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REV 12/7/94

SUBJECT: Forwards revs to Oconee Selected Licensee Commitments Manual.SLC Manual is Chapter 16.0 to FSAR & will be updated as needed during yr.

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TITLE: OR Submittal: Updated FSAR (50.71) and Amendments

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DUKE POWER

November 1, 1994

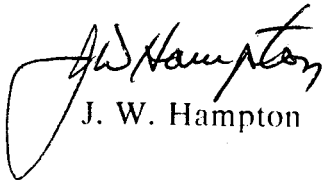
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Attention: Document Control Desk
Washington, D.C. 20555

Subject: Oconee Nuclear Station
Docket No. 50-269, -270, -287
Selected Licensee Commitments Manual (SLC)

Gentlemen:

Pursuant to 10 CFR 50.4 and 50.71, please find attached 7 copies of the latest revisions to the Oconee Selected Licensee Commitments Manual. The SLC Manual is Chapter 16.0 to the Oconee FSAR. This manual is meant to contain commitments and other station issues that we believe warrant higher control, but are not appropriate in the Technical Specifications (TS). Instead of being updated with the annual FSAR Update, the SLC Manual will be updated monthly as needed during the year.

Very truly yours,


J. W. Hampton

CMB/cmb
Attachment

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Regional Administrator, Region II

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November 1, 1994

To: Manual Holders

Subject: Oconee SLC Revision

This revision to the SLC Manual revises SLC Section 16.9.1 which adds an editorial note to the "commitment" section to clarify the relative restrictions imposed by the section; revises SLC Section 16.9-7 which adds a more restrictive lake level requirement based on the need to have a minimum lake level to support LPSW suction when EWST is out of service; adds new SLC 16.9-8 which defines and documents existing requirements to ensure adequate suction supply to the LPSW Pumps in support of LPSW Operability.

Please update your copy of this manual as follows:

Remove These Pages

- LOEP 1 ✓
- LOEP 3 ✓
- LOEP 4 ✓
- LOEP 5 ✓
- LOEP 6 ✓
- 16.9-1 ✓
- 16.9-2 ✓
- 16.9-3 ✓
- 16.9-20 ✓
- 16.9-21 ✓
- 16.9-22 ✓
- 16.9-23 ✓
- 16.9-24 ✓
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Insert These Pages:

- LOEP 1 ✓
- LOEP 3 ✓
- LOEP 4 ✓
- LOEP 5 ✓
- LOEP 6 ✓
- 16.9-1 ✓
- 16.9-2 ✓
- 16.9-3 ✓
- 16.9-20 ✓
- 16.9-21 ✓
- 16.9-22 ✓
- 16.9-23 ✓
- 16.9-24 ✓
- 16.9-25 ✓
- 16.9-26 ✓
- 16.9-27 ✓
- 16.9-28 ✓

Any questions concerning this revision may be directed to David Nix at 803-885-3634.

David Nix, cmb
David Nix
Regulatory Compliance

By: Conice Breazeale
Regulatory Compliance

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

<u>Page</u>	<u>Revision Date</u>
Cover Letter	
LOEP 1	09/22/94
LOEP 2	10/93
LOEP 3	09/22/94
LOEP 4	09/22/94
LOEP 5	09/22/94
LOEP 6	09/22/94
<u>Tab 16.0</u>	
16.0-1	07/93
16.0-2	11/11/93
16.0-3	07/93
<u>Tab 16.1</u>	
16.1-1	
<u>Tab 16.2</u>	
16.2-1	
16.2-2	
16.2-3	
<u>Tab 16.3</u>	
16.3-1	2/91
<u>Tab 16.5</u>	
16.5-1	3/91
16.5-2	2/17/94
16.5-3	2/17/94
16.5-4	2/17/94
16.5-5	2/17/94

09/22/94

Page No.

Revision Date

16.7-3

16.7-4

10/91

16.7-5

10/91

16.7-6

01/93

16.7-7

01/93

16.7-8

01/93

16.7-9

10/93

16.7-10

10/93

16.7-11

10/93

16.7-12

10/93

TAB 16.8

16.8-1

02/93

16.8-2

02/93

16.8-3

09/22/94

16.8-4

09/22/94

16.8-5

09/22/94

16.8-6

09/22/94

TAB 16.9

16.9-1

01/91

16.9-2

01/91

16.9-3

01/91

16.9-4

11/11/93

16.9-5

11/11/93

16.9-6

01/91

16.9-7

01/91

16.9-8

01/91

9/22/94

Page No.

