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DUKE POWER

October 12, 1992

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

Subject: McGuire Nuclear Station, Unit 1
Docket Number: 50-369
Inservice Testing Plan (IST)
Second Interval Plans for unit 1
Relief Request 92-04

Dear Sir;

The Commercial Service Date for McGuire Nuclear Station, Unit 1 is December 1, 1981. As specified by Section XI of the ASME Boiler and Pressure Vessel Code, the first interval for Unit 1 was from December 1, 1981 to December 1, 1991. Pursuant to IWA-2400(c) the first interval was extended an additional year. As such, the first interval for Unit 1 will end December 1, 1992.

In accordance with 10CFR50.55a(f)(4)(ii), the IST program for Unit 1 shall be revised to comply with the requirements of the latest edition and addenda of the Code incorporated by reference in 10CFR50.55a(b)(2) twelve months prior to the start of second inspection interval. The latest edition of the Code that was referenced by paragraph (b) of 10CFR50.55a at that time was the 1986 edition of the Code.

Pursuant to the requirements of 10CFR50.55(a), attached please find a copy of revision 18 to the McGuire Pump and Valve IST program for McGuire Nuclear Station Unit 1 to be used during the second interval. In accordance with the requirements of 10CFR50.55a(f), the IST plan for Unit 1 of McGuire Nuclear Station will be performed in accordance with the 1986 edition, including the 1987 addenda, of the ASME Section XI Code.

The McGuire Pump and Valve IST program for Unit 2 was not updated at this time. Revision 13 is the current revision for Unit 2. The effective date for the changes for Unit 1, as provided by this submittal is December 1, 1992.

A047 1/1

Included within the IST program plan provided by this letter are requests for relief from certain pump and valve test requirements that have been determined to be impractical. Specifically, sections I.3, I.4, II.5 and II.6 of the McGuire Pump and Valve IST program manual provide the relief requests. Pursuant to 10CFR50.55a(f)(6), NRC approval of the enclosed reliefs is hereby requested.

Please contact Paul Guill at (704) 875-4002 if there are any questions regarding this submittal.

Very truly yours,

Ted 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

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DUKE POWER COMPANY

McGUIRE NUCLEAR STATION

PUMP INSERVICE TESTING PROGRAM

UNIT 1

INSERT THE FOLLOWING SECTION UNDER TAB:

I.1

DUKE POWER COMPANY
McGUIRE NUCLEAR STATION – UNIT 1
PUMP INSERVICE TESTING PROGRAM
ASME SECTION XI, SUBSECTION IWP

INTRODUCTION

The inservice testing of ASME Code Class 1, 2 and 3 pumps provided with an emergency power source will be tested as required by Section XI, Subsection IWP, of the ASME Boiler and Pressure Vessel Code 1986 Edition including the 1987 Addenda issued December 31, 1987 except where specific written relief has been granted by the Nuclear Regulatory Commission. The effective date of the submittal is December 1, 1992.

A description of the inservice testing program, as well as specific relief requests from code requirements determined to be impractical, is described in the submittal.

NOTES:

1) IWP-6240(f) requires the signature of the person or persons responsible for conducting and analyzing the test. The dated initials of the person or persons responsible for conducting and analyzing the test may be used in place of a signature in the record of tests. Initials shall be construed as signatures to meet the intent of IWP.

INSERT THE FOLLOWING SECTION UNDER TAB:

I.2

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

PUMP	1CAPU0001, 1A Auxiliary Feedwater Pump 1CAPU0002, 1B Auxiliary Feedwater Pump
SAFETY CLASS	C
FLOW DIAGRAM	MC-1592-1.1
TEST FREQUENCY	Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1 RR I.4.1
INSTRUMENT RANGE	IWP-4120	RR I.4.1
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly full flow pump test is conducted. The test meets IWP requirements except as noted above and described in the respective relief request.

PUMP 1CAPU0003, Unit 1 Turbine Driven Auxiliary Feedwater Pump

SAFETY CLASS C

FLOW DIAGRAM MC-1592-1.1

TEST FREQUENCY Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	IWP-3300, 3500	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1 RR I.4.1
INSTRUMENT RANGE	IWP-4120	RR I.4.1
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly full flow pump test is conducted. The test meets IWP requirements except as noted above and described in the respective relief request.

PUMP	1FDPU0054, 1A D/G Fuel Oil Transfer Pump 1FDPU0055, 1B D/G Fuel Oil Transfer Pump
SAFETY CLASS	C
FLOW DIAGRAM	MC-1609-3.0, MC-1609-3.1
TEST FREQUENCY	Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1 RR I.4.2
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	IWP-3300, 3500	RR I.4.2
FLOW RATE, Q	IWP-4600, 3300, 3500	RR I.4.2
INSTRUMENT RANGE	IWP-4120	RR I.4.2
INSTRUMENT ACCURACY	IWP-4110-1	RR I.4.2
ACCEPTABLE RANGE	IWP-3100-2	RR I.4.2
ALERT RANGE	IWP-3100-2	RR I.4.2
REQUIRED ACTION RANGE	IWP-3100-2	RR I.4.2
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.4
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	Not Required	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly full flow pump test is conducted as described in Relief Request I.4.2. The test meets IWP requirements except as noted above and described in the respective relief request.

PUMP
1KCPU0001, 1A1 Component Cooling Water Pump
1KCPU0002, 1A2, Componet Cooling Water Pump
1KCPU0003, 1B1 Component Cooling Water Pump
1KCPU0004, 1B2 Component Cooling Water Pump

SAFETY CLASS C

FLOW DIAGRAM MC-1573-1.0

TEST FREQUENCY Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1 RR I.4.3
INSTRUMENT RANGE	IWP-4120	RR I.4.3
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly full flow pump test is conducted. The test meets IWP requirements except as noted above and described in the respective relief request.

PUMP	1NDPU0001, 1A Residual Heat Removal Pump 1NDPU0002, 1B Residual Heat Removal Pump
SAFETY CLASS	B
FLOW DIAGRAM	MC-1561-1.0
TEST FREQUENCY	Quarterly - Miniflow: Refueling - Full Flow /Relief Request I.4.4)

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4310, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE Quarterly low flow pump tests will be conducted as described in Relief Request I.4.4. Full flow pump tests will be conducted on a refueling frequency as described in Relief Request I.4.4. The ND Pump Testing Plan meets all other code requirements except as noted above and described in the respective relief request.

PUMP	1NIPU0009, 1A Safety Injection Pump 1NIPU0010, 1B Safety Injection Pump
SAFETY CLASS	B
FLOW DIAGRAM	MC-1562-3.0
TEST FREQUENCY	Quarterly - Miniflow; Refueling - Full Flow (Relief Request I.4.5)

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE Quarterly low flow pump tests will be conducted as described in Relief Request I.4.5. Full flow pump tests will be conducted on a refueling frequency as described in Relief Request I.4.5. The NI Pump Testing Plan meets all other code requirements except as noted above and described in the respective relief request.

PUMP	1NSPU0001, 1A Containment Spray Pump 1NSPU0002, 1B Containment Spray Pump
SAFETY CLASS	B
FLOW DIAGRAM	MC-1563-1.0
TEST FREQUENCY	Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly pump test will be conducted which meets IWP requirements except as noted above and described in the respective relief request.

PUMP: 1NVPU0015, 1A Centrifugal Charging Pump
1NVPU0016, 1B Centrifugal Charging Pump

SAFETY CLASS: B

FLOW DIAGRAM: MC-1554-3.1

TEST FREQUENCY: Quarterly- Low Flow; Refueling - Full Flow (Relief Request I.4.6)

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	I.4 6
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE: Quarterly low flow pump tests will be conducted as described in Relief Request I.4.6. Full flow pump tests will be conducted on a refueling frequency as described in Relief Request I.4.6. The NV Pump Testing Plan meets all other code requirements except as noted above and described in the respective relief request.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

PUMP	1NVPU0027, 1A Boric Acid Transfer Pump 1NVPU0028, 1B Boric Acid Transfer Pump
SAFETY CLASS	C
FLOW DIAGRAM	MC-1554-5.0
TEST FREQUENCY	Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly full flow pump test is conducted. The test meets IWP requirements except as noted above and described in the respective relief request.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

PUMP	1RNPU0003, 1A Nuclear Service Water Pump 1RNPU0004, 1B Nuclear Service Water Pump
SAFETY CLASS	C
FLOW DIAGRAM	MC-1574-1.0
TEST FREQUENCY	Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE A quarterly full flow pump test is conducted. The test meets IWP requirements except as noted above and described in the respective relief request.

PUMP	1WNPU0094, 1A2 D/G Sump Pump 1WNPU0096, 1A3 D/G Sump Pump 1WNPU0095, 1B2 D/G Sump Pump 1WNPU0097, 1B3 D/G Sump Pump
SAFETY CLASS	C
FLOW DIAGRAM	MC-1609-7.0
TEST FREQUENCY	Quarterly - Premodification Two Year - Post Modification (Relief Request I.4.7)

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1 RR I.4.7
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	RR I.4.7
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	RR I.4.7
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	RR I.4.7
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	Not Required	-

PUMP (Continued)

1WNPU0094, 1A2 D/G Sump Pump
1WNPU0096, 1A3 D/G Sump Pump
1WNPU0095, 1B2 D/G Sump Pump
1WNPU0097, 1B3 D/G Sump Pump

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1 (Continued)

BEARING TEMPERATURE, Tb	IWP-4310	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE Quarterly pump tests will be conducted in accordance with Relief Request I.4.7 in the premodification plan. After the test loops are installed, a head curve test will be conducted on a two year frequency as decribed in Relief Request I.4.7.

PUMP — 0YCPU0001, Train A Control Area Chilled Water Pump
0YCPU0002, Train B Control Area Chilled Water Pump

SAFETY CLASS — C

FLOW DIAGRAM — MC-1618-1

TEST FREQUENCY — Quarterly

INSERVICE TEST QUANTITIES, TABLE IWP-3100-1

	REQUIREMENT	RELIEF REQUESTS
SPEED	Not required per IWP-4400	-
INLET PRESSURE, Pi	IWP-3300, 3500	RR I.3.1
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DISCHARGE PRESSURE , Pd	IWP-4240, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
DIFFERENTIAL PRESSURE, Pd-Pi	Calculated per IWP-4240	-
ACCEPTABLE RANGE	IWP-3100-2	-
ALERT RANGE	IWP-3100-2	-
REQUIRED ACTION RANGE	IWP-3100-2	-
SYSTEM REQUIREMENTS	IWP-3210	RR-I.3.2
FLOW RATE, Q	IWP-4600, 3300, 3500	-
INSTRUMENT RANGE	IWP-4120	-
INSTRUMENT ACCURACY	IWP-4110-1	-
VIBRATION, Vr	IWP-4510, 3300, 3500	RR I.3.3
INSTRUMENT RANGE	IWP-4120	RR I.3.3
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.3
ACCEPTABLE RANGE	IWP-3100-2	RR I.3.3
ALERT RANGE	IWP-3100-2	RR I.3.3
REQUIRED ACTION RANGE	IWP-3100-2	RR I.3.3
LUBRICATION LEVEL	IWP-3300, 3500	-
BEARING TEMPERATURE, Tb	IWP-4310, 3300, 3500	RR I.3.4
INSTRUMENT RANGE	IWP-4120	RR I.3.4
INSTRUMENT ACCURACY	IWP-4110-1	RR I.3.4

INSERVICE TEST SCOPE — A quarterly full flow pump test is conducted in accordance IWP requirements except as noted above and described in the respective relief requests.

INSERT THE FOLLOWING SECTION UNDER TAB:

I.3

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST:	I.3.1
PUMPS:	All pumps in the Inservice Test Program
TEST REQUIREMENT:	Table IWP-3100-1 requires measuring static suction pressure (Pi) prior to pump startup.
BASIS FOR RELIEF:	Measuring static suction pressure prior to pump startup ensures adequate NPSH is available. Some pumps are in operation when the IWP test is scheduled. Adequate NPSH would have been verified prior to pump startup per normal operating procedures. There would not be any additional information gained on pump operability or degradation by shutting down an operating pump so that the static suction pressure could be measured to meet Table IWP-3100-1 requirements.
ALTERNATE TESTING:	If a pump to be tested is in operation such that a pump start is not required, then the static suction pressure (Pi) will not be measured.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.3.2

PUMPS: All pumps in the Inservice Test Program

TEST REQUIREMENT: IWP-3210 requires that when system requirements are more restrictive than the allowable ranges in Table IWP-3100-2, then the Owner shall specify reduced range limits and the reduced range limits shall be used in lieu of the ranges given in Table IWP-3100-2.

BASIS FOR RELIEF: When system requirements for a pump are more restrictive, the Owner shall have the option of using:

1) Specify reduced range limits based on the more restrictive system requirements as stated in IWP-3210

or

2) Use Table IWP-3100-2 allowable ranges for IWP acceptance criteria, but also specify system limiting acceptance criteria such that the resulting pump performance must meet both sets of acceptance criteria in order to be operable.

Option 2 is requested because the basis for IWP acceptance criteria and system acceptance criteria may be different. Instrumentation uncertainty is built into IWP acceptance criteria since instrument ranges and accuracies are built into the code. System acceptance criteria may or may not have instrument uncertainty built into its acceptance criteria; it must be evaluated on a case by case basis. Using Option 2 does not reduce the quality of the test and allows for better trending as full IWP acceptance ranges are present when monitoring for pump degradation. By specifying system acceptance criteria (which has been adjusted for instrument uncertainty where appropriate), operability of the pump is assured. Specifying separate acceptance criteria also aids the evaluator when a pump falls in an action range as it helps in determining if the problem is a pump degradation problem or a restrictive system limit problem. The actions taken may be different depending on the cause of the problem

RELIEF REQUEST: I.3.2 (Continued)

ALTERNATE TESTING: Acceptance criteria will be specified in the pump test procedure which assures that IWP acceptance ranges are met and system requirements are met. This may be through reduced Table IWP-3100-2 allowable ranges which incorporate more restrictive system limits or a combination of Table IWP-3100-2 limits and separate system specific acceptance criteria.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.3.3

PUMPS: All pumps in the Inservice Test Program

TEST REQUIREMENTS: IWP-3100 requires vibration amplitude to be measured in mils Pk-Pk

IWP-3210 specifies the allowable range of vibration amplitude measurements.

IWP-4110 requires the accuracy of vibration amplitude measurements to be +/- 5 % of full scale.

IWP-4120 requires the full-scale range of vibration instrumentation to be three times the reference value or less.

IWP-4510 requires displacement vibration amplitude (Pk-Pk) to be read at one specific location during each test.

IWP-4520(b) requires the frequency response range of vibration instrumentation to be from one-half minimum speed to at least maximum pump shaft rotational speed.

BASIS FOR RELIEF: Experience has shown that measuring vibration as required by ASME Code Section XI Subsection IWP is not the most effective way to determine the mechanical condition of a pump. In order to better determine the mechanical condition of pumps, multiple vibration velocity measurements will be obtained/evaluated and supplemented, when necessary, with acceleration/displacement measurements and spectral analysis. In order to facilitate this testing, digital vibration instrumentation will be used.

IWP does not provide guidance/requirements for performing the better/alternate testing.

RELIEF REQUEST: I.5.3 (Continued)

ALTERNATE TESTING: In lieu of the vibration specified in IWP–3210, the following ranges shall be used. These ranges shall be used because IWP does not specify ranges for vibration velocity. These ranges are based on current vibration standards (vibration severity charts).

	Acceptable Range	Alert Range	Required Action Range
For all pumps when Vr ≤ 0.075 in/sec	0 to 0.19 in/sec	> 0.19 ≤ 0.45 in/sec	> 0.45 in/sec
For centrifugal pumps, when Vr > 0.075 in/sec	≤ 2.5 * Vr	2.5 * Vr to 6 * Vr or > 0.325 to 0.70 in/sec	> 6 * Vr or > 0.70 in/sec
For reciprocating pumps, when Vr > 0.075 in/sec	≤ 2.5 * Vr	> 2.5 * Vr to 6 * Vr	> 6 * Vr
For internal gear positive displacement pumps, when Vr > 0.075 in/sec	≤ 2.5 * Vr	> 2.5 * Vr to 6 * Vr	> 6 * Vr

In lieu of the vibration requirements of IWP–3300, peak vibration velocity will be measured. In most cases, vibration velocity gives the best indication of machine mechanical condition.

In lieu of the vibration instrument accuracy requirements of IWP–4110, the loop accuracy of vibration measurements will be +/– 6.56 % of reading. This accuracy will be used because IWP does not specify an accuracy for vibration data measured in velocity (Pk). This accuracy is the best that can be reasonably obtained from the state of the art instrumentation used. (When you combine range and accuracy requirements, IWP allows vibration inaccuracies of +/– 15 %).

In lieu of the range requirements imposed on vibration instrumentation of IWP–4120, there will be no vibration range requirement (digital vibration instrumentation is auto–ranging). It is not necessary to have a range requirement because the accuracies stated above and the repeatability of a digital gauge are not dependent upon instrument range.

In lieu of IWP–4510, peak vibration velocity measurements shall be taken during each test. On centrifugal and internal gear PD pumps, measurements shall be taken in a plane perpendicular to the rotaing shaft in two orthogonal directions. These measurements shall be taken on each accessible pump bearing housing. If no pump bearing

RELIEF REQUEST: I.3.3 (Continued)

housings are accessible, these measurements shall be taken at the accessible location that gives the best indication of lateral vibration. This location shall be one of the following:

Pump casing
Motor bearing housing

Measurements also shall be taken in the axial direction. This measurement shall be taken on each accessible pump thrust bearing housing. If no pump thrust bearing housings are accessible, this measurement shall be taken at the accessible location that gives the best indication of axial pump vibration. This location shall be one of the following:

Pump casing
Motor thrust bearing housing
Motor casing

On reciprocating pumps, a measurement shall be taken on the bearing housing of the crankshaft, approximately perpendicular to both the crankshaft and the line of plunger travel.

In lieu of IWP-6320(b), vibration instrumentation will be calibrated to measure amplitudes of vibration in velocity (Pk) over a range of 10 to 1000 Hz. This is the range that the state of the art instrumentation used can be adequately calibrated over. Vibration test measurements will be done over a range from 1/2 minimum pump shaft rotational speed to 1000 Hz. (Measurements at other frequencies will be taken as necessary.) This range will encompass most potential noise contributors.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST:	I.3.4
PUMPS:	All pumps in the Inservice Test Program
TEST REQUIREMENT:	IWP sections 3100, 3300, 3500, and 4310 require annual measurements of pump bearing temperatures with instrumentation in accordance with IWP--4110 and 4120.
BASIS FOR RELIEF:	The annual measurement of bearing temperatures for pumps does not provide as useful information about pump bearing condition as does a program utilizing pump vibration velocity measurements. Several factors such as the temperature of the working fluid, the ambient temperature, the lubricant temperature and the size of the bearing housing may mask any bearing condition change short of a catastrophic failure. Obtaining these measurements requires a minimum of one half hour of pump operation to achieve stable bearing temperatures. The small probability of detecting bearing failure by bearing temperature measurement does not justify the additional pump operating time required to obtain the measurement.
ALTERNATE TESTING:	Quarterly velocity vibration measurements will obtained and trended per relief request I.3.3 to monitor pump bearing conditions.

INSERT THE FOLLOWING SECTION UNDER TAB:

I.4

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.1

PUMPS: 1CAPU0001, 1A CA Pump
1CAPU0002, 1B CA Pump
1CAPU0003, Unit 1 Turbine Driven CA Pump

TEST REQUIREMENT: IWP-4120 requires that the full scale range of the instrument shall be three times the reference value or less.

