Duke Power
A Duke Energy Company

W. R. McCollum, Jr.
Vice President

Duke Power
Oconee Nuclear Site
7800 Rochester Highway
Seneca, SC 29672
(864) 885-3107 OFFICE
(864) 885-3564 FAX

April 27, 2000

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

Subject: Oconee Nuclear Station
Docket 50-269, -270, -287
Selected Licensee Commitments Manual (SLC)

Gentlemen:

Pursuant to 10CFR 50.4 and 50.71, please find attached 7 copies of the latest revisions to the Oconee Selected Licensee Commitments Manual (SLC). The SLC Manual is Chapter 16.0 of the Oconee Updated Final Safety Analysis Report (UFSAR). This manual is intended to contain commitments and other station issues that warrant higher control, but are not appropriate for inclusion into the Technical Specifications (TS). Instead of being updated with the annual UFSAR Update, the SLC Manual will be updated as necessary throughout the year.

Very truly yours,

W. R. McCollum, Jr.
Vice President
Oconee Nuclear Station

CMB/cmb
Attachment

xc: Luis A. Reyes
Regional Administrator, Region II

D. E. LaBarge, ONRR

M. C. Shannon
Oconee Senior Resident Inspector

A053

April 27, 2000

To: Manual Holders

Subject: Oconee Selected Licensee Commitments Manual (SLC) Revision

On April 13, 2000, Station Management approved revisions to SLC 16.9.11 Turbine Building Flood Protection Measures, to be implemented on 4/13/00. The subject change adds guidance under Commitment b saying that this commitment is met if the Condenser outlet valve is closed and capable of being operated manually or automatically. The Bases have also been revised to reflect the change to Commitment b. This revision will allow credit to be taken for a Condenser outlet valve that is closed, with the actuator capable of operating the valve. With the valve closed, the intended function is met and with the actuator capable of operating the valve, the valve will not be able to drift open.

Remove these pages	Insert these pages
LOEP 1	LOEP 1
LOEP 6	LOEP 6
SLC page 16.9.11-1	SLC page 16.9.11-1
SLC page 16.9.11-2	SLC page 16.9.11-2
SLC page 16.9.11-3	SLC page 16.9.11-3
SLC page 16.9.11-4	SLC page 16.9.11-4
SLC page 16.9.11-5	SLC page 16.9.11-5
SLC page 16.9.11-6	SLC page 16.9.11-6
SLC page 16.9.11-7	SLC page 16.9.11-7
--------	SLC page 16.9.11-8

Any questions concerning this revision may be directed to Noel Clarkson at 864-885-3077.

Regulatory Compliance
By: Conice Breazeale
Regulatory Compliance

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
LOEP 1	4/13/00
LOEP 2	2/17/00
LOEP 3	1/31/00
LOEP 4	2/17/00
LOEP 5	3/2/00
LOEP 6	4/13/00
LOEP 7	1/31/00
LOEP 8	1/31/00
LOEP 9	1/31/00
LOEP 10	1/31/00
LOEP 11	11/30/99
16.0-1	5/11/99
16.0-2	1/31/00
16.0-3	1/31/00
16.0-4	5/10/99
16.0-5	11/30/99
16.0-6	5/10/99
16.1-1	3/27/99
16.2-1	3/27/99
16.2-2	3/27/99
16.2-3	3/27/99
16.3-1	3/27/99
16.5.1-1	3/27/99
16.5.1-2	3/27/99
16.5.2-1	5/11/99
16.5.2-2	5/11/99
16.5.2-3	5/11/99
16.5.2-4	Delete 5/11/99
16.5.2-5	Delete 5/11/99
16.5.3-1	1/31/00
16.5.3-2	3/27/99
16.5.3-3	3/27/99
16.5.4-1	3/27/99
16.5.5-1	3/27/99
16.5.6-1	3/27/99
16.5.7-1	3/27/99
16.5.7-2	3/27/99

