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

February 7, 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

A001

Bxc: ELL
ONS Document Management

February 7, 2000

To: Manual Holders

Subject: Oconee Selected Licensee Commitments Manual (SLC) Revision

On January 27, 2000, Station Management approved changes to correct typographical and editorial errors in numerous SLCS. These changes were implemented on January 31, 2000.

During the conversion of ITS to Microsoft Word, the proof review identified a number of typographical or editorial errors in SLCs 16.5.3, 16.5.11, 16.6.4, 16.7.2, 16.8.3 - 16.8.8, 16.9.1 - 16.9.5, 16.9.7, 16.10.4, 16.10.7, 16.11.1 - 16.11.9, 16.13.2, 16.13.3 and 16.15.1. These errors were not corrected during the conversion to Microsoft Word since the conversion was not a SLC change.

Remove these pages	Insert these pages
LOEP 1	LOEP 1
LOEP 2	LOEP 2
LOEP 3	LOEP 3
LOEP 4	LOEP 4
LOEP 5	LOEP 5
LOEP 7	LOEP 7
LOEP 8	LOEP 8
LOEP 9	LOEP 9
LOEP 10	LOEP 10
SLC 16.0-2	SLC 16.0-2
SLC 16.0-3	SLC 16.0-3
SLC 16.5.3-1	SLC 16.5.3-1
SLC 16.5.10-2	SLC 16.5.10-2
SLC 16.5.11-1	SLC 16.5.11-1
SLC 16.6.4-5	SLC 16.6.4-5
SLC 16.7.2-1,3	SLC 16.7.2-1,3
SLC 16.8.3-2,3,5,6,7	SLC 16.8.3-2,3,5,6,7
SLC 16.8.4-7,8	SLC 16.8.4-7,8
SLC 16.8.5-2,3,5,	SLC 16.8.5-2,3,5
SLC 16.8.6-2,3,	SLC 16.8.6-2,3
SLC 16.8.7-1	SLC 16.8.7-1
SLC 16.8.8-1	SLC 16.8,8-1
SLC 16.9.1-1,5	SLC 16.9.1-1,5
SLC 16.9.2-1,2,3,4	SLC 16.9.2-1,2,3,4
SLC 16.9.3-1,2	SLC 16.9.3-1,2

SLC 16.9.4-1,2,3,5,	SLC 16.9.4-1,2,3,5
SLC 16.9.5-1	SLC 16.9.5-1
SLC 16.9.7-2,4	SLC 16.9.7-2,4
SLC 16.10.4-1	SLC 16.10.4-1
SLC 16.10.7-3	SLC 16.10.7-3
SLC 16.11.1-1,4,5,7	SLC 16.11.1-4,5,7
SLC 16.11.2-1,3,5,6	SLC 16.11.2-1,3,5,6
SLC 16.11.3-1,2,5,6,7,	SLC 16.11.3-1,2,5,6,7
SLC 16.11.3-8,9,10,12,13,18	SLC 16.11.3-8,9,10,12,13,18
SLC 16.11.4-4,5	SLC 16.11.4-4,5
SLC 16.11.5-1,2,3	SLC 16.11.5-1,2,3
SLC 16.11.6-1,2,9,10,	SLC 16.11.6-1,2,9,10
SLC 16.11.7-1,2,4	SLC 16.11.7-1,2,4
SLC 16.11.8-1,2	SLC 16.11.8-1,2
SLC 16.11.9-2,3	SLC 16.11.9-2,3
SLC 16.13.2-1,2,3	SLC 16.13.2-1,2,3
SLC 16.13.3-1,2	SLC 16.13.3-1,2
SLC 16.15.1-5	SLC 16.15.1-5

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	1/31/00
LOEP 2	1/31/00
LOEP 3	1/31/00
LOEP 4	1/31/00
LOEP 5	1/31/00
LOEP 6	6/24/99
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

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.5.7-3	9/02/99
16.5.7-4	3/27/99
16.5.7-5	3/27/99
16.5.7-6	9/02/99
16.5.8-1	3/27/99
16.5.8-2	3/27/99
16.5.9-1	3/27/99
16.5.9-2	3/27/99
16.5.10-1	5/11/99
16.5.10-2	1/31/00
16.5.11-1	1/31/00
16.5.12-1	3/27/99
16.5.13-1	3/27/99
16.5.13-2	12/01/99
16.5.13-3	12/01/99
16.6.1-1	3/27/99
16.6.1-2	3/27/99
16.6.1-3	3/27/99
16.6.1-4	3/27/99
16.6.1-5	3/27/99
16.6.2-1	3/27/99
16.6.2-2	3/27/99
16.6.2-3	3/27/99
16.6.2-4	3/27/99
16.6.2-5	3/27/99
16.6.2-6	3/27/99
16.6.2-7	3/27/99
16.6.2-8	3/27/99
16.6.2-9	3/27/99
16.6.2-10	3/27/99
16.6.2-11	3/27/99
16.6.2-12	3/27/99
16.6.3-1	3/27/99
16.6.4-1	3/27/99
16.6.4-2	3/27/99

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.6.4-3	3/27/99
16.6.4-4	3/27/99
16.6.4-5	1/31/00
16.6.4-6	3/27/99
16.6.5-1	3/27/99
16.6.6-1	3/27/99
16.6.7-1	3/27/99
16.6.8-1	3/27/99
16.6.9-1	3/27/99
16.6.9-2	3/27/99
16.6.10-1	3/27/99
16.6.10-2	3/27/99
16.6.10-3	3/27/99
16.6.12-1	3/27/99
16.6.12-2	3/27/99
16.6.12-3	3/27/99
16.6.12-4	3/27/99
16.6.12-5	3/27/99
16.6.12-6	3/27/99
16.6.12-7	3/27/99
16.7.1-1	3/27/99
16.7.1-2	3/27/99
16.7.2-1	1/31/00
16.7.2-2	3/27/99
16.7.2-3	1/31/00
16.7.3-1	3/27/99
16.7.3-2	3/27/99
16.7.4-1	3/27/99
16.7.5-1	10/04/99
16.7.5-2	3/27/99
16.7.5-3	10/04/99
16.7.5-4	10/04/99
16.7.6-1	3/27/99
16.7.7-1	3/27/99
16.7.7-2	3/27/99
16.7.8-1	3/27/99

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.7.8-2	3/27/99
16.7.9-1	3/27/99
16.7.10-1	3/27/99
16.7.10-2	3/27/99
16.7.11-1	3/27/99
16.7.11-2	3/27/99
16.7.11-3	3/27/99
16.7.12-1	3/27/99
16.7.12-2	3/27/99
16.7.13-1	3/27/99
16.7.13-2	3/27/99
16.7.13-3	6/29/99
16.8.1-1	3/27/99
16.8.1-2	3/27/99
16.8.2-1	3/27/99
16.8.3-1	3/27/99
16.8.3-2	1/31/00
16.8.3-3	1/31/00
16.8.3-4	3/27/99
16.8.3-5	1/31/00
16.8.3-6	1/31/00
16.8.3-7	1/31/00
16.8.4-1	9/18/99
16.8.4-2	9/18/99
16.8.4-3	9/18/99
16.8.4-4	9/18/99
16.8.4-5	9/18/99
16.8.4-6	9/18/99
16.8.4-7	1/31/00
16.8.4-8	1/31/00
16.8.5-1	9/30/99
16.8.5-2	1/31/00
16.8.5-3	1/31/00
16.8.5-4	9/30/99
16.8.5-5	1/31/00
16.8.6-1	3/27/99
16.8.6-2	1/31/00

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.8.6-3	1/31/00
16.8.7-1	1/31/00
16.8.8-1	1/31/00
16.9.1-1	1/31/00
16.9.1-2	3/27/99
16.9.1-3	3/27/99
16.9.1-4	3/27/99
16.9.1-5	1/31/00
16.9.2-1	1/31/00
16.9.2-2	1/31/00
16.9.2-3	1/31/00
16.9.2-4	1/31/00
16.9.3-1	1/31/00
16.9.3-2	1/31/00
16.9.4-1	1/31/00
16.9.4-2	1/31/00
16.9.4-3	1/31/00
16.9.4-4	3/27/99
16.9.4-5	1/31/00
16.9.5-1	1/31/00
16.9.5-2	4/29/99
16.9.5-3	4/29/99
16.9.5-4	11/30/99
16.9.6-1	3/27/99
16.9.6-2	3/27/99
16.9.6-3	3/27/99
16.9.6-4	3/27/99
16.9.6-5	3/27/99
16.9.6-6	3/27/99
16.9.6-7	3/27/99
16.9.6-8	3/27/99
16.9.6-9	11/30/99
16.9.7-1	6/24/99
16.9.7-2	1/31/00
16.9.7-3	6/24/99
16.9.7-4	1/31/00
16.9.7-5	Delete

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.9.15-3	3/27/99
16.9.16-1	3/27/99
16.9.16-2	3/27/99
16.9.16-3	3/27/99
16.9.17-1	3/27/99
16.9.17-2	3/27/99
16.9.18-1	3/27/99
16.9.18-2	3/27/99
16.9.18-3	3/27/99
16.9.18-4	3/27/99
16.9.18-5	3/27/99
16.9.18-6	3/27/99
16.9.18-7	3/27/99
16.9.18-8	3/27/99
16.10.1-1	3/27/99
16.10.1-2	3/27/99
16.10.1-3	3/27/99
16.10.2-1	3/27/99
16.10.3-1	3/27/99
16.10.3-2	3/27/99
16.10.4-1	1/31/00
16.10.5-1	3/27/99
16.10.6-1	3/27/99
16.10.7-1	4/29/99
16.10.7-2	4/29/99
16.10.7-3	1/31/00
16.10.7-4	4/29/99
16.10.7-5	4/29/99
16.10.7-6	4/29/99
16.10.7-7	4/29/99
16.10.7-8	4/29/99
16.10.7-9	4/29/99
16.11.1-1	1/31/00
16.11.1-2	3/27/99
16.11.1-3	3/27/99
16.11.1-4	1/31/00
16.11.1-5	1/31/00

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.11.1-6	3/27/99
16.11.1-7	1/31/00
16.11.2-1	1/31/00
16.11.2-2	3/27/99
16.11.2-3	1/31/00
16.11.2-4	3/27/99
16.11.2-5	1/31/00
16.11.2-6	1/31/00
16.11.3-1	1/31/00
16.11.3-2	1/31/00
16.11.3-3	3/27/99
16.11.3-4	3/27/99
16.11.3-5	1/31/00
16.11.3-6	1/31/00
16.11.3-7	1/31/00
16.11.3-8	1/31/00
16.11.3-9	1/31/00
16.11.3-10	1/31/00
16.11.3-11	3/27/99
16.11.3-12	1/31/00
16.11.3-13	1/31/00
16.11.3-14	3/27/99
16.11.3-15	3/27/99
16.11.3-16	3/27/99
16.11.3-17	3/27/99
16.11.3-18	1/31/00
16.11.4-1	3/27/99
16.11.4-2	9/01/99
16.11.4-3	3/27/99
16.11.4-4	1/31/00
16.11.4-5	1/31/00
16.11.4-6	3/27/99
16.11.5-1	1/31/00
16.11.5-2	1/31/00
16.11.5-3	1/31/00
16.11.6-1	1/31/00

