

DUKE POWER COMPANY  
MCGUIRE NUCLEAR STATION  
TECHNICAL SPECIFICATION 4.6.1.2d/10CFR50 APPENDIX J EXEMPTION REQUEST

McGuire Technical Specification 4.6.1.2d requires that Type C penetration tests "be conducted at intervals no greater than 24 months". This is based on 10 CFR 50, Appendix J, III.c.3, which requires that Type C penetration tests "be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years".

McGuire Unit 1 had previously been scheduled for shutdown in October, 1982 to install the design modification on the Model D Westinghouse steam generators. Recent delays in delivery of the special tooling required for this modification has resulted in a delay of the scheduled shutdown until November, 1982. Therefore, Duke Power Company is requesting an exemption from Technical Specifications (and thus 10 CFR 50 Appendix J) to allow penetration number M320 to be leak tested no later than November 30, 1982. This would allow an insignificant extension to the 24 months currently required to a maximum of 25 months. The proposed Technical Specification change is shown in Attachment 1.

Justification

Several penetrations require that the unit be in cold shutdown to perform the Type C leakage tests. These penetrations were last tested in 1980 and, therefore, are required to be tested in 1982. Previous shutdowns for steam generator eddy current inspections provided an opportunity to test penetrations which were tested mid-year 1980. At the time of the last shutdown in July, 1982, a review was performed of all surveillance requiring a unit shutdown to insure the unit could operate until the next shutdown, which at that time was scheduled for September, 1982. Penetration M320 was not leak tested during this July outage since it was believed the next shutdown in 1982 would occur no later than the expiration of the interval for this penetration. Other penetrations with earlier test dates were tested during this outage.

As shown on Figure 1 (excerpt from FSAR Figure 9.2.4-3 (2 of 2)), penetration M320 is on the component cooling (KC) line from components in the reactor building including the reactor coolant pump motor coolers. Testing of this penetration requires isolating and draining this portion of the line, and thus requires isolation of KC flow to the affected components. Therefore, Unit 1 would have to be shutdown and cooled down in order to switch to residual heat removal which would allow isolation of KC to reactor coolant pump motor coolers. Current estimate for shutdown, cooldown, penetration testing, and heatup is approximately 72 hours. More important is the thermal cycle which would be required only for the purpose of obtaining test results a few days earlier than otherwise available. In addition, the probability of the penetrations failure during the brief delay is extremely remote. Also, the NRC allows a grace period (generally  $\pm 25\%$ ) for many other types of testing and surveillance, including some valve leak testing pursuant to ASME Boiler and Pressure Vessel Code Section XI, Subsection IWV. The current outage planned to begin in mid-November allows more than sufficient time to complete this penetration test and all other required surveillance for 1982.

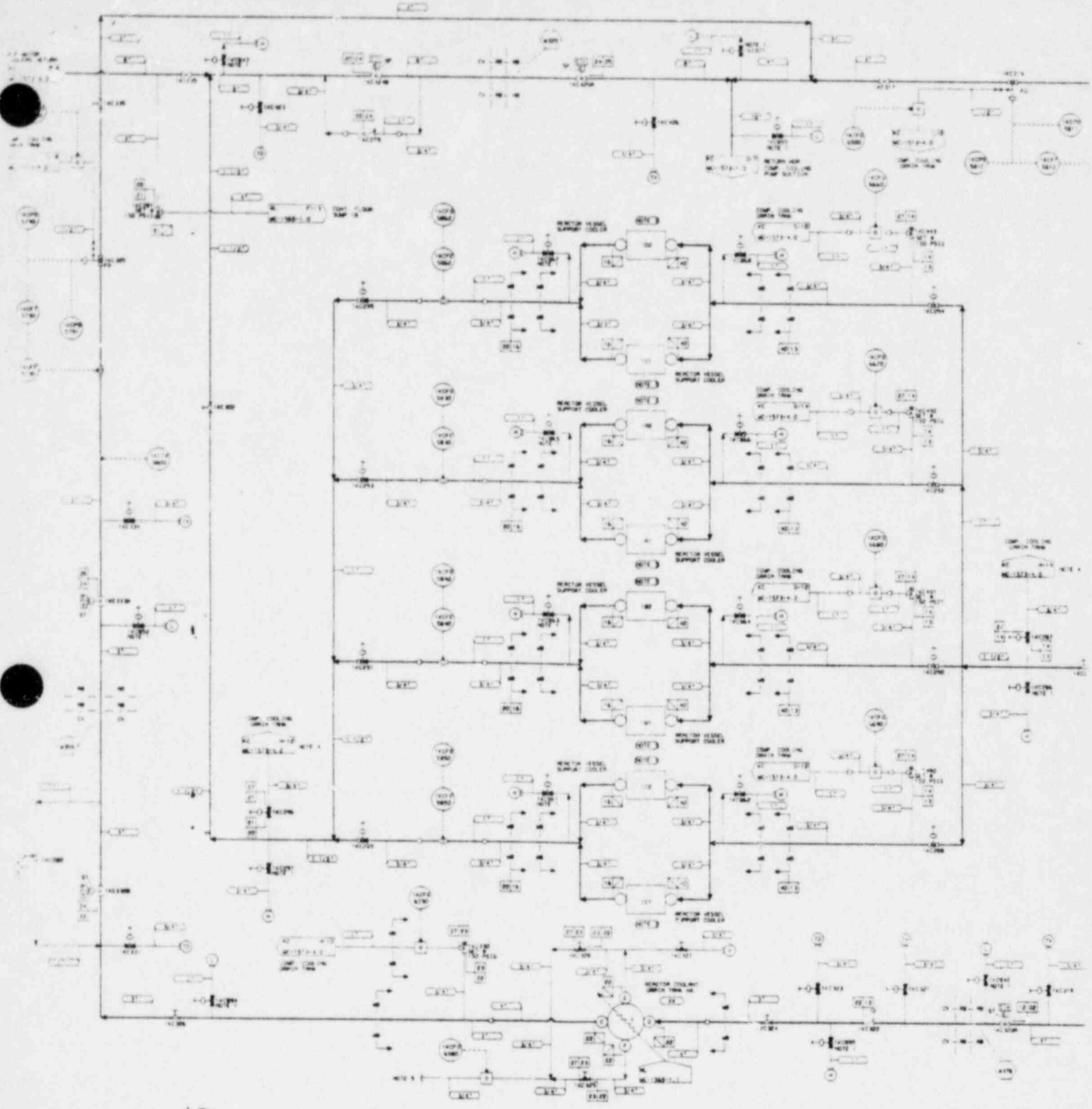
Duke Power Company feels the insignificant increase in the surveillance frequency compared to the unnecessary thermal cycle of cooldown and heatup represents responsible and prudent concern for the safety of plant operations.

