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SLECTED LICENSEE COMMITMENT
MANUAL (SLC)

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DOCUMENT NO	QA COND	REV #/ DATE	DISTR CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
SELECTED LICENSEE COMMITMENT MANUAL	NA	035 06/11/03	MADM-03A	V1	V1	V1													53
MEMORANDUM	NA	030 06/12/03																	
SLC - TABLE OF CONTENTS	NA	030 06/12/03																	
SLC - LIST OF EFFECTIVE PAGES	NA	035 06/11/03																	
SLC 16.9.7	NA	042 06/11/03																	
SLC 16.6.2	NA	DEL 06/11/03																	

REMARKS: PLEASE UPDATE YOUR MANUAL ACCORDINGLY

EB

D M JAMIL
VICE PRESIDENT
MCGUIRE NUCLEAR STATION

BY:

B C BEAVER MG01RC BCB/CMK

June 12, 2003

MEMORANDUM

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

Subject: McGuire SLC Manual Update

Please revise your copy of the manual as follows:

REMOVE	INSERT
Table of Contents	Table of Contents (Rev 30)
List of Effective Sections	List of Effective Sections (Rev 35)
SLC 16.6.2 (This SLC has been deleted)	
SLC 16.9.7	SLC 16.9.7 (Rev 42)

Revisions may skip numbers due to Regulatory Compliance Filing System.

Please call me if you have questions.

Bonnie Beaver
Regulatory Compliance

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16.9 AUXILIARY SYSTEMS - FIRE PROTECTION SYSTEMS

16.9.7 Standby Shutdown System

COMMITMENT The Standby Shutdown System (SSS) shall be operable.

APPLICABILITY MODES 1, 2, and 3.

REMEDIAL ACTIONS

----------NOTE----------

1. The SRO should ensure that security is notified 10 minutes prior to declaring the SSS inoperable. Immediately upon discovery of the SSS inoperability, Security must be notified to implement compensatory measures within 10 minutes of the discovery.

2. If inoperable SSS component is located inside containment, repairs shall be made at the first outage which permits containment access.

CONDITION	REQUIRED ACTION	COMPLETION TIME
----------NOTE---------- Not applicable to the SSS Diesel Generator or 24 V Battery Bank and Charger. ----------	A.1 Verify the OPERABILITY of fire detection and suppression systems in the associated areas identified in Table16.9.7-1.	1 hour
A. One or more required SSS components identified in Table 16.9.7-1 inoperable.	AND A.2 Restore the component to OPERABLE status.	7 days
B. SSS Diesel Generator or 24 V Battery Bank and Charger inoperable.	B.1 Verify the OPERABILITY of fire detection and suppression systems in the associated areas identified in Table16.9.7-1. AND	1 hour (continued)

REMEDIAL ACTIONS (continued)

CONDITION		REQUIRED ACTION		COMPLETION TIME
B.	(continued).	B.2	Verify offsite power and one emergency diesel generator OPERABLE.	1hour
		AND		
		B.3	Restore the component to OPERABLE status.	60 days
C.	Total Unidentified LEAKAGE, Identified LEAKAGE, and reactor coolant pump seal leakoff > 20 gpm.	C.1	Declare the standby makeup pump and SSS inoperable.	Immediately
D.	Required Action and associated Completion Time of Condition A or C not met.	D.1	Prepare and submit a Special Report to the NRC outlining the cause of the inoperability, corrective actions taken, and plans for restoring the SSS to OPERABLE status.	30 days
E.	Required Action and associated Completion Time of Condition B not met.	E.1	Prepare and submit a Special Report to the NRC outlining the extent of repairs required, schedule for completing repairs, and basis for continued operation.	14 days