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.11.6-2	1/31/00
16.11.6-3	3/27/99
16.11.6-4	3/27/99
16.11.6-5	3/27/99
16.11.6-6	3/27/99
16.11.6-7	3/27/99
16.11.6-8	3/27/99
16.11.6-9	1/31/00
16.11.6-10	1/31/00
16.11.7-1	1/31/00
16.11.7-2	1/31/00
16.11.7-3	3/27/99
16.11.7-4	1/31/00
16.11.8-1	1/31/00
16.11.8-2	1/31/00
16.11.9-1	3/27/99
16.11.9-2	1/31/00
16.11.9-3	1/31/00
16.11.10-1	6/30/99
16.11.10-2	3/27/99
16.11.11-1	3/27/99
16.11.12-1	3/27/99
16.11.12-2	3/27/99
16.11.13-1	3/27/99
16.11.13-2	3/27/99
16.11.14-1	3/27/99
16.11.14-2	3/27/99
16.12.1-1	3/27/99
16.12.2-1	3/27/99
16.12.3-1	3/27/99
16.12.4-1	3/27/99
16.12.5-1	3/27/99
16.13.1-1	11/30/99
16.13.1-2	11/30/99
16.13.1-3	11/30/99
16.13.1-4	11/30/99

1/31/00

Oconee Nuclear Station
Selected Licensee Commitments
List of Effective Pages

Page	Revision Date
16.13.1-5	11/30/99
16.13.1-6	11/30/99
16.13.1-7	11/30/99
16.13.1-8	11/30/99
16.13.2-1	1/31/00
16.13.2-2	1/31/00
16.13.2-3	1/31/00
16.13.3-1	1/31/00
16.13.3-2	1/31/00
16.13.4-1	3/27/99
16.13.5-1	Delete
16.13.5-2	Delete
16.13.6-1	3/27/99
16.13.7-1	10/11/99
16.13.8-1	3/27/99
16.13.9-1	3/27/99
16.13.9-2	3/27/99
16.13.10-1	3/27/99
16.13.11-1	3/27/99
16.14.1-1	3/27/99
16.14.2-1	3/27/99
16.14.2-2	3/27/99
16.14.3-1	3/27/99
16.14.4-1	3/27/99
16.15.1-1	3/27/99
16.15.1-2	3/27/99
16.15.1-3	3/27/99
16.15.1-4	3/27/99
16.15.1-5	1/31/00
16.15.2-1	3/27/99
16.15.2-2	3/27/99
16.15.2-3	3/27/99
16.15.2-4	3/27/99
16.15.3-1	3/27/99
16.15.3-2	3/27/99

1/31/00

TABLE OF CONTENTS (continued)

16.5 REACTOR COOLANT SYSTEM (RCS)

16.5.3 Loss of Decay Heat Removal

COMMITMENT The following conditions shall be met:

a. Conduct a containment closure survey to identify containment penetrations that would need to be closed in the event of a loss of decay heat removal capability and to ensure that containment closure can be achieved within 2 1/2 hours,

b. Two operable core exit thermocouple indications and alarm shall be available. The core exit temperature shall be monitored and recorded at least once every two hours,

c. The LT-5 Reactor vessel level indication system shall be available and operable.

d. An ultrasonic Reactor vessel level detection system, or other backup level indicating system, shall be available and operable in addition to LT-5.

e. Both Main Feeder Buses (MFB) shall be energized.

f. Two sources of power shall be available to supply the Main Feeder buses.

g. Two of the following means of adding inventory to the RCS are available and operable:

   1. A gravity flow path from the BWST

   2. One Bleed Transfer Pump (BTP) and connecting piping

   3. A High Pressure Injection (HPI) pump

h. Both steam generators upper primary side handhole covers shall be removed or equivalent RCS vent path opened..

BASES

The requirement(s) of this SLC section were relocated from the CTS 3.1.6.2, 3.1.6.6, and 3.1.6.9 during the conversion to ITS

Water inventory balances, radiation monitoring equipment, boric acid crystalline deposits, and physical inspections can disclose reactor coolant leaks (Refs. 1, 2, and 4). Any leak of radioactive fluid, whether from the reactor coolant system primary boundary or not can be a serious problem with respect to in-plant radioactivity contamination and cleanup or it could develop into a still more serious problem; and therefore, first indications of such leakage will be followed up as soon as practicable.

Although some leak rates on the order of GPM may be tolerable from a dose point of view, especially if they are to closed systems, it must be recognized that leaks in the order of drops per minute through any of the walls of the primary system could be indicative of materials failure such as by stress corrosion cracking. If depressurization, isolation and/or other safety measures are not taken promptly, these small breaks could develop into much larger leaks, possibly into a gross pipe rupture. Therefore, the nature of the leak, as well as the magnitude of the leakage must be considered in the safety evaluation. The safety evaluation shall assure that the exposure of offsite personnel to radiation is within the guidelines of 10 CFR 20.

The upper limit of 30 gpm, which includes RCS LEAKAGE (Ref. 3), is based on the contingency of a complete loss of station power. A 30 gpm loss of water in conjunction with a complete loss of station power and subsequent cooldown of the reactor coolant system by the turbine bypass system (set at 1,040 psia) and steam driven emergency feedwater pump would require more than 60 minutes to empty the pressurizer from the combined effect of system leakage and contraction. This will be ample time to restore electrical power to the station and makeup flow to the reactor coolant system (Ref. 2).

REFERENCES

1. UFSAR, Section 3.1.16 and 3.1.17.

2. UFSAR, Section 5.2.3.10.3 and 5.2.3.10.5.

3. ITS 3.4.13, "RCS Operational LEAKAGE."

4. Generic Letter 88-05, "BORIC ACID CORROSION OF CARBON STEEL REACTOR PRESSURE BOUNDARY COMPONENTS IN PWR PLANTS," dated March 17, 1988.

16.5 REACTOR COOLANT SYSTEM (RCS)

16.5.11 Subcriticallity

COMMITMENT The reactor shall be maintained subcritical by an amount greater than or equal to the calculated reactivity insertion due to depressurization.

APPLICABILITY: MODE 2 and 3 with Tavg < 525°F
MODE 4, 5, and 6

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Commitment not met.	A.1	Be in MODE 3.	12 hours
	AND		
	A.2	Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.5.11.1	N/A	N/A

BASES

The requirement(s) of this SLC section were relocated from CTS 3.1.3.3 during the conversion to ITS.

The potential reactivity insertion due to the moderator pressure coefficient that could result from depressurizing the coolant from 2100 psia to saturation pressure of 900 psia is approximately 0.1% Δk/k.

If the specified shutdown margin is maintained, there is no possibility of an accidental criticality as a result of a decrease of coolant pressure.

REFERENCES

N/A

Because recirculation would not be required for some accidents, and because an affected train might be needed prior to beginning recirculation, physically securing an affected train may not always be the best method for controlling leakage. Example 2 below illustrates this point. Situations in which more complex provisions are necessary should be addressed by a procedure.

The basis for these requirements is that-leakage above 2 gph could cause the offsite doses during an accident to exceed those which have been evaluated in the UFSAR. Because of the high concentration of fission products assumed to be present in the primary coolant after a large break LOCA significant offsite dose is associated with even small amounts of primary coolant leakage outside containment.

These practices, and the examples below, represent a conservative application of this SLC during operation in MODES 1, 2, 3 or 4, when ITS LCO 3.5.3 also applies. The 2 gph limit is relatively restrictive. Therefore, the Compliance Section should be contacted when marginal rates of LPI System leakage could cause a unit shutdown.

Example 1:
During power operation with the LPI pumps not running, leakage around the shaft of the 'A' LPI pump is observed. The leakage is determined to be about 3 gph (from BWST head). To repair the leakage, the pump must be isolated.

The required action is to declare LPI Train 'A' out of service, and to enter the 72 hour Required Action A.1 for ITS 3.5.3. In addition, the A' pump must be isolated.

Example 2:
During power operation with the LPI pumps not running, leakage is observed around the packing of LP-9. The leakage is determined to be about 1 gph. It is also determined that this leakage would exceed 2 gph at 350 psig, but be less than 2 gph at 59 psig. Repairs do not require isolating LP-9.

The required action is to declare LPI Train 'A' out of service, and to enter the 72 hour Required Action A.1 for ITS 3.5.3. Action must also be taken to control the leakage. Because isolating LP-9 is not necessary for repairs, it is preferable to leave the 'A' LPI train aligned for ES actuation even though it is declared out of service. To prevent leakage in excess of 2 gph in recirculation mode, verbal instructions and a turnover sheet item could be provided to turn off the 'A' LPI pump, prior to initiating the recirculation mode during an accident.

Example 3:
During power operation, the 3/8" line between LP-38 and LP-39 (PALS LINE ISOLATION VALVES) becomes disconnected. Leakage which would exceed 2 gph at 350 psig is observed coming from both directions (i.e., > 2 gph from 'A' and > 2 gph from 'B' The leakage cannot be controlled by closing LP-38 and LP-39.

The required action is to enter ITS LCO 3.0.3, and to attempt to reduce leakage.

16.7 INSTRUMENTATION

16.7.2 Anticipated Transients Without Scram

COMMITMENT The ATWS Mitigation Systems Actuation Circuitry (AMSAC) and Diverse Scram System (DSS) shall be OPERABLE.

APPLICABILITY: MODE 1,
MODE 2 when Keff ≥ 1.0

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or both channels of AMSAC inoperable.	A.1 Restore AMSAC to OPERABLE status.	7 days
B. One or both channels of DSS inoperable.	B.1 Restore DSS to OPERABLE status.	7 days
C. Required Action and associated Completion Time not met.	----------NOTE---------- When initiated, the Required Action must be completed. ---------- C.1 Submit a written report to the NRC outlining the cause of the channel(s) or system(s) malfunction and the plans for restoring the channel(s) or system(s) to OPERABLE status.	30 days

An Actuation Test consists of a complete test from input sensors through output actuation relays.

REFERENCES:

1. Code of Federal Regulations, Section 10 CFR 50.62, "The ATWS Rule". |
2. B&WOG Generic ATWS Design Basis Document 47-1159091-00, October 9, 1985.
3. NRC Safety Evaluation Report on 47-1159091, June 30, 1988.
4. AMSAC and DSS Final Design Description, August 30, 1988.
5. NRC Safety Evaluation Report for Final Design of Oconee ATWS Modification (TACs 59119/59120/59121), November 29, 1989. |

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. A single battery inoperable.	B.1	Declare associated distribution center (1DP, 2DP, or 3DP) inoperable.	Immediately
	AND		
	B.2	----------NOTE---------- Not required when associated buses (PA or PB) are cross-tied for all ONS units. ----------	
		Declare Turbine Driven Emergency Feedwater (TDEFW) System and Anticipated Transients Without Scram (ATWS) System inoperable.	Immediately
	AND		
	B.3	Initiate action to cross-tie the associated buses (PA or PB) for all ONS Units.	Immediately

CONDITION	REQUIRED ACTION		COMPLETION TIME
C. Two or more batteries inoperable.	C.1	Declare associated distribution center (1DP, 2DP, or 3DP) inoperable.	Immediately
	AND		
	C.2	Declare Turbine Driven Emergency Feedwater (TDEFW) System and Anticipated Transients Without Scram (ATWS) System inoperable.	Immediately
D. One battery charger inoperable.	D.1	Initiate action to connect the standby charger to the associated bus.	Immediately
E. Electrolyte level < minimum or > maximum level indication marks.	E.1	Restore electrolyte level to within limits.	90 days
F. Battery cell float voltage < 2.13 Volts and ≥ 2.06 Volts.	F.1	Restore cell float voltage to within limits.	90 days
G. Required Action and associated Completion Time not met.	G.1	Declare associated battery inoperable.	Immediately

BASES

BACKGROUND

This SLC on the 250VDC Power Battery cell parameters utilizes the limits on electrolyte level, float voltage, and temperature for the 250VDC Power Batteries to determine OPERABILITY of the batteries. Float voltage is the voltage that is required to be continuously applied to the battery which is sufficient to maintain a constant state of charge. The limits for the designated pilot cell's float voltage, electrolyte level, and temperature is characteristic of a charged cell with adequate capacity. The limits for each connected cell's float voltage, electrolyte level and temperature ensures the OPERABILITY and capability of the battery.

