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 FACIL: 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co.
 50-270 Oconee Nuclear Station, Unit 2, Duke Power Co.
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 RECIP. NAME REID, R.W. RECIPIENT AFFILIATION Operating Reactors Branch 4

DOCKET #
 05000269
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SUBJECT: Notified by B&W on 790522 that operator for valve 2HP-20 inside Unit 2 containment bldg did not meet environ qualification requirements. Unit 1 continued to operate & Unit 2 valve replaced.

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DUKE POWER COMPANY

POWER BUILDING

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WILLIAM O. PARKER, JR.
VICE PRESIDENT
STEAM PRODUCTION

June 5, 1979

TELEPHONE: AREA 704
373-4083

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. R. W. Reid, Chief
Operating Reactors Branch #4

Re: Oconee Nuclear Station, Units 1 and 2
Docket Nos. 50-269 and 50-270

Dear Sir:

On May 23, 1979, your office was notified that certain components in use at Oconee Nuclear Station Units 1 and 2 did not meet environmental qualification requirements. Pursuant to IE Bulletin 79-01, this letter provides detailed information regarding those components.

At approximately 1700 on May 22, 1979, as a result of a review of equipment qualification data for Oconee Nuclear Station, the Babcock and Wilcox Company (B&W) notified Duke Power Company that the operator for valve 2HP-20, the Engineered Safeguards (ES) Reactor Coolant Pump (RCP) Seal Return Isolation Valve inside the Unit 2 containment building, did not meet environmental qualification requirements. In addition, B&W indicated that eight in-containment ES isolation valves in Unit 1 and six in Unit 2 (including valve 2HP-20) were suspected of having operators with limit switch frame housings which were not qualified for a post-accident environment. At the time, Unit 1 was operating at 100% full power, and Unit 2 was in a heatup mode at approximately 500°F and 1750 psig. The decision was made to return Unit 2 to cold shutdown in order to allow replacement of the operator for valve 2HP-20, and cooldown was initiated at approximately 2100 on May 22. The valve operator, which was verified to have an aluminum limit switch housing, was replaced with a qualified operator. While Unit 2 was in cold shutdown on May 23, the five additional valves in question were inspected, and all five operators were found to have limit switches with aluminum housings. An evaluation was performed which concluded that the non-qualified limit switch housings would have no affect on safety in the event of a design-basis accident. Therefore, Unit 1 continued to operate, and Unit 2 returned to power operation following replacement of the operator for 2HP-20.



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The non-qualified operator for valve 2HP-20 appears to have resulted from a construction deficiency at the time the valve was installed. The valve operator has been replaced with one which is qualified for a post-accident environment. The installation of the aluminum limit switch housings is considered to be due to a manufacturing deficiency. The limit switch housings for the valves listed below for Unit 1 will be inspected and replaced if necessary during the next cold shutdown of that unit. The aluminum limit switch housings for the valves listed for Unit 2 will be replaced at its next cold shutdown. In addition, the records for the replacement valve motor operator assemblies currently in storage will be reviewed to verify that their components meet environmental qualification requirements. The records for Unit 3 indicated that all ES valve operators in use in that unit meet the appropriate requirements.

Valve Number		Function
Unit 1	Unit 2	
1HP-3		Letdown Cooler A Isolation
1HP-4		Letdown Cooler B Isolation
1HP-20		Reactor Coolant Pump Seal Return Isolation
1LP-1	2LP-1	Normal Decay Heat Removal Isolation
1LP-2	2LP-2	Normal Decay Heat Removal Isolation
1GWD-12	2GWD-12	Quench Tank Vent Isolation
1CS-5	2CS-5	Quench Tank Suction Isolation
1CC-7	2CC-7	Component Cooling Water Return Isolation

If, upon receiving an ES signal, valve 2HP-20 had not closed due to failure of the non-qualified operator, isolation of the RCP seal return lines would have been effected by closure of redundant valve 2HP-21, located outside containment. In addition, periodic operability testing had confirmed that the valve will properly actuate upon receipt of an ES signal. The concern with respect to the aluminum limit switch housings resulted from tests conducted by the valves' manufacturer, which indicated that prolonged exposure to a boric acid spray, which could occur subsequent to a design-basis accident, could result in corrosion of the aluminum. However, the tests indicated that five hours of exposure to the corrosive spray was required before degradation of the housing affected operation of the limit switch, and the switch failed to operate properly only after 24 hours of exposure to the spray. Under postulated accident conditions requiring containment isolation, all the valves of concern would either be closed already or would close within 45 seconds, and would not be required to reopen. Therefore, the installation of the non-qualified valve operator components is considered to be of no consequence with respect to safe operation of the unit, and the health and safety of the public were not endangered.

Very truly yours,

W. O. Parker Jr. by WAT
W. O. Parker, Jr.

SRL/sch

cc: Mr. J. P. O'Reilly