#### Safety Evaluation

Component cooling system penetration M320 (component cooling water from reactor vessel support coolers and RCP coolers) was tested in May, 1979 and October, 1980. The results from these tests were 40 sccm and 45 sccm respectively. The total allowable leakage for penetrations is specified as 0.07 La or 6343 sccm at 14.8 psig. The average maximum allowable leakage for each of the 69 penetrations would be 92 sccm. Therefore, penetration M320 has exhibited leakage rates less than half the maximum allowable for individual penetrations. The latest results for leakage rates of all penetrations shows a current total of 2187 sccm which is well below the allowable limit of 6343 sccm.

The past history shows the leak rate of the penetration has been well within the allowable limit and there is no justification to assume the penetration will degrade beyond the allowable limit by November 30, 1982. Therefore, Duke believes this limited extension in the surveillance period does not involve an unreviewed safety question and has no effect on the health and safety of the public.

Figure 1



NOTES:  
 1. SEE THE DESIGN NEEDS BY CONSTRUCTION.  
 2. SEE THE DESIGN NEEDS BY CONSTRUCTION.  
 3. CENTRAL MAP LOCATION FOR DETAILED WATER COOLANT  
 4. SEE THE DESIGN NEEDS BY CONSTRUCTION.

LINE NO.	DESIGNATION	TEMPERATURE	CLASS	MATERIAL
1	...	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...
6	...	...	...	...
7	...	...	...	...
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29	...	...	...	...
30	...	...	...	...
31	...	...	...	...
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37	...	...	...	...
38	...	...	...	...
39	...	...	...	...
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41	...	...	...	...
42	...	...	...	...
43	...	...	...	...
44	...	...	...	...
45	...	...	...	...
46	...	...	...	...
47	...	...	...	...
48	...	...	...	...
49	...	...	...	...
50	...	...	...	...

FLOW DIAGRAM OF COMPONENT COOLING SYSTEM  
 McGuire Nuclear Station



TABLE 3.6-1

SECONDARY CONTAINMENT BYPASS LEAKAGE PATHS

<u>PENETRATION NUMBER</u>	<u>SERVICE</u>	<u>RELEASE LOCATION</u>	<u>TEST TYPE</u>
M317	Instrument Air	Auxiliary Building	Type C
M243	Containment Air Release	Auxiliary Building	Type C
M384	Containment Air Addition	Auxiliary Building	Type C
M361	Reactor Coolant Pump Motor Oil Supply	Auxiliary Building	Type C
M353	Fire Protection Header	Auxiliary Building	Type C
M376	Component Cooling Water to Reactor Coolant Drain Tank Heat Exchanger	Auxiliary Building	Type C
M355	Component Cooling Water from Reactor Coolant Drain Tank Heat Exchanger	Auxiliary Building	Type C
M327	Component Cooling Water to Reactor Vessel Support Coolers and RCP Coolers	Auxiliary Building	Type C
M320	Component Cooling Water from Reactor Vessel Support Coolers and RCP Coolers	Auxiliary Building	Type C**
	Flued Head to Guard Pipe Welds on all Hot Penetrations	Atmosphere, or Auxiliary Building, or Turbine Building	...
	Equipment Hatch	Atmosphere	*

\*Pursuant to Specification 4.6.1.2.e.

\*\*This penetration is exempted from the Type C leak rate test requirements of specification 4.6.1.2d for the period November 1 through November 30, 1982.

MCGUIRE - UNIT 1

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Attachment 1