In addition, the SLC provides the required actions for restoring the system to an OPERABLE status should a battery or charger become inoperable.

APPLICABLE SAFETY ANALYSIS

The 250VDC Power Batteries provide DC power for the Turbine Driven Emergency Feedwater (TDEFW) System. The OPERABILITY of the 250VDC Power Batteries is required to ensure the OPERABILITY and the capability of the TDEFW system. The TDEFW system is required to be OPERABLE in accordance with ITS 3.7.5 In addition, the Anticipated Trip Without Scram (ATWS) system is supported by the power batteries. Selected Licensee Commitment 16.7.2 provides the OPERABILITY requirements of the ATWS system. In order to maintain the required 250VDC Power Batteries OPERABLE, battery cell parameters must be maintained within specific limits.

APPLICABILITY

The Power Battery cell parameters are required to be within limits when the associated DC sources are required to be OPERABLE.

ACTIONS

The pilot cells are monitored closely as a measure of battery performance. Because pilot cells lose more electrolyte than the other cells, the designation of the pilot cell should be rotated among all cells in the battery. The Completion Times are based on engineering judgment considering operating experience, and the time required to complete the Required Actions.

A.1

If the electrolyte level is below the top of the cell plates, the entire battery is conservatively assumed to be inoperable, because the cell's discharge capacity would be reduced, and the plates may suffer permanent damage. The battery may be restored to OPERABLE status by restoring the electrolyte level in accordance with the Required Actions of the SLC.

If the float voltage of a battery cell is < 2.06 volts, the battery is assumed to be inoperable, because battery voltage may not be adequate to carry required loads. The battery may be restored to OPERABLE status by restoring the float voltage to ≥ 2.06 volts in accordance with the Required Actions of the SLC.

If the electrolyte temperature of a connected cell is < 60°F, the associated battery must be declared inoperable and the Required Actions taken as appropriate. With temperature < 60°F, the battery's capability may not be sufficient to meet the design basis load demand.

If no battery charger is available to a battery, then the associated battery shall be declared inoperable. The associated DC buses on all ONS units can be cross-tied to ensure OPERABILITY of the system.

B.1, B.2, and B.3

If a single battery is inoperable, then the associated DC buses (PA or PB) on all ONS units can be cross-tied to ensure OPERABILITY of the system. The TDEFW system and ATWS are considered OPERABLE in this configuration. If the DC buses are not cross-tied then the associated distribution center (1DP, 2DP, or 3DP) is inoperable. The TDEFW system and ATWS on the associated unit are NOT considered OPERABLE in this configuration.

C.1 and C.2

If two or more batteries are inoperable, then the associated distribution centers (1DP. 2DP, or 3DP) are inoperable. The TDEFW system and ATWS on the associated units are NOT considered OPERABLE in this configuration. Inadequate battery capacity is available to operate the PA or PB buses cross-tied with two PA or two PB batteries unavailable. In addition, excessive fault current (greater than protective device ratings) is available with a PA and PB battery unavailable and both PA and PB buses cross-tied.

D.1

If a battery charger is inoperable, then the Standby Charger can be connected to the associated DC bus to ensure OPERABILITY of the system. The TDEFW system and ATWS are considered OPERABLE in this configuration.

E.1

The limits on electrolyte level ensures no physical damage to the plates occurs and adequate electron transfer capability is maintained.

F.1

A float voltage limit of greater than or equal to 2.13 volts will ensure the cell remains fully charged with adequate capacity.

G.1

If the appropriate parameters cannot be restored in accordance with the Required Actions, the associated battery is assumed to be inoperable.

SURVEILLANCE REQUIREMENTS

SR 16.8.3.1

This Surveillance is consistent with the recommendations of Reference 1. The reference indicates that the battery be demonstrated to meet limits on a regularly scheduled interval.

SR 16.8.3.2

This Surveillance is consistent with the recommendations of Reference 1. An adequate electrolyte level ensures that there will be a proper conductivity and capacity of the battery cell.

SR 16.8.3.3

This Surveillance is consistent with the recommendations of Reference 1. A minimum voltage is established to ensure adequate voltage to maintain cells in a constant state of charge.

SR 16.8.3.4

This Surveillance is consistent with the recommendations of Reference 1 and the battery manufacturers. An adequate electrolyte level ensures that there will be a proper conductivity path and capacity of the battery cell.

SR 16.8.3.5

This Surveillance is consistent with the recommendations of Reference 1. The electrolyte must be maintained above a minimum temperature for the battery to deliver designed power.

REFERENCES:

1. A IEEE Standard 450-1975, Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations.
2. ITS 3.7.5, Emergency Feedwater System.
3. Selected Licensee Commitment 16.7.2, Anticipated Transient Without Scram.

BACKGROUND

Portions of this SLC are relocated from CTS 3.7.1 TS Note 3.

During periods of commercial power generation, the OPERABILITY of the Keowee Hydro units shall be based on lake levels and the power level of the Keowee Hydro units. The Keowee Hydro operating restrictions for commercial power generation shall be contained in the ONS Selected Licensee Commitment manual.

This SLC is used to determine Keowee Hydro unit OPERABILITY as an Oconee Emergency Power source when Keowee is generating to the commercial grid. It specifies the range of acceptable Keowee lake and tailrace elevations for various Keowee power generation levels. The acceptable region of the operating restrictions was determined by reference 1.

Figure 16.8.4-1 specifies the maximum operating limits of Keowee Hydro unit 1. This refers to occasions when Keowee unit 1 is operating and Keowee unit 2 is not operating. This figure allows for operation of Keowee Hydro unit 1 at a maximum of 85MW. Also, any operation of Keowee Hydro unit 1 below 85MW is allowed in accordance with this figure. Figure 16.8.4-2 allows for operation of Keowee unit 1 at a maximum of 75 MW. Also, any operation of Keowee Hydro unit 1 below 75 MW is allowed in accordance with this figure.

Figure 16.8.4-3 is applicable only for single unit operation of Keowee unit 2. This refers to occasions when Keowee unit 2 is operating and Keowee unit 1 is not operating. This figure allows for operation of Keowee Hydro unit 2 at a maximum of 85 MW. Also, any operation of Keowee Hydro unit 2 below 85 MW is allowed in accordance with this figure. Figure 16.8.4-4 allows for operation of Keowee unit 2 at a maximum of 75 MW. Also, any operation of Keowee Hydro unit 2 below 75 MW is allowed in accordance with this figure.

Figure 16.8.4-5 applies to simultaneous commercial generation with both Keowee units. In Figure 16.8.4-5, commercial generation is allowed up to a maximum of 79MW.

The lake levels on the operating charts are operating lake levels. Therefore, verification that the operation of the Keowee Hydro units is within the acceptable region of the charts will have to be performed during operation of the Keowee Hydro units.

Each figure has a recommended start-up area. This gives the Operator guidance on forebay and tailrace levels which are appropriate for starting the Keowee units. Once the unit is generating, and has successfully entered the operating envelope, forebay and tailrace levels may vary from the start-up area.

APPLICABLE SAFETY ANALYSIS

The Keowee Hydro units provide emergency power for Oconee Nuclear Station on the appropriate emergency power path. The OPERABILITY of the Keowee Hydro units is required to ensure the OPERABILITY and the capability of the Emergency Power System. Nuclear Station Modification (NSM) ON-52966 installed Frequency protection and revised the runaway governor protection logic circuits which ensure the OPERABILITY of the Keowee Hydro units

during periods of commercial generation. This SLC will ensure that the Keowee Hydro units are operated within the acceptable limits.

APPLICABILITY

During periods of commercial power generation, the Keowee Hydro units are required to be within the acceptable regions of the operating restrictions when one or more Oconee Nuclear units are in MODES 1, 2, 3 or 4.

ACTIONS

The OPERABILITY of the Keowee Hydro units during periods of commercial generation is ensured when the Keowee Hydro units operate within the acceptable region of Figures 16.8.4-1, 16.8.4-2, 16.8.4-3, 16.8.4-4, and 16.8.4-5.

A.1

If the Keowee Hydro units are determined to be outside the limits of the acceptable region, action will be taken to restore commercial generation of the Keowee Hydro units to within the limits of the acceptable region. In addition, the applicable ITS Condition shall be entered since the Keowee Hydro unit may not be able to perform its design function. Once the commercial operation of the Keowee Hydro unit(s) is restored to within the limits of the acceptable region, the ITS Condition shall be exited. It is not necessary to perform an OPERABILITY test of Keowee Hydro units prior to exiting the Condition as long as no maintenance is performed on the units in order to return them to an acceptable operating region.

SURVEILLANCE REQUIREMENTS

SR 16.8.4.1

This surveillance will ensure that the operating conditions are within the limits of the acceptable region of the operating restrictions in Figures 16.8.4-1, 16.8.4-2, 16.8.4-3, 16.8.4-4, and 16.8.4-5 during commercial generation by the Keowee Hydro units. Since the lake levels in Figures 16.8.4-1, 16.8.4-2, 16.8.4-3, 16.8.4-4, and 16.8.4-5 are operating lake levels, verification that the operation of the Keowee Hydro units is within the acceptable regions will be performed during operation of the Keowee Hydro units.

REFERENCES:

1. Calculation KC-UNIT1-2-0106
2. 04/19/95 letter from J. W. Hampton to the NRC, "Response to NRC Questions on the Proposed Emergency Power Modification Action Plan."
3. 03/15/95 letter from J. W. Hampton to the NRC, "Proposed Emergency Power Modification Action Plan."
4. 08/15/95 letter from the NRC to J. W. Hampton, "Issuance of Amendments."
5. 03/20/97 Safety Evaluation Report from the NRC to add OPERABILITY requirements and surveillances to the Technical Specifications.

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Ground resistance < 2.8V to ground (≤ 500 Ohms).	C.1 Initiate efforts to locate the ground. AND C.2 Perform engineering evaluation of safety system vulnerability to the ground using the available data. AND C.3 Request Plant Operations Review Committee (PORC) approval of the evaluation.	24 hours from receipt of continuous ground alarm 7 days from receipt of continuous ground alarm 7 days from receipt of continuous ground alarm
D. Ground resistance ≥ 2.8V and < 6V (> 500 Ohms and ≤ 2,000 Ohms).	D.1 Initiate efforts to locate the ground. AND D.2 If ground is not located, perform engineering evaluation of safety system vulnerability to the ground using the available data. AND D.3 Request PORC approval of the evaluation.	48 hours from receipt of continuous ground alarm 14 days from receipt of continuous ground alarm 14 days from receipt of continuous ground alarm

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Ground resistance ≥ 6V and ≤ 18V (> 2,000 Ohms and ≤ 10,000 Ohms).	E.1 Initiate efforts to locate the ground. AND	128 hours from receipt of continuous ground alarm
	E.2 If ground is not located, perform engineering evaluation of safety system vulnerability to the ground using the available data. AND	728 hours from receipt of continuous ground alarm
	E.3 Request PORC approval of the evaluation.	728 hours from receipt of continuous ground alarm

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.8.5.1	NA	NA

BASES

BACKGROUND

The DC ground locating process was identified as a weakness in NRC Inspection Report 50-269,270,287/93-26. During December 1993, a pressure switch failed which resulted in a ground on the DC system and the inoperability of the 2A Motor Driven Emergency Feedwater Pump. This inoperability exceeded the allowed outage time in the CTS and resulted in NRC Violation 50-270/94-08-02. The response to this violation indicated that guidelines would be developed for locating a DC ground, evaluating the significance of the ground, and removing the ground. The guidelines have been developed and are contained in this SLC.

located within 7 days after the receipt of a continuous ground alarm, or an evaluation of the safety system vulnerability using the available ground data will be performed. This 7 day action statement is based on 24 hours to initiate the locating efforts and 6 days to locate the ground or perform an evaluation. The Plant Operations Review Committee (PORC) will be contacted to approve the evaluation.