TESTING REQUIREMENTS

	TEST	FREQUENCY
TR 16.9.7.1	Verify total Identified LEAKAGE, Unidentified LEAKAGE, and reactor coolant pump seal leakoff are $\leq$ 20 gpm.	72 hours
TR 16.9.7.2	Verify the requirements for spent fuel water level in Surveillance Requirement 3.7.13.1 are met and the boron concentration in the spent fuel storage pool is within the limits specified in the COLR. OR Verify the refueling water storage tank is capable of being aligned to the SSS standby makeup pump.	7 days
TR 16.9.7.3	Verify fuel oil level in the SSS diesel generator fuel storage tank is $\geq$ 4.0 ft.	31 days
TR 16.9.7.4	Verify the SSS diesel generator starts from ambient conditions and operates for $\geq$ 30 minutes at $\geq$ 700 kW.	31 days
TR 16.9.7.5	Verify fuel oil properties of new fuel oil for the SSS diesel generator are tested in accordance with the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
TR 16.9.7.6	Verify the SSS diesel generator 24 V battery voltage is $\geq$ 24 volts.	31 days
TR 16.9.7.7	Perform a CHANNEL CHECK of the SSS Instrumentation as required by Table 16.9.7-2.	31 days
TR 16.9.7.8	Verify the electrolyte level of each SSS 250/125 V battery bank is above the plates.	31 days

(continued)

TESTING REQUIREMENTS (continued)

	TEST	FREQUENCY
TR 16.9.7.9	Verify the total battery terminal voltage of each SSS 250/125 V battery bank is $\geq$ 258/129 V on float charge.	31 days
TR 16.9.7.10	Verify the average specific gravity of each SSS 250/125 V battery bank is $\geq$ 1.200.	92 days
TR 16.9.7.11	Verify the standby makeup pump's developed head and capacity is greater than or equal to that required by the Inservice Testing Program.	92 days
TR 16.9.7.12	Verify the SSS diesel generator 24 V batteries and battery racks show no visual indication of physical damage or abnormal deterioration.	18 months
TR 16.9.7.13	Verify SSS diesel generator 24 V battery to battery and terminal connections are clean, tight, and free of corrosion.	18 months
TR 16.9.7.14	Perform a CHANNEL CALIBRATION of the SSS Instrumentation as required by Table 16.9.7-2.	18 months
TR 16.9.7.15	Perform inspection of SSS diesel generator in accordance with procedures prepared in conjunction with manufacturer's recommendations for class of service.	18 months
TR 16.9.7.16	Verify the SSS 250/125 V batteries, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration.	18 months
TR 16.9.7.17	Verify the SSS 250/125 V battery to battery and terminal connections are clean, tight, free of corrosion, and coated with anti-corrosion material.	18 months
TR 16.9.7.18	Verify the "C" solenoid to valve SA48ABC can be deenergized to provide steam supply to the turbine driven auxiliary feedwater pump.	18 months

TABLE 16.9.7-1

STANDBY SHUTDOWN SYSTEM
FIRE DETECTION & SUPPRESSION SYSTEMS VERIFICATION[1]

INOPERABLE SSS COMPONENT	FIRE DETECTION & SUPPRESSION SYSTEMS LOCATION								
	EL 716 EE-KK	EL 733 EE-KK	EL 750 EE-KK	Control Room	Battery Room	Cable Rooms	Turbine Driven AFW Pump	Motor Driven AFW Pump	Containment
SSS Diesel Generator[3]	X	X	X	X	X	X	X	X	Note 2
SSS DG Starting 24 V Battery Bank and Charger[3]	X	X	X	X	X	X	X	X	Note 2
Standby Makeup Pump and Water Supply	X	X	X						
SSS 250/125V Battery and Charger[3]				X	X	X			Note 2
Turbine Driven AFW Pump								X	
Turbine Driven AFW Pump Solenoid "C"								X	
Groundwater Drainage Sump Pump A, Sump A AND Groundwater Drainage Sump Pump A, Sump B								X	
INSTRUMENTATION:									
1. RCS Pressure				X	X	X			Note 2
2. Pressurizer Level				X	X	X			Note 2
3. SG Level				X	X	X			Note 2
4. Incore Temperature				X	X	X			Note 2
5. NC Wide Range Cold Leg Temperature				X	X	X			Note 2

NOTES:

1. If fire detection and/or suppression systems are inoperable, then the ACTION statement(s) of the applicable fire detection and/or suppression SLC shall be complied with.
2. Monitor containment air temperature at least once per hour at the locations specified in Technical Specification Surveillance Requirement 3.6.5.1 or 3.6.5.2, in lieu of verification of operability of systems inside containment
3. With this component inoperable, then denoted areas of both units are affected.

