

May 24, 2000

MEMORANDUM

To: All McGuire Nuclear Station Selected Licensee Commitments (SLC) Manual Holders

Subject: McGuire Units 1 and 2 SLC Manual Update
SLC 16.9.1 – Fire Suppression Water System
SLC 16.9.2 – Spray and/or Sprinkler Systems

The changes are marked by vertical bars on the right margin.

Please revise your copy of the manual by replacing the affected pages with these new pages. The new pages are identified by "Revision 5" at the bottom of each page.

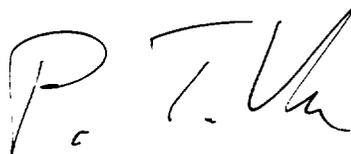
REMOVE

Entire LOEP
Entire SLC 16.9.1
Entire SLC 16.9.2

INSERT

Entire LOEP
Entire SLC 16.9.1
Entire SLC 16.9.2

Please call me if you have questions.



P.T. Vu, x4302
Regulatory Compliance

A001

PRIORITY Rush

DISPOSITION OF THE ORIGINAL DOCUMENT WILL BE TO THE TRANSMITTAL SIGNATURE UNLESS RECIPIENT IS OTHERWISE IDENTIFIED BELOW

- 1) 02546 R L MORGAN MG01WC
- 2) 03044 MCG DOC CNTRL MISC MAN MG01DM
- 3) 03102 H L MASSEY OPS PROC GP MG030T
- 4) 03379 D E CALDWELL MG01MM
- 5) 03447 HARRY J SLOAN MG01RP
- 6) 03614 MCG OPS PROCEDURE GP MG01OP
- 7) 03744 OPS TRNG MGR. MG030T
- 8) 03759 U S NUCLEAR REG WASH, DC
- 9) 04809 MCG PLANT ENG. LIBR. MG05SE
- 10) 05160 P T VU MG01RC
- 11) 05162 MCG SHIFT WORK MGRS MG01CC
- 12) 05512 REG. COMP. MANAGER CN01RC
- 13) 05610 K D THOMAS MG01WC
- 14) 05622 OPS MATRIX MG01WC
- 15) 05695 PATRICK F MCHALE MG03MT
- 16) 06593 D E HOLDEN MG03A2
- 17) 09460 W C SPENCER MG01RP
- 18) 09665 FRANK RINALDI,USNRC

Duke Power Company DOCUMENT TRANSMITTAL FORM

REFERENCE

MCGUIRE NUCLEAR STATION
SELECTED LICENSEE
COMMITMENTS MANUAL

Page 2 of 2

Date: 06/30/00

Document Transmittal #: DUK003675690

QA CONDITION Yes No

OTHER ACKNOWLEDGEMENT REQUIRED Yes

IF QA OR OTHER ACKNOWLEDGEMENT REQUIRED, PLEASE ACKNOWLEDGE RECEIPT BY RETURNING THIS FORM TO:

Duke Power Company
P.O. Box 12700
Document Management MG01 MOD
Hagers Ferry Road
Huntersville, N.C. 28078

Rec'd By _____

Date _____

DOCUMENT NO	QA COND	REV #/DATE	DISTR CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL	
LOEP	NA	005 06/26/00	MADM-03A	V1	V1	V1	V1	V1	V1	V2	V8	V2	V1	45									
ENTIRE SLC 16.9.1	NA	005 05/24/00																					
ENTIRE SLC 16.9.2	NA	005 05/25/00																					

REMARKS: PLEASE UPDATE YOUR MANUAL ACCORDINGLY.