BASIS FOR RELIEF: The installed process instrumentation for the CA pump suction gauge is a 0-100 psig, 0.5 % accuracy. Typical values for the CA suction pressure during the IWP CA pump testing is 20-25 psig; therefore, the process gauge does not meet the three times criteria specified in IWP-4120. The accuracy of the process gauge (0.5 %) is well below the requirements specified in Table IWP-4110-1 for pressure instrument accuracy (2 %). The actual reading error at test pressure due to the process instrument accuracy is 2.5 % (0.5 * 100/20). If a 0-60 psig test instrument is used (which meets the three times criteria) and it has an accuracy of 2 %, then the reading error would be 6 % (2 * 60/20). When the requirements of IWP-4120 and Table IWP-4110-1 are combined, the actual instrument error introduced into the test is less than the code allowable (2.5 % vs. 6 %). Using the process instrument for suction pressure data does not degrade the quality of the test and meets the intent of the instrumentation requirements of IWP; just not the specify range requirements of IWP-4120.

ALTERNATE TESTING: The installed process instrumentation will be used to measure CA suction pressure for the 1A CA, 1B CA and Unit 1 Turbine Driven CA IWP pump tests.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.2

PUMPS: 1FDPU0054, 1A D/G Fuel Oil Transfer Pump
1FDPU0055, 1B D/G Fuel Oil Transfer Pump

TEST REQUIREMENT: Test pumps in accordance with Subsection IWP

BASIS FOR RELIEF: IWP does not provide appropriate provisions for testing positive displacement pumps.

ALTERNATE TESTING: The D/G Fuel Oil Transfer Pumps are internal gear positive displacement pumps. The performance curve for these pumps is relatively flat. Capacity of these pumps is independent of discharge pressure when operating properly and below the cracking pressure of the pump internal relief valve. Discharge pressure will be monitored for information purposes, but it will not be compared to any acceptance criteria. Pumps will be tested by measuring level rise in the Fuel Oil Day Tank over time and converting the results to a flow in gallons per minute. This method provides a flow rate that meets the instrument accuracy requirements of 2 % (Table IWP-4110-1). The test flow rate (Q) will be compared to acceptance criteria established in accordance with Table IWP-3100-2 except the acceptable range has been widened on the high side and the High Alert Value has been increased. As a result, the High Required Action Range has also been increased. The increased acceptance criteria band is to allow for instrument fluctuations. The new limits are:

Acceptable Range:	0.94*Qr to 1.07*Qr
Low Alert Range:	0.90*Qr to 0.94*Qr
High Alert Range	1.07*Qr to 1.10*Qr
Low Required Action Range:	< 0.90*Qr
High Required Action Range:	> 1.10*Qr

These pumps are designed to produce a flow rate of 22 gpm. The requirements of the Diesel Generator are approximately 6 gpm. Five vibration points are monitored and trended on the Fuel Oil Transfer Pumps. Acceptance criteria for the vibration points is calculated based on Relief Request I.3.3. Vibration data is trended on a quarterly basis similar to the flow test results. Any degradation in the performance of the Fuel Oil Transfer pumps will first appear in the vibration data. Also, the Fuel Oil Transfer pumps are conservatively

RELIEF REQUEST: I.4.2 (Continued)

designed in the discharge pressure that can be obtained. The capabilities of the pump are not challenged during the quarterly test with respect to discharge pressure. System limitations restrict the discharge pressure to less than or equal to 55 psig; however, the Fuel Oil Transfer pumps could easily pump against 150 psig.

Since the pumps are installed with considerable safety margin with respect to flow and discharge pressure, the most prudent data to use for trending for pump degradation would be the velocity vibration data. By trending the five velocity vibration data points, the acceptability of the widened High Alert and Required Action ranges for flow are justified. The flow ensures system operability is met and the pump internal relief valve is not lifting prematurely while the vibration test ensures an adequate trending program is in place to ensure continued operability during testing intervals.

The D/G Fuel Oil Storage Tank is the suction source for the Fuel Oil Transfer pumps and is monitored to maintain level as required by McGuire Technical Specifications. This level ensures adequate NPSH; therefore, a suction pressure reading is not required.

In addition, monthly Diesel Generator starting and loading (as required by McGuire Technical Specifications) will assess the hydraulic condition of the subject auxiliary pumps and demonstrates the capability of the individual components to perform their design function.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.3

PUMPS: 1KCPU0001, 1A1 Component Cooling Water Pump
1KCPU0002, 1A2 Component Cooling Water Pump
1KCPU0003, 1B1 Component Cooling Water Pump
1KCPU0004, 1B2 Component Cooling Water Pump

TEST REQUIREMENT: IWP-4120 requires that the full scale range of the instrument shall be three times the reference value or less.

BASIS FOR RELIEF: The installed process instrumentation for the KC pump suction gauge is a 0-60 psig, 0.5 % accuracy. Typical values for the KC suction pressure during the IWP KC pump testing is 15-20 psig; therefore, the process gauge does not meet the three times criteria specified in IWP-4120. The accuracy of the process gauge (0.5 %) is well below the requirements specified in Table IWP-4110-1 for pressure instrument accuracy (2 %). The actual reading error at test pressure due to the process instrument accuracy is 2 % (0.5 * 60/15). If a 0-45 psig test instrument is used (which meets the three times criteria) and it has an accuracy of 2 %, then the reading error would be 6 % (2 * 45/15). When the requirements of IWP-4120 and Table IWP-4110-1 are combined, the actual instrument error introduced into the test is less than the code allowable (2 % vs. 6 %). Using the process instrument for suction pressure data does not degrade the quality of the test and meets the intent of the instrumentation requirements of IWP; just not the specify range requirements of IWP-4120.

ALTERNATE TESTING: The installed process instrumentation will be used to measure KC suction pressure for the 1A1, 1A2, 1B1 and 1B2 KC IWP pump tests.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.4

PUMPS: 1NDPU0001, 1A Residual Heat Removal Pump
1NDPU0002, 1B Residual Heat Removal Pump

TEST REQUIREMENT: IWP-3100 requires the resistance of the system to be varied until either the measured differential pressure or the measured flow rate equals the reference value.

IWP-4120 specifies the range of each instrument shall be three times the reference value or less.

BASIS FOR RELIEF: When testing these pumps on line, the only flow path available is through the miniflow control valve in the line, which yields a test point back on the head curve. As stated in Generic Letter 89-04, minimum flow lines are not designed for pump testing purposes. The test point for monitoring pump performance for degradation should be in a more stable region on the pump performance curve. Also, the amount of time the pump is run at miniflow should be minimized.

Also, range requirements will be waived for the quarterly test. The purpose of the quarterly is to verify Tech Spec requirements are met and to obtain vibration data for trending. The instrumentation use for the quarterly Residual Heat Removal Pump test will meet accuracy requirements for assuring Residual Heat Removal Pump operability per Technical Specifications.

ALTERNATE TESTING: The Residual Heat Removal Pumps will be tested according to the following program, which is consistent with Generic Letter 89-04.

Quarterly

The Residual Heat Removal Pumps will be tested quarterly to verify Technical Specifications are met. The test measures differential pressure and velocity vibration data. The differential pressure and velocity vibration data will be trended. The instrumentation range requirements of IWP-4120 will be waived. The instrumentation used to measure suction and discharge pressure will meet applicable accuracy requirements for the determination of operability per Technical Specifications. The instrument used to measure vibrations will meet the requirements specified in relief request I.3.3. Since the test loop is a minimum flow line with a flow limiting control valve, flow will be recorded for information only.

RELIEF REQUEST: I.4.4 (Continued)

Refueling Outage

During each refueling outage, a code pump -- including velocity vibration measurements -- will be performed at a test point in the stable region of the performance curve.

As an alternative to repeat testing at a single test point in the stable region, a reference curve will be obtained with applicable IWP acceptance curves plotted. Using this technique, the full flow test point (also in the stable region of the pump curve) will be bound by flow points obtained in the development of the reference curve. The data obtained is then evaluated against IWP acceptance criteria and Chapter 15 basis acceptance curves to verify pump operability. When baseline vibration data varies significantly over the pump head curve, vibration acceptance criteria will be developed for flow regions of the head curve.

The test method selected will depend on plant refueling conditions and the quantity of pump data required. Each method however will ensure that the pump is tested in the full flow region of the head curve and that system operability is verified. Each test methodology is consistent with the intent of IWP and Generic Letter 89-04.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.5

PUMPS: 1NIPU0009, 1A Safety Injection Pump
1NIPU0010, 1B Safety Injection Pump

TEST REQUIREMENT: IWP-3100 requires the resistance of the system to be varied until either the measured differential pressure or the measured flow rate equals the reference value.

IWP-4120 specifies the range of each instrument shall be three times the reference value or less.

BASIS FOR RELIEF: When testing these pumps on line, the only flow path available is through the miniflow line which has a flow restricting orifice. The orifice yields a test point back on the head curve. As stated in Generic Letter 89-04, minimum flow lines are not designed for pump testing purposes. The test point for monitoring pump performance for degradation should be in a more stable region on the pump performance curve. Also, the amount of time the pump is run at miniflow should be minimized.

Also, range requirements will be waived for the quarterly test. The purpose of the quarterly is to verify Tech Spec requirements are met and to obtain vibration data for trending. The instrumentation use for the quarterly Safety Injection Pump test will meet accuracy requirements for assuring Safety Injection Pump operability per Technical Specifications.

ALTERNATE TESTING: The Safety Injection Pumps will be tested according to the following program, which is consistent with Generic Letter 89-04.

Quarterly

The Safety Injection Pumps will be tested quarterly to verify Technical Specifications are met. The test measures differential pressure and velocity vibration data. The differential pressure and velocity vibration data will be trended. The instrumentation range requirements of IWP-4120 will be waived. The instrumentation used to measure suction and discharge pressure will meet applicable accuracy requirements for the determination of operability per Technical Specifications. The instrument used to measure vibrations will meet the requirements specified in relief request I.3.3. Since the test loop is a minimum flow line with a flow restricting orifice, flow will be recorded for information only.

RELIEF REQUEST: I.4.5 (Continued)

Refueling Outage

During each refueling outage, a code pump – including velocity vibration measurements – will be performed at a test point in the stable region of the performance curve.

As an alternative to repeat testing at a single test point in the stable region, a reference curve will be obtained with applicable IWP acceptance curves plotted. Using this technique, the full flow test point (also in the stable region of the pump curve) will be bound by flow points obtained in the development of the reference curve. The data obtained is then evaluated against IWP acceptance criteria and Chapter 15 basis acceptance curves to verify pump operability. When baseline vibration data varies significantly over the pump head curve, vibration acceptance criteria will be developed for flow regions of the head curve.

The test method selected will depend on plant refueling conditions and the quantity of pump data required. Each method however will ensure that the pump is tested in the full flow region of the head curve and that system operability is verified. Each test methodology is consistent with the intent of IWP and Generic Letter 89-04.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.6

PUMPS: 1NVPU0015, 1A Centrifugal Charging Pump
1NVPU0016, 1B Centrifugal Charging Pump

TEST REQUIREMENT: IWP-3100 requires the resistance of the system to be varied until either the measured differential pressure or the measured flow rate equals the reference value.

IWP-4120 specifies the range of each instrument shall be three times the reference value or less.

BASIS FOR RELIEF: When testing these pumps on line, the only flow path available is through a combination of the normal charging line and the miniflow line to the Volume Control Tank. This test yields a test point back on the head curve. As stated in Generic Letter 89-04, the test point for monitoring pump performance for degradation should be in a more stable region on the pump performance curve. Also, the miniflow is not instrumented for flow. The flow through the line is assumed to be at the flow rate corresponding to the orifice design conditions.

Also, range requirements will be waived for the quarterly test. The purpose of the quarterly is to verify Tech Spec requirements are met and to obtain vibration data for trending. The instrumentation use for the quarterly Centrifugal Charging Pump test will meet accuracy requirements for assuring Centrifugal Charging Pump operability per Technical Specifications.

ALTERNATE TESTING: The Centrifugal Charging Pumps will be tested according to the following program, which is consistent with Generic Letter 89-04.

Quarterly

The Centrifugal Charging Pumps will be tested quarterly to verify Technical Specifications are met. The test measures differential pressure and velocity vibration data. The differential pressure and velocity vibration data will be trended. The instrumentation range requirements of IWP-4120 will be waived. The instrumentation used to measure suction and discharge pressure will meet applicable accuracy requirements for the determination of operability per Technical Specifications. The instrument used to measure vibrations will meet the requirements specified in relief request I.3.3. The flow through the miniflow line to the Volume Control Tank will be assumed to be constant at the orifice design conditions (60 gpm).

RELIEF REQUEST: I.4.6 (Continued)

Refueling Outage

During each refueling outage, a code pump – including velocity vibration measurements – will be performed at a test point in the stable region of the performance curve.

As an alternative to repeat testing at a single test point in the stable region, a reference curve will be obtained with applicable IWP acceptance curves plotted. Using this technique, the full flow test point (also in the stable region of the pump curve) will be bound by flow points obtained in the development of the reference curve. The data obtained is then evaluated against IWP acceptance criteria and Chapter 15 basis acceptance curves to verify pump operability. When baseline vibration data varies significantly over the pump head curve, vibration acceptance criteria will be developed for flow regions of the head curve.

The test method selected will depend on plant refueling conditions and the quantity of pump data required. Each method however will ensure that the pump is tested in the full flow region of the head curve and that system operability is verified. Each test methodology is consistent with the intent of IWP and Generic Letter 89-04.

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

RELIEF REQUEST: I.4.7

PUMPS: 1WNPU0094, 1A2 D/G Sump Pump
1WNPU0096, 1A3 D/G Sump Pump
1WNPU0095, 1B2 D/G Sump Pump
1WNPU0097, 1B3 D/G Sump Pump

TEST REQUIREMENT: Test pumps in accordance with Subsection IWP.

BASIS FOR RELIEF: The Diesel Generator Room Sump Pumps are vertical pumps tested by filling the Diesel Generator Room Sump and pumping the sump down. Stable conditions can not be obtained due to the continuous decrease in sump level. Also, the backpressure the pumps have to pump against can vary from test to test. Suction pressure or flow indication is not available.

Test loops are being installed for these pumps. The modifications will be installed in the 1993 refueling outage. Since this is a dry sump and the pumps are not normally run except for test purposes, a comprehensive test will be run on a two year frequency and the quarterly test requirement will be waived.

ALTERNATE TESTING: The WN pumps will be tested under the following test plan.

Premodification

The Diesel Generator Sump pumps will be tested for greater than or equal to emergency design flow by:

1) Filling the sump and recording level

2) Pump down the sump and recording both level and pump down time.

An average flow rate will be determined from the time it takes to pump a known volume from the sump. Pumping down the sump takes approximately 60 seconds. An average discharge pressure will be recorded for information only. Suction pressure instrumentation is not available. Since sump level will be recorded, suction pressure can be calculated if required. The calculated flow rate will be compared with acceptance criteria established per Table IWP-3100-2. Five velocity points will be taken and trended to monitor for pump degradation.

The flow calculation ensures system requirements are met while the vibration monitoring program ensures the pumps can be monitored for degradation. This assures operability of the WN pumps until test loops with required instrumentation can be installed.

RELIEF REQUEST: I.4.7 (Continued)

Postmodification

The Diesel Generator Sump pumps will be tested on a two year program that will involve a head curve test on each pump. The head curve will include a minimum of three test points. Vibration data will be taken at each test point. Vibration acceptance criteria for each point will be developed according to Relief Request I.3.3. IWP acceptance curves will be developed using ranges specified in Table IWP-3100-2.

Since these sumps are normally dry, the WN pumps are not run except for testing. Testing these pumps using the two year head curve methodology will assure operability of the system is maintained and provide better quality testing.

INSERT THE FOLLOWING SECTION UNDER TAB:

II. VALVE INSERVICE TESTING PROGRAM

DUKE POWER COMPANY

McGUIRE NUCLEAR STATION

VALVE INSERVICE TESTING PROGRAM

UNIT 1

INSERT THE FOLLOWING SECTION UNDER TAB:

II.1

DUKE POWER COMPANY
McGUIRE NUCLEAR STATION
VALVE INSERVICE TESTING PROGRAM

Introduction:

The inservice testing of ASME Code categories A, B, C and D will be performed as required by Section XI, subsection IWV, of the ASME Boiler and Pressure Vessel Code 1986 Edition including the 1987 Addenda issued December 31, 1987 except where specific written relief has been granted by the Commission. The effective date for this ten year submittal is December 1, 1992.

NOTES:

1) The dated initials of the person responsible for the action may be used in place of a signature in the record of tests. Initials shall be construed as signatures to meet the intent of IWV-6230.

2) Category A and A/C valves include containment isolation valves (CIV) and pressure isolation valves (PIV). CIVs are leak tested in accordance with 10CFR50, Appendix J, IWV-3426, and IWV-3427a. Relief is sought in General Relief Request II from IWV-3427b. PIVs are tested per Technical Specification 4.4.6.2.2.

INSERT THE FOLLOWING SECTION UNDER TAB:

II.2

TABLE OF ABBREVIATIONS

CLASSIFICATION

Duke System Valve Class	Code Design Criteria	Designed for Seismic Loading	ANS Safety Class
A	Class 1, ASME Section III, 1971	Yes	1
B	Class 2, ASME Section III, 1971	Yes	2
C	Class 3, ASME Section III, 1971	Yes	3
D	Class 2, ASME Section III, 1971	No	2
E	ANSI B31.1.0 (1967)	No	NNS
F	ANSI B31.1.0 (1967)	Yes	NNS
G	ANSI B31.1.0 (1967)	No	---
H	Duke Power Company Specification	No	---

LEGEND

LT – Leak Test
MTO – Movement Test Open
MTC – Movement Test Closed
MTO,C – Movement Test Open and Closed
Q – Quarterly
CS – Cold Shutdown
RF – Refueling Outage
ST – Stroke Time (cycle and time)
SP – Setpoint
PC – Procedure Check
CIV – Containment Isolation Valve
PIV – Pressure Isolation Valve
RR – Relief Request
TS – Technical Specification
CL – Class
CAT – Category
FS – Fail Safe

INSERT THE FOLLOWING SECTION UNDER TAB:

II.3

DEFINITION OF TESTING REQUIREMENTS AND ALTERNATIVES

Cold Shutdown (CS) — Testing will be performed when the unit is entering, during or recovering from a cold shutdown of sufficient duration to establish necessary test conditions. In the case of frequent shutdowns, the testing will not be performed more than once per three (3) months. Testing will commence as soon as the cold shutdown condition is achieved but not later than 48 hours after shutdown, and continue until complete or the plant is ready to return to power. Completion of all valve testing is not a prerequisite to return to power. Any testing not completed at one cold shutdown will be performed during any subsequent cold shutdowns that may occur before refueling to meet the code specified testing frequency. Any valve specified to be tested during Cold Shutdown (CS) may be tested during Refueling Outage (RF) conditions.

Stroke Time (ST) — Valve will be tested to verify that its stroke time is less than or equal to the maximum allowable stroke time specified by McGuire Nuclear Station. Stroke time is defined as the time interval from initiation of the actuating signal to the limit switch at the end of the actuating cycle.

Leak Test (LT) — Valve will be tested to verify that the seat leakage is limited to a specific maximum amount.