D.1

If the ground magnitude is determined to be > 500 Ohms and ≤ 2,000 Ohms, then fewer relays are vulnerable. Locating efforts will begin within 40 hours. This is based on a total time period of 48 hours from receipt of the ground alarm until locating efforts begin (40 hours plus the initial 8 hours). If determination of ground magnitude is delayed due to extenuating circumstances as described above, ground locating efforts will begin within 40 hours after the 8 hour period for determination of the ground magnitude. The ground will be located within 14 days after the buses are separated, or an evaluation of the safety system vulnerability using the available ground data will be performed. This 14 day action statement is based on 48 hours to initiate the locating efforts and 12 days to locate the ground or perform an evaluation. The PORC will be contacted to approve the evaluation.

E.1

If the ground magnitude is determined to be > 2,000 Ohms and ≤ 10,000 Ohms, then locating efforts will begin within 128 hours. If determination of ground magnitude is delayed due to extenuating circumstances as described above, ground locating efforts will begin within 5 days after the 8 hour period for determination of the ground magnitude. The ground will be located within 728 hours after receipt of a continuous ground alarm, or an evaluation of the safety system vulnerability using the available ground data will be performed. This 728 hour action statement is based on 5 days and 8 hours to initiate the locating efforts and 25 days to locate the ground or perform an evaluation. The PORC will be contacted to approve the evaluation.

REFERENCES:

1. LER 270/94-01 dated March 10, 1994, "Technical Specification Limit Exceeded Due to Equipment Failure."
2. NRC Inspection Report 50-269,270,287/93-26.
3. NRC Inspection Report 50-269,270,287/94-08.
4. 5/11/94 letter from J. W. Hampton to NRC Document Control Desk, "Reply to Notice of Violation."
5. 6/23/94 letter from J. W. Hampton to NRC Document Control Desk, "Reply to Notice of Violation."
6. 2/9/95 memo from L. S. Underwood to C. A. Little, "DC Ground Locating Policy."

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. CT-5 is not available within one hour of demand. OR 100 kV power path from Lee is not available within one hour of demand. OR Both SL breakers are not available within one hour of demand.	B.1 ----------NOTE---------- Lee/Central Power System is considered unavailable as input to Maintenance Rule Risk Assessment and Unavailability Monitoring. ---------- Log unavailability in the Operations Log.	NA
C. Power from a LCT is lost while supplying power to the Standby Buses. OR Failure of a required LCT to start within one hour of demand.	C.1 ----------NOTE---------- LCT is considered to have had a run failure as input into Maintenance Rule Failure Monitoring. ---------- Log unavailability in Operations Log.	NA

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.8.6.1	Verify with Lee Steam Station the availability status of required LCTs for supplying power to the Standby Buses.	24 hours

BASES

BACKGROUND

The three Lee Combustion Turbines 4C, 5C, and 6C; the separated 100 kv line through CT-5; and the SL Breakers serve as an alternate electrical power source for Oconee Nuclear Station when its on-site emergency power sources are unavailable. Only one Lee Combustion Turbine and one SL Breaker are required to supply hot shutdown loads for two Oconee units plus LOCA loads for one Oconee unit. The availability of two Lee Combustion Turbines allows for redundancy.

ACTIONS

With less than two Lee Combustion Turbines or its separated power path available within one hour of the loss of both on-site emergency power paths, the Oconee units are more susceptible to a station blackout event (SBO). Adherence to Maintenance Rule Risk Assessment guidelines reduces the probability of a blackout event and increases the availability of SBO mitigation equipment. Unavailability of this equipment is logged in the Operations Log. Requirements for energizing the Oconee Standby busses are found in the ITS.

SURVEILLANCE REQUIREMENTS

The surveillance requires daily communication between Lee and Oconee, keeping Oconee personnel informed of the availability of the Lee Combustion Turbines for supplying power to the Oconee Standby Buses.

REFERENCES

1. Oconee Nuclear Station ITS 3.8.
2. Work Process Manual Section 607, "Maintenance Rule Assessment of Equipment Removed From Service."
3. OSC-5771 "PRA Risk Significant SSC's for the Maintenance Rule."
4. 0SS-0254.00-00-2011 100KV Alternate Power System Design Basis Document.

16.8 ELECTRIC POWER SYSTEMS

16.8.7 Auctioneering Diodes

COMMITMENT Perform specified SR.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. N/A	A.1 N/A.	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.8.7.1	Verify peak inverse voltage capability of each I&C auctioneering diode is within limits.	184 days

BASES

The requirement(s) of this SLC section were relocated from CTS SR 3.7.8.2 during the conversion to ITS.

Each panelboard receives its DC power through an auctioneering network of two isolating diode assemblies. One assembly is supplied from the unit's 125 volt distribution system, and the other assembly is supplied from another unit's (the backup unit) 125VDC Vital Distribution System. The diode assemblies permit the two distribution systems to supply current to the Vital I&C DC Panelboard connected to the output of the diode assemblies, and block the flow of current from one DC distribution system to the other. Measuring peak inverse voltage capability of each auctioneering diode ensures the diodes are capable of isolating a fault on one source from the other source. The 184 day Frequency is based on engineering judgement and operating experience.

REFERENCES

N/A

16.8 ELECTRIC POWER SYSTEMS

16.8.8 External Grid Trouble Protection System

COMMITMENT Perform specified SR.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. N/A	A.1 N/A.	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.8.8.1	Verify the External Grid Trouble Protection System logic provides an isolated power path between Keowee and Oconee.	92 days

BASES

The requirement(s) of this SLC section were relocated from CTS 4.6.5 during the rewrite of CTS 3.7 (Amendment Nos. 232, 232, and 231).

REFERENCES

N/A

16.9 AUXILIARY SYSTEMS

16.9.1 Fire Suppression Water Supply Systems

COMMITMENT The Fire Suppression Water Supply Systems shall be OPERABLE as follows:

Oconee

a. High Pressure Service Water (HPSW) pumps A and B with automatic initiation logic, and associated piping and valves supplying water to the sprinkler system and fire hose stations.

b. The HPSW pumps shall be aligned to the high pressure fire header.

Keowee

c. The Fire Protection Pump, automatic initiation logic, the associated piping and valves supplying water to the Main Transformer water spray system and hose stations listed in SLC 16.9.4 with the exception of the Mechanical Equipment Gallery stations

APPLICABILITY: At all times

BASES

Portions of SR 16.9.1.2 involving the HPSW pumps and power supplies were relocated from CTS Table 4.1-2, Item 8 during the conversion to the ITS.

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 Supply System, spray and/or sprinklers, Keowee CO_2 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 Supply System becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the 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 UFSAR, Chapter 9.5.1.
2) Oconee Fire Protection SER dated August 11, 1978.
3) Oconee Fire Protection Review, (currently contained in the Fire Protection DBD), as revised.
4) Oconee Plant Design Basis Specification for Fire Protection as revised.

16.9 AUXILIARY SYSTEMS

16.9.2 Sprinkler and Spray Systems

COMMITMENT Sprinkler and Spray Systems in safety related areas listed in Table 16.9.2-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required Sprinkler or Spray Systems inoperable. AND Affected Area(s) has no OPERABLE fire detection.	A.1 Establish continuous fire watch with backup fire suppression equipment in the area.	1 hour
B. One or more required Sprinkler or Spray Systems inoperable. AND Affected Area(s) has OPERABLE fire detection.	B.1 Establish hourly fire watch with backup fire suppression equipment in the area.	1 hour

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 16.9.2.1	----------NOTE---------- Not required to be performed for systems in the cable spreading room, equipment rooms and cable shafts. ---------- Functionally test each required Sprinkler or Spray System.	12 months
SR 16.9.2.2	Inspect each required Sprinkler System's spray headers and nozzles.	12 months
SR 16.9.2.3	Verify by visual inspection each nozzle's spray area to ensure spray pattern is not obstructed.	18 months

Table 16.9.2-1
Sprinkler and Spray Systems

a. Oconee Nuclear Station		
i.	Turbine Driven Emergency FDW Pump	Units 1, 2, and 3
ii.	Transformers[1]	CT-I, CT-2, CT-3, CT-4, and CT-5
iii.	Cable Room	Units 1, 2, and 3
iv.	Equipment Room	Units 1, 2, and 3
v.	Cable Shaft (3rd Level)	Units 1, 2, and 3
vi.	Cable Shaft (4th & 5th Level)	Units 1, 2, and 3
b. Keowee Hydro Station		
i.	Main Lube Oil Storage Room	
ii.	Main Transformer	

1. The transformers do not have fire detection devices. They have Activation devices that actuate the deluge valve of the fire suppression systems only.

BASES

The OPERABILITY of the NRC committed Fire Suppression System ensures that adequate fire suppression capability is available to confine and extinguish fires occurring at the Oconee or Keowee facilities. The regulatory requirement is to have NRC committed Sprinkler and Spray Systems OPERABLE only when the equipment it is protecting is required OPERABLE for plant safety. However, to protect the equipment for property conservation and minimize equipment loss due to fire; the Oconee and Keowee NRC committed Sprinkler and Spray Systems will be required to be OPERABLE at all times.

The Oconee CT-1, 2, 3, 4, and 5 transformers do not have fire detection devices. They have fire actuation devices that actuate the deluge valve of the fire suppression systems. These actuation devices do not directly annuciate to the Control Rooms. When the deluge valve trips, the flow pressure switch is the sensor that activiates the Control Room alarms. With HPSW deactivated for maintenance or testing, there is no form of annucation of a fire in the Control Room.

During periods of time when the Sprinkler or Spray System is not OPERABLE and detection instrumentation is OPERABLE, a hourly fire watch patrol will be required to inspect the affected area frequently as a precaution. If the Sprinkler or Spray System in the area is not OPERABLE and no detection instrumentation is OPERABLE, a continuous fire watch is required to be maintained in the vicinity of the affected Sprinkler or Spray System until the system is restored to OPERABLE status.

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 test requirements provide assurance that the minimum OPERABILITY requirements of the Fire Suppression Systems are met.

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 UFSAR, Chapter 9.5-1.
2. Oconee Fire Protection SER dated August 11, 1978.
3. Oconee Fire Protection Review, (currently contained in the Fire Protection DBD), as revised.
4. Oconee Plant Design Basis Specification for Fire Protection, as revised.

16.9 AUXILIARY SYSTEMS

16.9.3 Keowee CO_2 Systems

COMMITMENT The automatic CO_2 system provided for the generators at Keowee Hydro Station shall be OPERABLE.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Keowee CO_2 System inoperable and associated KHU OPERABLE.	A.1 Establish continuous fire watch with backup fire suppression equipment in the area.	1 hour
B. Keowee CO_2 System inoperable and associated KHU inoperable.	B.1 Establish backup fire suppression equipment in the area.	1 hour

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.9.3.1	Verify each valve in the flow path is in its correct position.	31 days
SR 16.9.3.2	Verify CO_2 storage tank weight is ≥ 90% full charge weight.	184 days
SR 16.9.3.3	Verify system actuates manually and automatically upon receipt of a simulated action signal.	18 months

SURVEILLANCE		FREQUENCY
SR 16.9.3.4	Perform flow test through headers and nozzles to assure no blockage.	18 months

BASES

The OPERABILITY of the NRC committed Keowee CO_2 Fire Suppression system ensures that adequate fire suppression capability is available to protect safety-related equipment by confining and extinguishing fires occurring in the Keowee electric generators. The regulatory requirement is to have the Keowee CO_2 Fire Suppression System OPERABLE only when the equipment it is protecting is required OPERABLE for plant safety, however to also protect the equipment for property conservation and minimize equipment loss due to a fire; the Keowee $C0_2$ Fire Suppression System will be required OPERABLE at all times.