H B BARRON
VICE PRESIDENT
MCGUIRE NUCLEAR STATION

BY:
BONNIE BEAVER MG01RC BB/CJB

EB

SLC LIST OF AFFECTED SECTIONS

SECTION	REVISION NUMBER	DATE
16.1	REVISION 0	12/14/99
16.2	REVISION 0	12/14/99
16.3	REVISION 0	12/14/99
16.4	REVISION 0	12/14/99
16.5.1	REVISION 0	12/14/99
16.5.2	REVISION 0	12/14/99
16.5.3	REVISION 0	12/14/99
16.5.4	REVISION 0	12/14/99
16.5.5	REVISION 0	12/14/99
16.5.6	REVISION 0	12/14/99
16.5.7	REVISION 0	12/14/99
16.5.8	REVISION 0	12/14/99
16.5.9	REVISION 0	12/14/99
16.5.10	REVISION 0	12/14/99
16.6.1	REVISION 0	12/14/99
16.6.2	REVISION 0	12/14/99
16.6.3	REVISION 0	12/14/99
16.7.1	REVISION 0	12/14/99
16.7.2	REVISION 0	12/14/99
16.7.3	REVISION 0	12/14/99
16.7.4	REVISION 1	4/11/00
16.7.5	REVISION 0	12/14/99
16.7.6	REVISION 0	12/14/99
16.7.7	REVISION 0	12/14/99
16.7.8	REVISION 0	12/14/99
16.7.9	REVISION 0	12/14/99
16.7.10	REVISION 0	12/14/99
16.8.1	REVISION 2	4/11/00
16.8.2	REVISION 0	12/14/99
16.8.3	REVISION 2	4/11/00
16.9.1	REVISION 5	5/24/00
16.9.2	REVISION 5	5/24/00
16.9.3	REVISION 0	12/14/99
16.9.4	REVISION 1	03/02/00
16.9.5	REVISION 0	12/14/99
16.9.6	REVISION 0	12/14/99
16.9.7	REVISION 1	4/11/00
16.9.8	REVISION 0	12/14/99
16.9.9	REVISION 0	12/14/99
16.9.10	REVISION 0	12/14/99
16.9.11	REVISION 0	12/14/99
16.9.12	REVISION 0	12/14/99
16.9.13	REVISION 0	12/14/99
16.9.14	REVISION 0	12/14/99
16.9.15	REVISION 4	6/20/00
16.9.16	REVISION 0	12/14/99
16.9.17	REVISION 0	12/14/99

SLC LIST OF AFFECTED SECTIONS

SECTION	REVISION NUMBER	DATE
16.9.18	REVISION 0	12/14/99
16.9.19	REVISION 0	12/14/99
16.9.20	REVISION 1	4/11/00
16.9.21	REVISION 0	12/14/99
16.9.22	REVISION 0	12/14/99
16.10.1	REVISION 0	12/14/99
16.11.1	REVISION 0	12/14/99
16.11.2	REVISION 0	12/14/99
16.11.3	REVISION 0	12/14/99
16.11.4	REVISION 0	12/14/99
16.11.5	REVISION 0	12/14/99
16.11.6	REVISION 0	12/14/99
16.11.7	REVISION 0	12/14/99
16.11.8	REVISION 0	12/14/99
16.11.9	REVISION 0	12/14/99
16.11.10	REVISION 0	12/14/99
16.11.11	REVISION 0	12/14/99
16.11.12	REVISION 0	12/14/99
16.11.13	REVISION 0	12/14/99
16.11.14	REVISION 0	12/14/99
16.11.15	REVISION 0	12/14/99
16.11.16	REVISION 1	4/11/00
16.11.17	REVISION 1	4/11/00
16.11.18	REVISION 0	12/14/99
16.11.19	REVISION 0	12/14/99
16.11.20	REVISION 0	12/14/99
16.12.1	REVISION 0	12/14/99
16.12.2	REVISION 0	12/14/99
16.13.1	REVISION 0	12/14/99
16.13.2	REVISION 0	12/14/99
16.13.3	REVISION 0	12/14/99
16.14.1	REVISION 0	12/14/99

16.9 AUXILIARY SYSTEMS

16.9.1 Fire Suppression Water System

- COMMITMENT** The Fire Suppression Water System shall be OPERABLE with:
- a. Fire suppression pump C and one other fire suppression pump, with their discharge aligned to the fire suppression header, and
 - b. An OPERABLE flow path capable of taking suction from Lake Norman and transferring water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrants, the last valve ahead of the water flow alarm device on each sprinkler or hose standpipe, and the last valve ahead of the deluge valve on each Deluge or Spray System required to be OPERABLE per SLC 16.9.2 and 16.9.4.