Movement Tests (MT) — Valve will be tested to verify that the valve is operable and capable of fulfilling its intended purpose. No timing is involved. Movement tests will be performed by passing full accident flow through the valve, acoustic emission monitoring of the disc in either the open or closed position, leak testing to verify closure, sample disassembly, or other NRC accepted means.

Quarterly (Q) — Testing will be performed at least once per three months.

Refueling Outage (RF) — Testing will be performed when the unit is shut down for refueling. Testing may be done while in No Mode as well as Modes 3, 4, 5 and 6.

Refueling Outage (RF*)	Valve will normally be tested during refueling outages, not to exceed 24 months per Appendix J to 10CFR50.
Refueling Outage (RF#)	Valve will normally be tested on a routine basis via a sample valve disassemble program (1 valve from a group of identical valves under similar conditions). Failure of one valve of the group during a refueling outage will result in all remaining valves of the group being tested during that outage.
Setpoint (SP)	Valve will be tested to verify that it will relieve pressure at its specified setpoint. Testing will be performed per the requirements of IWV-3510.
Failsafe (FS)	Valve will be tested to verify it will reposition to its design safe position upon loss of control air per IWV-3415.
Passive	Valve does not perform a mechanical motion during the course of accomplishing a system safety function. (IWA-9000)

INSERT THE FOLLOWING SECTION UNDER TAB:

II.4

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* NUCLEAR SERVICE WATER *									
0RN-0002B	C	1574-1.0	K-10	B	ST-Q	-	-	-	-
0RN-0003A	C	1574-1.0	K-10	B	ST-Q	-	-	-	-
0RN-0004AC	C	1574-1.0	F-13	B	ST-Q	-	-	-	-
0RN-0005B	C	1574-1.0	E-12	B	ST-Q	-	-	-	-
0RN-0007A	C	1574-1.0	J-09	B	ST-Q	-	-	-	-
0RN-0009B	C	1574-1.0	D-09	B	ST-Q	-	-	-	-
0RN-0010AC	C	1574-1.0	G-11	B	ST-Q	-	-	-	-
0RN-0011B	C	1574-1.0	F-11	B	ST-Q	-	-	-	-
0RN-0012AC	C	1574-1.0	I-11	B	ST-Q	-	-	-	-
0RN-0013A	C	1574-1.0	J-11	B	ST-Q	-	-	-	-
0RN-0014A	C	1574-1.0	I-13	B	ST-Q	-	-	-	-
0RN-0015B	C	1574-1.0	F-13	B	ST-Q	-	-	-	-
0RN-0147AC	C	1574-1.0	H-02	B	ST-Q	-	-	-	-
0RN-0148AC	C	1574-1.0	H-03	B	ST-Q	-	-	-	-
0RN-0149A	C	1574-1.0	J-07	B	ST-Q	-	-	-	
0RN-0150A	C	1574-1.0	I-06	B	ST-Q	-	-	-	-
0RN-0151B	C	1574-1.0	F-06	B	ST-Q	-	-	-	-
0RN-0152B	C	1574-1.0	E-07	B	ST-Q	-	-	-	-
0RN-0283AC	C	1574-1.0	F-02	B	ST-Q	-	-	-	-
0RN-0284B	C	1574-1.0	F-02	B	ST-Q	-	-	-	-
0RN-0301AC	C	1574-1.0	G-10	B	ST-Q	-	-	-	-
0RN-0302B	C	1574-1.0	F-10	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* STEAM GENERATOR BLOWDOWN RECYCLE *									
1BB-0001B	B	1580-1.0	H-02	B	ST-Q	-	-	-	-
1BB-0002B	B	1580-1.0	H-04	B	ST-Q	-	-	-	-
1BB-0003B	B	1580-1.0	H-10	B	ST-Q	-	-	-	-
1BB-0004B	B	1580-1.0	H-10	B	ST-Q	-	-	-	-
1BB-0005A	B	1580-1.0	F-02	B	ST-Q	-	-	-	-
1BB-0006A	B	1580-1.0	F-04	B	ST-Q	-	-	-	-
1BB-0007A	B	1580-1.0	F-12	B	ST-Q	-	-	-	-
1BB-0008A	B	1580-1.0	F-10	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* AUXILIARY FEEDWATER *									
1CA-0007AC	C	1592-1.1	B-10	B	ST-Q	-	-	-	-
1CA-0008	C	1592-1.1	B-11	C	MTC-Q	-	CA2	RF#	-
1CA-0009B	C	1592-1.1	C-05	B	ST-Q	-	-	-	-
1CA-0010	C	1592-1.1	C-05	C	MTC-Q	-	CA2	RF#	-
1CA-0011A	C	1592-1.1	B-04	B	ST-Q	-	-	-	-
1CA-0012	C	1592-1.1	B-03	C	MTC-Q	-	CA2	RF#	-
1CA-0015A	C	1592-1.1	D-03	B	ST-Q	-	-	-	-
1CA-0018B	C	1592-1.1	D-04	B	ST-Q	-	-	-	-
1CA-0020AB	C	1592-1.1	I-10	AC	ST-Q	LT	-	-	-
1CA-0022	C	1592-1.1	I-10	C	MTO-Q	-	-	-	-
1CA-0026	C	1592-1.1	I-04	C	MTO-Q	-	-	-	-
1CA-0027A	C	1592-1.1	J-05	AC	ST-Q	LT	-	-	-
1CA-0031	C	1592-1.1	I-07	C	MTO-Q	-	-	-	-
1CA-0032B	C	1592-1.1	J-08	AC	ST-Q	LT	-	-	-
1CA-0036AB	C	1592-1.0	L-10	B	ST-Q	-	-	-	-
1CA-0037	B	1592-1.0	K-14	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0038B	B	1592-1.0	J-14	B	ST-Q	-	-	-	-
1CA-0040B	C	1592-1.0	G-14	B	ST-Q	-	-	-	-
1CA-0041	B	1592-1.0	H-14	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0042B	B	1592-1.0	I-14	B	ST-Q	-	-	-	-
1CA-0044B	C	1592-1.0	C-11	B	ST-Q	-	-	-	-
1CA-0045	B	1592-1.0	C-09	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0046B	B	1592-1.0	D-08	B	ST-Q	-	-	-	-
1CA-0048AB	C	1592-1.0	K-08	B	ST-Q	-	-	-	-
1CA-0049	B	1592-1.0	H-08	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0050B	B	1592-1.0	G-08	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* AUXILIARY FEEDWATER * (page 2)									
1CA-0052AB	C	1592-1.0	K-07	B	ST-Q	-	-	-	-
1CA-0053	B	1592-1.0	H-07	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0054AC	B	1592-1.0	G-07	B	ST-Q	-	-	-	-
1CA-0056A	C	1592-1.0	C-04	B	ST-Q	-	-	-	-
1CA-0057	B	1592-1.0	C-06	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0058A	B	1592-1.0	D-07	B	ST-Q	-	-	-	-
1CA-0060A	C	1592-1.0	G-01	B	ST-Q	-	-	-	-
1CA-0061	B	1592-1.0	H-01	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0062A	B	1592-1.0	I-01	B	ST-Q	-	-	-	-
1CA-0064AB	C	1592-1.0	L-04	B	ST-Q	-	-	-	-
1CA-0065	B	1592-1.0	K-01	C	MTO,C-Q	-	-	CS-CA1	-
1CA-0066AC	B	1592-1.0	J-01	B	ST-Q	-	-	-	-
1CA-0086A	C	1592-1.1	C-14	B	ST-Q	-	-	-	-
1CA-0116B	C	1592-1.1	E-14	B	ST-Q	-	-	-	-
1CA-0128	C	1592-1.1	D-13	C	SP	-	-	135 PSIG	-
1CA-0165	C	1592-1.1	C-14	C	MTO,C-Q	-	CA1	RF#	-
1CA-0166	C	1592-1.1	F-14	C	MTO,C-Q	-	CA1	RF#	-
1CA-0167	C	1592-1.1	F-2	C	SP	-	-	135 PSIG	-
1CA-0168	C	1592-1.1	E-6	C	SP	-	-	135 PSIG	-

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* FEEDWATER *							
1CF-0017AB	F	1591-1.1	K-03	B	ST-Q	-	-	CS-CF2	-
1CF-0020AB	F	1591-1.1	K-06	B	ST-Q	-	-	CS-CF2	-
1CF-0023AB	F	1591-1.1	K-09	B	ST-Q	-	-	CS-CF2	-
1CF-0026AB	B	1591-1.1	H-03	B	ST-Q	-	-	CS-CF1	-
1CF-0028AB	B	1591-1.1	H-06	B	ST-Q	-	-	CS-CF1	-
1CF-0030AB	B	1591-1.1	H-09	B	ST-Q	-	-	CS-CF1	-
1CF-0032AB	F	1591-1.1	K-13	B	ST-Q	-	-	CS-CF2	-
1CF-0035AB	B	1591-1.1	H-13	B	ST-Q	-	-	CS-CF1	-
1CF-0104AB	F	1591-1.1	K-12	B	ST-Q	-	-	CS-CF4	-
1CF-0105AB	F	1591-1.1	K-09	B	ST-Q	-	-	CS-CF4	-
1CF-0106AB	F	1591-1.1	K-05	B	ST-Q	-	-	CS-CF4	-
1CF-0107AB	F	1591-1.1	K-02	B	ST-Q	-	-	CS-CF4	-
1CF-0126B	B	1591-1.1	H-14	B	ST-Q	-	-	CS-CF3	-
1CF-0127B	B	1591-1.1	H-10	B	ST-Q	-	-	CS-CF3	-
1CF-0128B	B	1591-1.1	H-07	B	ST-Q	-	-	CS-CF3	-
1CF-0129B	B	1591-1.1	H-03	B	ST-Q	-	-	CS-CF3	-
1CF-0134A	B	1591-1.1	G-13	B	ST-Q	-	-	-	-
1CF-0135A	B	1591-1.1	G-10	B	ST-Q	-	-	-	-
1CF-0136A	B	1591-1.1	G-07	B	ST-Q	-	-	-	-
1CF-0137A	B	1591-1.1	G-03	B	ST-Q	-	-	-	-
1CF-0151B	B	1591-1.1	G-12	B	ST-Q	-	-	-	-
1CF-0152	B	1591-1.1	F-12	C	MTC-Q	-	-	CS-CF5	-
1CF-0153B	B	1591-1.1	F-08	B	ST-Q	-	-	-	-
1CF-0154	B	1591-1.1	E-08	C	MTC-Q	-	-	CS-CF5	-
1CF-0155B	B	1591-1.1	F-07	B	ST-Q	-	-	-	-
1CF-0156	B	1591-1.1	E-07	C	MTC-Q	-	-	CS-CF5	-
1CF-0157B	B	1591-1.1	G-12	B	ST-Q	-	-	-	-
1CF-0158	B	1591-1.1	F-12	C	MTC-Q	-	-	CS-CF5	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* DIESEL GENERATOR ENGINE FUEL OIL *									
1FD-0005	C	1609-3.0	E-2	C	SP	-	-	50 PSIG	-
1FD-0013	C	1609-3.0	C-14	C	SP	-	-	50 PSIG	-
1FD-0028	C	1609-3.1	E-2	C	SP	-	-	50 PSIG	-
1FD-0036	C	1609-3.1	C-14	C	SP	-	-	50 PSIG	-
1FD-0083	C	1609-3.0	D-2	C	SP	-	-	10 PSIG	-
1FD-0092	C	1609-3.0	E-13	C	MTO,C-Q	-	-	-	-
1FD-0093	C	1609-3.0	J-14	C	MTO,C-Q	-	-	-	-
1FD-0096	C	1609-3.1	D-2	C	SP	-	-	10 PSIG	-
1FD-0104	C	1609-3.1	E-13	C	MTO,C-Q	-	-	-	-
1FD-0105	C	1609-3.1	J-14	C	MTO,C-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* REFUELING WATER *								
1FW-0001A	B	1571-1.0	E-11	B	ST-Q	-	-	-	-
1FW-0004	B	1571-1.0	D-08	A	LT-RF	-	-	PASSIVE	-
1FW-0005	B	1571-1.0	C-07	AC	LT-RF	-	-	PASSIVE	-
1FW-0011	B	1571-1.0	C-02	A	LT-RF	-	-	PASSIVE	-
1FW-0013	B	1571-1.0	D-02	A	LT-RF	-	-	PASSIVE	-
1FW-0027A	B	1571-1.0	C-12	B	ST-Q	-	-	CS-FW1	-
1FW-0028	B	1571-1.0	B-11	C	MTO,C-Q	-	-	CS-FW2	-
1FW-0032B	B	1571-1.0	E-11	B	ST-Q	-	-	-	-
1FW-0033A	B	1571-1.0	F-11	B	ST-Q	-	-	-	-
1FW-0049B	B	1571-1.0	F-10	B	ST-Q	-	-	-	-
1FW-0052	E	1571-1.0	I-05	C	MTO-Q	-	-	-	-
1FW-0067	B	1571-1.0	C-01	AC	LT-RF	-	-	PASSIVE	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* AIRLOCK *							
1IA-5080	B	1499-IA1	N/A	A	ST-Q	LT-RF	-	-	-
1IA-5160	B	1499-IA1	N/A	A	ST-Q	LT-RF	-	-	-
1IA-5260	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5270	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5280	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5290	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5300	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5310	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5320	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5330	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5340	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5350	B	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5360	C	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5370	C	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5380	C	1499-IA1	N/A	AC	LT-RF	-	-	-	-
1IA-5390	C	1499-IA1	N/A	AC	LT-RF	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* COMPONENT COOLING *								
1KC-0001A	C	1573-1.0	C-07	B	ST-Q	-	-	-	-
1KC-0002B	C	1573-1.0	C-08	B	ST-Q	-	-	-	-
1KC-0003A	C	1573-1.0	C-07	B	ST-Q	-	-	-	-
1KC-0005	C	1573-1.0	F-04	C	MTO-Q	-	-	-	-
1KC-0008	C	1573-1.0	F-04	C	MTO-Q	-	-	-	-
1KC-0011	C	1573-1.0	F-11	C	MTO-Q	-	-	-	-
1KC-0014	C	1573-1.0	F-11	C	MTO-Q	-	-	-	-
1KC-0018B	C	1573-1.0	C-08	B	ST-Q	-	-	-	-
1KC-0047	B	1573-4.0	L-12	AC	MTC-Q	LT-RF	KC5	MT-RF	-
1KC-0050A	C	1573-1.0	K-07	B	ST-Q	-	-	-	-
1KC-0051A	C	1573-1.0	J-05	B	ST-Q	-	-	-	-
1KC-0053B	C	1573-1.0	K-08	B	ST-Q	-	-	-	-
1KC-0054B	C	1573-1.0	J-10	B	ST-Q	-	-	-	-
1KC-0056A	C	1573-1.1	E-02	B	ST-Q	-	-	-	-
1KC-0057A	C	1573-1.1	D-06	B	ST-Q	-	-	-	-
1KC-0061	C	1573-1.1	E-05	C	SP	-	-	150 PSIG	-
1KC-0079	C	1573-1.1	B-05	C	SP	-	-	150 PSIG	-
1KC-0081B	C	1573-1.1	E-13	B	ST-Q	-	-	-	-
1KC-0082B	C	1573-1.1	D-09	B	ST-Q	-	-	-	-
1KC-0086	C	1573-1.1	E-10	C	SP	-	-	150 PSIG	-
1KC-0104	C	1573-1.1	B-10	C	SP	-	-	150 PSIG	-
1KC-0138	C	1573-2.0	E-12	C	SP	-	-	150 PSIG	-
1KC-0147	C	1573-2.0	E-09	C	SP	-	-	150 PSIG	-
1KC-0154	C	1573-2.0	C-06	C	SP	-	-	150 PSIG	-
1KC-0161	C	1573-2.0	F-03	C	SP	-	-	150 PSIG	-
1KC-0170	C	1573-4.0	C-12	C	SP	-	-	150 PSIG	-
1KC-0187	C	1573-2.1	H-02	C	SP	-	-	150 PSIG	-
1KC-0193	C	1573-2.1	F-02	C	SP	-	-	150 PSIG	-
1KC-0199	C	1573-2.1	D-02	C	SP	-	-	150 PSIG	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* COMPONENT COOLING * (page 2)									
1KC-0205	C	1573-2.1	D-13	C	SP	-	-	150 PSIG	-
1KC-0211	C	1573-2.1	F-13	C	SP	-	-	150 PSIG	-
1KC-0217	C	1573-2.1	H-13	C	SP	-	-	150 PSIG	-
1KC-0223	C	1573-2.1	J-13	C	SP	-	-	150 PSIG	-
1KC-0228B	C	1573-1.0	K-08	B	ST-Q	-	-	-	-
1KC-0230A	C	1573-1.0	K-07	B	ST-Q	-	-	-	-
1KC-0234	C	1573-2.2	G-09	C	SP	-	-	150 PSIG	-
1KC-0241	C	1573-2.2	G-11	C	SP	-	-	150 PSIG	-
1KC-0248	C	1573-2.2	G-14	C	SP	-	-	150 PSIG	-
1KC-0261	C	1573-2.2	G-06	C	SP	-	-	150 PSIG	-
1KC-0268	C	1573-2.2	G-04	C	SP	-	-	150 PSIG	-
1KC-0275	C	1573-2.2	G-02	C	SP	-	-	150 PSIG	-
1KC-0279	B	1573-3.1	K-04	AC	MTC-Q	LT-RF	KC3	MT-RF	-
1KC-0280	B	1573-3.1	D-01	AC	MTC-Q	LT-RF	KC1	MT-RF	-
1KC-0281	C	1573-3.1	J-02	C	SP	-	-	150 PSIG	-
1KC-0305B	B	1573-3.1	D-14	B	ST-Q	-	-	-	-
1KC-0313	B	1573-3.1	I-13	C	SP	-	-	150 PSIG	-
1KC-0315B	B	1573-3.1	L-13	B	ST-Q	-	-	-	-
1KC-0320A	B	1573-3.1	C-10	A	ST-Q	LT-RF	-	CS-KC4	-
1KC-0322	B	1573-3.1	C-09	AC	MTC-Q	LT-RF	KC2	MT-RF	-
1KC-0330	C	1573-3.1	C-05	C	SP	-	-	150 PSIG	-
1KC-0332B	B	1573-3.1	D-01	A	ST-Q	LT-RF	-	CS-KC3	-
1KC-0333A	B	1573-3.1	G-01	A	ST-Q	LT-RF	-	CS-KC3	-
1KC-0338B	B	1573-3.1	D-12	A	ST-Q	LT-RF	-	CS-KC2	-
1KC-0340	B	1573-3.1	E-12	AC	MTC-Q	LT-RF	KC4	MT-RF	-
1KC-0349	B	1573-3.0	G-09	C	SP	-	-	2485 PSIG	-
1KC-0355	C	1573-3.0	E-14	C	SP	-	-	150 PSIG	-
1KC-0361	C	1573-3.0	F-13	C	SP	-	-	150 PSIG	-