The Fire Suppression System consists of the water system, spray and/or sprinklers, Keowee CO_2 system 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.

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 UFSAR, Chapter 9.5-1.
2. Oconee Fire Protection SER dated August 11, 1978.
3. Oconee Fire Protection Review, (currently contained in the Fire Protection DBD), as revised.
4. Oconee Plant Design Basis Specification for Fire Protection, as revised.

16.9 AUXILIARY SYSTEMS

16.9.4 Fire Hose Stations

COMMITMENT The Fire Hose Stations listed in Table 16.9.4-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required Fire Hose Station outside reactor building inoperable.	A.1 Provide additional equivalent capacity fire hose of length to reach unprotected area at OPERABLE hose station.	1 hour
B. Required Fire Hose Station inside reactor building inoperable (water not available to isolation valves LPSW-563 and LPSW-564).	B.1 Ensure availability of 4 portable fire extinguishers outside the reactor building in the personnel air lock area of the auxiliary building for fire brigade use upon entering reactor building.	NA

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.9.4.1	Perform visual inspection, including inspection of coupling gaskets, of the fire hose stations located outside the reactor building and inside reactor building that are accessible during power operation.	31 days
SR 16.9.4.2	Perform visual inspection, including inspection of coupling gaskets, of reactor building fire hose stations that are inaccessible during power operation.	18 months
SR 16.9.4.3	Partially stroke test Fire Hose Station Valves.	36 months
SR 16.9.4.4	Subject each fire hose to hydrostatic test at pressure ≥ 50 psig greater than the maximum pressure at the station.	36 months
SR 16.9.4.5	Perform maintenance inspection including removal and reracking the hoses and inspection of coupling gaskets.	36 months

Table 16.9.4-1
Fire Hose Stations

a. Oconee Nuclear Station

Location No.	Valve No.	Area or Component Protected
3-D-28	2HPSW-194	1&2 Blockhouse, 1 & 2 3rd Floor Switchgear
AX-35	1HPSW-436	#1 Cable Spread Room
AX-32	2HPSW-436	#2 Cable Spread Room
AX-33	2HPSW-437	1 & 2 Cable Spread Room
AX-30	3HPSW-436	#3 Cable Spread Room
AX-31	3HPSW-437	#3 Cable Spread Room
5-M-31	2HPSW-304	1 & 2 Control Room, 1 & 2 Emergency Shutdown Panels
TOH-3	3HPSW-338	#3 Control Room, #3 Emergency Shutdown Panels
1-J-28	2HPSW-242	#1 First Floor MCCs HPSW Pumps, 1 & 2 LPSW Pumps
1-J-43	3HPSW-344	#3 1st Floor Motor Control Centers
1-B-19	1HPSW-283	#1 EFWP
1-D-39	2HPSW-236	#2 EFWP
1-D-53	3HPSW-336	#3 EFWP
AX-13	1HPSW-448	1 & 2 HPI Pumps, 1 & 2 LPI Pumps
AX-14	3HPSW-449	3 HPI Pumps, 3 LPI Pumps
1-J-47	3HPSW-348	3 LPSW Pumps
AX-36	1HPSW-445	#1 West Penetration Room
AX-45	1HPSW-444	#1 East Penetration Room
AX-42	2HPSW-444	#2 East Penetration Room
AX-43	2HPSW-445	#2 West Penetration Room
AX-29	3HPSW-444	#3 East Penetration Room
AX-44	3HPSW-445	#3 West Penetration Room
AX-21	HPSW-457	1 & 2 Equipment Room
AX-19	3HPSW-458	3 Equipment Room
3-M-24	HPSW-176	1 Equipment Room
3-M-29	2HPSW-245	2 Equipment Room
3-M-43	3HPSW-339	3 Equipment Room
3-J-28	2HPSW-241	1 & 2 3rd Floor Switchgear
3-M-43	3HPSW-339	3 3rd Floor Switchgear, 600V Load Center
AX-22	1HPSW-440	1 Battery Room
AX-20	2HPSW-440	2 Battery Room
AX-18	3HPSW-440	3 Battery Room
1RBH1	1LPSW-471	Ground Floor Level - East Side
2RBH1	2LPSW-471	Basement Floor Level - East Side
3RBH1	3LPSW-471	Basement - East side
1RBH2	1LPSW-473	Intermediate Floor Level - East Side
2RBH2	2LPSW-473	Intermediate Floor Level - East Side
3RBH2	3LPSW-473	Intermediate Floor Level - East Side
1RBH3	1LPSW-475	Top of Shielding Floor Level - East Side
2RBH3	2LPSW-475	Top of Shielding Floor Level - East Side
3RBH3	3LPSW-475	Top of Shielding Floor Level - East Side
1RBH4	1LPSW-465	Top of Shielding Floor Level - West Side
2RBH4	2LPSW-465	Top of Shielding Floor Level - West Side
3RBH4	3LPSW-465	Top of Shielding Floor Level - West Side
1RBH5	1LPSW-467	Intermediate Floor Level - West Side

BASES

The OPERABILITY of the NRC committed Fire Suppression System ensures that adequate fire suppression capability is available to confine and extinguish fires occurring at the Oconee or Keowee facilities. The regulatory requirement is to have NRC committed Fire Hose Stations OPERABLE only when the equipment it is protecting is required OPERABLE for plant safety. However, to protect the equipment for property conservation and minimize equipment loss due to fire; the Oconee and Keowee NRC committed Fire Hose Stations will be required to be OPERABLE at all times.

In the event that portions of the Fire Suppression Systems are inoperable, alternate backup fire-fighting equipment is required to be made available for 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 System are met.

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 UFSAR, Chapter 9.5-1.
2. Oconee Fire Protection SER dated August 11, 1978.
3. Oconee Fire Protection Review, (currently contained in the Fire Protection DBD), as revised.
4. Oconee Plant Design Basis Specification for Fire Protection, as required.

16.9 AUXILIARY SYSTEMS

16.9.5 Fire Barriers

COMMITMENT All Fire Barriers (including mechanical and electrical penetrations, fire doors, fire dampers, walls, ceilings and floors) boundaries, as shown on the O-310-K and O-310-L series drawings, shall be OPERABLE.

APPLICABILITY: At all times

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Required Fire Barrier inoperable. AND There is OPERABLE fire detection instrumentation within 15 feet on both sides of the fire barrier boundary inoperability location.	A.1 Determine OPERABILITY status of fire detection instrumentation for the affected area(s). AND A.2 Establish an hourly fire watch patrol on at least one side of the fire boundary.	1 hour 1 hour
B. Required Fire Barrier inoperable. AND Affected Area(s) has OPERABLE fire detection instrumentation within 15 feet on only one side of the fire barrier boundary inoperability location.	B.1 Determine OPERABILITY status of fire detection instrumentation for the affected area(s). AND B.2 Establish hourly fire watch patrol in the area that does not have OPERABLE fire detection instrumentation.	1 hour 1 hour

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Keowee Lake Level < 794.15 ft.	A.1	Enter applicable Condition for one required LPSW pump inoperable in accordance with ITS 3.7.7.	Immediately
B. Keowee Lake Level < 784.15 ft.	B.1	Declare the Keowee Oil Storage Room Water Spray System inoperable.	Immediately
C. Keowee Lake Level < 781.15 ft.	C.1	Cease commercial power generation using KHUs.	Immediately
	AND		
	C.2	Notify the Plant Operations Review Committee (PORC) per NSD-308 and request plant operation (and reportability) guidance.	Immediately
D. Keowee Lake Level < 780.6 ft.	D.1	Declare Keowee Step-up transformer Mulsifyre inoperable.	Immediately

REFERENCES:

1. PIR 0 092 0535, Potential Insufficient NPSH for LPSW pumps.
2. LER 269/93 04, Rev. 0 and Rev. 1.
3. OSS-0254.00-00-1039, Rev. 10, Design Basis Specification for the LPSW System.
4. Calculation OSC 2895, Rev. 4, Hydraulic Calculations for Keowee Deluge Systems.
5. Calculation OSC 5325, Rev. 0, Keowee Lake Level Uncertainty Calculation.
6. Calculation OSC 5022, Rev. 1, USQ Evaluation for Operability Evaluation of PIR O-092-0535.
7. Calculation OSC 2280, Rev. 10, LPSW NPSH and Minimum Required Lake Level.
8. Calculation OSC-3528, Rev. 3, Keowee Lake Level Minimum Administrative Limits.
9. ITS 3.7.8, Emergency Condenser Circulating Water, Amendment Nos. 300/300/300.

16.10 STEAM AND POWER CONVERSION SYSTEMS

16.10.4 Low Pressure Service Water (LPSW) System Testing

COMMITMENT Manually align valves LPSW-4 and LPSW-5 from the control room to demonstrate OPERABILITY of the Low Pressure Injection Coolers.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. N/A.	A.1 N/A.	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.10.4.1	Verify valves LPSW-4 and LPSW-5 actuate to the correct position upon manual actuation from the control room.	----------NOTE---------- The provisions of SLC 16.2.7 do not apply. ---------- 18 months +25%

BASES

The requirement(s) of this SLC section were relocated from CTS 4.5.1.1.2.a(2) during the conversion to ITS.

SR 16.10.4.1 verifies that LPSW-4 and -5 (LPSW supply to LPI coolers) respond as required to manual alignment from the control room. The test will be considered satisfactory if valves LPSW-4 and LPSW-5 have completed their travel.

REFERENCES

N/A

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 16.10.7.2	----------NOTE---------- This SR may be satisfied by ITS SR 3.7.5.1 for the credited alternate unit. ----------	
	Verify that each EFW manual, and non-automatic power operated valve in the required EFW flow path(s) from the credited alternate unit to the subject unit and, if required, the steam supply flow path to the credited alternate unit's turbine-driven EFW pump that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
SR 16.10.7.3	----------NOTE---------- This SR may be satisfied by ITS SR 3.7.5.2 for the credited alternate unit. ----------	
	Verify the developed head of the credited alternate unit's required EFW pump(s) at the flow test point is greater than or equal to the required developed head.	In accordance with the Inservice Testing Program
SR 16.10.7.4	Cycle the required cross-connect valves in the flow path between the credited alternate unit and the subject unit.	In accordance with the Inservice Testing Program
SR 16.10.7.5	----------NOTE---------- This SR may be satisfied by ITS SR 3.3.14.2 for the credited alternate unit. ----------	
	Perform CHANNEL FUNCTIONAL TEST for the manual initiation circuit for the credited alternate unit's EFW pump(s).	92 days

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.1 Radioactive Liquid Effluents

COMMITMENT Establish conditions for the controlled release of radioactive liquid effluents. Implement the requirements of 10 CFR 20, 10 CFR 50.36a, Appendix A to 10 CFR 50, Appendix I to 10 CFR 50, 40 CFR 141 and 40 CFR 190.

a. Concentration

The concentration of radioactive material released at anytime from the site boundary for liquid effluents to Unrestricted Areas [denoted in Figure 2.1-4(a) of the Oconee Nuclear Station Updated Final Safety Analysis Report] shall be limited to 10 times the effluent concentrations specified in 10 CFR Part 20, Appendix B, Table 2, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases the concentration shall be limited to 1×10^{-4} μCi/ml total activity.

b. Dose

The dose or dose commitment to a Member Of The Public from radioactive materials in liquid effluents to Unrestricted Areas shall be limited to:

1. during any calendar quarter:

   ≤ 4.5 mrem to the total body

   ≤ 15 mrem to any organ; and

2. during any calendar year:

   ≤ 9 mrem to the total body

   ≤ 30 mrem to any organ.

c. Liquid Waste Treatment

The appropriate subsystems of the liquid radwaste treatment system shall be used to reduce the radioactive materials in liquid waste prior to their discharge, if the projected dose due to liquid effluent releases to unrestricted areas, when averaged over 31 days would exceed 0.18 mrem to the total body or 0.6 mrem to any organ.