4/13/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.9.7-6	Delete
16.9.7-7	Delete
16.9.7-8	Delete
16.9.7-9	Delete
16.9.8-1	6/24/99
16.9.8-2	Delete
16.9.8-3	Delete
16.9.8-4	Delete
16.9.8-5	Delete
16.9.8-6	Delete
16.9.8-7	Delete
16.9.8a-1	3/27/99
16.9.8a-2	3/27/99
16.9.8a-3	3/27/99
16.9.9-1	3/27/99
16.9.9-2	3/27/99
16.9.10-1	3/27/99
16.9.10-2	3/27/99
16.9.11-1	4/13/00
16.9.11-2	4/13/00
16.9.11-3	4/13/00
16.9.11-4	4/13/00
16.9.11-5	4/13/00
16.9.11-6	4/13/00
16.9.11-7	4/13/00
16.9.11-8	4/13/00
16.9.12-1	5/10/99
16.9.12-2	5/10/99
16.9.12-3	5/10/99
16.9.12-4	5/10/99
16.9.12-5	5/10/99
16.9.12-6	5/10/99
16.9.12-7	5/10/99
16.9.12-8	5/10/99
16.9.13-1	3/27/99
16.9.14-1	3/27/99
16.9.15-1	3/27/99
16.9.15-2	3/27/99

4/13/00

16.9 AUXILIARY SYSTEMS

16.9.11 Turbine Building Flood Protection Measures

COMMITMENT Turbine Building Flood Protection Measures shall be OPERABLE as follows:

a. Each CCW Pump Discharge Valve (1,2,3CCW-10 through -13) shall:

1. be capable of being closed remotely,

2. be closed with its breaker open and its handwheel locked, or

3. one of the following conditions shall exist:

a. the unwatering blocks are installed for the associated CCW inlet piping,

b. the associated condensate coolers CCW flowpath is isolated with locked closed valve(s), the associated waterbox inlet valves are locked closed, the crossover tie valves are locked closed, the CCW inlet piping is vented at the high point to disable the first siphon, and the CCW inlet piping is intact inside the Turbine Building, or

c. Keowee lake level is $\leq$ 796.5 ft. absolute and the associated CCW inlet piping is vented at the high point to disable the first siphon.

b. Each Condenser Outlet Valve (1,2,3CCW-20 through -25) shall

1. be capable of closing automatically when all CCW pumps on the applicable unit are tripped to mitigate certain Turbine Building flood conditions,

----------NOTE----------
The condenser outlet valve control switch may be placed in the HAND position, with the valve open, for the purpose of immediately closing the valve, without entering Condition A.
---

2. be closed and capable of being operated manually or automatically,

3. be closed and air locked with air pressure vented and strongback installed,

4. be closed with its operator removed and strongback installed, or

5. one of the following conditions shall exist:

   a. the unwatering blocks are installed for the associated CCW discharge piping, or

   b. Keowee lake level is $\leq$ 791 ft. absolute and the associated CCW discharge piping is vented at the high point to prevent reverse siphon flow.

c. Two flowpaths (one each from two different units) shall be available for reverse gravity flow through the Condensate coolers whenever Keowee lake level is greater than 791 ft.

d. Prior to opening any condenser waterbox access hatch or creating any opening in the CCW or LPSW systems > 24 inches diameter (or multiple openings with equivalent diameter > 24 inches) inside the Turbine Building, an isolation boundary with single barriers shall be established to isolate the opening from the lake using the following methods, as applicable:

   1. Any manual valves > 24 inches diameter used for the isolation boundary shall be locked closed,

   2. Any motor-operated valve > 24 inches diameter used for the isolation boundary shall be closed with its breaker locked open and the handwheel locked,

   3. Any condenser outlet valve used for the isolation boundary shall be closed and air-locked with air pressure vented and strongback installed,

4. A physical barrier, such as unwatering blocks or blank flange, may be used for boundary isolation instead of valves.

e. The Turbine Building/Auxiliary Building boundary wall shall be sealed below Elevation 795 ft. with all water tight doors operable.

f. The Turbine Basement Water Emergency High Level alarm shall be operable.

g. The six foot diameter Turbine Building Flood drain shall be operable.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Turbine Building Flood Protection Measures inoperable.	A.1 ----------NOTE---------- If Turbine Building Flood Protection Measures are inoperable due to planned activities, then these activities shall be performed in a prompt manner without delay. ---------- Initiate action to restore flood protection measures to OPERABLE status. AND	Immediately
	A.2 ----------NOTE---------- Entry into the associated Condition results in unavailability for all three units. ---------- Log unavailability duration in the Operations Log for Maintenance Rule Performance monitoring. AND	None
	A.3 Perform a Risk Assessment using the PRA matrix considering CCW integrity not met for all three units.	None

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.9.11.1	Verify OPERABILITY of Turbine Basement Water Emergency High Level Alarm.	12 months
SR 16.9.11.2	Verify capability to close all four CCW pump discharge valves.	18 months
SR 16.9.11.3	Verify capability to automatically close condenser outlet valves when all CCW pumps are tripped.	18 months

BASES

One of the risk-significant Maintenance Rule functions for the CCW System is to maintain system integrity to prevent or mitigate a Turbine Building flood. The purpose of this Selected Licensee Commitment is to monitor the performance of the major design features associated with this function. To monitor performance of this function, any unavailability must be logged.