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* COMPONENT COOLING * (page 3)									
1KC-0368	B	1573-3.0	H-09	C	SP	-	-	2485 PSIG	-
1KC-0374	C	1573-3.0	J-14	C	SP	-	-	150 PSIG	-
1KC-0380	C	1573-3.0	K-13	C	SP	-	-	150 PSIG	-
1KC-0386	C	1573-3.0	K-03	C	SP	-	-	150 PSIG	-
1KC-0392	C	1573-3.0	J-02	C	SP	-	-	150 PSIG	-
1KC-0398	B	1573-3.0	I-06	C	SP	-	-	2485 PSIG	-
1KC-0404	C	1573-3.0	G-02	C	SP	-	-	150 PSIG	-
1KC-0410	C	1573-3.0	E-02	C	SP	-	-	150 PSIG	-
1KC-0417	B	1573-3.0	D-07	C	SP	-	-	2485 PSIG	-
1KC-0424B	B	1573-3.1	L-04	A	ST-Q	LT-RF	-	CS-KC1	-
1KC-0425A	B	1573-3.1	L-06	A	ST-Q	LT-RF	-	CS-KC1	-
1KC-0429B	B	1573-4.0	K-12	A	ST-Q	LT-RF	-	-	-
1KC-0430A	B	1573-4.0	K-10	A	ST-Q	LT-RF	-	-	-
1KC-0458	C	1573-4.0	C-10	C	SP	-	-	150 PSIG	-
1KC-0461	C	1573-4.0	E-08	C	SP	-	-	150 PSIG	-
1KC-0472	C	1573-4.0	E-05	C	SP	-	-	150 PSIG	-
1KC-0490	C	1573-3.1	E-09	C	SP	-	-	150 PSIG	-
1KC-0491	C	1573-3.1	F-09	C	SP	-	-	150 PSIG	-
1KC-0492	C	1573-3.1	H-09	C	SP	-	-	150 PSIG	-
1KC-0493	C	1573-3.1	J-09	C	SP	-	-	150 PSIG	-
1KC-0800	C	1573-1.1	I-11	C	SP	-	-	10 PSIG	-
1KC-0897	C	1573-1.0	K-2	C	MTC-Q	-	-	-	-
1KC-0903	C	1573-1.0	K-13	C	MTC-Q	-	-	-	-
1KC-0958	C	1573-1.0	I-8	C	MTC-Q	-	-	-	-
1KC-0972	C	1573-1.1	J-10	C	SP	-	-	15 PSIG	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* DIESEL GENERATOR COOLING WATER *									
1KD-0009	C	1609-1.0	E-14	B	FS-Q	-	-	-	-
1KD-0029	C	1609-1.1	E-14	B	FS-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* FUEL POOL COOLING *								
1KF-0020	C	1570-1.0	K-5	C	SP	-	-	150 PSIG	-
1KF-0031	C	1570-1.0	I-5	C	SP	-	-	150 PSIG	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* DIESEL GENERATOR LUBE OIL *									
1LD-0001	C	1609-2.0	I-10	C	SP	-	-	75 PSIG	-
1LD-0004	C	1609-2.0	G-13	C	SP	-	-	75 PSIG	-
1LD-0009	C	1609-2.0	F-09	C	SP	-	-	45 PSIG	-
1LD-0011	C	1609-2.0	F-06	C	SP	-	-	75 PSIG	-
1LD-0013	C	1609-2.0	H-03	C	SP	-	-	50 PSIG	-
1LD-0031	C	1609-2.1	J-10	C	SP	-	-	75 PSIG	-
1LD-0034	C	1609-2.1	H-13	C	SP	-	-	75 PSIG	-
1LD-0039	C	1609-2.1	H-09	C	SP	-	-	45 PSIG	-
1LD-0041	C	1609-2.1	G-05	C	SP	-	-	75 PSIG	-
1LD-0043	C	1609-2.1	I-03	C	SP	-	-	50 PSIG	-
1LD-0108	C	1609-2.0	G-12	B	ST-Q	-	-	-	-
1LD-0113	C	1609-2.1	G-12	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* RADIATION MONITORING *									
1MI-5580	B	1499-MI7	N/A	A	ST-Q	LT-RF	-	-	-
1MI-5581	B	1499-MI7	N/A	A	ST-Q	LT-RF	-	-	-
1MI-5582	B	1499-MI7	N/A	A	ST-Q	LT-RF	-	-	-
1MI-5583	B	1499-MI7	N/A	A	ST-Q	LT-RF	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* BORON RECYCLE *							
1NB-0003	C	1556-1.0	J-10	C	SP	-	-	150 PSIG	-
1NB-0260B	B	1556-3.0	G-05	A	ST-Q	LT-RF	-	-	-
1NB-0262	B	1556-3.0	G-03	AC	MTC-Q	LT-RF	NB1	MT-RF	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* REACTOR COOLANT *								
1NC-0001	A	1553-2.0	J-09	C	SP	-	-	2485 PSIG	-
1NC-0002	A	1553-2.0	J-10	C	SP	-	-	2485 PSIG	-
1NC-0003	A	1553-2.0	J-11	C	SP	-	-	2485 PSIG	-
1NC-0031B	A	1553-2.0	H-06	B	ST-Q	-	-	-	-
1NC-0032B	A	1553-2.0	J-06	B	ST-Q	-	-	CS-NC1	-
1NC-0033A	A	1553-2.0	H-04	B	ST-Q	-	-	-	-
1NC-0034A	A	1553-2.0	J-04	B	ST-Q	-	-	CS-NC1	-
1NC-0035B	A	1553-2.0	H-02	B	ST-Q	-	-	-	-
1NC-0036B	A	1553-2.0	J-02	B	ST-Q	-	-	CS-NC1	-
1NC-0053B	B	1553-2.1	I-10	A	ST-Q	LT-RF	-	-	-
1NC-0054A	B	1553-2.1	I-08	A	ST-Q	LT-RF	-	-	-
1NC-0056B	B	1553-2.1	E-13	A	ST-Q	LT-RF	-	-	-
1NC-0057	B	1553-2.1	G-12	AC	LT-RF	-	-	PASSIVE	-
1NC-0141	B	1553-4.0	B-06	A	PC-Q	LT-RF	-	PASSIVE	-
1NC-0142	B	1553-4.0	B-05	A	PC-Q	LT-RF	-	PASSIVE	-
1NC-0195B	B	1553-4.0	K-07	A	LT-RF	-	-	PASSIVE	-
1NC-0196A	B	1553-4.0	I-07	A	LT-RF	-	-	PASSIVE	-
1NC-0259	B	1553-4.0	I-07	AC	MTC-Q	LT-RF	NC1	MT-RF*	-
1NC-0261	B	1553-4.0	B-07	AC	MTC-Q	LT-RF	NC1	MT-RF*	-
1NC-0272AC	A	1553-2.1	L-07	B	ST-Q	-	-	CS-NC2	-
1NC-0273AC	A	1553-2.1	L-07	B	ST-Q	-	-	CS-NC2	-
1NC-0274B	A	1553-2.1	K-07	B	ST-Q	-	-	CS-NC2	-
1NC-0275B	A	1553-2.1	K-07	B	ST-Q	-	-	CS-NC2	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* RESIDUAL HEAT REMOVAL *									
1ND-0001B	A	1561-1.0	I-13	A	ST-Q	LT-TS	-	CS-ND1 PIV	-
1ND-0002AC	A	1561-1.0	H-13	A	ST-Q	LT-TS	-	CS-ND1 PIV	-
1ND-0003	B	1561-1.0	G-14	C	SP	-	-	450 PSIG	
1ND-0004B	B	1561-1.0	E-12	B	ST-Q	-	-	-	-
1ND-0008	B	1561-1.0	D-08	C	MTO,C-Q	-	-	CS-ND6	-
1ND-0014	B	1561-1.0	D-03	B	ST-Q	-	-	-	-
1ND-0015B	B	1561-1.0	E-03	B	ST-Q	-	-	CS-ND3	-
1ND-0019A	B	1561-1.0	H-12	B	ST-Q	-	-	-	-
1ND-0023	B	1561-1.0	J-08	C	MTO,C-Q	-	-	CS-ND6	-
1ND-0029	B	1561-1.0	J-03	B	ST-Q	-	-	-	-
1ND-0030A	B	1561-1.0	I-03	B	ST-Q	-	-	CS-ND3	-
1ND-0056	B	1561-1.0	J-02	C	SP	-	-	600 PSIG	-
1ND-0058A	B	1561-1.0	K-03	B	ST-Q	-	-	CS-ND2	-
1ND-0061	B	1561-1.0	F-02	C	SP	-	-	600 PSIG	-
1ND-0064	B	1561-1.0	E-02	C	SP	-	-	600 PSIG	-
1ND-0067B	B	1561-1.0	B-09	B	ST-Q	-	-	-	-
1ND-0068A	B	1561-1.0	L-09	B	ST-Q	-	-	-	-
1ND-0070	B	1561-1.0	K-03	C	MTO,C-Q	-	-	CS-ND4	-
1ND-0071	B	1561-1.0	C-04	C	MTO,C-Q	-	-	CS-ND5	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* ICE CONDENSOR REFRIGERATION *									
1NF-0228A	B	1558-4.0	H-13	A	ST-Q	LT-RF	-	LT per TS	-
1NF-0229	B	1558-4.0	F-13	AC	MTC-Q	LT-RF	NF1	MT-RF*	-
1NF-0233B	B	1558-4.0	K-12	A	ST-Q	LT-RF	-	LT per TS	-
1NF-0234A	B	1558-4.0	K-13	A	ST-Q	LT-RF	-	LT per TS	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* SAFETY INJECTION *								
1NI-0009A	B	1562-1.0	H-09	B	ST-Q	-	-	CS-NI1	-
1NI-0010B	B	1562-1.0	G-09	B	ST-Q	-	-	CS-NI1	-
1NI-0012	B	1562-1.0	G-08	C	MTO-Q	-	-	CS-NI13	-
1NI-0015	A	1562-1.0	K-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0017	A	1562-1.0	I-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0019	A	1562-1.0	F-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0021	A	1562-1.0	D-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0047A	B	1562-2.0	K-05	A	ST-Q	LT-RF	-	-	-
1NI-0048	B	1562-2.0	K-03	AC	MTC-Q	LT-RF	NI1	MT-RF*	-
1NI-0052	B	1562-2.0	E-05	C	SP	-	-	700 PSIG	-
1NI-0059	A	1562-2.0	D-13	AC	MTO,C-Q	LT-TS	NI2	PIV RF#	-
1NI-0060	A	1562-2.0	D-14	AC	MTO,C-Q	LT-TS	NI4	PIV RF#	-
1NI-0063	B	1562-2.0	I-05	C	SP	-	-	700 PSIG	-
1NI-0070	A	1562-2.0	H-13	AC	MTO,C-Q	LT-TS	NI2	PIV RF#	-
1NI-0071	A	1562-2.0	H-13	AC	MTO,C-Q	LT-TS	NI4	PIV RF#	-
1NI-0074	B	1562-2.1	J-05	C	SP	-	-	700 PSIG	-
1NI-0081	A	1562-2.1	C-03	AC	MTO,C-Q	LT-TS	NI2	PIV RF#	-
1NI-0082	A	1562-2.1	C-03	AC	MTO,C-Q	LT-TS	NI4	PIV RF#	-
1NI-0086	B	1562-2.1	J-09	C	SP	-	-	700 PSIG	-
1NI-0093	A	1562-2.1	C-08	AC	MTO,C-Q	LT-TS	NI2	PIV RF#	-
1NI-0094	A	1562-2.1	C-08	AC	MTO,C-Q	LT-TS	NI4	PIV RF#	-
1NI-0095A	B	1562-2.1	F-12	A	ST-Q	LT-RF	-	-	-
1NI-0096B	B	1562-2.1	E-13	A	ST-Q	LT-RF	-	-	-
1NI-0100B	B	1562-3.0	F-13	B	ST-Q	-	-	CS-NI2	-
1NI-0101	B	1562-3.0	F-13	C	MTO,C-Q	-	-	CS-NI14	-
1NI-0102	B	1562-3.0	I-13	C	SP	-	-	240 PSIG	-
1NI-0103A	B	1562-3.0	J-14	B	ST-Q	-	-	CS-NI6	-
1NI-0114	B	1562-3.0	I-09	C	MTO-Q	-	-	-	-
1NI-0115B	B	1562-3.0	H-09	B	ST-Q	-	-	CS-NI3	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* SAFETY INJECTION * (page 2)									
1NI-0116	B	1562-3.0	J-09	C	MTO,C-Q	-	-	CS-NI15	-
1NI-0118A	B	1562-3.0	H-07	B	ST-Q	-	-	-	-
1NI-0119	B	1562-3.0	K-07	C	SP	-	-	1740 PSIG	-
1NI-0120B	B	1562-3.0	J-07	A	ST-Q	LT-RF	-	-	-
1NI-0121A	B	1562-3.0	J-06	B	ST-Q	-	-	CS-NI4	-
1NI-0124	A	1562-3.0	J-03	AC	MTO,C-Q	LT-TS	-	PIV CS-NI16	-
1NI-0125	A	1562-3.0	I-03	AC	MTO,C-Q	LT-TS	-	PIV CS-NI19	-
1NI-0126	A	1562-3.0	J-02	AC	MTO,C-Q	LT-TS	-	PIV CS-NI19	-
1NI-0128	A	1562-3.0	I-04	AC	MTO,C-Q	LT-TS	-	PIV CS-NI16	-
1NI-0129	A	1562-3.0	I-03	AC	MTO,C-Q	LT-TS	-	PIV CS-NI19	-
1NI-0134	A	1562-3.0	G-04	AC	MTO,C-Q	LT-TS	-	PIV CS-NI19	-
1NI-0135B	B	1562-3.0	E-14	B	ST-Q	-	-	-	-
1NI-0136B	B	1562-3.0	C-14	B	ST-Q	-	-	CS-NI20	-
1NI-0143	B	1562-3.0	F-09	C	MTO,C-Q	-	-	-	-
1NI-0144B	B	1562-3.0	G-09	B	ST-Q	-	-	-	-
1NI-0147A	B	1562-3.0	G-11	B	ST-Q	-	-	CS-NI3	-
1NI-0148	B	1562-3.0	D-09	C	MTO,C-Q	-	-	CS-NI15	-
1NI-0150B	B	1562-3.0	E-07	B	ST-Q	-	-	-	-
1NI-0151	B	1562-3.0	C-07	C	SP	-	-	1740 PSIG	-
1NI-0152B	B	1562-3.0	D-06	B	ST-Q	-	-	CS-NI4	-
1NI-0156	A	1562-3.0	D-03	AC	MTO,C-Q	LT-TS	-	PIV CS-NI16	-
1NI-0157	A	1562-3.0	D-02	AC	MTO,C-Q	LT-TS	-	PIV CS-NI16	-
1NI-0159	A	1562-3.0	B-04	AC	MTO,C-Q	LT-TS	-	PIV CS-NI16	-
1NI-0160	A	1562-3.0	B-03	AC	MTO,C-Q	LT-TS	-	PIV CS-NI16	-
1NI-0161	B	1562-3.1	K-12	C	SP	-	-	1740 PSIG	-
1NI-0162A	B	1562-3.1	K-11	B	ST-Q	-	-	CS-NI5	-
1NI-0165	A	1562-3.1	J-03	AC	MTO,C-Q	LT-TS	-	PIV CS-NI17	-
1NI-0167	A	1562-3.1	J-05	AC	MTO,C-Q	LT-TS	-	PIV CS-NI17	-
1NI-0169	A	1562-3.1	J-06	AC	MTO,C-Q	LT-TS	-	PIV CS-NI17	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* SAFETY INJECTION * (page 3)									
1NI-0171	A	1562-3.1	J-07	AC	MTO,C-Q	LT-TS	-	PIV CS-NI17	-
1NI-0173A	B	1562-3.1	I-12	B	ST-Q	-	-	CS-NI7	-
1NI-0175	A	1562-3.1	I-08	AC	MTO,C-Q	LT-TS	-	PIV CS-NI18	-
1NI-0176	A	1562-3.1	H-08	AC	MTO,C-Q	T-TS	-	PIV CS-NI18	-
1NI-0178B	B	1562-3.1	F-12	B	ST-Q	-	-	CS-NI7	-
1NI-0180	A	1562-3.1	F-06	AC	MTO,C-Q	LT-TS	-	PIV CS-NI18	-
1NI-0181	A	1562-3.1	D-05	AC	MTO,C-Q	LT-TS	-	PIV CS-NI18	-
1NI-0183B	B	1562-3.0	G-03	B	ST-Q	-	-	CS-NI9	-
1NI-0184B	B	1562-3.1	D-12	B	ST-Q	-	-	CS-NI10	-
1NI-0185A	B	1562-3.1	B-12	B	ST-Q	-	-	CS-NI10	-
1NI-0332A	B	1562-3.0	L-14	B	ST-Q	-	-	CS-NI11	-
1NI-0333B	B	1562-3.0	L-12	B	ST-Q	-	-	CS-NI11	-
1NI-0334B	B	1562-3.0	L-11	B	ST-Q	-	-	CS-NI8	-
1NI-0347	A	1562-1.0	I-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0348	A	1562-1.0	F-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0349	A	1562-1.0	D-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0354	A	1562-1.0	K-07	C	MTO-Q	-	-	CS-NI12	-
1NI-0430A	B	1562-2.0	E-04	B	ST-Q	-	-	-	-
1NI-0431B	B	1562-2.0	J-04	B	ST-Q	-	-	-	-
1NI-0436	B	1562-2.1	G-11	AC	MTC-Q	LT-RF	NI3	MT-RF*	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* NUCLEAR SAMPLING *								
1NM-0003AC	B	1572-1.0	K-03	A	ST-Q	LT-RF	-	-	-
1NM-0006AC	B	1572-1.0	J-03	A	ST-Q	LT-RF	-	-	-
1NM-0007B	B	1572-1.0	K-06	A	ST-Q	LT-RF	-	-	-
1NM-0022AC	B	1572-1.0	J-12	A	ST-Q	LT-RF	-	-	-
1NM-0025AC	B	1572-1.0	K-12	A	ST-Q	LT-RF	-	-	-
1NM-0026B	B	1572-1.0	K-08	A	ST-Q	LT-RF	-	-	-
1NM-0069	B	1572-1.1	G-09	AC	SP	LT-RF	-	700 PSIG, PASSIVE	-
1NM-0072B	B	1572-1.1	I-06	A	ST-Q	LT-RF	-	-	-
1NM-0075B	B	1572-1.1	I-08	A	ST-Q	LT-RF	-	-	-
1NM-0078B	B	1572-1.1	I-09	A	ST-Q	LT-RF	-	-	-
1NM-0081B	B	1572-1.1	I-11	A	ST-Q	LT-RF	-	-	-
1NM-0082A	B	1572-1.1	E-09	A	ST-Q	LT-RF	-	-	-
1NM-0187A	B	1572-3.0	K-01	B	ST-Q	-	-	-	-
1NM-0190A	B	1572-3.0	K-02	B	ST-Q	-	-	-	-
1NM-0191B	B	1572-3.0	I-02	B	ST-Q	-	-	-	-
1NM-0197B	B	1572-3.0	K-05	B	ST-Q	-	-	-	-
1NM-0200B	B	1572-3.0	K-06	B	ST-Q	-	-	-	-
1NM-0201A	B	1572-3.0	I-06	B	ST-Q	-	-	-	-
1NM-0207A	B	1572-3.0	K-08	B	ST-Q	-	-	-	-
1NM-0210A	B	1572-3.0	K-09	B	ST-Q	-	-	-	-
1NM-0211B	B	1572-3.0	I-09	B	ST-Q	-	-	-	-
1NM-0217B	B	1572-3.0	K-11	B	ST-Q	-	-	-	-
1NM-0220B	B	1572-3.0	K-12	B	ST-Q	-	-	-	-
1NM-0221A	B	1572-3.0	I-12	B	ST-Q	-	-	-	-
1NM-0420	B	1572-1.0	J-03	AC	MTC-Q	LT-RF	NM1	MT-RF*	-
1NM-0421	B	1572-1.0	J-12	AC	MTC-Q	LT-RF	NM1	MT-RF*	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTAINMENT SPRAY *									
1NS-0001B	B	1563-1.0	C-13	B	ST-Q	-	-	-	-
1NS-0002	B	1563-1.0	D-12	C	SP	-	-	220 PSIG	-
1NS-0003B	B	1563-1.0	B-13	B	ST-Q	-	-	-	-
1NS-0004	B	1563-1.0	B-12	C	MTO,C-Q	-	NS2	RF#	-
1NS-0012B	B	1563-1.0	C-04	B	ST-Q	-	-	-	-
1NS-0013	B	1563-1.0	B-02	C	MTO-Q	-	NS1	RF#	-
1NS-0015B	B	1563-1.0	D-04	B	ST-Q	-	-	-	-
1NS-0016	B	1563-1.0	D-02	C	MTO-Q	-	NS1	RF#	-
1NS-0018A	B	1563-1.0	G-13	B	ST-Q	-	-	-	-
1NS-0019	B	1563-1.0	H-12	C	SP	-	-	220 PSIG	-
1NS-0020A	B	1563-1.0	F-13	B	ST-Q	-	-	-	-
1NS-0021	B	1563-1.0	F-12	C	MTO,C-Q	-	NS2	RF#	-
1NS-0029A	B	1563-1.0	F-04	B	ST-Q	-	-	-	-
1NS-0030	B	1563-1.0	F-02	C	MTO-Q	-	NS1	RF#	-
1NS-0032A	B	1563-1.0	H-04	B	ST-Q	-	-	-	-
1NS-0033	B	1563-1.0	H-02	C	MTO-Q	-	NS1	RF#	-
1NS-0038B	B	1563-1.0	J-05	B	ST-Q	-	-	CS-NS1	-
1NS-0041	B	1563-1.0	J-03	C	MTO-Q	-	NS1	RF#	-
1NS-0043A	B	1563-1.0	K-05	B	ST-Q	-	-	CS-NS1	-
1NS-0046	B	1563-1.0	K-03	C	MTO-Q	-	NS1	RF#	-
1NS-0083	B	1563-1.0	G-02	AC	MTO,C-Q	LT	NS3	-	-
1NS-0084	B	1563-1.0	G-03	AC	MTO,C-Q	LT	NS3	-	-
1NS-0085	B	1563-1.0	G-03	AC	MTO,C-Q	LT	NS3	-	-
1NS-0086	B	1563-1.0	C-02	AC	MTO,C-Q	LT	NS3	-	-
1NS-0087	B	1563-1.0	C-03	AC	MTO,C-Q	LT	NS3	-	-
1NS-0088	B	1563-1.0	C-03	AC	MTO,C-Q	LT	NS3	-	-
1NS-5550B	B	1499-NS8	N/A	A	ST-Q	LT-RF	-	-	-
1NS-5551A	B	1499-NS8	N/A	A	ST-Q	LT-RF	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CHEMICAL AND VOLUME CONTROL *									
1NV-0006	B	1554-1.2	K-09	C	SP	-	-	600 PSIG	-
1NV-0007B	B	1554-1.2	J-10	B	ST-Q	-	-	CS-NV2	-
1NV-0021A	A	1554-1.2	E-03	B	ST-Q	-	-	CS-NV3	-
1NV-0024B	A	1554-1.2	D-06	B	ST-Q	-	-	-	-
1NV-0025B	A	1554-1.2	D-07	B	ST-Q	-	-	-	-
1NV-0035A	B	1554-1.2	K-07	B	ST-Q	-	-	-	-
1NV-0093	B	1554-1.1	K-12	C	SP	-	-	150 PSIG	-
1NV-0094AC	B	1554-1.1	J-13	B	ST-Q	-	-	CS-NV1	-
1NV-0095B	B	1554-1.1	H-13	B	ST-Q	-	-	CS-NV1	-
1NV-0141A	B	1554-2.0	B-08	B	ST-Q	-	-	CS-NV4	-
1NV-0142B	B	1554-2.0	B-07	B	ST-Q	-	-	CS-NV4	-
1NV-0150B	B	1554-2.0	F-02	B	ST-Q	-	-	CS-NV8	-
1NV-0151A	B	1554-2.0	G-02	B	ST-Q	-	-	CS-NV8	-
1NV-0155	B	1554-2.0	I-06	C	SP	-	-	150 PSIG	-
1NV-0156	B	1554-2.0	J-09	C	SP	-	-	255 PSIG	-
1NV-0170	B	1554-2.0	C-08	C	SP	-	-	75 PSIG	-
1NV-0221A	B	1554-3.1	H-01	B	ST-Q	-	-	CS-NV6	-
1NV-0222B	B	1554-3.1	I-01	B	ST-Q	-	-	CS-NV6	-
1NV-0223	B	1554-3.1	I-02	C	MTO,C-Q	-	-	CS-NV11	-
1NV-0225	B	1554-3.1	F-05	C	MTO,C-Q	-	-	CS-NV10	-
1NV-0227	B	1554-3.1	E-06	C	MTO,C-Q	-	-	-	-
1NV-0229	B	1554-3.1	I-12	C	SP	-	-	220 PSIG	-
1NV-0231	B	1554-3.1	F-10	C	MTO,C-Q	-	-	CS-NV10	-
1NV-0233	B	1554-3.1	E-10	C	MTO,C-Q	-	-	-	-
1NV-0244A	B	1554-3.0	K-08	B	ST-Q	-	-	CS-NV5	-
1NV-0245B	B	1554-3.0	K-09	B	ST-Q	-	-	CS-NV5	-
1NV-0261	B	1554-3.1	J-03	C	MTC-Q	-	-	CS NV13	-
1NV-0263	B	1554-3.1	J-11	C	MTC-Q	-	-	CS-NV13	-
1NV-0264	B	1554-3.1	J-10	C	MTO,C-Q	-	-	CS-NV7	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CHEMICAL AND VOLUME CONTROL * (page 2)									
1NV-0265B	B	1554-3.1	J-09	B	ST-Q	-	-	CS-NV9	-
1NV-0383	C	1554-5.0	E-06	C	MTO,C-Q	-	-	-	-
1NV-0386	C	1554-5.0	C-06	C	MTO,C-Q	-	-	-	-
1NV-0457A	B	1554-1.2	I-07	B	ST-Q	-	-	-	-
1NV-0458A	B	1554-1.2	J-07	B	ST-Q	-	-	-	-
1NV-0482	B	1554-2.0	D-07	C	SP	-	-	150 PSIG	-
1NV-0483	C	1554-2.0	D-11	C	SP	-	-	150 PSIG	-
1NV-0486	B	1554-3.1	J-09	C	SP	-	-	150 PSIG	-
1NV-0487	B	1554-3.1	J-10	C	SP	-	-	150 PSIG	-
1NV-0488	C	1554-5.0	C-01	C	SP	-	-	30 PSIG	-
1NV-0849AC	B	1554-1.3	F-08	A	ST-Q	LT-RF	-	-	-
1NV-1002	B	1554-1.3	F-10	AC	MTC-Q	LT-RF	NV1	RF	-
1NV-1046	B	1554-3.0	H-12	C	MTC-Q	-	-	CS-NV12	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* FIRE PROTECTION *								
1RF-0821A	B	1599-2.2	E-05	A	LT-RF	-	-	PASSIVE	-
1RF-0823	B	1599-2.2	E-07	AC	MTC-Q	LT-RF	RF1	MT-RF*	-