Revision Date

16.9-9	01/91
16.9-10	01/91
16.9-11	01/91
16.9-12	01/91
16.9-13	01/91
16.9-14	01/91
16.9-15	01/91
16.9-16	01/91
16.9-17	01/91
16.9-18	01/91
16.9-19	01/91
16.9-20	5/2/94
16.9-21	5/2/94
16.9-22	5/2/94
16.9-23	5/2/94
16.9-24	5/2/94

Tab 16.11

16.11-1	02/93
16.11-2	02/93
16.11-3	02/93
16.11-4	02/93
16.11-5	02/93
16.11-6	02/93
16.11-7	02/93
16.11-8	02/93
16.11-9	02/93
16.11-10	07/94

9/22/94

Page No.

Revision Date

16.11-11	07/94
16.11-12	07/94
16.11-13	07/94
16.11-14	07/94
16.11-15	07/94
16.11-16	07/94
16.11-17	07/94
16.11-18	07/94
16.11-19	07/94
16.11-20	07/94
16.11-21	07/94
16.11-22	07/94
16.11-23	07/94
16.11-24	07/94
16.11-25	07/94
16.11-26	2/91
16.11-27	2/91
16.11-28	10/93
16.11-29	10/93
16.11-30	10/93
16.11-31	2/91
16.11-32	2/91
16.11-33	2/91
16.11-34	2/91
16.11-35	2/91
16.11-36	2/91
16.11-37	02/93

9/22/94

Page no.

Revision No.

16.11-38

02/93

16.11-39

2/91

16.11-40

2/91

16.11-41

10/93

16.11-42

10/93

16.11-43

2/91

16.11-44

2/91

Tab 16.13

16.13-1

1/91

9/22/94

16.9 AUXILIARY SYSTEMS

FIRE PROTECTION SYSTEMS

16.9.1 FIRE SUPPRESSION WATER SYSTEM

COMMITMENT

The Fire Suppression Water System shall be OPERABLE with:

- a. Two High Pressure Service Water (HPSW) pumps with a design capacity of 6000 GPM each and automatic initiation logic, and the associated piping and valves supplying water to the sprinkler systems and fire hose stations.
- b. The HPSW pumps shall be aligned to the high pressure fire header.

APPLICABILITY: At all times.

ACTION:

- a. Inoperable equipment shall be restored to operable status within 7 days or a report shall be submitted to the Commission within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.
 - i Continued operation of the affected unit is permitted provided that this condition is met.
 - ii Operation under this action statement is not considered to be in a degraded mode and thus is not reportable under Technical Specification 6.6.2.1.
- b. With no Fire Suppression Water System operable, in lieu of the above, the following action shall be taken:
 - i Within 24 hours a backup Fire Suppression Water System shall be established. If a backup Fire Suppression Water System cannot be established within 24 hours, place the reactor in Hot Standby within the next 12 hours and in Cold Shutdown within the following 48 hours.
 - ii Within 24 hours the Commission shall be notified by telephone,

and in writing no later than the first working day following the event.

- iii Within 14 days of the event, a report shall be submitted to the Commission outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to operable status.

SURVEILLANCE:

- a. The Fire Suppression Water System shall be demonstrated OPERABLE:
 - i Monthly, a functional test of the HPSW pumps and associated automatic valve shall be performed.
 - ii Monthly, proper alignment of valves shall be verified.
 - iii Annually, each HPSW pump shall be tested to verify flow of 3000 gpm.
 - iv At least once per 3 years a system flow test shall be performed on the Fire Suppression Water System in accordance with Chapter 5, Section 11 of the Fire Protection Handbook, 14 Edition, NFPA.

BASES:

The OPERABILITY of the Fire Suppression System 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, CO₂ 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.

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

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. The requirement for a twenty-four hour

report to the commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued operation of the nuclear plant.

This Selected Licensee Commitment is part of the Oconee Fire Protection Program and therefore subject to the provisions of Oconee Facility Operating License Conditions.

REFERENCES:

- 1) Oconee FSAR, Chapter 9.5.1.
- 2) Oconee Fire Protection SER dated August 11, 1978.
- 3) Oconee Fire Protection Review, as revised.
- 4) Oconee Plant Design Basis Specification for Fire Protection as revised.

