



UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION II - SUITE 818
230 PEACHTREE STREET, NORTHWEST
ATLANTA, GEORGIA 30303

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May 18, 1971

J. P. O'Reilly, Chief, Reactor Testing and Operations Branch (2)
Division of Compliance, Headquarters

COMPLIANCE INQUIRY MEMORANDUM NO. 269/71-5 - DUKE POWER COMPANY (OCONEE 1),
LICENSE NO. CPPR-33, DOCKET NO. 50-269 - INTERNAL SHORT CIRCUITS IN CONTAINMENT
ELECTRICAL PENETRATIONS

During a site inspection on April 6-9, 1971, C. E. Murphy, Region II
inspector, was advised by the licensee that two low-voltage, power-type,
containment electrical penetrations manufactured by the Viking Company had
been tested and found to be grounded internally (discussed in CO Report No.
50-269/71-4). Subsequent testing revealed that two additional spare units
also contained short circuits. The following preliminary information was
obtained during this inspection and the subsequent inspection on May 4-9,
1971.

The results of the initial tests were as follows:

<u>Serial No.</u>	<u>Pin No.</u>	<u>Resistance to Ground (Ohms)</u>
Cl-16	1	2
Cl-18	21	Variable, 5 to 10.5
Cl-12	37	4
Cl-27	12	Variable, 5 to 10

Other pins had indicated momentary short circuits when first tested but the
short circuits cleared and later measurements indicated that they no longer
existed.

The licensee returned the penetrations to the Viking Company in California
for repair. Upon disassembly, metal shavings were found between the two
seal plates which support the electrical connectors. Some of the shavings
had become lodged between the connector pins and the metal plates.

A review of the QC documents revealed that the penetrations that contained
the short circuits had been modified subsequent to manufacture. The modi-
fications had required the machining out of some of the connectors. The
licensee and the manufacturer postulate that the shavings entered the area
between the plates during the machining operations.

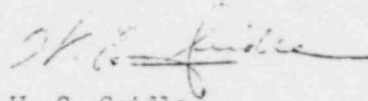
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All penetrations which had been modified have now been returned to the manufacturer for disassembly and inspection. Other penetrations were checked for short circuits by the licensee but none were found.

The licensee has stated that an in-house report will be issued regarding the penetrations and it will be made available to the inspector for review.



W. C. Seidle
Senior Reactor Inspector

CO:II:CEM

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