1RF-0832A	B	1599-2.2	I-05	A	LT-RF	-	-	PASSIVE, U2CIV	-
1RF-0834	B	1599-2.2	I-08	AC	MTC-Q	LT-RF	RF1	MT-RF*, U2CIV	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* NUCLEAR SERVICE WATER *									
1RN-0016A	C	1574-1.1	J-03	B	ST-Q	-	-	-	-
1RN-0018B	C	1574-1.1	E-02	B	ST-Q	-	-	-	-
1RN-0021A	C	1574-1.1	J-02	B	ST-Q	-	-	-	-
1RN-0022A	C	1574-1.1	H-05	B	ST-Q	-	-	-	-
1RN-0025B	C	1574-1.1	C-04	B	ST-Q	-	-	-	-
1RN-0026B	C	1574-1.1	G-05	B	ST-Q	-	-	-	-
1RN-0028	C	1574-1.1	J-09	C	MTO-Q	-	-	-	-
1RN-0030	C	1574-1.1	E-09	C	MTO-Q	-	-	-	-
1RN-0040A	C	1574-1.1	I-12	B	ST-Q	-	-	-	-
1RN-0041B	C	1574-1.1	F-12	B	ST-Q	-	-	U1 & U2 SIGNAL	-
1RN-0042A	C	1574-4.0	B-09	B	ST-Q	-	-	CS-RN3	-
1RN-0043A	C	1574-1.1	F-12	B	ST-Q	-	-	U1 & U2 SIGNAL	-
1RN-0063B	C	1574-1.0	I-02	B	ST-Q	-	-	CS-RN4	-
1RN-0064A	C	1574-1.0	I-02	B	ST-Q	-	-	CS-RN4	-
1RN-0068A	C	1574-1.1	K-12	B	ST-Q	-	-	-	-
1RN-0069A	C	1574-2.0	K-03	B	ST-Q	-	-	-	-
1RN-0070A	C	1574-2.0	F-03	B	ST-Q	-	-	-	-
1RN-0073A	C	1574-2.0	I-03	B	ST-Q	-	-	-	-
1RN-0077	C	1574-2.0	I-03	C	SP	-	-	135 PSIG	-
1RN-0086A	C	1574-2.0	D-09	B	ST-Q	-	-	-	-
1RN-0089A	C	1574-2.0	J-10	B	ST-Q	-	-	-	-
1RN-0090	C	1574-2.0	D-12	C	SP	-	-	VAC BREAKER	-
1RN-0092	C	1574-2.0	I-12	C	SP	-	-	VAC BREAKER	-
1RN-0103A	C	1574-2.1	C-06	B	ST-Q	-	-	-	-
1RN-0112A	C	1574-2.0	I-06	B	ST-Q	-	-	-	-
1RN-0113	C	1574-2.0	D-13	C	MTO-Q	-	RN1	RF#	-
1RN-0114A	C	1574-2.1	B-11	B	ST-Q	-	-	-	-
1RN-0117A	C	1574-2.0	I-08	B	ST-Q	-	-	-	-
1RN-0126A	C	1574-2.1	D-09	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* NUCLEAR SERVICE WATER * (page 2)									
1RN-0130A	C	1574-2.1	C-10	B	ST-Q	-	-	-	-
1RN-0134A	C	1574-2.1	C-07	B	ST-Q	-	-	-	-
1RN-0137A	C	1574-2.1	H-07	B	ST-Q	-	-	-	-
1RN-0138	C	1574-2.1	H-05	C	SP	-	-	135 PSIG	-
1RN-0140A	C	1574-2.0	E-13	B	ST-Q	-	-	-	-
1RN-0161B	C	1574-1.1	B-13	B	ST-Q	-	-	-	-
1RN-0162B	C	1574-3.0	K-03	B	ST-Q	-	-	-	-
1RN-0166A	C	1574-2.0	J-02	B	ST-Q	-	-	-	-
1RN-0170B	C	1574-3.0	I-01	B	ST-Q	-	-	-	-
1RN-0171B	C	1574-3.0	E-03	B	ST-Q	-	-	-	-
1RN-0174B	C	1574-3.0	I-03	B	ST-Q	-	-	-	-
1RN-0178	C	1574-3.0	I-03	C	SP	-	-	135 PSIG	-
1RN-0187B	C	1574-3.0	E-10	B	ST-Q	-	-	-	-
1RN-0190B	C	1574-3.0	J-10	B	ST-Q	-	-	-	-
1RN-0191	C	1574-3.0	E-12	C	SP	-	-	VAC BREAKER	-
1RN-0193	C	1574-3.0	H-12	C	SP	-	-	VAC BREAKER	-
1RN-0204B	C	1574-3.1	C-05	B	ST Q	-	-	-	-
1RN-0213B	C	1574-3.0	J-06	B	ST-Q	-	-	-	-
1RN-0214	C	1574-3.0	D-13	C	MTO-Q	-	RN1	RF#	-
1RN-0215B	C	1574-3.1	B-11	B	ST-Q	-	-	-	-
1RN-0218B	C	1574-3.0	I-08	B	ST-Q	-	-	-	-
1RN-0227B	C	1574-3.1	E-10	B	ST-Q	-	-	-	-
1RN-0231B	C	1574-3.1	C-10	B	ST-Q	-	-	-	-
1RN-0235B	C	1574-3.1	E-07	B	ST-Q	-	-	-	-
1RN-0238B	C	1574-3.1	I-07	B	ST-Q	-	-	-	
1RN-0240B	C	1574-3.0	E-13	B	ST-Q	-	-	-	-
1RN-0252B	C	1574-4.0	E-02	A	ST-Q	LT-RF	-	CS-RN1	-
1RN-0253A	C	1574-4.0	C-02	A	ST-Q	LT-RF	-	CS-RN1	-
1RN-0276A	C	1574-4.0	J-02	A	ST-Q	LT-RF	-	CS-RN2	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* NUCLEAR SERVICE WATER * (page 3)									
1RN-0277B	C	1574-4.0	I-02	A	ST-Q	LT-RF	-	CS-RN2	-
1RN-0279B	C	1574-1.0	K-02	B	ST-Q	-	-	-	-
1RN-0280	C	1574-1.0	K-03	C	SP	-	-	VAC BREAKER	-
1RN-0293	C	1574-3.1	G-05	C	SP	-	-	135 PSIG	-
1RN-0294	C	1574-3.0	H-10	C	SP	-	-	135 PSIG	-
1RN-0295	C	1574-2.0	H-10	C	SP	-	-	135 PSIG	-
1RN-0296A	C	1574-1.0	I-01	B	ST-Q	-	-	-	
1RN-0297B	C	1574-1.0	G-02	B	ST-Q	-	-	-	-
1RN-0299A	C	1574-1.0	K-02	B	ST-Q	-	-	-	-
1RN-0442	C	1574-2.0	J-11	B	ST-Q	-	-	-	-
1RN-0445	C	1574-2.0	J-11	B	ST-Q	-	-	-	-
1RN-0457	C	1574-3.0	J-11	B	ST-Q	-	-	-	-
1RN-0460	C	1574-3.0	J-11	B	ST-Q	-	-	-	-
1RN-0994	C	1574-3.1	C-07	C	MTC-Q	-	-	-	-
1RN-1006	C	1574-2.1	E-06	C	MTC-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTAINMENT VENTILATION COOLING WATER *									
1RV-0032A	B	1604-3.0	K-10	A	ST-Q	LT-RF	-	CS-RV1	-
1RV-0033B	B	1604-3.0	K-12	A	ST-Q	LT-RF	-	CS-RV1	-
1RV-0076A	B	1604-3.0	C-12	A	ST-Q	LT-RF	-	CS-RV1	-
1RV-0077B	B	1604-3.0	C-10	A	ST-Q	LT-RF	-	CS-RV1	-
1RV-0079A	B	1604-3.0	K-07	A	ST-Q	LT-RF	-	-	-
1RV-0080B	B	1604-3.0	K-05	A	ST-Q	LT-RF	-	-	-
1RV-0101A	B	1604-3.0	C-05	A	ST-Q	LT-RF	-	-	-
1RV-0102B	B	1604-3.0	C-07	A	ST-Q	LT-RF	-	-	-
1RV-0445		1604-3.0	J-12	C	LT-RF	-	-	-	-
1RV-0446		1604-3.0	B-12	C	LT-RF	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* MAIN STEAM TO AUXILIARY EQUIPMENT									
1SA-0005	B	1593-1.2	F-04	C	MTO,C-Q	-	SA1	RF#	-
1SA-0006	B	1593-1.2	F-04	C	MTO,C-Q	-	SA1	RF#	-
1SA-0048A,B,C	B	1593-1.2	E-04	B	ST-Q	-	-	-	-
1SA-0043AB	B	1593-1.2	F-02	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* MAIN STEAM *							
1SM-0001AB	B	1593-1.3	I-14	B	ST-Q	-	-	CS-SM1	-
1SM-0003AB	B	1593-1.3	C-14	B	ST-Q	-	-	CS-SM1	-
1SM-0005AB	B	1593-1.0	I-14	B	ST-Q	-	-	CS-SM1	-
1SM-0007AB	B	1593-1.0	C-14	B	ST-Q	-	-	CS-SM1	-
1SM-0009AB	B	1593-1.3	I-13	B	ST-Q	-	-	-	-
1SM-0010AB	B	1593-1.3	C-13	B	ST-Q	-	-	-	-
1SM-0011AB	B	1593-1.0	I-13	B	ST-Q	-	-	-	-
1SM-0012AB	B	1593-1.0	C-13	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* MAIN STEAM VENT TO ATMOSPHERE *									
1SV-0001AB	B	1593-1.3	L-05	B	ST-Q	-	-	-	-
1SV-0002	B	1593-1.3	K-06	C	SP	-	-	1170 PSIG	-
1SV-0003	B	1593-1.3	K-07	C	SP	-	-	1190 PSIG	-
1SV-0004	B	1593-1.3	K-09	C	SP	-	-	1205 PSIG	-
1SV-0005	B	1593-1.3	K-11	C	SP	-	-	1220 PSIG	-
1SV-0006	B	1593-1.3	K-12	C	SP	-	-	1225 PSIG	-
1SV-0007ABC	B	1593-1.3	G-05	B	ST-Q	-	-	-	-
1SV-0008	B	1593-1.3	E-06	C	SP	-	-	1170 PSIG	-
1SV-0009	B	1593-1.3	E-07	C	SP	-	-	1190 PSIG	-
1SV-0010	B	1593-1.3	E-09	C	SP	-	-	1205 PSIG	-
1SV-0011	B	1593-1.3	E-11	C	SP	-	-	1220 PSIG	-
1SV-0012	B	1593-1.3	E-12	C	SP	-	-	1225 PSIG	-
1SV-0013AB	B	1593-1.0	L-04	B	ST-Q	-	-	-	-
1SV-0014	B	1593-1.0	K-05	C	SP	-	-	1170 PSIG	-
1SV-0015	B	1593-1.0	K-07	C	SP	-	-	1190 PSIG	-
1SV-0016	B	1593-1.0	K-09	C	SP	-	-	1205 PSIG	-
1SV-0017	B	1593-1.0	K-10	C	SP	-	-	1220 PSIG	-
1SV-0018	B	1593-1.0	K-12	C	SP	-	-	1225 PSIG	-
1SV-0019AB	B	1593-1.0	G-04	B	ST-Q	-	-	-	-
1SV-0020	B	1593-1.0	E-05	C	SP	-	-	1170 PSIG	-
1SV-0021	B	1593-1.0	E-07	C	SP	-	-	1190 PSIG	-
1SV-0022	B	1593-1.0	E-09	C	SP	-	-	1205 PSIG	-
1SV-0023	B	1593-1.0	E-10	C	SP	-	-	1220 PSIG	-
1SV-0024	B	1593-1.0	E-12	C	SP	-	-	1225 PSIG	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* BREATHING AIR *							
1VB-0049B	B	1605-3.1	G-02	A	ST-Q	LT-RF	-	-	-
1VB-0050	B	1605-3.1	E-04	AC	MTC-Q	LT-RF	VB1	MT-RF*	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTROL AREA VENTILATION *									
1VC-0001A	NA	1578-1	I-13	B	ST-Q	-	-	-	-
1VC-0002A	NA	1578-1	I-13	B	ST-Q	-	-	-	-
1VC-0003B	NA	1578-1	I-13	B	ST-Q	-	-	-	-
1VC-0004B	NA	1578-1	H-13	B	ST-Q	-	-	-	-
1VC-0009A	NA	1578-1	E-13	B	ST-Q	-	-	-	-
1VC-0010A	NA	1578-1	D-13	B	ST-Q	-	-	-	-
1VC-0011B	NA	1578-1	E-13	B	ST-Q	-	-	-	-
1VC-0012B	NA	1578-1	D-13	B	ST-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* ANNULUS VENTILATION *							
1VE-0005A	B	1564-1	G-04	A	ST-Q	LT-RF	-	-	-
1VE-0006B	B	1564-1	G-04	A	ST-Q	LT-RF	-	-	-
1VE-0008A	B	1564-1	J-02	B	ST-Q	-	-	-	-
1VE-0010A	B	1564-1	H-03	A	ST-Q	LT-RF	-	-	-
1VE-0011	B	1564-1	H-03	AC	LT-RF	-	-	PASSIVE	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* DIESEL GENERATOR STARTING AIR *									
1VG-0003	C	1609-4.0	J-12	C	MTO-Q	-	-	-	-
1VG-0004	C	1609-4.0	E-12	C	MTO-Q	-	-	-	-
1VG-0017	C	1609-4.0	J-06	C	MTO-Q	-	-	CS-VG1	-
1VG-0018	C	1609-4.0	I-06	C	MTO-Q	-	-	CS-VG1	-
1VG-0019	C	1609-4.0	E-06	C	MTO-Q	-	-	CS-VG1	-
1VG-0020	C	1609-4.0	D-06	C	MTO-Q	-	-	CS-VG1	-
1VG-0021	G	1609-4.0	L-13	C	SP	-	-	275 PSIG	-
1VG-0022	G	1609-4.0	I-13	C	SP	-	-	275 PSIG	-
1VG-0023	G	1609-4.0	G-13	C	SP	-	-	275 PSIG	-
1VG-0024	G	1609-4.0	C-13	C	SP	-	-	275 PSIG	-
1VG-0033	C	1609-4.0	L-07	C	SP	-	-	250 PSIG	-
1VG-0034	C	1609-4.0	I-07	C	SP	-	-	250 PSIG	-
1VG-0035	C	1609-4.0	G-07	C	SP	-	-	250 PSIG	-
1VG-0036	C	1609-4.0	C-07	C	SP	-	-	250 PSIG	-
1VG-0061	C	1609-4.0	K-02	B	ST-Q	-	-	-	-
1VG-0062	C	1609-4.0	K-02	B	ST-Q	-	-	-	-
1VG-0063	C	1609-4.0	H-02	B	ST-Q	-	-	-	-
1VG-0064	C	1609-4.0	I-02	B	ST-Q	-	-	-	-
1VG-0065	C	1609-4.0	E-02	B	ST-Q	-	-	-	-
1VG-0066	C	1609-4.0	F-02	B	ST-Q	-	-	-	-
1VG-0067	C	1609-4.0	C-02	B	ST-Q	-	-	-	-
1VG-0068	C	1609-4.0	C-02	B	ST-Q	-	-	-	-
1VG-0079	C	1609-4.0	I-11	C	SP	-	-	139 PSIG	-
1VG-0080	C	1609-4.0	D-11	C	SP	-	-	139 PSIG	-
1VG-0083	C	1609-4.0	J-10	C	SP	-	-	139 PSIG	-
1VG-0084	C	1609-4.0	D-10	C	SP	-	-	139 PSIG	-
1VG-0115	C	1609-4.0	K-09	C	MTO-Q	-	-	-	-
1VG-0116	C	1609-4.0	H-09	C	MTO-Q	-	-	-	-
1VG-0117	C	1609-4.0	F-09	C	MTO-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* DIESEL GENERATOR STARTING AIR * (page 2)									
1VG-0118	C	1609-4.0	C-09	C	MTO-Q	-	-	-	-
1VG-5160	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5161	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5162	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5163	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5170	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5171	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5172	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-
1VG-5173	C	1499-VG3	N/A	B	ST-Q	-	VG-1	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
	* INSTRUMENT AIR *								
1VI-0040	B	1605-1.3	H-04	AC	MTC-Q	LT-RF	VI2	MT-RF*	-
1VI-0113	C	1605-1.13	I-13	C	SP	-	-	120 PSIG	-
1VI-0114	C	1605-1.13	I-13	C	SP	-	-	120 PSIG	-
1VI-0115	C	1605-1.13	J-02	C	SP	-	-	120 PSIG	-
1VI-0116	C	1605-1.13	J-02	C	SP	-	-	120 PSIG	-
1VI-0117	C	1605-1.13	H-02	C	SP	-	-	120 PSIG	-
1VI-0118	C	1605-1.13	H-02	C	SP	-	-	120 PSIG	-
1VI-0119	C	1605-1.13	J-09	C	SP	-	-	120 PSIG	-
1VI-0120	C	1605-1.13	J-09	C	SP	-	-	120 PSIG	-
1VI-0124	B	1605-1.2	D-03	AC	MTC-Q	LT-RF	VI1	MT-RF*	-
1VI-0129B	B	1605-1.17	J-06	A	ST-Q	LT-RF	-	-	-
1VI-0148B	B	1605-1.14	C-04	A	ST-Q	LT-RF	-	-	-
1VI-0149	B	1605-1.2	I-03	AC	MTC-Q	LT-RF	VI1	MT-RF*	-
1VI-0150B	B	1605-1.14	B-03	A	ST-Q	LT-RF	-	-	-
1VI-0160B	B	1605-1.17	C-06	A	ST-Q	LT-RF	-	-	-
1VI-0161	B	1605-1.3	E-04	AC	MTC-Q	LT-RF	VI2	MT-RF*	-
1VI-0362A	B	1605-1.2	I-02	A	ST-Q	LT-RF	-	-	-
1VI-0368	F	1605-1.3	I-07	C	MTO-Q	-	-	CS-VI1	-
1VI-0372	F	1605-1.3	I-08	C	MTC-Q	-	-	CS-VI1	-
1VI-0373	F	1605-1.3	C-07	C	MTO-Q	-	-	CS-VI1	-
1VI-0374	F	1605-1.3	C-08	C	MTC-Q	-	-	CS-VI1	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTAINMENT PURGE VENTILATION *									
1VP-0001B	B	1576-1	I-06	A	LT-TS	-	-	-	-
1VP-0002A	B	1576-1	I-07	A	LT-TS	-	-	-	-
1VP-0003B	B	1576-1	K-06	A	LT-TS	-	-	-	-
1VP-0004A	B	1576-1	K-07	A	LT-TS	-	-	-	-
1VP-0006B	B	1576-1	E-06	A	LT-TS	-	-	-	-
1VP-0007A	B	1576-1	E-07	A	LT-TS	-	-	-	-
1VP-0008B	B	1576-1	D-06	A	LT-TS	-	-	-	-
1VP-0009A	B	1576-1	D-07	A	LT-TS	-	-	-	-
1VP-0010A	B	1576-1	J-08	A	LT-TS	-	-	-	-
1VP-0011B	B	1576-1	J-09	A	LT-TS	-	-	-	-
1VP-0012A	B	1576-1	I-08	A	LT-TS	-	-	-	-
1VP-0013B	B	1576-1	I-09	A	LT-TS	-	-	-	-
1VP-0015A	B	1576-1	F-08	A	LT-TS	-	-	-	-
1VP-0016B	B	1576-1	F-09	A	LT-TS	-	-	-	-
1VP-0017A	B	1576-1	B-07	A	LT-TS	-	-	-	-
1VP-0018B	B	1576-1	B-06	A	LT-TS	-	-	-	-
1VP-0019A	B	1576-1	B-08	A	LT-TS	-	-	-	-
1VP-0020B	B	1576-1	B-09	A	LT-TS	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTAINMENT AIR RELEASE AND ADDITION *									
1VQ-0001A	B	1585-1.0	J-04	A	ST-Q	LT-RF	-	-	-
1VQ-0002B	B	1585-1.0	J-06	A	ST-Q	LT-RF	-	-	-
1VQ-0005B	B	1585-1.0	E-06	A	ST-Q	LT-RF	-	-	-
1VQ-0006A	B	1585-1.0	E-03	A	ST-Q	LT-RF	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* STATION AIR *							
1VS-0012B	B	1605-2.2	K-05	A	ST-Q	LT-RF	-	-	-
1VS-0013	B	1605-2.2	I-05	AC	MTC-Q	LT-RF	VS1	MT-RF*	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTAINMENT AIR RETURN EXCHANGE & HYDROGEN SKIMMER *									
1VX-0001A	B	1557-1	I-03	B	ST-Q	-	-	-	-
1VX-0002B	B	1557-1	I-12	B	ST-Q	-	-	-	-
1VX-0030	B	1557-1	J-03	AC	MTC-Q	LT-RF	VX1	MT-RF	-
1VX-0031A	B	1557-1	J-13	A	ST-Q	LT-RF	-	-	-
1VX-0033B	B	1557-1	J 12	A	ST-Q	LT-RF	-	-	-
1VX-0034	B	1557-1	K-12	A	LT-RF	-	-	PASSIVE	-
1VX-0040	B	1557-1	K-03	A	LT-RF	-	-	PASSIVE	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* EQUIPMENT DECONTAMINATION *									
1WE-0013	B	1568-1.0	E-08	A	LT-RF	-	-	PASSIVE	-
1WE-0023	B	1568-1.0	E-10	A	LT-RF	-	-	PASSIVE	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
		* WASTE GAS *							
1WG-0092	C	1567-2.0	F-14	C	SP	-	-	150 PSIG	-
1WG-0097	C	1567-2.0	F-12	C	SP	-	-	150 PSIG	-
1WG-0104	C	1567-2.0	F-10	C	SP	-	-	150 PSIG	-
1WG-0112	C	1567-2.0	F-08	C	SP	-	-	150 PSIG	-
1WG-0117	C	1567-2.0	F-05	C	SP	-	-	150 PSIG	-
1WG-0124	C	1567-2.0	F-03	C	SP	-	-	100 PSIG	-
1WG-0146	C	1567-2.1	F-11	C	SP	-	-	150 PSIG	-
1WG-0153	C	1567-2.1	F-6	C	SP	-	-	150 PSIG	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* LIQUID WASTE RECYCLE *									
1WL-0001B	B	1565-1.1	L-11	A	ST-Q	LT-RF	-	-	-
1WL-0002A	B	1565-1.1	K-13	A	ST-Q	LT-RF	-	-	-
1WL-0024	B	1565-1.1	J-14	AC	MTC-Q	LT-RF	WL1	MT-RF*	-
1WL-0039A	B	1565-1.1	J-05	A	ST-Q	LT-RF	-	-	-
1WL-0041B	B	1565-1.1	K-05	A	ST-Q	LT-RF	-	-	-
1WL-0064A	B	1565-1.0	J-03	A	ST-Q	LT-RF	-	-	-
1WL-0065B	B	1565-1.0	K-05	A	ST-Q	LT-RF	-	-	-
1WL-0264	B	1565-1.0	J-02	AC	SP	LT-RF	-	100 PSIG PASSIVE	-
1WL-0321A	B	1565-7.0	H-07	A	ST-Q	LT-RF	-	-	-
1WL-0322B	B	1565-7.0	I-06	A	ST-Q	LT-RF	-	-	-
1WL-0385	B	1565-7.0	H-07	AC	MTC-Q	LT-RF	WL2	MT-RF*	-
1WL-1301B	B	1565-1.0	G-03	A	ST-Q	LT-RF	-	-	-
1WL-1302A	A	1565-1.0	E-04	A	ST-Q	LT-RF	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* DIESEL GENERATOR ROOM SUMP PUMP *									
1WN-0003	C	1609-7.0	L-11	C	MTO,C-Q	-	WN-1	-	-
1WN-0005	C	1609-7.0	K-11	C	MTO,C-Q	-	WN-1	-	-
1WN-0007	C	1609-7.0	J-11	C	MTC-Q	-	WN-1	-	-
1WN-0011	C	1609-7.0	F-11	C	MTO,C-Q	-	WN-1	-	-
1WN-0013	C	1609-7.0	E-11	C	MTO,C-Q	-	WN-1	-	-
1WN-0015	C	1609-7.0	D-11	C	MTC-Q	-	WN-1	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* CONTROL AREA CHILLED WATER *									
1YC-0002A	C	1618-1	H-02	B	ST-Q	-	-	-	-
1YC-0007	C	1618-1	K-02	C	SP	-	-	30 PSIG	-
1YC-0013	C	1618-1	K-09	C	MTO-Q	-	-	-	-
1YC-0014	C	1618-1	K-10	C	MTO-Q	-	-	-	-
1YC-0038A	C	1618-1	E-12	B	ST-Q	-	-	-	-
1YC-0039B	C	1618-1	F-12	B	ST-Q	-	-	-	-
1YC-0054	C	1618-1	H-09	B	FS-Q	-	-	-	-
1YC-0076	C	1618-1	H-04	B	FS-Q	-	-	-	-
1YC-0083B	C	1618-1	F-02	B	ST-Q	-	-	-	-
1YC-0088	C	1618-1	C-02	C	SP	-	-	30 PSIG	-
1YC-0094	C	1618-1	C-09	C	MTO-Q	-	-	-	-
1YC-0095	C	1618-1	C-10	C	MTO-Q	-	-	-	-
1YC-0113	C	1618-1	F-09	B	FS-Q	-	-	-	-
1YC-0135	C	1618-1	F-04	B	FS-Q	-	-	-	-
1YC-0148	C	1618-2	E-02	B	FS-Q	-	-	-	-
1YC-0162	C	1618-2	E-03	B	FS-Q	-	-	-	-
1YC-0176	C	1618-2	E-05	B	FS-Q	-	-	-	-
1YC-0190	C	1618-2	E-07	B	FS-Q	-	-	-	-
1YC-0204	C	1618-2	E-08	B	FS-Q	-	-	-	-
1YC-0218	C	1618-2	E-10	B	FS-Q	-	-	-	-
1YC-0232	C	1618-2	E-12	B	FS-Q	-	-	-	-
1YC-0246	C	1618-2	E-14	B	FS-Q	-	-	-	-
1YC-0347	C	1618-4	G-05	B	FS-Q	-	-	-	-
1YC-0357	C	1618-4	G-12	B	FS-Q	-	-	-	-