APPLICABILITY At all times.

REMEDIAL ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>A. Fire suppression pumps A and B inoperable.</p> <p style="text-align: center;"><u>OR</u></p> <p>Water supply to pumps A and B inoperable.</p>	<p>A.1 Restore one pump (A or B) and its associated water supply to OPERABLE status.</p>	<p>7 days</p>
<p>B. Fire suppression pump C inoperable.</p>	<p>B.1 Restore pump to OPERABLE status.</p> <p style="text-align: center;"><u>OR</u></p> <p>B.2 Verify fire suppression pumps A and B and their water supplies are OPERABLE and at least one can be aligned to the blackout diesel generator.</p>	<p>7 days</p> <p>7 days</p>

(continued)

REMEDIAL ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>C. Fire suppression pumps primary automatic starting function inoperable.</p>	<p>C.1 Verify secondary automatic starting function for each pump is OPERABLE.</p>	Immediately
	<p><u>OR</u></p> <p>C.2 Place at least one fire suppression pump in continuous operation.</p>	Immediately
<p>D. Any fire suppression pump secondary automatic starting function inoperable.</p>	<p>D.1 Verify primary automatic starting function for fire suppression pumps is OPERABLE.</p>	Immediately
	<p><u>OR</u></p> <p>D.2 Place at least one fire suppression pump in continuous operation.</p>	Immediately
<p>E. Primary and secondary fire suppression pump automatic starting functions inoperable.</p> <p><u>OR</u></p> <p>Jockey pumps unable to maintain system header pressure.</p>	<p>E.1 Place at least one fire suppression pump in continuous operation.</p>	Immediately
<p>F. Fire Suppression Water System inoperable for reasons other than Condition A, B, C, D, or E.</p>	<p>F.1 Establish a backup fire suppression water system.</p>	24 hours

(continued)

REMEDIAL ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. Required Action and associated Completion Time not met.	G.1 Restore the system to OPERABLE status.	1 hour
	<u>OR</u>	
	G.2.1 Be in MODE 3.	7 hours
	<u>AND</u>	
	G.2.2 Be in MODE 4.	13 hours
	<u>AND</u>	
	G.2.3 Be in MODE 5.	37 hours

TESTING REQUIREMENTS

TEST	FREQUENCY
TR 16.9.1.1 Start each fire pump (A & B, or C) and operate for ≥ 15 minutes on recirculation flow.	15 days on a STAGGERED TEST BASIS
TR 16.9.1.2 Verify each manual, power operated, or automatic valve in flow path is in its correct position.	31 days
TR 16.9.1.3 Perform a system flush of the outside distribution loop and verify no flow blockage.	6 months

(continued)

TESTING REQUIREMENTS (continued)

TEST	FREQUENCY
TR 16.9.1.4 Cycle each testable valve in flow path through one complete cycle of full travel.	12 months
TR 16.9.1.5 Verify each automatic valve in the flow path actuates to its correct position in response to a simulated automatic actuation signal.	18 months
TR 16.9.1.6 Verify each pump develops ≥ 2500 gpm at a system pressure of ≥ 125 psig in response to a simulated automatic actuation signal.	18 months
TR 16.9.1.7 Cycle each valve in flow path that is not testable during plant operation through one complete cycle of full travel.	18 months
TR 16.9.1.8 Verify each fire suppression pump starts automatically (using both primary and secondary auto-start functions) in response to a simulated automatic actuation signal and maintains Fire Suppression Water System pressure ≥ 125 psig.	18 months
TR 16.9.1.9 Perform a system flow test in accordance with NFPA Fire Protection Handbook, 14 th ed., Section 11, Chapter 5.	3 years

BASES

The OPERABILITY of the Fire Suppression Systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The Fire Suppression System consists of the water system, spray, and/or sprinklers, Halon, and fire hose stations. The collective capability of the Fire Suppression Systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

BASES (continued)

In the event that portions of the Fire Suppression Systems are inoperable, alternate backup fire-fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire-fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression. For McGuire Nuclear Station, fire pumps A and B serve as a backup for each other. Pump C is located separately with an independent dedicated power supply.

