Duke Power Company
McGuire Nuclear Generation Department
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DUKE POWER

May 18, 1993

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Subject: McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370
Section XI Inservice Inspection (ISI)
Hydrostatic Testing, First Interval
Relief Request 93-02

Dear Sir;

Pursuant to 10 CFR 50.55(g)(5)(iii), I am submitting the attached relief request for NRC review and approval. This request for relief from the requirements of Section XI of the ASME code involves a hydrostatic test of the class B piping within mechanical penetrations M372 and M373 during the first interval. These penetrations are part of the glycol-water mixture supply and return lines for the ice condenser refrigerant system (NF).

Please note that by letter dated August 19, 1992, a relief request to extend the first ten-year ISI interval to coincide with the start of the end-of-cycle 8 refueling outage for McGuire Unit 1 was submitted. Approval by the NRC was provided by a December 28, 1992 letter. This extension was needed in order to complete all of the remaining hydrostatic tests for the first interval. One of the remaining test to be performed is that of the Class B piping of penetrations M372 and M373. As such, approval of this submittal prior to June 7, 1993, which coincides with the current schedule for entering mode 4, is requested. Approval by this date is necessary because the remaining hydrostatic tests for the first ten-year ISI interval need to be completed prior to the restart of Unit 1 from its current refueling outage.

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Should there be any questions regarding this matter, please contact Paul Guill at (704) 875-4002.

Very truly yours,

for

T. C. McMeekin

xc: Mr. S. D. Ebneter
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. P. K. Van Doorn
Senior NRC Resident Inspector, McGuire
McGuire Nuclear Station

Mr. Victor Nerses, Project Manager
Office of Nuclear Reactor Regulation
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John C. Brooks, Commissioner of Labor
Attention: Director, Boiler & Pressure Vessel Division
Department of Labor State of North Carolina
4 West Edenton Street
Raleigh, North Carolina 27601

bcc: with attachments
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ATTACHMENT

DUKE POWER COMPANY
MCGUIRE NUCLEAR STATION

Request for Relief From
ASME Code Section XI Requirements

I. Component for Which Relief is Requested

A. Name and Identification Number
Class B piping within Containment Penetrations M372 and M373; Item Number C07.021.045; Flow diagram MC-1558-4.0 (Flow diagram is attached)

B. Function
The supply and return glycol-water mixture lines for the ice condenser refrigeration system (NF).

C. ASME Section XI Code Class
Class 2

D. Valve Category
Not applicable

II. ASME Code Section XI Requirement That Has Been Determined To Be Impractical

ASME Code Section XI, 1980 Edition through Winter 1980 Addenda, Subsection IWC, Subarticle 2500, table IWC-2500-1, Examination Category C-H (All Pressure Retaining Components), Item Number C7.21

III. Basis for Requesting Relief

The examination specified by the code is a system hydrostatic test of the class B piping for mechanical penetrations M372 and M373. These penetrations are part of the glycol-water mixture supply and return lines for the Ice Condenser Refrigeration System (NF). The lines are 4 inch carbon steel piping that is insulated. The examination method specified by the code is a VT-2 visual exam. IWA-5242 delineates the requirements for performing a VT-2 visual examination of an insulated component. Briefly, IWA-5242 states that a VT-2 visual exam may be performed without removing insulation provided that; 1) accessible and exposed surfaces and joints of insulation are examined; 2) vertical surfaces of insulation are examined at the lowest elevation; and 3) horizontal surfaces be examined at each insulation joint. If the insulation surfaces are inaccessible for direct examinations, then only surrounding areas need be examined.

The piping in question for penetrations M372 and M373 are encapsulated with ice and frost. Due to this layer of ice and frost, a VT-2 visual examination can not be performed in accordance with the requirements specified within the ASME Section XI code. The inspectors during the examination are not able to observe the appropriate areas for any signs of possible leakage. This layer of ice and frost on the piping is believed to be due to the nature of the fluid (glycol-water mixture) within the piping.