McGUIRE NUCLEAR STATION INSERVICE TESTING PROGRAM

VALVE	CLASS	FLOW DIAGRAM	FLOW COORDINATE	VALVE CATEGORY	TEST REQUIREMENT #1	TEST REQUIREMENT #2	RELIEF	TEST ALTERNATIVES	REVISION
* MAKEUP DEMINERALIZED WATER *									
1YM-0115B	B	1601-2.4	C-09	A	ST-Q	LT-RF	-	-	-
1YM-0116	B	1601-2.4	C-11	AC	MTC-Q	LT-RF	YM1	RF*	-

INSERT THE FOLLOWING SECTION UNDER TAB:

II.5

GENERAL RELIEF (I)

TEST REQUIREMENT:	Perform trend analysis on category A and B valve as described in IWV-3417(a).
BASIS:	Applying the 50% increase of stroke time corrective action requirements to valves that normally stroke in 2 seconds or less may result in unnecessary maintenance. The purpose of this requirement is to detect and evaluate degradation of a valve. For valves with stroke times in this range, much of the difference in stroke times from test tot est comes from inconsistencies in the operator's actions or the timing device used to gather the data.
ALTERNATE TESTING:	Power operated valves with average stroke times of less than or equal to 1.33 seconds for air operated valves and less than or equal to 1.6 seconds for electric operated valves will be referred to as "rapid acting valves." A maximum limiting value of full stroke time of 2 seconds will be assigned to these valves and, upon exceeding this limit, the valve will be declared inoperable and corrective action will be taken in accordance with IWV-3417(b).

GENERAL RELIEF (II)

TEST REQUIREMENT: For category A and A/C valves, IWV-3427(b) states:

For valves NPS 6 and larger, if a leakage rate exceeds the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate by 50% or greater, the test frequency shall be doubled; the tests shall be scheduled to coincide with a cold shutdown until corrective action is taken, at which time the original test frequency shall be resumed. If tests show a leakage rate increasing with time, and a projection based on three or more tests indicates that the leakage rate of the next scheduled test will exceed the maximum permissible leakage rate by greater than 10%, the valve shall be replaced or repaired.

BASIS: For CIVs, "Based on input from many utilities and [NRC] staff review of testing data at some plants, the usefulness of IWV-3427(b) does not justify the burden of complying with this requirement." (1)

ALTERNATE TESTING: The Analysis of Leakage Rates and Corrective Action requirements of IWV-3426 and IWV-3427(a) will be met.

(1) Generic Letter No. 89-04, Guidance on Developing Acceptable Inservice Testing Programs, Attachment 1, Item No. 10.

GENERAL RELIEF (III)

TEST REQUIREMENT: Perform trend analysis on category A and B valves by comparing stroke times with previous stroke times as described in IWV-3417(a).

BASIS: As described in NRC Generic Letter No. 89-04, Guidance on Developing Acceptable Inservice Testing Programs, comparing stroke times to a reference value is an acceptable alternative to comparing with the previous stroke time. This comparison will not allow the stroke times to gradually increase without requiring corrective action.

ALTERNATE TESTING: Power operated valve strike times will be compared to reference stroke time value established when the valve is in good working order. Electric motor operated valves with reference values greater than 10 seconds will be compared to a ±15% change from the reference value. Electric motor operated valves with reference values less than or equal to 10 seconds will be compared to a ±25% change from the reference value. Other power operated valves with reference values greater than 10 seconds will be compared to a ±25% change from the reference value. Other power operated valves with reference values less than or equal to 10 seconds will be compared to a ±50% change from the reference value. If the stroke time for a valve is not within this acceptable range based on reference values, the test frequency will be increased in accordance with the requirements of IWV-3417(a) except as requested in General Relief (IV) until corrective action is taken.

The requirement of IWV-3417(a) to compare stroke times to previous stroke times will not be followed. Any abnormal or erratic action will be reported.

GENERAL RELIEF (IV)

TEST REQUIREMENT: Increase frequency of test interval from once every three months to once every month for valves which fail to meet the criteria of IWV-3417(a).

BASIS: Many valves cannot be tested while their respective train is in service. Since many train swaps occur on a six week frequency, it creates a burden on the licensee to comply with the requirements of IWV-3417(a) as it would require unnecessary train swaps in order to test on a monthly basis.

ALTERNATE TESTING: When one of these valves requires an increased testing frequency interval as described in General Relief (III), the interval will be six (6) weeks to coincide with the train swap. The requirement of IWV-3417(a) to increase the test frequency interval to monthly will not be followed for valves that meet the criteria above. The valve will remain on this six week interval until corrective action is taken. Any abnormal or erratic action will be reported.