The Oconee UFSAR Section 3.4.1.1.1 describes the flood protection measures for the Turbine Building (TB) and Auxiliary Building (AB). These measures are the basis for the commitments in SLC 16.9.11. The flood protection measures were implemented to reduce the overall risk of a Turbine Building flood, as determined by the Oconee Probabilistic Risk Assessment (PRA) study.

Upon detection of a TB flood, operators would trip the CCW pumps which would automatically close all condenser outlet valves. They would also close all CCW pump discharge valves. This may be done using a pushbutton in the control room that closes all four valves on that unit or by closing the valves individually using pushbuttons at the breaker compartment in the Equipment Room. This SLC is intended to ensure that the functional capability of the CCW pump discharge valves and condenser outlet valves will be maintained unless alternative actions have been taken.

In Commitment a, each CCW pump discharge valve shall be capable of being closed remotely, or shall be closed with its breaker open and its handwheel locked. This precludes credit for manual operation of the valves during a flood since there may not be adequate time to take credit for manual operation. Additional options are provided in case the valves cannot be closed remotely, or are not already closed with the breaker open and handwheel locked.

Option 3a requires the unwatering blocks to be installed for the associated CCW inlet piping. Option 3b includes locking closed the condensate coolers CCW flowpath, the waterbox inlet valves, the crossover tie valves, and venting the CCW inlet piping at the high point. Option 3c involves Keowee lake level $\leq$ 796.5 feet absolute with the associated CCW inlet piping vented at the high point to disable the first siphon. The high point may be vented by opening valves or by other means, such as manways. These options provide additional flexibility to allow maintenance to be performed on the CCW pump discharge valves while preventing the possibility of CCW siphoning into the Turbine Building basement.

In Commitment b, additional options are provided to allow maintenance to be performed on the condenser outlet valves. Option 1 allows the valves to be capable of closing automatically when all CCW pumps on the applicable unit are tripped to mitigate certain Turbine Building flood scenarios. Option 2 of Commitment b allows an affected condenser outlet valve to be closed and capable of operating with the control switch in either the HAND or AUTO position. With the valve in the closed position, there is no need for the valve to be capable of automatically closing. The requirement to be "capable of operating..." prevents the valve actuator from being disabled unless one of the other options is met. The Note prior to this option allows the control switch to be placed in the HAND position for the purpose of immediately closing the valve without entering an Action. Option 3 allows a condenser outlet valve to be out of service if the valve is blocked closed with the air supply to the valve operator defeated. Option 4 is similar to Option 3 except that it allows the valve operator to be removed for maintenance if the strongback is installed. Option 5a involves installing the unwatering blocks at the CCW discharge. Option 5b allows the automatic valve operation to be out of service if the lake level is $\leq$ 791 feet absolute and the high point of the discharge piping is vented. Below this lake level, the CCW discharge pipe could not be refilled from the lake. Venting the high point may be accomplished by opening manways or by any available means. Credit cannot be taken for the normally open mid-point vents on the discharge piping, because these vents may not prevent reverse siphon flow.

Options 5a or 5b of Commitment b will make the affected flowpath incapable of applying towards the requirements in Commitment c, which requires two flowpaths for reverse gravity flow. However, Commitment c may still be met using other available flowpaths (e.g., other units).

For Commitment c, if Keowee lake level is greater than 791 ft., reverse gravity flow can be used to provide suction to the LPSW and SSF ASW pumps. An analysis was performed to determine the optimum flowpath to supply suction to these pumps while minimizing any excess flow that would contribute to additional flooding. This analysis determined that flowpaths through one condensate cooler and one flow control valve on each of two units would be optimum. As a result of this analysis, Condensate Coolers CCW Flow Control Valves for Units 2 and 3 (2, 3CCW-84) have been permanently failed open by having their instrument air supplies removed. If either flowpath through Units 2 or 3 will be unavailable, an alternate flowpath should be provided on Unit 1 by failing open 1CCW-84. A flowpath for reverse gravity flow consists of an open condenser discharge header, one failed-open condensate cooler CCW flow control valve, one open condensate cooler, and an open flowpath to the suction of the LPSW and SSF ASW Pumps.