TABLE 16.9.7-2

STANDBY SHUTDOWN SYSTEM
INSTRUMENTATION TESTING REQUIREMENTS

	INSTRUMENT	REQUIRED CHANNELS	TESTING REQUIREMENTS	READOUT LOCATION
1.	Reactor Coolant Pressure	1	TR 16.9.7.7 TR 16.9.7.14	SSF Control Panel
2.	Pressurizer Level	1	TR 16.9.7.7 TR 16.9.7.14	SSF Control Panel
3.	Steam Generator Level (Wide Range)	1 per SG	TR 16.9.7.7 TR 16.9.7.14	SSF Control Panel
4.	Incore Temperature	1	TR 16.9.7.7 TR 16.9.7.14	SSF Control Panel
5.	Standby Makeup Pump Flow	1	TR 16.9.7.14	SSF Control Panel
6.	NC Wide Range Cold Leg Temperature	1 per 2 Cold Legs	TR 16.9.7.7 TR 16.9.7.14	SSF Control Panel

BASES

The Standby Shutdown System (SSS) is designed to mitigate the consequences of certain postulated fire incidents, sabotage, or station blackout events by providing capability to maintain HOT STANDBY conditions and by controlling and monitoring vital systems from locations external to the main control room. This capability is consistent with the requirements of 10 CFR Part 50, Appendix R and 10 CFR 50.63.

By design, the SSS is intended to respond to those low-probability events which render both the control room and automatic safety systems inoperable. Because of the low probability of occurrence of these events, the remedial actions rely on compensatory action, timely repair or return to operability and, if necessary, a justification for continued operation.

Because the SSS performs a redundant fire protection function, compensatory action during periods when the SSS is inoperable relies largely on assurance of the operability of fire detection and suppression systems. Table 16.9.7-1 establishes requirements for operability of fire detection and suppression systems.

Both A&D NC Cold Leg Wide Range Temperatures are required for SSS operability. This conclusion is based on NRC Correspondence during issuance of the original operating license.

The Source Range Wide Range Neutron Flux Instrumentation was installed at the SSS Control Panel as part of NRC review of this system in the early 1980s. The indication is not required for SSS operability, based on the NRCs response to Duke dated July 12, 1983.

Controls and power to the pressurizer heater banks are included for SSF events; however, they are not required for SSS operability. NRC Generic Letter 86-10 provides that conclusion.

The Testing Requirements ensure that the SSS systems and components are capable of performing their intended functions. The testing requirements were based largely on SSS Technical Specifications for the Catawba Nuclear Station, which was approved prior to the issuance of the fuel load license for Unit 1 of that plant. Also considered in the formulation of the testing requirements were existing McGuire Technical Specifications, such as those for the 1E Diesel Generators, Refueling Water Storage Tank, Fire Protection & Detection Systems, and other Tech Specs which are related to the safe operation and/or shutdown of the plant.

The required level in the SSS diesel generator fuel storage tank ensures sufficient fuel for 3 ½ days of uninterrupted operation. Per Appendix R requirements, the unit must be in cold shutdown within 72 hours of going to the SSF. The 3 ½ day supply of fuel oil assures this capability.

BASES (continued)

New fuel oil is sampled in accordance with ASTM D4057-81 prior to addition to the storage tanks. In accordance with the tests specified in ASTM D975-81, the sample is verified to have:

1. an API Gravity of within 0.3 degrees at 60°F or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity at 60°F of greater than or equal to 27 degrees but less than or equal to 39 degrees,

2. a kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes but less than or equal to 4.1 centistokes (or a Saybolt Universal Viscosity at 100°F of greater than or equal to 32.6 SUS but less than or equal to 40.1 SUS),

3. a flash point equal to or greater than 125°F, and

4. a clear and bright appearance with proper color when tested in accordance with ASTM D4176-82.