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Calculated dose from the release of radioactive materials in liquid effluents exceeds any of the limits in Commitment b.	B.1 ----------NOTE---------- Not required during unusual operating conditions that result in activation of the Oconee Emergency Plan. ----------	
	Submit report to the regional NRC Office which includes the following: a. Cause(s) for exceeding the limit(s). b. A description of the program of corrective action initiated to: reduce the releases of radioactive materials in liquid effluents, and to keep these levels of radioactive materials in liquid effluents in compliance with the above limits, or as low as reasonably achievable. c. Results of radiological analyses of the drinking water source and the radiological impact on finished drinking water supplies with regard to the requirements of 40 CFR 141.	30 days from the end of the quarter during which the release occurred

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Radioactive liquid waste is discharged without treatment and in excess of the specified limit.	C.1 Submit report to the regional NRC Office which includes the following: a. Cause of equipment or subsystem inoperability. b. Corrective action to restore equipment and prevent recurrence.	30 days
D. Total radioactive inventory of used powdex resins transferred to the Chemical Treatment Ponds over previous 13 weeks greater than 0.4% of the pond radionuclide inventory limit.	D.1 Submit report to the regional NRC Office describing the reason(s) for exceeding the limit and plans for future operation.	30 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.11.1.1 N/A	N/A

The inventory limits of the chemical treatment ponds are based on limiting the consequences of an uncontrolled release of the pond inventory. The short term rate limit (2 mrem/hr) of 10 CFR 20.1301 is applied to 10 CFR 20.1302 in the following expression:

$$\frac{\frac{Aj}{1.3 \times 10 \text{ gal}} \times 10^6 \frac{\mu Ci}{Curie} \times \frac{gal}{3785 \text{ ml}} \leq \frac{2 \text{ mrem/hr}}{500 \text{ mrem/yr}} \times \frac{8760 \text{ hr}}{yr}}{10 \times Cj}$$

$$\frac{Aj}{Cj} \leq 1.7 \times 10^5$$

Where Aj = pond inventory limit for radionuclide "j" (curies)

Cj = 10 CFR 20, Appendix B, Table 2, Column 2, concentration radionuclide "j"

1.3×10^6 gal = estimated volume of smaller chemical treatment pond

The transfer limits provide assurance that activity input to the CTP will be minimized.

REFERENCES:

1. 10 CFR Part 20, Appendix B.
2. 40 CFR Part 141.
3. 10 CFR Part 50, Appendices A and I.
4. 40 CFR Part 190.
5. Offsite Dose Calculation Manual.
6. Regulatory Guide 1.109.

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.2 Radioactive Gaseous Effluents

COMMITMENT Establish conditions for the controlled release of radioactive gaseous effluents. Implement the requirements of 10 CFR 20, 10 CFR 50.36a, Appendix A to 10 CFR 50, Appendix I to 10 CFR 50, and 40 CFR 190.

a. Dose Rate

The instantaneous dose rate at the site (exclusion area) boundary for gaseous effluents [Figure 2.1-4(a) of the Oconee Nuclear Station Updated Final Safety Analysis Report] due to radioactive materials released in gaseous effluents from the site shall be limited to the following values:

1. The dose rate limit for noble gases shall be:

   ≤ 500 mrem/yr to the total body

   ≤ 3000 mrem/yr to the skin; and

2. The dose rate limit for all radioiodines and for all radioactive materials in particulate form and radionuclides other than noble gases with half-lives greater than 8 days shall be ≤ 1500 mrem/yr to any organ.

b. Dose

1. The air dose due to noble gases released in gaseous effluent from the site shall be limited to the following:

   i. During any calendar quarter:

      ≤ 15 mrad for gamma radiation

      ≤ 30 mrad for beta radiation

   ii. During any calendar year:

      ≤ 30 mrad for gamma radiation

      ≤ 60 mrad for beta radiation

2. The dose to a Member Of The Public from radioiodines, tritium and radioactive materials in particulate form with half-lives greater than 8 days in gaseous effluents released from the site, shall be limited to the following:

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Dose rate exceeds the limits specified in Commitment a.	A.1 Restore release rate to within limits.	Immediately
B. Calculated dose exceeds specified limits.	B.1 Submit report to the regional NRC Office which includes the following: a. Cause(s) for exceeding the limit(s), and b. A description of the program of corrective action initiated to: reduce the releases of radioactive materials in gaseous effluents, and to keep these levels of radioactive materials in gaseous effluents in compliance with the specified limits or as low as reasonably achievable.	30 days from the end of the quarter during which the release occurred

BASES

The basic requirements for Selected Licensee Commitments concerning effluent from nuclear power reactors are stated in 10CFR50.36. Compliance with effluent Selected Licensee Commitments will ensure that average annual releases of radioactive material in effluents will be small percentages of the limits specified in the old 10CFR20.106 (new 10CFR20.1302). The requirements contained in 10CFR50.36a further indicate that operational flexibility is allowed, compatible with considerations of health and safety, which may temporarily result in releases higher than such small percentages, but still within the limits specified in the old 10CFR20.106 which references Appendix B, Table II concentrations (MPCs). These referenced concentrations are specific values which relate to an annual dose of 500 mrem to the total body, 3000 mrem to the skin, and 1500 mrem to an infant via the milk animal-milk-infant pathway. It is further indicated in 10CFR50.36a that when using operational flexibility, best efforts shall be exerted to keep levels of radioactive materials in effluents as low as reasonably achievable (ALARA) as set forth in 10CFR50 Appendix I. Therefore, to accommodate operational flexibility needed for effluent releases, the limits associated with gaseous release rate SLCs will be maintained at the current instantaneous dose rate limit for noble gases of 500 mrem/year to the total body and 3000 mrem/year to the skin; and for Iodine-131, for Iodine-133, for tritium, and for all radionuclides in particulate form with half-lives greater than 8 days. an instantaneous dose rate limit of 1500 mrem/year.

The ODCM calculational methods for calculating the doses due to the actual release rates of the subject materials will be consistent with the methodology provided in Regulatory Guide 1.109, "Calculating of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I," Revision 1,. October 1977 and Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors."

Equations in the ODCM are provided for determining the actual doses based upon the historical average atmospheric conditions. The release rate commitments for radioiodines, radioactive material in particulate form and radionuclides other than noble gases are dependent on the existing radionuclide pathways to man, in the unrestricted area. The pathways which are examined in the development of these calculations are: 1) individual inhalation of airborne radionuclides, 2) deposition of radionuclides into green leafy vegetation with subsequent consumption by man, 3) deposition onto grassy areas where milk animals and meat producing animals graze with consumption of the milk and meat by man, and 4) deposition on the ground with subsequent exposure of man.

The requirement that the appropriate portions of these systems be used when specified provides reasonable assurance that the release of radioactive materials in gaseous effluents will be kept "as low as is reasonably achievable." This commitment implements the requirements of 10 CFR Part 50.36a, General Design Criterion 60 of Appendix A to 10 CFR Part 50, and design objective Section IID of Appendix I to 10 CFR Part 50.

REFERENCES:

1 10 CFR Part 20, Appendix 8.
2. 10 CFR Part 50, Appendices A and I.
3. Regulatory Guide 1.109.
4. 40 CFR Part 190.
5. Offsite Dose Calculation Manual.

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.3 Radioactive Effluent Monitoring Instrumentation

COMMITMENT Radioactive Effluent Monitoring Instrumentation shall be OPERABLE as follows:

a. Liquid Effluents

The radioactive liquid effluent monitoring instrumentation channels shown in Table 16.11.3-1 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of SLC 16.11.1.a are not exceeded.

b. Gaseous Process and Effluents

The radioactive gaseous process and effluent monitoring instrumentation channels shown in Table 16.11.3-2 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of SLC 16.11.2.a are not exceeded.

c. The setpoints shall be determined in accordance with the methodology described in the ODCM and shall be recorded.

---NOTE---
Correction to setpoints determined in accordance with Commitment c may be permitted without declaring the channel inoperable.

APPLICABILITY: According to Table 16.11.3-1 and Table 16.11.3-2.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Alarm/trip setpoint less conservative than required for one or more effluent monitoring instrument channels.	A.1	Declare channel inoperable.	Immediately
	OR		
	A.2	Suspend release of effluent monitored by the channel.	Immediately

CONDITION	REQUIRED ACTION		COMPLETION TIME
B. One or more required liquid effluent monitoring instrument channels inoperable.	B.1	Enter the Condition referenced in Table 16.11.3-1 for the function.	Immediately
	AND		
	B.2	Restore the instrument(s) to OPERABLE status.	30 days
C. One or more required gaseous effluent monitoring instrument channels inoperable.	C.1	Enter the Condition referenced in Table 16.11.3-2 for the function.	Immediately
	AND		
	C.2	Restore the instrument(s) to OPERABLE status.	30 days
D. Required Action and associated Completion Time of Required Action B.2 or C.2 not met.	D.1	Explain in next Annual Radiological Effluent Release Report why inoperability was not corrected in a timely manner.	April 30 of following calendar year

CONDITION	REQUIRED ACTION		COMPLETION TIME
H. As required by Required Action B.1 and referenced in Table 16.11.3-1. (RIA-35, #3 Chemical Treatment Pond Composite Sampler and Sampler Flow Monitor (Turbine Building Sumps Effluent))	----------NOTE---------- Not required during short, controlled outages of liquid effluent monitoring instrumentation. Short controlled outages are defined as planned removals from service for durations not to exceed 1 hour, for purposes of sample filter changeouts, setpoint adjustments, service checks, and/or routine maintenance procedures. This guidance may be applied successively, provided that time between successive short, controlled outages is always at least equal to duration of immediately preceding outage. ----------		
	H.1	Suspend release of radioactive effluents by this pathway.	Immediately
	OR		
	H.2	Collect and analyze grab samples for gross radioactivity (beta and/or gamma) at a lower limit of detection of at least 10^{-7} μCi/ml.	Immediately AND Once per 12 hours thereafter

CONDITION	REQUIRED ACTION	COMPLETION TIME
I. As required by Required Action C.1 and referenced in Table 16.11.3-2 for effluent releases from waste gas tanks (RIA-37, RIA-38) or containment purges (RIA-45).	----------NOTE---------- Not required during short, controlled outages of gaseous effluent monitoring instrumentation. Short controlled outages are defined as planned removals from service for durations not to exceed 1 hour, for purposes of sample filter changeouts, setpoint adjustments, service checks, and/or routine maintenance procedures. This guidance may be applied successively, provided that time between successive short, controlled outages is always at least equal to duration of immediately preceding outage. ----------	
	I.1.1 Analyze two independent samples.	Prior to initiating subsequent release
	AND	
	I.1.2 Conduct two independent data entry checks for release rate calculations	Prior to initiating subsequent release
	AND	
	I.1.3 Conduct two independent valve lineups of the effluent pathway.	Prior to initiating subsequent release
	OR	
	I.2 Suspend release of radioactive effluents by this pathway.	Immediately

