penetration assemblies....

ENCLOSURE

PLANT NAME: Kewaunee (2-P)
RJL 12/6/77

FOR ACTION/INFORMATION

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December 2, 1977

Mr. J. G. Keppler, Regional Director
Office of Inspection & Enforcement
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Gentlemen:

SUBJECT: Docket 50-305
Operating License DPR-43
IE Bulletin No. 77-06

An investigation of the Kewaunee Nuclear Power Plant's electrical penetration assemblies was performed after receipt of IE Bulletin No. 77-06. The following information addresses those concerns expressed in the subject bulletin.

1.0 The Kewaunee Plant does not utilize GE type electrical penetration assemblies. All electrical penetration assemblies were supplied by D. G. O'Brien, Inc. and use an RTV Type 511 silicone potting compound for sealant. A dry nitrogen pressure environment is not required to ensure electrical functional capability or containment leak tightness.

1.1 We have not experienced any failures with this type of penetration.

2.0 Question is not applicable since dry nitrogen pressure has not been prescribed by the manufacturer to ensure electrical functional capability or leak tightness. However, nitrogen pressure is used to measure the leak tightness of these penetrations and the penetration assemblies are generally left pressurized. No provisions are made to repressurize those penetration assemblies which bleed down between leak rate tests.

2.1 Question is not applicable, however, no degradation of insulation resistance or anomolous component operation has been detected.

2.2 Question is not applicable.

2.3 Circuit operability provides an ongoing continual check of satisfactory circuit operation. Our preventative maintenance program provides for periodic meggering of all motors (pumps, valve motors, fans) inside containment. The meggering is done from the circuit breaker outside

containment to the motor inside containment and, thus, provides a check on the circuit insulation resistance including the penetration assembly. The control rod drive circuits are also periodically meggered. Instrument calibrations also provide a check on circuit continuity and insulation resistance for instrumentation systems.

3.0 Design reviews, analyses and tests have shown that the electrical penetration assemblies utilized at the Kewaunee Plant do not need to be pressurized during a LOCA.

3.1 The mechanical and electrical design requirements include long and short term LOCA environment criteria, seismic criteria, and electrical continuity criteria. Assemblies were subjected to Leak Rate testing, Pressure tests, Environmental tests (post LOCA conditions), Thermal tests, Short Circuit tests, Insulation Resistance tests, Voltage tests, and Continuity tests. Analyses by our Architect-Engineers show that these penetration assemblies will perform under LOCA conditions.

3.2 The measures that have been taken to provide this assurance satisfy the Commission's regulations, General Design Criteria 4, Appendix A to Part 50 and Quality Assurance Criteria, Appendix B to Part 50.

Very truly yours,

E. W. James
Senior Vice President
Power Supply & Engineering

EWJ:sna

cc - Dir, Office of Inspection & Enforcement
US NRC, Washington, D C 20555