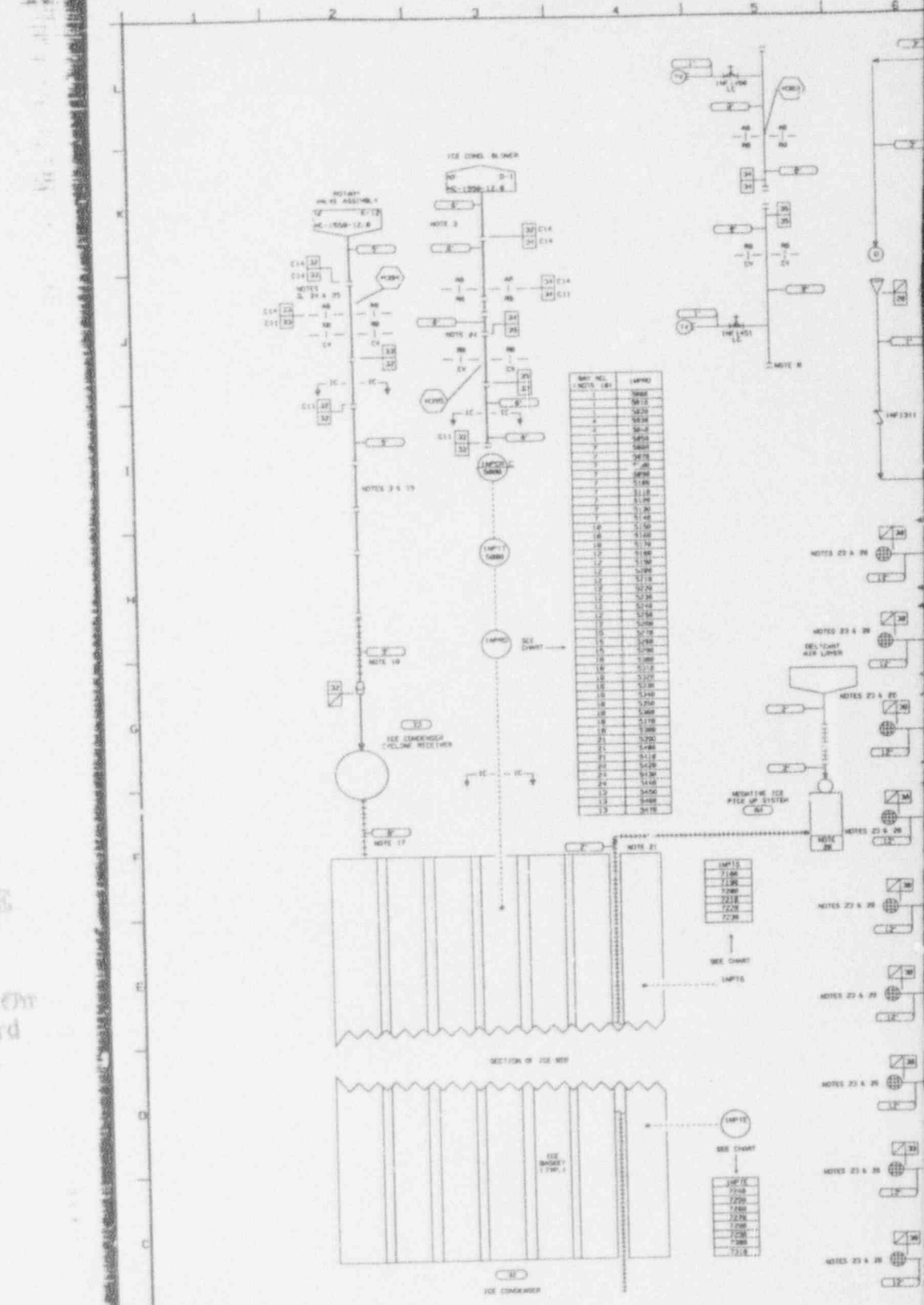
As such, to perform the code required VT-2 visual examination, the insulation around the piping will need to be removed. The NF system would have to be shutdown for an extended period of time in order to: remove the insulation, drain the glycol-water mixture, perform the examination, and to re-install the insulation. Since these lines are in service at all times to maintain the weight of the ice baskets, the NF system can not be shut down and the glycol-water mixture drained. Doing so would result in the degradation of the safety related ice condenser system due to melting of the ice. Further, the recovery from such an incident would be a significant burden due to the need to re-weight the ice baskets and the possible need to reload some.

IV. Alternate Testing

In lieu of the system hydrostatic test, tne surveillance requirement of technical specification (TS) 4.6.1.2d.4) would be performed. This TS surveillance specifies that the type C test for penetrations M372 and M373 can be performed with glycol-water mixture as the pressurizing fluid, provided that a zero indicated leakage rate is measured.

V. Implementation Schedule

The proposed alternate testing will be performed prior to startup of cycle 9 for unit 1. For Unit 2, the proposed alternate testing will be performed during the end-of-cycle 8 refueling outage.