INSERT THE FOLLOWING SECTION UNDER TAB:

II.6

RELIEF/JUSTIFICATION:	RR-CA1
VALVE:	1CA-165, 1CA-166
FLOW DIAGRAM:	MC-1592-1.1
CATEGORY	C
CLASS:	C
FUNCTION:	Prevents backflow from Auxiliary Feedwater System to Nuclear service Water System until the associated EMOs are closed. EMOs are powered from the same train they serve. Must open to allow assured makeup flow to CA from RN system.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Neither full nor partial flow can be put through these valves without contaminating the Auxiliary Feedwater System with raw water. No means exist for alternate testing techniques using air or any other medium. No means exist to test for proper closure without contaminating the Auxiliary Feedwater System with raw water. These valves will not be tested during cold shutdown because sample disassembly is required.
ALTERNATE TESTING:	At least one of these two valves will be disassembled and full stroked during each refueling outage, and both valves will have been disassembled and full stroked after two consecutive refueling outages. Failure of one valve to properly full stroke during a refueling outage will result in the remaining valves being disassembled and full stroked during that outage. Sample disassemble will also be used to verify proper closure of valves.

RELIEF/JUSTIFICATION:	RR-CA2
VALVE:	1CA-8, 1CA-10, 1CA-12
FLOW DIAGRAM:	MC-1592-1.1
CATEGORY:	C
CLASS:	C
FUNCTION:	Auxiliary Feedwater Pump Suction Check valves to prevent diversion of assured auxiliary feedwater source.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	These valves cannot be tested to close without contaminating the Auxiliary Feedwater System with raw water. These valves will not be tested during cold shutdown because sample disassembly is required.
ALTERNATE TESTING:	Valves will be sample disassembled each refueling outage to verify valve closure capability.

RELIEF/JUSTIFICATION:	RR-KC1
VALVE:	1KC-280
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and thermal overpressurization protection of line between 1KC-332B and 1KC-333A on penetration M-355.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	This valve cannot be practically tested during operation due to the design of the system.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-KC2
VALVE:	1KC-322
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-376.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	This valve cannot be practically tested during operation due to the design of the system.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-KC3
VALVE:	1KC-279
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and thermal overpressurization protection of line between 1KC-424B and 1KC-425A on penetration M-320.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-KC4
VALVE:	1KC-340
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-327.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-KC5
VALVE:	1KC-47
FLOW DIAGRAM:	MC-1573-4.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-322.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-NB1
VALVE:	1NB-262
FLOW DIAGRAM:	MC-1556-3.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-259.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-NC1
VALVE:	1NC-259, 1NC-261
FLOW DIAGRAM:	MC-1553-4.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and thermal overpressurization protection of line between 1NC-195B and 1NC-196A on penetration M-361, and line between 1NC-141 and 1NC-142 on penetration M-326 respectively.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-NF1
VALVE:	1NF-229
FLOW DIAGRAM:	MC-1558-4.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-373.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420. 10CFR50 Appendix J requires measurement of local leak rate using air or nitrogen.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	1) Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J. 2) Leak Rate testing of the valve will be performed per Tech Spec 4.6.1.2.d.4).

RELIEF/JUSTIFICATION:	RR-NI1
VALVE:	1NI-48
FLOW DIAGRAM:	MC-1562-2.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-330.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-NI2
VALVE:	1NI-59, 1NI-70, 1NI-81, 1NI-93
FLOW DIAGRAM:	MC-1562-2.0, NC-1562-2.1
CATEGORY:	A,C
CLASS:	A
FUNCTION:	Opens on flow from the NI cold leg accumulator to the Reactor Coolant System. Reactor Coolant Boundary valve.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420. 3) Leak test in accordance with Tech Spec 4.4.6.2.2.
BASIS:	Valves cannot be full or partial stroked during power operation since the accumulator pressure is ~600 psig and cannot overcome RCS pressure. Valves will not be tested during cold shutdown since disassembly is required. Disassembly would render one train of RHR inoperable for an extended period of time.
ALTERNATE TESTING:	Valves will be partial stroked during cold shutdown, but not more often than once per nine months. Valves will be full stroked at refueling by sample disassembly. Valves will be verified closed by leak test performed in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	RR-NI3
VALVE:	1NI-436
FLOW DIAGRAM:	MC-1562-2.1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and thermal overpressurization protection for penetration M-321.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-NI4
VALVE:	1NI-60, 1NI-71, 1NI-82, 1NI-94
FLOW DIAGRAM:	MC-1562-2.0, MC-1562-2.1
CATEGORY:	A,C
CLASS:	A
FUNCTION:	Opens on flow from the NI cold leg accumulator to the Reactor Coolant System. Reactor Coolant Boundary valve.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420. 3) Leak test in accordance with Tech Spec 4.4.6.2.2.
BASIS:	Valves cannot be full or partial stroked during power operation since a driving head which can overcome RCS pressure does not exist cannot overcome RCS pressure. Instrumentation is not present to measure the flow through the individual valves.Valves will not be tested during cold shutdown since disassembly is required. Disassembly would render one train of RHR inoperable for an extended period of time.
ALTERNATE TESTING:	Valves will be partial stroked during cold shutdown, but not more often than once per nine months. Valves will be full stroked at refueling by sample disassembly. Valves will be verified closed by leak test performed in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	RR-NM1
VALVE:	1NM-420, 1NM-421
FLOW DIAGRAM:	MC-1572-1.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and thermal overpressurization protection for penetrations M-235 and M-309 respectively.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-NS1
VALVE:	1NS-13, 1NS-16, 1NS-30, 1NS-33, 1NS-41, 1NS-46
FLOW DIAGRAM:	MC-1563-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Open on flow from containment spray pumps.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Full stroke exercising of these check valves is not practical since there is no external indication of disk movement. Full stroke exercising would require for the pumps and spray nozzles to be activated which would require a large scale cleanup effort. Valves will not be tested during cold shutdown since sample disassembly is required.
ALTERNATE TESTING:	These valves will be verified to fully cycle each refueling by sample disassembly.

RELIEF/JUSTIFICATION:	RR-NS2
VALVE:	1NS-4, 1NS-21
FLOW DIAGRAM:	MC-1563-1.0
CATEGORY:	C
CLASS:	3
FUNCTION:	Opens to allow flow from the Refueling Water Storage Tank to the Containment Spray Pump suction. Closes to prevent flow from the Containment Recirculation Sump to the Refueling Water Storage Tank.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Full stroke exercising with flow would require for the pumps and spray nozzles to be activated which would require a large scale cleanup effort. The system design does not provide any indication for verifying closure upon flow reversal.
ALTERNATE TESTING:	Full stroke testing will be achieved by sample disassembly. At least one of these valves will be disassembled during each refueling outage, and both valves will have been disassembled and full stroked after two consecutive outages. Sample disassembly will also verify closure. Failure of one of valve to properly full stroke during a refueling outage will result in the remaining valve being disassembled and full stroked during that outage. Valves will be partial stroked quarterly.

RELIEF/JUSTIFICATION:	RR-NS3
VALVE:	1NS-83, 1NS-84, 1NS-85, 1NS-86, 1NS-87, 1NS-88
FLOW DIAGRAM:	MC-1563-1.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Serves as vacuum breaker on vertical piping to prevent steam bubble collapse and water hammer on pump restart.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3120. ECCS system leakage verification.
BASIS:	Full stroke exercising requires manual isolations at the spray rings, movement of the polar crane, temporary scaffolding installed on schedule 10 piping high in the annulus, and severe personnel safety risks for testing at full power.
ALTERNATE TESTING:	Full stroke exercising of vacuum breakers is a partial stroke verification of air inflow. Valves will be leak tested for ECCS system leakage and partial stroke exercised at refueling outage frequency. Closure will be verified by this leak test. This application for relief from the code is temporary. During the refueling outage EOC8, modification MG1-2398 is scheduled to be implemented. This modification will delete these vacuum breakers thereby eliminating the need for testing.

RELIEF/JUSTIFICATION:	RR-NV1
VALVE:	1NV-1002
FLOW DIAGRAM:	MC-1554-1.3
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-342.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-RF1
VALVE:	1RF-P23
FLOW DIAGRAM:	MC-1599-2.2
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-353.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-RN1
VALVE:	1RN-113, 1RN-214
FLOW DIAGRAM:	MC-1574-2.0, MC-1574-3.0
CATEGORY:	C
CLASS:	C
FUNCTION:	Prevent backflow of potentially contaminated water from the Spent Fuel Pool makeup header to the Nuclear Service Water System when the manual isolation valves are opened. Must open to allow assured makeup supply from the Nuclear Service Water System to the Spent Fuel Pool.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valves cannot be full stroked at any time without putting raw water into the Spent Fuel Pool.
ALTERNATE TESTING:	At least one of these two valves will be disassembled and full stroked during each refueling outage, and both valves will have been disassembled and full stroked after two consecutive outages. Sample disassembly will also verify closure. Failure of one of valve to properly full stroke during a refueling outage will result in the remaining valve being disassembled and full stroked during that outage. Valves will be partial stroked quarterly.

RELIEF/JUSTIFICATION:	RR-SA1
VALVE:	1SA-5, 1SA-6
FLOW DIAGRAM:	MC-1593-1.2
CATEGORY:	C
CLASS:	B
FUNCTION:	Opens to allow steam supply to the turbine driven Auxiliary Feedwater Pump. Closes to prevent cross connecting steam generators 1B and 1C.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	System configuration and design do not provide a suitable means to prove the valve prevents reversal of flow. To test the close function of this valve on line would risk personnel safety since high energy steam would be involved.
ALTERNATE TESTING:	At least one of these two valves will be disassembled and full stroked during each refueling outage, and both valves will have been disassembled and full stroked after two consecutive outages. Sample disassembly will verify closure. Failure of one of valve to properly full stroke during a refueling outage will result in the remaining valve being disassembled and full stroked during that outage. Valves will be full stroked quarterly.

RELIEF/JUSTIFICATION:	RR-VB1
VALVE:	1VB-50
FLOW DIAGRAM:	MC-1605-3.1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-215.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-VG1
VALVE:	1VGSV5160, 1VGSV5161, 1VGSV5162, 1VGSV5163, 1VGSV5170, 1VGSV5171, 1VGSV5172, 1VGSV5173
INSTRUMENT DETAIL:	MC-1499-VG3
CATEGORY:	B
CLASS:	C
FUNCTION:	Supply control air to the Diesel Generator air/oil booster cylinder, the intercooler temperature controller, and the run/shutdown cylinder.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3413(b).
BASIS:	Direct observation of these valves is impossible. These valves are automatically opened when the diesel generator is started. Similar valves (the starting air solenoid valves) are tested with acoustic emission monitoring. Limitations on available acoustic equipment prevents its use on these valves. Additionally, these valves are scheduled to be modified in function during refueling outage 1EOC9, Unit 1, 2EOC8 Unit 2. Their new function will not be within the scope of the IST program. To comply with the requirements of IWV-3413(b) would impose a cost burden of additional acoustic monitoring equipment for the quarterly timing. Due to the short time before these valves are modified, no adverse trends could be developed from the quarterly testing.
ALTERNATE TESTING:	Design Bases Document MCS-1609.VG-00-0001 paragraph 20.4.3.1 states that these valves shall be tested by the diesel start tests. These tests are performed monthly, and a failure of any one of these valves would result in a failure of the diesel start test. The monthly diesel start test will continue to be performed, and during the refueling outages mentioned above, the function of these valves will be changed such that they are no longer subject to IWV-3400 requirements.

RELIEF/JUSTIFICATION:	RR-VI1
VALVE:	1VI-124, 1VI-149
FLOW DIAGRAM:	MC-1605-1.2
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetrations M-317 and M-386 respectively.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-VI2
VALVE:	1VI-40, 1Vi-161
FLOW DIAGRAM:	MC-1605-1.3
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetrations M-220 and M-359 respectively.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-VS1
VALVE:	1VS-13
FLOW DIAGRAM:	MC-1605-2.2
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-219.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-VX1
VALVE:	1VX-30
FLOW DIAGRAM:	MC-1557-1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-325.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-WL1
VALVE:	1WL-24
FLOW DIAGRAM:	MC-1565-1.1
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and therm . overpressurization protection of line between 1WL-1B and .WL-2A on penetration M-375.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-WL2
VALVE:	1WL-385
FLOW DIAGRAM:	MC-1565-7.0
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation and thermal overpressurization protection of line between 1WL-322B and 1WL-321A on penetration M-221.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

RELIEF/JUSTIFICATION:	RR-WN1
VALVE:	1WN-3, 1WN-5, 1WN-7, 1WN-11, 1WN-13, 1WN-15
FLOW DIAGRAM:	MC-1609-7.0
CATEGORY:	C
CLASS:	C
FUNCTION:	Pump discharge check valves. All valves isolate parallel pump flow losses. 1WN-3, 1WN-5, 1WN-11 and 1WN-13 open to allow pump flow and close to isolate opposite pump flow losses. 1WN-7 and 1WN-15 close to isolate non safety related pump from safety related pumps.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	After implementation of NSM MG-12319, the pumps are to be tested on a two year frequency. Reference pump relief request # I.4.7 . The only method of testing these valves is with the pump tests.
ALTERNATE TESTING:	Valves will be verified to fully cycle with the pump tests every two years. This relief request will go into effect after the implementation of NSM MG-12319.

RELIEF/JUSTIFICATION:	RR-YM1
VALVE:	1YM-116
FLOW DIAGRAM:	MC-1561-2.4
CATEGORY:	A,C
CLASS:	B
FUNCTION:	Provides containment isolation on penetration M-337.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	The system design does not provide a means of verifying valve closure upon flow reversal.
ALTERNATE TESTING:	Valve will be verified closed by leak test performed in accordance with 10CFR50 Appendix J.

INSERT THE FOLLOWING SECTION UNDER TAB:

II.7

RELIEF/JUSTIFICATION:	CS-CA1
VALVE:	1CA-37, 1CA-41, 1CA-45, 1CA-49, 1CA-53, 1CA-57, 1CA-61, 1CA-65
FLOW DIAGRAM:	MC-1592-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Check flow from the steam generators to Auxiliary Feedwater. Open to allow Auxiliary Feedwater supply to the Steam Generators.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Full stroke testing these valves would unnecessarily thermal shock the steam generators and feedwater piping.
ALTERNATE TESTING:	Valves will be full stroke exercised at cold shutdown. Closure will be verified quarterly.

RELIEF/JUSTIFICATION:	CS-CF1
VALVE:	1CF-26AB, 1CF-28AB, 1CF-30AB, 1CF-35AB
FLOW DIAGRAM:	MC-1591-1.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Provide feedwater and containment isolation.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closure of these valves would isolate the Steam Generator feedwater which could result in a severe transient in the Steam Generator, resulting in a Unit trip.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-CF2
VALVE:	1CF-17AB, 1CF-20AB, 1CF-23AB, 1CF-32AB
FLOW DIAGRAM:	MC-1591-1.1
CATEGORY:	B
CLASS:	F
FUNCTION:	Feedwater control.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closure of these valves would isolate the Steam Generator feedwater which could result in a severe transient in the Steam Generator, resulting in a Unit trip.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-CF3
VALVE:	1CF-126B, 1CF-127B, 1CF-128B, 1CF-129B
FLOW DIAGRAM:	MC-1591-1.1
CATEGORY:	B
CLASS:	[illegible]
FUNCTION:	[illegible] startup feedwater supply to the steam generators
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Cycling valves during power operation could induce unwanted transients in the steam generators. This would result in an increase in flow to the main feedwater nozzles causing vibrations in the preheater section of the steam generators.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-CF4
VALVE:	1CF-104AB, 1CF-105AB, 1CF-106AB, 1CF-107AB
FLOW DIAGRAM:	MC-1591-1.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides tempering flow to the steam generators.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing this valve during operation could result in loss of Steam Generator level control and result in a Unit trip.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-CF5
VALVE:	1CF-152, 1CF-154, 1CF-156, 1CF-158
FLOW DIAGRAM:	MC-1591-1.1
CATEGORY:	C
CLASS:	B
FUNCTION:	Opens to allow tempering flow to the Steam Generator auxiliary feedwater nozzles. Closes to form pressure boundary for auxiliary feedwater.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	During normal operation, there is constant flow through these valves to keep the auxiliary feedwater nozzles tempered. Testing these valves would require supplying the Steam Generators with cold water and thus thermally shocking these nozzles.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-FW1
VALVE:	1FW-27A
FLOW DIAGRAM:	MC-1571-1.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Isolates low pressure injection from the Refueling Water Storage Tank.
TEST REQUIREMENT:	Stroke time test in accordance with iWV-3412(a).
BASIS:	Closure of this valve during normal power operation would render all low pressure injection inoperable. This valve is opened and power removed above Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-FW2
VALVE:	1FW-28
FLOW DIAGRAM:	MC-1571-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Opens to allow low pressure injection flow. Closes to prevents reverse flow to the Refueling Water Storage Tank, thereby preventing pressurization of the tank.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valve cannot be full stroked during power operation since the only full flow path is into the RCS by the Residual Heat Removal pumps. These pumps cannot overcome RCS system pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-KC1
VALVE:	1KC-424B, 1KC-425A
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A
CLASS:	B
FUNCTION:	Provide containment isolation for penetration M-320.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Failure of either of these valves in the closed position during testing would inhibit the normal flow path from the reactor coolant pump motor coolers. This action could result in damage to the pumps.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-KC2
VALVE:	1KC-338B
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A
CLASS:	B
FUNCTION:	Provide containment isolation for penetration M-327.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Failure of this valve in the closed position during testing would inhibit flow to the reactor vessel support coolers. This action could result in damage to the reactor vessel.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-KC3
VALVE:	1KC-332B, 1KC-333A
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A
CLASS:	B
FUNCTION:	Provide containment isolation for penetration M-355.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Failure of one of these valves in the closed position during testing would inhibit flow through the reactor coolant drain tank heat exchanger. No alternate flowpath for cooling water to the heat exchanger exists. Without flow to the heat exchanger, the drain tank would become overpressurized and steam would be released.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-KC4
VALVE:	1KC-320A
FLOW DIAGRAM:	MC-1573-3.1
CATEGORY:	A
CLASS:	B
FUNCTION:	Provide containment isolation for penetration M-376.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Failure of this valve in the closed position during testing would inhibit flow through the reactor coolant drain tank heat exchanger. No alternate flowpath for cooling water to the heat exchanger exists. Without flow to the heat exchanger, the drain tank would become overpressurized and steam would be released.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NC1
VALVE:	1NC-32B, 1NC-34A, 1NC-36B
FLOW DIAGRAM:	MC-1553-2.0
CATEGORY:	B
CLASS:	A
FUNCTION:	Reactor Coolant System PORV. Opens to relieve pressure for the primary system.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	PORVs do not serve a safety function when unit is at operating temperature and pressure. PORVs protect the Reactor Coolant System from overpressurization during LTOP conditions.
ALTERNATE TESTING:	Stroke time testing will be performed at cold shutdown and in all cases prior to entering LTOP conditions in accordance with Generic Letter 90-06.