CONDITION	REQUIRED ACTION		COMPLETION TIME
J. As required by Required Action C.1 and referenced in Table 16.11.3-2. (Effluent Flow Rate Monitor (Unit Vent, Containment Purge, Interim Radwaste Exhaust, Hot Machine Shop Exhaust, Radwaste Facility Exhaust, Waste Gas Discharge))	----------NOTE---------- Not required during short, controlled outages of gaseous effluent monitoring instrumentation. Short controlled outages are defined as planned removals from service for durations not to exceed 1 hour, for purposes of sample filter changeouts, setpoint adjustments, service checks, and/or routine maintenance procedures. This guidance may be applied successively, provided that time between successive short, controlled outages is always at least equal to duration of immediately preceding outage. ----------		
	J.1	Suspend release of radioactive effluents by this pathway.	Immediately
	OR		
	J.2	Estimate flow rate	Immediately AND Once per 4 hours thereafter

CONDITION	REQUIRED ACTION	COMPLETION TIME
K. As required by Required Action C.1 and referenced in Table 16.11.3-2. (4RIA-45, RIA-53)	----------NOTE---------- Not required during short, controlled outages of gaseous effluent monitoring instrumentation. Short controlled outages are defined as planned removals from service for durations not to exceed 1 hour, for purposes of sample filter changeouts, setpoint adjustments, service checks, and/or routine maintenance procedures. This guidance may be applied successively, provided that time between successive short, controlled outages is always at least equal to duration of immediately preceding outage. ----------	
	K.1 Suspend release of radioactive effluents by this pathway.	Immediately
	OR	
	K.2.1 Collect grab sample.	Immediately AND Once per 8 hours
	AND	
	K.2.2 Analyze grab samples for gross activity (beta and/or gamma).	24 hours from collection of sample

CONDITION	REQUIRED ACTION	COMPLETION TIME
L. As required by Required Action C.1 and referenced in Table 16.11.3-2. (Unit Vent Monitoring Iodine Sampler, Unit Vent Monitoring Particulate Sampler, Interim Radwate Building Ventilation Monitoring Iodine Sampler, Interim Radwaste Building Ventilation Monitoring Particulate Sampler, Hot Machine Shop Iodine Sampler, Hot Machine Shop Particulate Sampler, Radwaste Facility Iodine Sampler, Radwaste Facility Particulate Sampler)	----------NOTE---------- Not required during short, controlled outages of gaseous effluent monitoring instrumentation. Short controlled outages are defined as planned removals from service for durations not to exceed 1 hour, for purposes of sample filter changeouts, setpoint adjustments, service checks, and/or routine maintenance procedures. This guidance may be applied successively, provided that time between successive short, controlled outages is always at least equal to duration of immediately preceding outage. ----------	
	L.1 Suspend release of radioactive effluents by this pathway.	Immediately
	OR	
	L.2.1 ----------NOTE---------- The collection time of each sample shall not exceed 7 days. ---------- Collect samples continuously using auxiliary sampling equipment.	Immediately
	AND	
	L.2.2 Analyze each sample.	48 hours from end of each sample collection

CONDITION	REQUIRED ACTION	COMPLETION TIME
M. As required by Required Action C.1 and referenced in Table 16.11.3-2 for effluent releases from ventilation system or condenser air ejectors. (RIA-40)	----------NOTE---------- Not required during short, controlled outages of gaseous effluent monitoring instrumentation. Short controlled outages are defined as planned removals from service for durations not to exceed 1 hour, for purposes of sample filter changeouts, setpoint adjustments, service checks, and/or routine maintenance procedures. This guidance may be applied successively, provided that time between successive short, controlled outages is always at least equal to duration of immediately preceding outage. ----------	
	M.1 Continuously monitor release through the unit vent.	Immediately
	OR	
	M.2 Suspend release of radioactive effluents by this pathway.	Immediately
	OR	
	M.3.1 Collect grab sample.	Immediately AND Once per 8 hours
	AND	
	M.3.2 Analyze grab sample for gross activity (beta and/or gamma).	24 hours from collection of grab sample

	SURVEILLANCE	FREQUENCY
SR 16.11.3.6	----------NOTE---------- The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room annunciation occurs if any of the following conditions exist: 1. Instrument indicates measured levels above the alarm/trip setpoint. 2. Circuit failure (downscale only). ---------- Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 16.11.3.7	----------NOTE---------- The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room annunciation occurs if any of the following conditions exist: 1. Instrument indicates measured levels above the alarm/trip setpoint. 2. Circuit failure (downscale only). ---------- Perform CHANNEL FUNCTIONAL TEST.	92 days
SR 16.11.3.8	Perform CHANNEL FUNCTIONAL TEST.	92 days

	SURVEILLANCE	FREQUENCY
SR 16.11.3.9	----------NOTE---------- The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with the National Institute of Standards and Technology (NIST). The standards shall permit calibrating the system over its intended range of energy and measurement. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used. (Operating plants may substitute previously established calibration procedures for these requirements.) ---------- Perform CHANNEL CALIBRATION.	12 months
SR 16.11.3.10	Perform CHANNEL CALIBRATION.	12 months
SR 16.11.3.11	Perform leak test.	When cylinder gates or wicket gates are reworked
SR 16.11.3.12	Perform Source Check.	Within 24 hours prior to each release via associated pathway

BASES

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to assure that the alarm/trip will occur prior to exceeding 10 times the limits of 10 CFR Part 20. The operability and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to assure that the alarm/trip will occur prior to exceeding applicable dose limits in SLC 16.11.2. The operability end use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

For certain applicable cases, grab samples or flow estimates are required at frequencies between every 4 hours end every 12 hours upon RIA removal from service. SLC 16.11.3 does not explicitly require Action (grab samples or flow estimates) to be initiated immediately upon RIA removal from service, when removal is for the purposes of sample filter changeouts, setpoint adjustments, service checks, or routine maintenance. Therefore, during the defined short, controlled outages, Action is not required.

For the cases in which Action is defined as continuous sampling by auxiliary equipment (Action L) initiation of continuous sampling by auxiliary sampling equipment requires approximately 1 hour. One hour is the accepted reasonable time to initiate collect and change samples. Therefore. for the defined short, controlled outages (not to exceed 1 hour), Action is not required.

Failures such as blown instrument fuses, defective indicators, and faulted amplifiers are, in many cases, revealed by alarm or annunciator action. Comparison of output and/or state of independent channels measuring the same variable supplements this type of built-in surveillance. Based on experience in operation of both conventional and nuclear systems, when the unit is in operation, the minimum checking frequency stated is deemed adequate.

REFERENCES:

1. 10 CFR Part 20.
2. 10 CFR Part 50, Appendix A.
3. Offsite Dose Calculation Manual.
4. UFSAR, Section 7.2.3.4.

(a) Samples shall be changed at least once every 24 hours and analysis shall be completed within 48 hours after changing (on or after removal from sampler).

(b) The LLD is defined for purposes of these commitments as the smallest concentration of radioactive material in a sample that would be detected with 95% probability with 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation) :

$$LLD = \frac{4.66\ sb}{E \times V \times 2.22E06 \times Y \times \exp(-\lambda \Delta t)}$$

Where:

LLD is the "a priori" lower limit of detection as defined above (as micro Curies per unit mass or volume),

sb is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (as counts per minute),

E is the counting efficiency (as counts per disintegration),

V is the sample size (in units of mass or volume),

2.22E06 is the number of disintegrations per minute per micro Curie,

Y is the fractional radiochemical yield (when applicable),

λ is the radioactive decay constant for the particular nuclide

Δ t is the elapsed time between midpoint of sample collection and time of counting (for plant effluents, not environmental samples). NOTE: This assumes decay correction is applied (at the time of analysis) for the duration of sample collection, for the time between collection and analysis, and for the duration of the counting. Additionally, it does not apply to isolated systems such as Waste Gas Decay Tanks and Waste Monitor Tanks.

Typical values of E, V, Y and Δ t should be used in the calculation.

It should be recognized that the LLD is an a priori (before the fact) limit representing the capability of a measurement system and not an a posteriori (after the fact) limit for a particular measurement.

(c) The principal gamma emitters for which the LLD control applies include the following radionuclides: Mn-54. Fe-59, Co-58, Co-60. Zn-65, Mo-99, Cs-134, Cs-137. and Ce-141. Ce-144 shall also be measured, but with a LLD of 5E-06 µCi/ml. This list does not mean that only these nuclides are to be considered. Other gamma peaks that are identifiable, together with the above nuclides shall also be analyzed and reported in the Annual Radioactive Effluent Release Report.

(d) The principal gamma emitters for which the LLD commitment applies exclusively are the following radionuclides: Kr-87. Kr-88, Xe-133. Xe-133m, Xe-135. and Xe-138 for gaseous emissions and Mn-54, Fe-59. Co-58, Co-60, Zn-65. Mo-99, Cs-134, Cs-137, Ce-141, and Ce-144 for particulates. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides shall also be identified and reported.

(e) The ratio of the sample flow rate to the sampled stream flow rate shall be known for the time period covered by each dose or dose rate calculation made in accordance with SLC 16.11.2.a, SLC 16.11.2.b.1, and SLC 16.11.2.b.2.

(f) A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged and in which the method of sampling employed results in a specimen which is representative of the liquids released.

(g) To be representative of the quantities and concentrations of radioactive materials in liquid effluents, samples shall be collected continuously in proportion to the rate of flow of the effluent stream. Prior to analysis, all samples taken for the composite shall be thoroughly mixed in order for the composite sample to be representative of the effluent release.

(h) A batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analysis, each batch shall be isolated, and then thoroughly mixed, to assure representative sampling.

(i) A continuous release is the discharge of liquid wastes of a non-discrete volume, e.g., from a volume of a system that has an input flow during the continuous release.

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.5 Solid Radioactive Waste

COMMITMENT The Solid Radwaste System shall be used in accordance with a Process Control Program, for the solidification of wet radioactive wastes. Prior to the shipment of containers of radioactive wastes from the site, radioactive wastes shall be processed and packaged to ensure meeting the requirements of 10 CFR Part 20, 10 CFR Part 71, and Federal and State regulations governing the disposal of radioactive wastes.

The PROCESS CONTROL PROGRAM (PCP) shall contain the current formulas, sampling, analyses, test, and determinations to be made to ensure that processing and packaging of solid radioactive wastes based on demonstrated processing of actual or simulated wet solid wastes will be accomplished in such a way as to assure compliance with 10 CFR Parts 20, 61, and 71, State regulations, burial ground requirements, and other requirements governing the disposal of solid radioactive waste.

The PCP shall be used to verify the solidification of at least one representative test specimen from at least every tenth batch of each type of wet radioactive waste to be solidified.

APPLICABILITY: At all times

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Requirements of 10CFR Part 20 are not satisfied. OR Requirements of 10CFR Part 71 are not satisfied.	A.1 Suspend shipments of defectively packaged solid radioactive wastes from the site.	Immediately

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Any test specimen fails to verify solidification.	B.1 Suspend solidification of the batch under test until such time as additional test specimens can be obtained, alternative solidification parameters can be determined in accordance with the PCP, and a subsequent test verifies solidification. solidification of the batch may then be resumed using the alternative solidification parameters determined by the PCP.	Immediately
C. Initial test specimen from a batch of waste fails to verify solidification.	C.1 The PCP shall provide for the collection and testing of representative test specimens from each consecutive batch of the same type of wet waste until at least 3 consecutive initial test specimens demonstrate solidification. The PCP shall be modified as required to assure solidification of subsequent batches of waste.	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 16.11.5.1	N/A	N/A

BASES

The solid radwaste system will be used whenever radwastes require processing and packaging prior to being shipped offsite. This commitment implements the requirements of 10 CFR Part 50.36a and General Design Criterion 60 of Appendix A to 10 CFR Part 50. The process parameters included in establishing the PCP may include, but are not limited to waste type, waste pH, waste/liquid/solidification agent/catalyst ratios, waste oil content, waste principal chemical constituents, mixing and curing times.

REFERENCES:

1. 10 CFR Part 50, Appendix A.
2. PCP Manual.