Within 31 days of obtaining the new fuel sample, the other properties specified in Table 1 of ASTM D975-81 are verified to be met when tested in accordance with ASTM D975-81, except that the analysis for sulfur may be performed in accordance with ASTM D1552-90 or ASTM D2622-82.

Although the Standby Makeup Pump is not nuclear safety-related and was not designed according to ASME code requirements, it is tested quarterly to ensure its OPERABILITY. The Standby Makeup Pump (SMP) functions as part of the SSF to provide makeup capacity to the reactor coolant system and cooling flow to the reactor coolant pump seals. The reactor coolant pump seal leak-off flow is temperature dependent (i.e., the higher the temperature the higher the leak-off flow). During normal operation the NCP seals are supplied from the Centrifugal Charging Pump (CCP) drawing from the Volume Control Tank (VCT). During the SSF event, the SMP draws from the Spent Fuel Pool (SFP). During the SSF event there is no SFP cooling, so water injected into the NCP seals will have a higher temperature than during normal operation. The SMP is capable of providing a makeup capacity of at 26 gpm. The revised SLC limit of 20 gpm total accumulative leakage is based on a calculation that was performed by Westinghouse, indicating increased seal leak-off at higher seal water temperatures, to relate the SSF event leakage of 26 gpm at elevated NCP seal temperatures. This more conservative limit will ensure that the SMP will be capable of providing makeup and seal cooling flow equal to or greater than total leakage during the SSF event, increased seal leak-off flow due to heat-up of the SFP, and still provide a margin of safety. As a conservative measure, during normal power operation the total accumulative system leakage (unidentified + identified + seal leak-off flows) shall be limited to 20 gpm. The Testing Requirement concerning the Standby Makeup Pump water supply ensures that an adequate water volume is available to supply the pump continuously for 72 hours.

The Groundwater Drainage Sump Pump A, in the A (Unit 1) and B (Unit 2) sumps, can be controlled and powered from the SSF. These Sump Pumps remove accumulation of groundwater, Turbine driven AFW Pump drains, and other miscellaneous sources. For the SSS to be OPERABLE, a minimum of one of these pumps must be OPERABLE. Credit is taken for the groundwater underdrain system to transport water from one sump to the other.

The turbine driven AFW pump can be controlled from the SSF and is utilized during an SSS event to maintain adequate secondary side heat removal. For the SSS to be OPERABLE, the turbine driven AFW pump must be OPERABLE.

While the SSS 24 VDC battery charger is isolated for battery surveillance testing, the SSS Diesel Generator remains operable as long as the battery voltage is $\geq$ 24 volts.

BASES (continued)

The SSS 125V batteries and battery chargers consist of three pairs SDSP1, SDSP2 and SDSS. Each pair consists of a battery and associated battery charger. Pair SDSS can be used to substitute for either pair SDSP1 or SDSP2. Only two of these pairs are required operable since pair SDSS is spare.

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 Nuclear Station SER Supplement 6, Chapter 9.5.1 and Appendix C
5. McGuire Fire Protection Review, as revised
6. McGuire Fire Protection Safe Shutdown Review
7. IEEE 308-1974, Class 1E Power Systems
8. IEEE 450-1975, Maintenance Testing & Replacement of Large Lead Storage Batteries
9. OP/O/B/6350/04, Standby Shutdown Facility Diesel Operation
10. McGuire Nuclear Station Facility Operating Licenses, Unit 1 License Condition C.(4) and Unit 2 License Condition C.(7)
11. PIP 0-M-99-03926
12. PIP-M-01-3466
13. 10 CFR 50.63, Loss of All Alternating Current
14. Letter from H.B. Tucker to NRC, dated April 4, 1990, Requirements for Station Blackout.