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**DUKE POWER**

December 7, 1989

Mr. S. D. Ebnetter  
Regional Administrator  
Region II  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

Subject: Catawba Nuclear Station  
Docket Nos. 50-413 and 50-414  
NRC Inspection Report Nos. 50-413, 414/89-33  
Submittal of Supplemental Information

Gentlemen:

Enclosed is supplemental information concerning Type C valves, requested by Mr. Herb Whitener during his recent inspection at Catawba Nuclear Station.

Very truly yours,

A handwritten signature in cursive script that reads "Hal B. Tucker".

Hal B. Tucker

WRC74/lcs

xc: Mr. W. T. Orders  
NRC Resident Inspector  
Catawba Nuclear Station

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**TYPE C VALVES TESTED IN REVERSE-ACCIDENT DIRECTION  
AT CATAWBA**

NOTE: Valves listed below are common to both units. VP valves are not included.

<u>VALVE # (PENET.#)</u>	<u>VALVE SIZE &amp; TYPE</u>	<u>DISCUSSION</u>
FW11 (M358)	4" Plug Valve loc. inside containment	Valve is not direction-dependent, per manufacturer's drawing. Testing in reverse-accident direction is equivalent to testing in accident direction.
NM69 (M236)	0.75" Relief Valve loc. inside cont.	Valve relieves to containment. Testing in reverse-accident direction tends to unseat valve, and is more conservative than testing in accident direction.
NV14 (M347)	3" Relief Valve loc. inside cont.	Valve relieves to containment. Testing in reverse-accident direction tends to unseat valve, and is more conservative than testing in accident direction.
VQ16A (M204)	4" Diaphragm Valve loc. inside cont.	Valve is not direction-dependent, per manufacturer's drawing. Testing in reverse-accident direction is equivalent to testing in accident direction.
WE22 (M356)	1" Globe Valve loc. inside cont.	Testing in reverse-accident direction applies pressure under seat of valve (tending to force disc open), and is more conservative than testing in accident direction.
MIMV6480 (CNIP-MI5) MIMV6481       " MIMV6490 (CNIP-MI6) MIMV6491       " MIMV6470 (CNIP-MI7) MIMV6471       "	0.5" Globe Valves (packless)	These manual instrument valves are on the ILRT pressure-sensing lines, and are kept locked-closed except during ILRT. Although testing in reverse-accident direction applies pressure to the top of the valve seat (vs. the bottom, as with WE22), the flow area through the valve seat is so small (less than 0.2 sq.in.), that the net force on the valve plug from test pressure (Pa = 14.68 psig) is negligible (0.02 pounds force). Therefore, testing in reverse-accident direction is equivalent to testing in accident direction.

<u>VALVE # (PENET.#)</u>	<u>VALVE SIZE &amp; TYPE</u>	<u>DISCUSSION</u>
MISV5230 (CNIP-EMF-IN)	0.5" Solenoid	<p>These instrument valves are essentially packless globe valves. The two EMF inlet valves test pressure is applied under the seat, but the two EMF outlet valves test pressure is applied to the top of the valve seat. However, as in the case of the MIMV's listed above, the flow area through the valve seat is so small that testing these valves in either direction is equivalent. This is supported by the fact that past test results for these four valves have been similar, regardless of which valves are tested with pressure under the valve seat.</p>
MISV5231 "	Valves	
MISV5232 (CNIP-EMF-OUT)		
MISV5233 "		
IASV5080 (Upper PAL)	0.5" Solenoid	<p>These instrument valves are on the instrument air supply lines to the upper/lower personnel airlock outer door seals. Although the valves (which again are essentially packless globe valves) are tested with pressure applied to the top of the valve seat, the seat area is once again so small that test results at a test pressure of 14.68 psig are the same in either direction.</p>
IASV5160 (Lower PAL)	Valves	