

DUKE POWER COMPANY

McGUIRE NUCLEAR STATION

PUMP AND VALVE INSERVICE TESTING

UNIT 1

REVISION # 6

8403290154 840316
PDR ADCK 05000369
P PDR

A) PUMP: D/G FUEL OIL TRANSFER PUMPS (1A, 1B)
SAFETY CLASS: 3
FUNCTION: Diesel generator auxiliary support
TEST REQUIREMENT: Test pumps in accordance with Subsection IWP
BASIS FOR RELIEF: Pumps contain insufficient instrumentation (See Attachment #1) to perform any meaningful testing in accordance with the intent of Subsection IWP.
ALTERNATE TESTING: Monthly Diesel Generator starting and loading as required by McGuire Technical Specifications is sufficient in assessing the hydraulic condition of the subject auxiliary pumps and demonstrating the capability of the individual components to perform their design function.

5 | The mechanical condition of the subject pumps will be determined from vibration data to be gathered quarterly. Flow will be monitored by observing level rise in the day tank.

B) PUMP: D/G ROOM SUMP PUMPS (1A2, 1A3, 1B2, 1B3)
SAFETY CLASS: 3
FUNCTION: Water removal from Diesel Generator rooms
TEST REQUIREMENT: Test pumps in accordance with Subsection IWP
BASIS FOR RELIEF: Pumps contain insufficient instrumentation (See Attachment #1) to perform any meaningful testing in accordance with Subsection IWP.
ALTERNATE TESTING: Due to the anticipated infrequent normal operation of these pumps, quarterly, each pump will be verified to be capable of performing their design function of removing water from the sump at a rate greater than or equal to 419 gpm. The time which it takes to pump a known volume from the sump is recorded and converted to a flow rate.

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V. The Standby Makeup Pump is not safety related and does not receive emergency power. It is required to be tested by McGuire Technical Specifications. Therefore, the request for relief and alternate testing method is described below.

6	PUMP:	STANDBY MAKEUP PUMP (1)
	SAFETY CLASS:	N/A
6	FUNCTION:	To supply makeup to the reactor coolant system if the normal system is unavailable.
	TEST REQUIREMENT:	Test pump in accordance with IWP (Technical Specification requirement)
	BASIS FOR RELIEF:	Pump contains insufficient instrumentation (see Attachment #1) to perform any meaningful testing in accordance with Subsection IWP.
	ALTERNATE TESTING:	<p>Pump will be verified to be capable of performing its design function on a quarterly basis by verifying that with pump in operation in a test loop that design flowrate can be achieved.</p> <p>The mechanical condition of the pump will be determined from vibration data to be gathered quarterly.</p>

Valve Number	Class	Drawing Number	Coordinates	Valve Category				Test Requirements	Relief Requests	Testing Alternative	System: Safety Injection
				A	B	C	D				Remarks
INI-147A	B	MC-1562-3.0	G-11		X			CT	X	CS	10 sec. max. cycle time
INI-144B	B	MC-1562-3.0	G-9		X			CT			10 sec. max. cycle time
INI-143	B	MC-1562-3.0	F-9			X		MT			
INI-116	B	MC-1562-3.0	J-9			X		MT	X	RF	
INI-148	B	MC-1562-3.0	D-9			X		MT	X	RF	
INI-118A	B	MC-1562-3.0	H-7		X			CT			10 sec. max. cycle time
INI-150B	B	MC-1562-3.0	E-7		X			CT			10 sec. max. cycle time
INI-120B	B	MC-1562-3.0	J-7	X				CT LT			Isolation time \leq 10 sec.
INI-121A	B	MC-1562-3.0	J-6		X			CT	X	CS	Isolation time \leq 10 sec.

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Valve Number	Class	Drawing Number	Coordinates	Valve Category				Test Requirements	Relief Requests	Testing Alternative	System: Safety Injection
				A	B	C	D				Remarks
INI-122B	B	MC-1562-3.0	K-4		X			CT			Isolation time ≤ 10 sec.
INI-128	A	MC-1562-3.0	I-4	X		X		LT MT	X	RF	
INI-134	A	MC-1562-3.0	H-4	X		X		LT MT	X	CS	
INI-129	A	MC-1562-3.0	I-3	X		X		LT MT	X	CS	
INI-124	A	MC-1562-3.0	I-3	X		X		LT MT	X	RF	
INI-126	A	MC-1562-3.0	J-2	X		X		LT MT	X	CS	
6 INI-183B	B	MC-1562-3.0	G-3		X			CT	X	CS	20 sec. max. cycle time
6 INI-152B	B	MC-1562-3.0	D-6		X			CT	X	CS	10 sec. max. cycle time

System: Safety Injection

Valve Number	Class	Drawing Number	Coordinates	Valve Category				Test Requirements	Relief Requests	Testing Alternative	Remarks
				A	B	C	D				
4 INI-159	A	MC-1562-3.0	B-4	X		X		MT LT	X	RF	
4 INI-160	A	MC-1562-3.0	B-3	X		X		MT LT	X	RF	
INI-156	A	MC-1562-3.0	D-3	X		X		LT MT	X	RF	
INI-157	A	MC-1562-3.0	D-2	X		X		LT MT	X	RF	
INI-125	A	MC-1562-3.0	I-3	X		X		LT MT	X	CS	