STATION MANAGER APPROVAL *H.R. Barr* DATE 1-15-91

16.9 AUXILIARY SYSTEMS

16.9.7 KEOWEE LAKE LEVEL

COMMITMENT

Ensure the proper requirements are met for the following lake Keowee level ranges.

APPLICABILITY: Maintain level to ensure operability of specified systems and/or components.

NOTE: An instrument error of ± 1.15 ft has been applied to lake levels identified in this SLC. This is based on control room indicator or computer point being used to verify level. Keowee personnel may be contacted to determine absolute lake level. Levels identified as (abs) are absolute values without instrument error included.

<u>LAKE LEVEL</u>	<u>REQUIRED ACTION</u>	<u>REQUIRED ACTION NOT MET</u>
A. Lake level < 801.15 ft. (800.0 abs)	A.1 Verify at least two sources of CCW are available by <u>siphon</u> flow to the CCW cross-over piping. The two sources must come from different Oconee Units. To ensure the sources will siphon flow to the CCW crossover piping, the CCW intake piping must be maintained water solid. For any unit to be considered a source, at least 3 CCW pumps <u>shall</u> be running.	A.1.1 If only one siphon assisted source is available, then the LPSW system cannot withstand a single failure. Enter a 72 hour LCO per T.S. 3.3.7.
	A.2 For any Oconee unit with an RCS temperature ≥ 250 °F, verify at least 3 CCW pumps are running on that unit to ensure the flow through the condenser portion of the ECCW (second siphon) is operable.	A.1.2 If no siphon assisted sources are available, then declare the LPSW system inoperable. Enter T.S. 3.0. A.2.1 Declare the ECCW system inoperable per T.S. 3.4.5 on the applicable Oconee unit.

05/02/94

LAKE LEVEL	REQUIRED ACTION	REQUIRED ACTION NOT MET
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B. Lake level < 796.65 ft. (795.5 abs)	B.1 Declare the Keowee Step-up Transformer <u>Mulsifyre</u> inoperable AND Refer to SLC 16.9.2 to establish required firewatch.	B.1.1 Notify Compliance of the need to meet the reporting requirements of SLC 16.9.2.
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C. Lake level < 790.15 ft. (789 abs)	C.1 Verify at least two sources of CCW are available by <u>siphon</u> flow to the CCW crossover piping. The two sources must come from different Oconee Units. To ensure the sources will siphon flow to the CCW crossover piping, the CCW intake piping must be maintained water solid. For any unit to be considered a source, all 4 CCW pumps <u>shall</u> be running. C.2 For any Oconee unit with an RCS temperature ≥ 250 °F, verify all 4 CCW pumps are running on that unit to ensure the flow through the condenser portion of the ECCW (second siphon) is operable.	C.1.1 If only one siphon assisted source is available, then the LPSW system cannot withstand a single failure. Enter a 72 hour LCO per T.S. 3.3.7. C.1.2 If no siphon assisted sources are available, then declare the LPSW system inoperable. Enter T.S. 3.0. C.2.1 Declare the ECCW system inoperable per T.S. 3.4.5 on the applicable Oconee unit.
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D. Lake level < 787.40 ft. (786.25 abs)	D.1 Prior to lake level decreasing below 787.40 close valves (1)(2) 3CCW-319 and (1)(2) 3CCW-320	D.1.1 Declare the affected unit unavailable as a siphon assisted source. Refer to item C. above.
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E. Lake level < 787.15 ft. (786.0 abs)	E.1 Restore lake level to greater than 787.15.	E.1.1 The LPSW system cannot withstand a single failure. Enter a 72 hour LCO per T.S.3.3.7.
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05/02/94

SURVEILLANCE: Keowee Lake Level shall be monitored once per shift.

BASES:

The CCW system provides the suction source to the CCW crossover piping which supplies suction to the LPSW system. Normally this crossover header is aligned to all three Oconee Units and any operating CCW pump can provide adequate flow for the requirements of the LPSW systems for all 3 units. During certain analyzed accident conditions, a loss of power to the CCW pumps for all 3 units must be assumed. This results in a loss of forced flow to the CCW crossover header.

In the event of loss of off-site power (LOOP), the Emergency CCW (ECCW) siphon must be capable of supplying suction to the LPSW pumps to meet the requirements of Tech Spec 3.3.7. The ECCW supply to LPSW (first siphon) must be capable of withstanding a single active failure. If all AC power is lost (SBO event), ECCW must be capable of supplying flow through the condensers (second siphon) for decay heat removal per Tech Spec 3.4.5. Single failure is not postulated for SBO events.