The Testing Requirements (TR) provide assurance that the minimum OPERABILITY requirements of the Fire Suppression Systems are met.

TR 16.9.1.7 requires cycling each valve in the flow path that is not testable during plant operation through one complete cycle of full travel. Although 1RF823 (Unit 1) and 1RF834 (Unit 2) are Containment Isolation check valves in the flow path, these valves are excluded from this testing requirement for the following reasons:

1. Check valves do not perform a sectionalizing control or isolation function.
2. 1RF823 and 1RF834 do not perform a dedicated fire protection system function.
3. NFPA 25 states that each control valve shall be operated through it's full range and returned to it's normal position. NFPA 25 recommends inspection of check valves internally to verify that all components operate properly, move freely, and are in good condition.
4. This exclusion is consistent with industry practices.
5. During Unit refueling outages, the Fire Suppression Water System including the check valves has been available for use.
6. Reactor Building fire hose stations are inspected every 36 months requiring opening hose valves, allowing flow through the check valves and verifying the fire protect system flow path.
7. The most common failure mode for these check valves will not affect the ability of the valve to open.

In the event the Fire Suppression Water System becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. These corrective measures include unit shutdown if a backup fire suppression water system is not established as required.

Regulatory codes and standards mandate that the fire suppression water system has automatic starting function to preclude the necessity of manual operator action. The fire suppression pumps have dual auto-start design functions to meet this requirement. The primary (0RFLP5000) auto-start control circuit will initiate all pumps operation at a set-point pressure greater than that provided by the secondary (0RYPS5010 for pump A, 0RYPS5020 for pump B and 0RYPS5030 for pump C) auto-start control circuits. Either primary or secondary auto-start control circuit is fully capable of providing the required automatic starting function.

Since the requirement for fire suppression pump automatic starting functions is intended to provide a high level of system standby readiness, it is equally acceptable to place at least one pump in continuous operation if all automatic starting functions are inoperable.

Likewise, if the fire suppression water system jockey pumps are unable to maintain system header pressure, it is acceptable to maintain system OPERABILITY by placing at least one pump in continuous operation.

This selected licensee commitment is part of the McGuire Fire Protection Program and therefore subject to the provisions of McGuire Facility Operating License Conditions C.4 (Unit 1) and C.7 (Unit 2).

REFERENCES

1. McGuire Nuclear Station UFSAR, Chapter 9.5.1
2. McGuire Nuclear Station SER Supplement 2, Chapter 9.5.1 and Appendix D
3. McGuire Nuclear Station SER Supplement 5, Chapter 9.5.1 and Appendix B
4. McGuire Fire Protection Review, as revised
5. McGuire Nuclear Station SER Supplement 6, Chapter 9.5.1 and Appendix C
6. Fire Protection System OP/1/A/6400/02A
7. McGuire Nuclear Station Facility Operating Licenses, Unit 1 License Condition C.(4) and Unit 2 License Condition C.(7)
8. Fire Protection Handbook, 14th Edition, Published by the National Fire Protection Association, Chapter 5, Section 11

16.9 AUXILIARY SYSTEMS

16.9.2 Spray and/or Sprinkler Systems

COMMITMENT Spray and/or Sprinkler Systems in Table 16.9.2-1 shall be OPERABLE.

APPLICABILITY Whenever equipment protected by the Spray/Sprinkler System is required to be OPERABLE.

REMEDIAL ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required Spray and/or Sprinkler Systems inoperable in an area in which redundant systems or components could be damaged.	A.1 Establish a continuous fire watch with backup fire suppression equipment.	1 hour
B. One or more required Spray and/or Sprinkler Systems inoperable in areas other than Condition A.	B.1 Establish an hourly fire watch patrol.	1 hour

TESTING REQUIREMENTS

TEST	FREQUENCY
TR 16.9.2.1 Verify each manual, power operated, or automatic valve in flow path which is accessible during plant operation is in its correct position.	31 days

(continued)

TESTING REQUIREMENTS (continued)