System: Safety Injection											
Valve Number	Class	Drawing Number	Coordinates	Valve Category				Test Requirements	Relief Requests	Testing Alternative	Remarks
				A	B	C	D				
INI-162A	B	MC-1562-3.1	K-11		X			CT	X	CS	10 sec. max. cycle time
4 INI-171	A	MC-1562-3.1	J-7	X		X		MT LT	X	RF	
4 INI-169	A	MC-1562-3.1	J-6	X		X		MT LT	X	RF	
4 INI-167	A	MC-1562-3.1	J-5	X		X		MT LT	X	RF	
4 INI-165	A	MC-1562-3.1	J-3	X		X		MT LT	X	RF	
6 INI-173A	B	MC-1562-3.1	I-12		X			CT	X	CS	10 sec. max. cycle time
4 INI-175	A	MC-1562-3.1	I-8	X		X		MT LT	X	CS	
4 INI-176	A	MC-1562-3.1	H-8	X		X		MT LT	X	CS	
6 INI-178B	B	MC-1562-3.1	F-12		X			CT	X	CS	10 sec. max. cycle time
4 INI-180	A	MC-1562-3.1	F-5	X		X		MT LT	X	CS	

VALVE: 1NI-121A

CATEGORY: B

CLASS: B

FUNCTION: Isolates Train A of Safety Injection to the Hot Legs

TEST REQUIREMENT: Cycle and time valve quarterly

BASIS FOR RELIEF: The valve is normally aligned for safety injection with power removed, as required by McGuire Technical Specification 4.5.2. Cycling the valve with the plant in operation requires that the power be restored to the valve and moved from the event-initiation position. The valve is required for alignment for hot-leg recirculation following an accident. It is not required to automatically actuate on initiation of a safety event. The past test history of the valve is very good.

ALTERNATE TESTING: Valve will be cycled and timed at cold shutdown.

VALVE: 1NI-152B

CATEGORY: B

CLASS: B

FUNCTION: Isolates Train B of Safety Injection to the Hot Legs

TEST REQUIREMENT: Cycle and time valve quarterly.

BASIS FOR RELIEF: The valve is normally aligned for safety injection with power removed, as required by McGuire Technical Specification 4.5.2. Cycling the valve with the plant in operation requires that the power be restored to the valve and moved from the event-initiation position. The valve is required for alignment for hot-leg recirculation following an accident. It is not required to automatically actuate on initiation of a safety event. The past test history of the valve is very good.

ALTERNATE TESTING: Cycle and time the valve at cold shutdown.

MC-1562-3.1

VALVE: 1NI-173A

CATEGORY: B

CLASS: B

FUNCTION: Isolate Train A Residual Heat Removal to the cold legs.

TEST REQUIREMENT: Cycle and time valve quarterly.

BASIS FOR RELIEF: The valve is normally aligned for safety injection with power removed, as required by McGuire Technical Specification 4.5.2. Cycling the valve with the plant in operation requires that the power be restored to the valve and moved from the event-initiation position. The valve is required for alignment for hot-leg recirculation following an accident. It is not required to automatically actuate on initiation of a safety event. The past test history of the valve is very good.

ALTERNATE TESTING: Cycle and time the valve at cold shutdown.

MC-1562-3.1

VALVE: 1NI-178B

CATEGORY: B

CLASS: B

FUNCTION: Isolates Train B of Residual Heat Removal to the cold legs.

TEST REQUIREMENT: Cycle and time valve quarterly.

BASIS FOR RELIEF: The valve is normally aligned for safety injection with power removed, as required by McGuire Technical Specification 4.5.2. Cycling the valve with the plant in operation requires that the power be restored to the valve and moved from the event-initiation position. The valve is required for alignment for hot-leg recirculation following an accident. It is not required to automatically actuate on initiation of a safe event. The past test history of the valve is very good.

ALTERNATE TESTING: Cycle and time the valve at cold shutdown.

MC-1562-3.1

VALVE: 1NI-183E

CATEGORY: B

CLASS: B

FUNCTION: Isolates ND flow to the hot legs.

TEST REQUIREMENT: Cycle and time valve quarterly.

BASIS FOR RELIEF: The valve is normally aligned for safety injection with power removed, as required by McGuire Technical Specification 4.5.2. Cycling the valve with the plant in operation requires that the power be restored to the valve and moved from the event-initiation position. The valve is required for alignment for hot-leg recirculation following an accident. It is not required to automatically actuate on initiation of a safety event. The past test history of the valve is very good.

ALTERNATE TESTING: Cycle and time the valve at cold shutdown.

VALVE: 1NI-248, 1NI-249, 1NI-250, 1NI-251, 1NI-252, 1NI-253

CATEGORY: A, C

CLASS: A

FUNCTION: Open when Reactor Coolant System pressure decreases below 1500 psig during accident conditions.

TEST REQUIREMENT: Verify valves open on flow from upper head injection accumulator.

BASIS FOR RELIEF: The pressure in the UHI accumulator (1500 psig) is not sufficient to open the valves into the Reactor Coolant System (2235 psig). At cold shutdown, the high velocity water could cause damage to reactor internals. This, also, could cause low temperature overpressurization.

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4 | ALTERNATE TESTING: Valves will be full stroked at refueling by disassembly. |