With the lake level less than 801.15 feet, siphon flow capability must be established. To ensure a siphon flowpath will be established in the event forced flow is stopped, at least one unit's CCW flowpath from the intake structure to the CCW crossover must be maintained water solid. Since the Continuous Vacuum Priming connections to the CCW inlet piping are normally isolated, the CCW flowpath is maintained water solid by requiring a minimum number of CCW pumps operating. Water solid is defined as sufficient positive pressure to prevent gases from coming out of solution and sufficient flow to ensure gases that may come out of solution will be swept away and not accumulate to the point of blocking siphon flow. A CCW flowpath is defined as two 8 ft. CCW pump discharge valves open to a common 11 ft. CCW inlet header.

The minimum number of CCW pumps necessary to ensure siphon flow capability varies with lake level. With lake level between 801.15 and 790.15, the CCW flowpath is maintained water solid by operating at least three CCW pumps on each Oconee unit being used as a siphon source. In the event lake level falls below 790.15, the CCW flowpath is maintained water solid by operating all four CCW pumps on that Oconee unit.

With lake level greater than 799.25 feet (798.1 abs), it may be possible to provide adequate suction pressure to the LPSW pumps due to gravity flow without dependence upon siphon flow. For simplicity, information is not included to determine if gravity flow is possible. Mechanical Systems Engineering should be contacted to determine whether or not gravity flow is possible if an LCO is entered and lake level is greater than 799.25.

Due to a potential single failure that could close all the CCW pump discharge valves associated with one Oconee unit, siphon sources from at

05/02/94

least two Oconee unit's CCW intakes must be available to supply the CCW crossover header. A 72 hour LCO must be entered per Tech Spec 3.3.7 if only one siphon source is available.

The minimum number of running CCW pumps required to provide siphon flow to the CCW crossover piping, as described above, will also ensure operability of ECCW siphon flow through the condenser, also known as the "second siphon". If any Oconee unit fails to maintain the minimum number of CCW pumps running when the RCS is heated above 250°F as described in items A and C, then the ECCW system for that unit must be declared inoperable per Tech Spec 3.4.5.

Should lake level fall below 796.65, the Keowee main Step-up Transformer Mulsifyre system may not provide the required flowrates. For this reason, the Mulsifyre should be declared inoperable and the appropriate compensatory actions taken.

Should lake level fall below 787.40, a postulated pipe break (due to a seismic event) downstream of valves (1)(2)3CCW-319 and (1)(2)3CCW-320 could cause a loss of the siphon supply to the CCW crossover for any unit which has these valves open. For this reason, it should be verified that the two units being utilized for meeting the requirements of A.1 or C.1 have their respective Radwaste supply valves closed prior to lake level decreasing below 787.40.

With lake level below 787.15, the LPSW pumps could experience inadequate NPSH with siphon flow from the CCW intake. Calculations show this could occur if a single failure causes the minimum number of LPSW pumps (one for Unit 3 or two for the shared Unit 1 and 2 systems) to be available during a design basis event. Therefore, the LPSW system must be considered unable to withstand a single failure for lake level below 787.15 and a 72 hour LCO must be entered per T.S. 3.3.7. Action should be initiated to raise and maintain Keowee lake level >787.15. The level of 787.15 for LPSW system operability is based upon calculations and testing performed to determine the level required to ensure adequate NPSH to the LPSW pumps during worst case accident configurations. This testing in conjunction with flow model calculations determined that this lake level would be sufficient to maintain the LPSW systems operable, provided additional steps as identified by procedural guidance to the operators were utilized.

05/02/94

REFERENCES:

1. PIR 0-092-0535
2. Calculation OSC-5018, Rev. 1
3. Units 1 and 2 LPSW System Flow Test, TT/1/A/0251/21
4. CCW Design Basis Document
5. Calculation OSC-2895, Rev. 3
6. Calculation OSC-5325
7. PIR-4-090-0109
8. LER 269/93-04, Rev. 0 and Rev. 1
9. Calculation OSC-5304
10. Calculation OSC-5022, Rev. 1
11. Calculation OSC-2280, Rev. 5
12. Calculation OSC-5349, Rev. 1
13. Calculation OSC-5670, Rev. 1
14. Calculation OSC-5461, Rev. 2

STATION MANAGER APPROVAL

BWP

DATE

5-3-94

05/02/94