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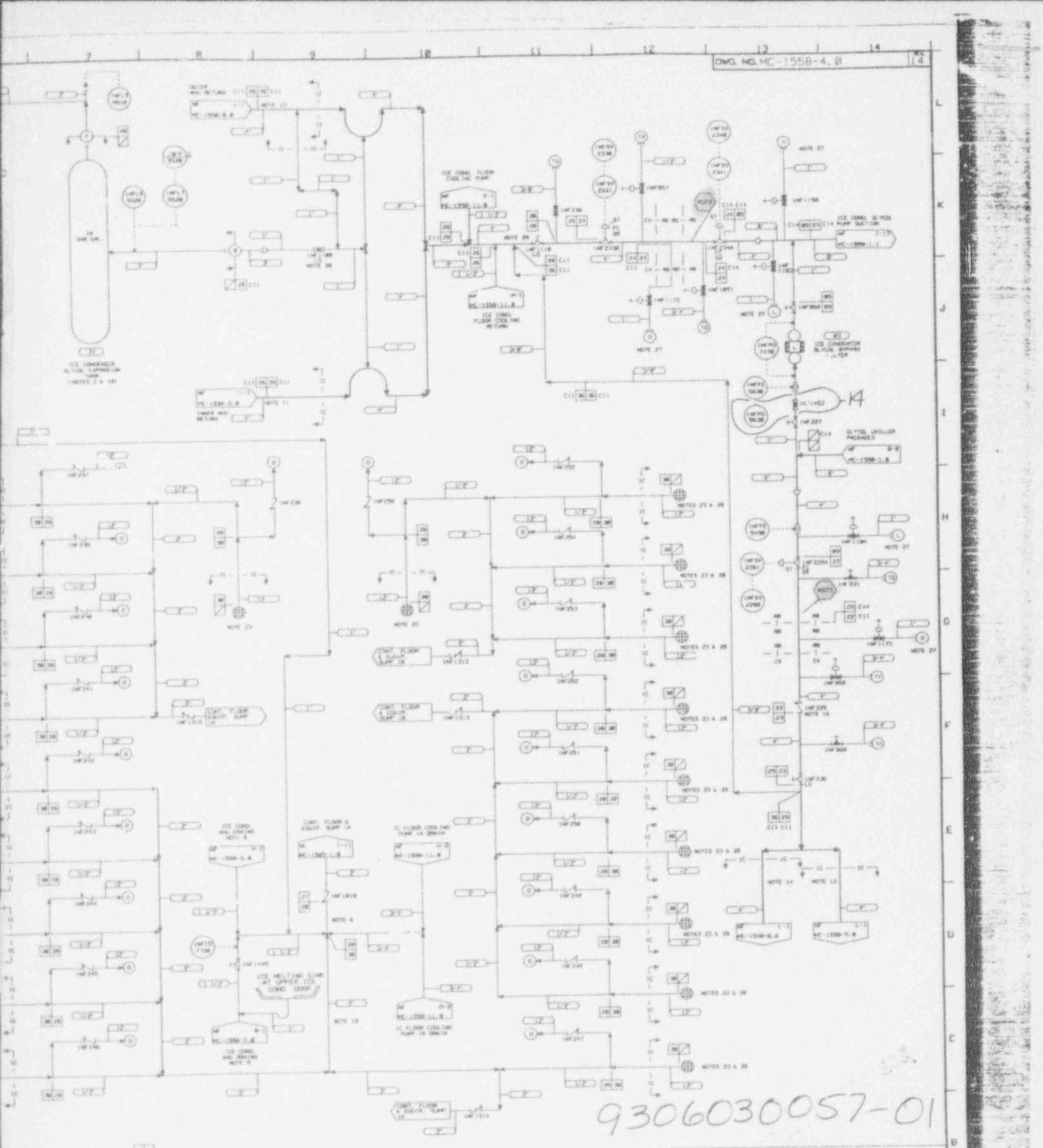

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QA CONDITION 4
QA CONDITION 2
QA CONDITION 1

DUKE POWER COMPANY
MCGUIRE NUCLEAR STATION UNIT 1

FLOW DIAGRAM
ICE CONDENSER REFRIGERATION
SYSTEM (NF)

DWG. NO. MC-1558-4.0 14

NO.	REVISIONS	DRW	DATE	CHKD	DATE	APPR	DATE
14	REV. PER MCW-2485						
13	REV. PER MCW-2143						
12	REV. PER SPR-3194						
11	REV. PER MSM-MCF-1576/80						
10	REV. PER CR23.24						
09	APPROVED AND RELEASED						