TEST	FREQUENCY
TR 16.9.2.2 Cycle each testable valve in flow path through one complete cycle of full travel.	12 months
TR 16.9.2.3 Verify each automatic valve in the flow path actuates to its correct position in response to a simulated automatic Fire Detection signal.	18 months
TR 16.9.2.4 Cycle each valve in flow path that is not testable during plant operation through one complete cycle of full travel.	18 months
TR 16.9.2.5 Perform a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity.	18 months
TR 16.9.2.6 Perform a visual inspection of each nozzle's spray area to verify the spray pattern is not obstructed.	18 months
TR 16.9.2.7 Verify each manual, power operated, or automatic valve in flow path which is not accessible during plant operation is in its correct position.	18 months
TR 16.9.2.8 Perform an air flow test through each open head spray/sprinkler header and verify each open head nozzle is unobstructed.	3 years

TABLE 16.9.2-1

Spray and Sprinkler Systems

Elevation	Building	Room No.	Equipment
Elevation 695 ft	Auxiliary	501	RHR Pump 1A
		500	RHR Pump 1B
		506	RHR Pump 2A
		507	RHR Pump 2B
		508	Corridor
Elevation 716 ft	Auxiliary	600	Aux. FW Pump Room - Unit 1
		649	Nuclear Service Water Pumps
		627	Centrifugal Charging Pump 1A
		630	Centrifugal Charging Pump 1B
		601	Aux. FW Pump Room - Unit 2
		634	Centrifugal Charging Pump 2A
		637	Centrifugal Charging Pump 2B
648	Cable Shaft		
Elevation 733 ft	Auxiliary	723	Component Cooling Pumps
		701	Battery Room Trench Area
Elevation 750 ft	Auxiliary	801	Cable Room – Unit 1
		801C	Cable Room – Unit 2
		806	Component Cooling Pumps
Elevation 725 ft	Reactor		Pipe Corridor
			Lower Containment Ventilation Filters
Elevation 738 ft	Reactor		Annulus

BASES

The OPERABILITY of the Fire Suppression Systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The Fire Suppression System consists of the water system, spray, and/or sprinklers, Halon, and fire hose stations. The collective capability of the Fire Suppression Systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the Fire Suppression Systems are inoperable, alternate backup fire-fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire-fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The Testing Requirements (TS) provide assurance that the minimum OPERABILITY requirements of the Fire Suppression Systems are met.

TR 16.9.2.4 requires cycling each valve in the flow path that is not testable during plant operation through one complete cycle of full travel. Although 1RF823 (Unit 1) and 1RF834 (Unit 2) are Containment Isolation check valves in the flow path, these valves are excluded from this testing requirement for the following reasons:

1. Check valves do not perform a sectionalizing control or isolation function.
2. 1RF823 and 1RF834 do not perform a dedicated fire protection system function.
3. NFPA 25 states that each control valve shall be operated through its full range and returned to its normal position. NFPA 25 recommends inspection of check valves internally to verify that all components operate properly, move freely, and are in good condition.
4. This exclusion is consistent with industry practices.
5. During Unit refueling outages, the Fire Suppression Water System including the check valves has been available for use.
6. Reactor Building fire hose stations are inspected every 36 months requiring opening hose valves, allowing flow through the check valves and verifying the fire protect system flow path.
7. The most common failure mode for these check valves will not affect the ability of the valve to open.

This selected licensee commitment is part of the McGuire Fire Protection Program and therefore subject to the provisions of McGuire Facility Operating License Conditions C.4 (Unit 1) and C.7 (Unit 2).

REFERENCES

1. McGuire Nuclear Station UFSAR, Chapter 9.5.1
2. McGuire Nuclear Station SER Supplement 2, Chapter 9.5.1 and Appendix D
3. McGuire Nuclear Station SER Supplement 5, Chapter 9.5.1 and Appendix B
4. McGuire Fire Protection Review, as revised
5. McGuire Nuclear Station SER Supplement 6, Chapter 9.5.1 and Appendix C
6. MCFD-1599 1.0 through 3.01
7. McGuire Nuclear Station Facility Operating Licenses, Unit 1 License Condition C.(4) and Unit 2 License Condition C.(7)