RELIEF/JUSTIFICATION:	CS-NC2
VALVE:	1NC-272AC, 1NC-273AC, 1NC-274B, 1NC-275B
FLOW DIAGRAM:	MC-1553-2.1
CATEGORY:	B
CLASS:	A
FUNCTION:	Reactor vessel head vent.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening these valves at full pressure could cause damage to the valve seating surfaces. A reactor coolant leak could be caused.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-ND1
VALVE:	1ND-1B, 1ND-2AC
FLOW DIAGRAM:	MC-1561-1.0
CATEGORY:	A
CLASS:	A
FUNCTION:	Provides suction for Residual Heat Removal pumps during normal cooldown.
TEST REQUIREMENT:	1) Stroke time test in accordance with IWV-3412(a). 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	These valves have an interlock which prevents their opening when the Reactor Coolant System pressure is greater than 385psig.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown. Valve will be leak tested in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	CS-ND2
VALVE:	1ND-58A
FLOW DIAGRAM:	MC-1561-1.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides suction to the Centrifugal Charging Pumps and Safety Injection Pumps from the Residual Heat Removal system.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening this valve during operation would render both trains of Residual Heat Removal inoperable.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-ND3
VALVE:	1ND-15B, 1ND-30A
FLOW DIAGRAM:	MC-1561-1.0
CATEGORY:	B
CLASS:	B
FUNCTION:	ND Heat Exchanger Outlet Crossover Block Valves.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	One of the ECCS safety analysis assumptions is that each train of ND can supply flow to all four cold legs. If either of these valves failed closed during testing then only two cold legs could be supplied by each train of ND. This would make both trains of ND inoperable.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-ND4
VALVE:	1ND-70
FLOW DIAGRAM:	MC-1561-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Opens to provides suction to the Centrifugal Charging Pumps and Safety Injection Pumps from the Residual Heat Removal system. Closes to provide suction pressure boundary for the Centrifugal Charging Pumps and Safety Injection Pumps
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valve cannot be full stroked during power operation since 1ND-58A would have to be opened, rendering both trains of ND inoperable. Additionally, the flow requirements to full stroke this valve cannot be achieved with the Reactor Coolant System pressurized.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Valve will be partial stroked quarterly.

RELIEF/JUSTIFICATION:	CS-ND5
VALVE:	1ND-71
FLOW DIAGRAM:	MC-1561-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Opens to provides suction to the Centrifugal Charging Pumps and Safety Injection Pumps from the Residual Heat Removal system. Closes to provide suction pressure boundary for the Centrifugal Charging Pumps and Safety Injection Pumps
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valve cannot be full stroked during power operation since 1NI-136B would have to be opened, rendering both trains of ND inoperable. Additionally, the flow requirements to full stroke this valve cannot be achieved with the Reactor Coolant System pressurized.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-ND6
VALVE:	1ND-8, 1ND-23
FLOW DIAGRAM:	MC-1561-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Residual Heat Removal pump discharge check valve.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valves cannot be full stroke exercised during power operation since the only full flow path is into the Reactor Coolant System and the ND pumps cannot overcome RCS pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Valves will be partially stroked quarterly. The opposite train valves will be tested closed quarterly except when the opposite train of ND is in service.

RELIEF/JUSTIFICATION:	CS-NI1
VALVE:	1NI-9A, 1NI-10B
FLOW DIAGRAM:	MC-1562-1.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Flowpath for Centrifugal Charging Pumps to Reactor Coolant System Cold Legs.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening either of these valves during operation would increase the charging flow into the Reactor Coolant System resulting in an increase of pressure and a rapid change in the primary system boron concentration. This could create a transient and possible unit shutdown.
ALTERNATE TESTING:	valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI2
VALVE:	1NI-100B
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Flowpath from the Refueling Water Storage Tank the Safety Injection Pump suction.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing this valve during operation would render both trains of Safety Injection inoperable. This valve is opened and power removed above Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI3
VALVE:	1NI-147A, 1NI115B
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	1NI-147A provides flowpath for both trains of Safety Injection recirculation line to the Refueling Water Storage Tank. 1NI-115B provides flowpath for A train of Safety Injection re-circulation line to the Refueling Water Storage Tank.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing either of these valve during power operation renders both trains of Safety Injection inoperable. 1NI-147A is open with power removed above Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI4
VALVE:	1NI-121A, 1NI-152B
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Isolates Safety Injection flow to the hot legs.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	These valves are closed with power removed above Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI5
VALVE:	1NI-162A
FLOW DIAGRAM:	MC-1562-3.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Isolates Safety Injection flow to the cold legs.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	This valve is opened and power removed above Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI6
VALVE:	1NI-103A
FLOW DIAGRAM:	MC-1532-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides A Train Safety Injection Pump suction flow from the Refueling Water Storage Tank.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing this valve during power operations degrades both trains of Chemical and Volume Control.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	C - NI7
VALVE:	1NI-173A, 1NI-178B
FLOW DIAGRAM:	MC-1562-3.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides flowpath for Residual Heat Removal to the cold legs.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	These valves are opened and power removed above Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	...e will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI8
VALVE:	1NI-334B
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides flowpath from B Train of Residual Heat Removal to B Train of Chemical and Volume Control, and from A Train of Residual Heat Removal to A Train of Safety Injection.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing this valve during power operation degrades both trains of Safety Injection.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI9
VALVE:	1NI-183B
FLOW DIAGRAM:	MC-1562-3.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Isolates Residual Heat Removal flow to the hot legs.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	This valve is closed and power removed in Mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI10
VALVE:	1NI-184B, 1NI-185A
FLOW DIAGRAM:	MC-1562-3.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides flowpath from the Containment Sump to the Residual Heat Removal Pump and the Containment Spray Pump suction.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening these valves during power operation would allow water to enter lower containment. Voids in suction piping would be created requiring fill and vent operations to prevent ECCS pump damage.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI11
VALVE:	1NI-332A, 1NI-333B
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides flowpath to Centrifugal Charging Pumps and Safety Injection Pumps from Residual Heat Removal Pumps during recirculation phase.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening these valves during power operations requires 1NI-334B to be closed to prevent aligning FWST to the suction of the Centrifugal Charging Pumps. Injecting FWST boron concentrated water into the Reactor Coolant System would induce a transient. Closing 1NI-334B degrades both trains of Safety Injection.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI12
VALVE:	1NI-15, 1NI-17, 1NI-19, 1NI-21, 1NI-347, 1NI-348, 1NI-349, 1NI-354
FLOW DIAGRAM:	MC-1562-1.0
CATEGORY:	C
CLASS:	A
FUNCTION:	Opens to allow flow to the cold legs from the Centrifugal Charging Pumps.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Injecting flow through these valves from the Centrifugal Charging Pumps during power operations could result in unnecessary thermal shock to the injection nozzles.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI13
VALVE:	1NI-12
FLOW DIAGRAM:	MC-1562-1.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Flowpath for Centrifugal Charging Pumps to Reactor Coolant System cold legs.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-352).
BASIS:	Injecting flow through this valve from the Centrifugal Charging Pumps during power operations could result in unnecessary thermal shock to the injection nozzles.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-NI14
VALVE:	1NI-101
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Opens to allow flow from the Refueling Water Storage Tank to the Safety Injection Pumps. Closes to provide suction pressure boundary for these pumps from the Residual Heat Removal Pump discharge.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valve cannot be full tested during power operation since the Safety Injection Pumps cannot overcome Reactor Coolant System pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Valve will be partial stroked quarterly.

RELIEF/JUSTIFICATION:	CS-NI15
VALVE:	1NI-116, 1NI-148
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Pump discharge check valve, opens to allow Safety Injection Flow. Closes to prevent oposite train flow losses.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valve cannot be full or partial stroke tested during power operation since the Safety Injection Pumps cannot overcome Reactor Coolant System pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Valve will be verified closed quarterly.

RELIEF/JUSTIFICATION:	CS-NI16
VALVE:	1NI-124, 1Ni-128, 1NI-156, 1NI-157, 1NI-159, 1NI-160
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	AC
CLASS:	B
FUNCTION:	1) Opens on flow from the Safety Injection Pumps to the hot legs. 2) Reactor Coolant System pressure boundary.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per two years in accordance with IWV-3420.
BASIS:	Valves cannot be full or partial stroke tested during power operation since the Safety Injection Pumps cannot overcome Reactor Coolant System pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Leak test in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	CS-NI17
VALVE:	1NI-165, 1NI-167, 1NI-169, 1NI-171
FLOW DIAGRAM:	MC-1562-3.1
CATEGORY:	AC
CLASS:	A
FUNCTION:	1) Opens on flow from the Safety Injection Pumps to the cold legs. 2) Reactor Coolant System pressure boundary.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per 2 years in accordance with IWV-3420.
BASIS:	Valves cannot be full or partial stroke tested during power operations since the Safety Injection Pumps cannot overcome Reactor Coolant System pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Leak test in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	CS-NI18
VALVE:	1NI-175, 1NI-176, 1NI-180, 1NI-181
FLOW DIAGRAM:	MC-1562-3.1
CATEGORY:	AC
CLASS:	A
FUNCTION:	1) Opens on flow from the Residual Heat Removal Pumps to the cold legs. 2) Reactor Coolant System pressure boundary.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per two years in accordance with IWV-3420.
BASIS:	Valves cannot be full or partial stroke tested during power operation since the Residual Heat Removal pumps cannot overcome Reactor Coolant System pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Leak test in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	CS-NI19
VALVE:	1NI-125, 1NI-126, 1NI-129, 1NI-134
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	AC
CLASS:	A
FUNCTION:	1) Opens on flow from the Residual Heat Removal Pumps to the hot legs. 2) Reactor Coolant System pressure boundary.
TEST REQUIREMENT:	1) Verify proper valve movement once per three months as required by IWV-3520. 2) Leak test once per two years in accordance with IWV-3420.
BASIS:	Valves cannot be full or partial stroke tested during power operation since the Residual Heat Removal pumps cannot overcome Reactor Coolant System pressure.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown. Leak test in accordance with Tech Spec 4.4.6.2.2.

RELIEF/JUSTIFICATION:	CS-NI20
VALVE:	1NI-136B
FLOW DIAGRAM:	MC-1562-3.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides suction to the Centrifugal Charging Pumps and Safety Injection Pumps from the Residual Heat Removal System.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening this valve during power operation renders both trains of Residual Heat Removal inoperable.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NS1
VALVE:	1NS-38B, 1NS-43A
FLOW DIAGRAM:	MC-1563-1.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Auxiliary Spray Nozzle header isolation.
TEST REQUIRLMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening either of these valves during power operation renders both trains on Residual Heat Removal inoperable.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV1
VALVE:	1NV-94A, 1NV-95B
FLOW DIAGRAM:	MC-1554-1.1
CATEGORY:	B
CLASS:	B
FUNCTION:	1) Provides flowpath for Reactor Coolant Pump seal water discharge line.
	2) Provides containment isolation for penetration M-256
TEST REQUIREMENT:	1) Stroke time test in accordance with IWV-3412(a).
	2) Leak test once per two years in accordance with IWV-3420.
BASIS:	Closure of one of these valves during power operation would inhibit normal seal water flow across the reactor coolant pump number 1 seal. This action could result in damage to the reactor coolant pump seals or the pump itself.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV2
VALVE:	1NV-7B
FLOW DIAGRAM:	MC-1554-1.2
CATEGORY:	B
CLASS:	B
FUNCTION:	1) Provides flowpath for normal letdown.
	2) Provides containment isolation for penetration M-347.
TEST REQUIREMENT:	1) Stroke time test in accordance with IWV-3412(a).
	2) Leak test once per two years in accordance with IWV-3420.
BASIS:	Failure of this valve in a closed position could result in loss of pressurizer level control and result in unit shutdown.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV3
VALVE:	1NV-21A
FLOW DIAGRAM:	MC-1554-1.2
CATEGORY:	B
CLASS:	A
FUNCTION:	Provides isolation for Pressurizer Auxiliary spray.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening this valve during power operations could result in a reactor low pressure trip.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV4
VALVE:	1NV-141A, 1NV-142B
FLOW DIAGRAM:	MC-1554-2.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides isolation for Volume Control Tank upon Safety Injection Signal.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closure of one of these valves during power operation would isolate the suction for the Centrifugal Charging Pumps. This action could result in damage to the pumps. Seal water to the Reactor Coolant pumps would be interrupted causing damage to the seals.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV5
VALVE:	1NV-244A, 1NV-245B
FLOW DIAGRAM:	MC-1554-3.0
CATEGORY:	A
CLASS:	B
FUNCTION:	Isolates charging to the Reactor Coolant System upon Safety Injection.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	If one of these valves were to fail in the closed position while testing during power operation, normal and alternate charging would be lost. This could result in a loss of pressurizer level control and result in unit shutdown.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV6
VALVE:	1NV-221A, 1NV-222B
FLOW DIAGRAM:	MC-1554-3.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Flowpath for Refueling Water Storage Tank to the suction of the Centrifugal Charging Pumps.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Opening these valves during power operation allows the Charging Pumps to inject highly borated water into the Reactor coolant System which could result in a unit shutdown.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV7
VALVE:	1NV-264
FLOW DIAGRAM:	MC-1554-3.1
CATEGORY:	C
CLASS:	B
FUNCTION:	Provides flowpath from the Boric Acid Tank to the Centrifugal Charging Pump suction. Closes to provide pump suction pressure boundary.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	To full stroke exercise this valve during power operations would inject more than 30 gpm of boric acid into the Reactor Coolant System creating a transient. To verify closure, residual boric acid would be injected causing a transient.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV8
VALVE:	1NV-150B, 1NV-151A
FLOW DIAGRAM:	MC-1554-2.0
CATEGORY:	B
CLASS:	B
FUNCTION:	Provides isolation for Centrifugal Charging Pump miniflow line to Volume Control Tank.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	If either valve were to fail closed while testing, the Charging Pump miniflow protection line is isolated possibly causing damage to the pump.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV9
VALVE:	1NV-265B
FLOW DIAGRAM:	MC-1554-3.1
CATEGORY:	B
CLASS:	B
FUNCTION:	Isolates the Boric Acid Tank from the suction of the Charging Pumps.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	If valve is opened during power operations, boric acid could be injected into the Reactor Coolant System causing a transient.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV10
VALVE:	1NV-225, 1NV-231
FLOW DIAGRAM:	MC-1554-3.1
CATEGORY:	C
CLASS:	
FUNCTION:	Pump discharge check valve. Opens to provide flowpath for Centrifugal Charging Pump. Closes to prevent oposite train flow losses.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Valve cannot be full stroke exercised during power operation since this would require an increase in Reactor Coolant System boron concentration which could result in unit shutdown. Normal letdown is not sufficient to verify full stroke, this must be done when aligned to the FWST for suction.
ALTERNATE TESTING:	Valve will be full stroke exercised during cold shutdown, partial stroked with normal use.

RELIEF/JUSTIFICATION:	CS-NV11
VALVE:	1NV-223
FLOW DIAGRAM:	MC-1554-3.1
CATEGORY:	C
CLASS:	B
FUNCTION:	Provides open flowpath from the FWST. Provides closed pump suction pressure boundary when suction is from the Residual Heat Removal pumps.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Testing this valve during power operations would require opening of either 1NV-221A or 1NV-222B. Opening these valves during power operation could result in a unit trip. See Justification # CS-NV6.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV12
VALVE:	1NV-1046
FLOW DIAGRAM:	MC-1554-3.0
CATEGORY:	C
CLASS:	B
FUNCTION:	Closes to provide pump suction pressure boundary for Centrifugal Charging Pumps. Open function is to protect the Positive Displacement Pump from overpressurization. This is not a safety related function.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Testing this valve during power operation would result in the addition of highly borated water into the Reactor Coolant System causing a transient.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-NV13
VALVE:	1NV-261, 1NV-263
FLOW DIAGRAM:	MC-1554-3.1
CATEGORY:	C
CLASS:	B
FUNCTION:	These valves shall close to provide pump suction pressure isolation for the Centrifugal Charging Pumps by preventing backflow to the Chemical Mixing Tank or the RMWST respectively.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Testing these valves requires 1NI-121A to be opened. This valve is closed with power removed above mode 4 per Tech Spec 4.5.2.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF JUSTIFICATION:	CS-RN1
VALVE:	1RN-252B, 1RN-253A
FLOW DIAGRAM:	MC-1574-4.0
CATEGORY:	A
CLASS:	B
FUNCTION:	1) Provides containment isolation for penetration M-307. 2) Provides flowpath for cooling water to the Reactor Coolant Pump Motor Air Cooler
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	If one of these valves were to fail closed during testing, isolation of cooling water to the motor coolers could result in damage to the pumps.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-RN2
VALVE:	1RN-276A, 1RN-277B
FLOW DIAGRAM:	MC-1574-4.0
CATEGORY:	A
CLASS:	B
FUNCTION:	1) Provides containment isolation for penetration M-315. 2) Provides flowpath for cooling water to the Reactor Coolant Pump Motor Air Cooler.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	If one of these valves were to fail closed during testing, isolation of cooling water to the motor coolers could result in damage to the pumps.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-RN3
VALVE:	1RN-42A
FLOW DIAGRAM:	MC-1574-4.0
CATEGORY:	B
CLASS:	C
FUNCTION:	Provides isolation to the Nuclear Service Water Non Essential header upon Safety Injection.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing this valve during power operation isolates cooling water flow to the Steam Generator Blowdown Heat Exchanger. Failure in the closed position could result in damage to the heat exchanger.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF JUSTIFICATION:	CS-RN4
VALVE:	1RN-63B, 1RN-64A
FLOW DIAGRAM:	MC-1574-1.0
CATEGORY:	B
CLASS:	C
FUNCTION:	Provides isolation to the Nuclear Service Water Non Essential header upon Safety Injection.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Closing either of these valves during power operation isolates cooling water flow to the Steam Generator Blowdown Heat Exchanger. Failure in the closed position could result in damage to the heat exchanger.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-RV1
VALVE:	1RV-32A, 1RV-33B, 1RV-76A, 1RV-77B
FLOW DIAGRAM:	MC-1604-3.0
CATEGORY:	A
CLASS:	B
FUNCTION:	Provide containment isolation for penetration M-240 and M-279 respectively.
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	Failure of one of these valves in the closed position during testing would isolate cooling flow to the Lower Containment Ventilation Units causing an increase in lower containment temperature which could exceed Tech Spec limits.
ALTERNATE TESTING:	Valve will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-SM1
VALVE:	1SM-1AB, 1SM-3AB, 1SM-5AB, 1SM-7AB
FLOW DIAGRAM:	MC-1593-1.0, MC-1593-1.3
CATEGORY:	B
CLASS:	B
FUNCTION:	Main Steam Isolation Valves
TEST REQUIREMENT:	Stroke time test in accordance with IWV-3412(a).
BASIS:	These valves cannot be fully cycled closed during power operation since a unit shutdown would result.
ALTERNATE TESTING:	These valves will be partially cycled closed while in Modes 1, 2 and 3. These valves will be cycled and timed during cold shutdown.

RELIEF/JUSTIFICATION:	CS-VG1
VALVE:	1VG-17, 1VG-18, 1VG-19, 1VG-20
FLOW DIAGRAM:	MC-1609-4.0
CATEGORY:	C
CLASS:	C
FUNCTION:	Provides flowpath for Diesel Generator control air from individual starting air banks.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	Testing these valves requires the Diesel Generator to be started on a single bank of control air which is considered a degraded condition. This is not justified for quarterly starts.
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.

RELIEF/JUSTIFICATION:	CS-VI1
VALVE:	1VI-368, 1VI-372, 1VI-373, 1VI-374
FLOW DIAGRAM:	MC-1605-1.3
CATEGORY:	C
CLASS:	B
FUNCTION:	1VI-368 and 1VI-373 must open to allow nitrogen to the PORV actuator. 1VI-372, 1VI-374 must close to prevent loss of Nitrogen pressure if instrument air is lost.
TEST REQUIREMENT:	Verify proper valve movement once per three months as required by IWV-3520.
BASIS:	All four valves are tested with PORV stroke timing. PORVs are tested on a cold shutdown frequency. Refer to Justification # CS-NC1
ALTERNATE TESTING:	Valve will be full stroke exercised at cold shutdown.