Commitment d is provided to control activities that would create openings in the CCW or LPSW

Systems. These activities are controlled to ensure that such openings are isolated from the lake using physical barriers (e.g., locks) and not just administrative barriers (e.g., valve tags). Per UFSAR Section 3.4.1.1.1, the worst-case flood would involve failure of the expansion joint at the inlet to the condenser. There are other possible failures could lead to a Turbine Building flood. The flood consequences would vary depending upon the size of the opening and other factors. A flood that involved an opening greater than approximately 24 inches diameter may affect the Low Pressure Service Water (LPSW) pumps. Therefore, emphasis is placed on any activities that would create openings in the piping greater than 24 inches diameter. Commitment d requires that an isolation boundary be established on a case-by-case basis prior to opening a condenser waterbox access-hatch and for any openings > 24 inches, including multiple openings equivalent to 24 inches diameter. Single isolation is acceptable, but the isolation boundary must include physical barriers, such as locked closed valves, and not just administrative barriers, such as valve tags. Physical barriers may include blocks or blank flanges. A stoppel plug or wet-tapping machine may also act as a physical barrier. This SLC is intended to address only the isolation of the opening from the lake. This SLC is applicable to the LPSW pump inlet isolation valves: LPSW-1,-2,-3 and 3LPSW-120,-123. Note that the discharge of each LPSW pump is 18"; thus, there are no valves downstream of the pumps within the scope of the SLC.

If Keowee lake level is greater than 791 ft., reverse gravity flow can be used to provide suction to the LPSW and SSF ASW pumps. An analysis was performed to determine the optimum flowpath to supply suction to these pumps while minimizing any excess flow that would contribute to additional flooding. This analysis determined that flowpaths through one condensate cooler and one flow control valve on each of two units would be optimum. As a result of this analysis, Condensate Coolers CCW Flow Control Valves for Units 2 and 3 (2, 3CCW-84) have been permanently failed open by having their instrument air supplies removed. If either flowpath through Units 2 or 3 will be unavailable, an alternate flowpath should be provided on Unit 1 by failing open 1CCW-84.

Commitment f requires that the Turbine Basement Water Emergency High Level alarm shall be operable. The Turbine Basement Water Emergency High Level Alarm consists of a 2 out of 4 logic circuit, which yields 6 different alarm circuit combinations. Operability is based on at least 1 of the 6 alarm circuit combinations being functional.

REFERENCES

1. UFSAR Sections 3.4.1.1.1, 9.2.2, 9.6, and Figure 9-9, 12/31/97 update.
2. Engineering Directives Manual EDM-210, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants or the Maintenance Rule."
3. OSS-0254.00-00-1003, "Design Basis Specification for the Condenser Circulating.Water (CCW) System," Rev. 11.
4. 0SS-0254.00-00-3005, "Design Basis Specification for the Turbine Building Structure," Rev. 1.
5. AP/1,2,3/A/1700/10, "Uncontrollable Flooding of Turbine Building," Approved 4/30/97.
6. Calculation No. C-OSA-SA-83-0002-0, Rev. 0, 3/I/83, "Turbine Building Flood CCW Reverse Flow Analysis."
7. Calculation No. OSC-6522, Rev. 0, 2/29/96, "Turbine Building Flood CCW Reverse Flow Analysis."
8. Calculation No. OSC-6577, Rev. 0, 6/7/96, "CCW Turbine Building Flood Analysis."
9. PT/1,2,3/A/0261/07, "Dam Failure Test."
10. IP/O/B/0235/03. "Turbine Basement Water Level Alarm System Check."
11. Calculation No. 0SC-5771, PRA Risk-Significant SSC's for the Maintenance Rule."
12. Work Process Manual Section 607. "Maintenance Rule Assessment of Equipment Removed From Service".
13. OP/1,2,3/A/1104/12, "Condenser Circulating Water System."
14. Calculation OSC-6081, Rev. 2, CCW Seismic-LOOP Response."
15. Oconee Unit 3 Probabilistic Risk Assessment, Rev. 1, November. 1990.