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.6 Radiological Environmental Monitoring

COMMITMENT

a. The radiological environmental monitoring samples shall be collected in accordance with Table 16.11.6-1 and shall be analyzed pursuant to the requirements of Tables 16.11.6-1, 16.11.6-2 and 16.11.6-3.

b. A land use census shall be conducted and shall identify the location of the nearest milk animal and the nearest residence in each of the 16 meteorological sectors within a distance of five miles. Broad leaf vegetation sampling shall be performed at the site boundary in the direction sector with the highest D/Q in lieu of the garden census.

c. Analyses shall be performed on radioactive materials supplied as part of an Interlaboratory Comparison Program. A summary of the results obtained as part of the Interlaboratory Comparison Program and in accordance with the methodology and parameters in the ODCM shall be included in the Annual Radiological Environmental Operating Report.

d. The results of the land use census shall be included in the Annual Radiological Environmental Operating Report.

---NOTE---

If samples required by Commitment part a, become permanently unavailable from any of the required sample locations, the locations from which samples were unavailable may then be deleted from the program provided replacement samples were obtained and added to the environmental monitoring program, if available. These new locations will be identified in the Annual Radioactive Effluent Release Report. |

APPLICABILITY: At all times

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Radiological environmental monitoring program is not conducted as required.	A.1	Submit a description of the reason for not conducting the program as required and plans to prevent a recurrence shall be included in the Annual Radiological Environmental Operating Report.	May 15 of following calendar year
B. Land use census identifies a Location which yields a calculated dose or dose commitment (via the same exposure pathway) greater than a location from which samples are currently being obtained.	B.1	----------NOTE---------- The sampling location having the lowest calculated dose or dose commitment (via the same exposure pathway) may be deleted from this monitoring program after October 31 of the year in which this land use census was conducted. ----------	
		Add new location to the radiological environmental monitoring program.	30 days
	AND		
	B.2	Identify new locations in the next Annual Radioactive Effluent Release Report.	April 30 of following calendar year

BASES

The environmental monitoring program required by this commitment provides measurements of radiation and of radioactive materials in those exposure pathways and for those radionuclides which lead to the highest potential radiation exposures of individuals resulting from the station operation. This monitoring program thereby supplements the radiological effluent monitoring program by verifying that the measurable concentrations of radioactive materials and levels of radiation are not higher than expected on the basis of the effluent measurements and modeling of exposure pathways. The initially specified monitoring program will be effective for at least the first three years of commercial operation. Following this period, program changes may be initiated based on operational experience.

The detection capabilities required by Table 16.11.6-2 are considered optimum for routine environmental measurements in industrial laboratories. The specified lower limits of detection correspond to less than the 10 CFR 50. Appendix I, design objective dose-equivalent of 45 mrem/year for atmospheric releases to the most sensitive organ and individual. The land use census commitment is provided to assure that changes in the use of unrestricted areas are identified and that modifications to the monitoring program are provided if required by the results of this census.

The requirements for participation in an Interlaboratory Comparison Program is provided to assure that independent checks on the precision and accuracy of the measurements of radioactive material in environmental sample matrices are performed as part of a quality assurance program for environmental monitoring in order to demonstrate that the results are reasonably valid.

The following requirement(s) were relocated from the CTS 6.4.4.f during the conversion to ITS.

The station shall have a program to monitor the radiation and radionuclides in the environs of the plant. The program shall provide (1) representative measurements of radioactivity in the highest potential exposure pathways, and (2) verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall (1) be contained in UFSAR Chapter 16, (2) conform to the guidance of Appendix I to 10 CFR Part 50, and (3) include the following:

1. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM;

2. A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census; and,

3. Participation in an Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

REFERENCES:

1. 10 CFR Part 50, Appendix I.
2. Offsite Dose Calculation Manual.

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.7 Dose Calculations

COMMITMENT The annual (calendar year) dose or dose commitment, to any Member of the Public due to releases of radioactivity and to radiation from uranium fuel cycle sources shall be limited to ≤ 25 mrems to the total body or to any organ, except the thyroid, which shall be limited to ≤ 75 mrems.

APPLICABILITY: At all times

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Calculated doses from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of SLC 16.11.1.b, SLC 16.11.2.b.1, or SLC 16.11.2.b.2	A.1 Determine by calculation, including direct radiation contributions from the reactor units and from outside storage tanks, whether the limits of Commitment 16.11.7 have been exceeded.	None

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Calculated dose exceeds limits of Commitment 16.11.7.	----------NOTE---------- This Special Report, as defined in 10 CFR Part 20.2203(a), shall include an analysis that estimates the radiation exposure (dose) to a Member of the Public from uranium fuel cycle sources, (including all effluent pathways and direct radiation), for the calendar year that includes the release(s) covered by this report. It shall also describe the levels of radiation and concentration of radioactive material involved, and the cause of the exposure levels or concentrations. ---------- B.1 Prepare and submit to the Commission a Special Report that defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the specified limits and includes the schedule for achieving conformance with the specified limits.	30 days

REFERENCES:

1. 10 CFR Part 20.
2. 40 CFR Part 190.
3. Offsite Dose Calculation Manual.
4. 10 CFR Part 50, Appendix I.

16.11 RADIOLOGICAL EFFLUENTS CONTROL

16.11.8 Reports

COMMITMENT Special reports shall be submitted to the Regional Administrator, Region II, within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable SLC:

a. Radioactive Liquid Effluents,
   Dose, SLC 16.11.1.b
   Liquid Waste Treatment, SLC 16.11.1.c
   Chemical Treatment Ponds, SLC 16.11.1.d

b. Radioactive Gaseous Effluents,
   Dose, SLC 16.11.2.b
   Gaseous Radwaste Treatment, SLC 16.11.2.c

c. Radiological Environmental Monitoring Program, SLC 16.11.6.a, b, and c

d. Land Use Census, SLC 16.11.6.d

e. Dose Calculations, SLC 16.11.7

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Individual milk samples show I-131 concentrations of 10 picocuries per liter or greater.	A.1 Submit plan advising the NRC of the proposed action to ensure the plant related annual doses will be within the design objective of 45 mrem/yr to the thyroid of any individual.	7 days

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Milk samples collected over a calendar quarter show average concentrations of ∃ 4.8 picoCuries per liter	B.1 Submit a plan advising the NRC of the proposed action to ensure the plant related annual doses will be within the design objective of 45 mrem/yr to the thyroid of any individual.	30 days

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.11.8.1 NA	NA

BASES

Reference applicable commitments.

REFERENCES:

1. 10 CFR Part 20.
2. 40 CFR Part 190.
3. Offsite Dose Calculation Manual.

accordance with the Offsite Dose Calculation Manual.

The Annual Radioactive Effluent Release Report shall include an explanation of why the inoperability of liquid or gaseous effluent monitoring instrumentation out of service for greater than 30 days was not corrected in a timely manner per SLC 16.11.3.

The Annual Radioactive Effluent Release Report shall include the following information for each type of solid waste shipped offsite during the report period:

a. Total container volume (cubic meters);

b. Total curie quantity (determined by measurement or estimate);

c. Principal radionuclides (determined by measurement or estimate);

d. Type of waste, (e.g., spent resin, compacted dry waste evaporator bottoms);

e. Number of shipments; and,

f. Solidification agent (e.g., cement, or other approved agents (media)).

The Annual Radioactive Effluent Release Report shall include a list and description of unplanned releases from the site to Unrestricted Areas of radioactive materials in gaseous and liquid effluents made during the reporting period.

The Annual Radioactive Effluent Release Report shall include any changes made during the reporting period to the Offsite Dose Calculation Manual (ODCM), as well as a listing of new locations for dose calculations and/or environmental monitoring identified by the land use census.

The Annual Radioactive Effluent Release Report shall also include an assessment of radiation doses to the likely most exposed Member of the Public from reactor releases and other nearby uranium fuel cycle sources (including doses from primary effluent pathways and direct radiation) for the previous calendar year to show conformance with 40 CFR 190, Environmental Radiation Protection Standards for Nuclear Power Operation. Methods for calculating the dose contribution from liquid and gaseous effluents are given in the ODCM.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. N/A	A.1 N/A	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.11.9.1 N/A	N/A

BASES

N/A

REFERENCES:

1. Oconee ITS.
2. Offsite Dose Calculation Manual.

16.13 CONDUCT OF OPERATIONS

16.13.2 Technical Review and Control

COMMITMENT A Technical Review and Control Program covering the preparation, review, and approval of documents important to station operation shall be established and maintained for the site.

Personnel performing the preparation, review, and approval activities covered by this commitment shall meet or exceed the qualifications of ANSI NI8.I-1971 (the conformance status for this standard is as listed in Table 17-1 of the Duke Power Topical Report, Quality Assurance Program, Duke-1-A).

a. The preparation, review, and approval of station procedures shall be done in accordance with station Technical Specifications. Individuals responsible for these reviews shall be members of the supervisory staff assigned to the site, be previously designated by the Site Vice President as a Qualified Reviewer, and successfully complete the site Qualified Reviewer training program. Review of environmental radiological analysis procedures, shall be performed by the General Manager, Environmental Services or a designee. Each such review shall include a determination of whether or not additional, cross-disciplinary review shall be performed by the appropriately designated site review personnel.

b. Proposed modifications shall be designed and the design reviewed in accordance with station Technical Specifications. The proposed modification design, the design review, and design approval shall be in accordance with ANSI N45.2.11 as described in Table 17-1 of the Duke Power Topical Report, Quality Assurance Program, Duke 1-A. Proposed modifications to nuclear safety related structures, systems, and components shall be approved prior to implementation by the Station Manager or the Manager of Engineering; or for the Station Manager, by a Maintenance Superintendent, the Operations Superintendent, or the Work Control Superintendent, as previously designated by the Station Manager. Upon implementation approval, the modification shall be implemented in accordance with the Duke Power Nuclear Station Modification Program and approved procedures (as discussed in Item a above).

c. Proposed changes to the station Technical Specifications or Facility Operating License shall be prepared in accordance with station Technical Specifications. Each proposed Technical Specification (including affected Bases) or Facility Operating License change shall be reviewed by the Plant Operations Review Committee (PORC) and the Nuclear Safety Review Board (NSRB) prior to submittal to the Nuclear Regulatory Commission. Proposed changes to the Technical

Specifications and Facility Operating License shall be approved by the Station Manager, or for the Station Manager by a designated manager or company officer. License Amendment Request submittal cover letters shall be signed by an officer of Duke Power Company.

d. Proposed tests and experiments which affect station nuclear safety and are not addressed in the UFSAR or Technical Specifications shall be reviewed by PORC.

e. Incidents reportable pursuant to station Technical Specifications and all violations of Technical Specifications shall be investigated and a report prepared which evaluates the occurrence and which provides recommendations to prevent recurrence. Such reports shall be approved by the Manager, Safety Assurance and provided to the Site Vice President and PORC.

f. The Manager, Safety Assurance shall assure the performance of special reviews and investigations, and the preparation and submittal of reports thereon, as requested by the Site Vice President. Such reports shall be provided to PORC.

g. The Manager, Safety Assurance shall assure the performance of a review by a knowledgeable individual/organization of every unplanned onsite release of radioactive material to the environs, including the preparation and forwarding of reports covering evaluation, recommendations, and disposition of the corrective action to prevent recurrence to the Site Vice President. and to the PORC.

h. The Manager, Safety Assurance shall assure the performance of a review by a knowledgeable individual/organization of changes to the Process Control Program, Offsite Dose Calculation Manual (ODCM), and Radwaste Treatment Systems.

i. The Manager, Safety Assurance shall ensure the performance of a review by a knowledgeable individual/organization of the Fire Protection program and implementing procedures and submittal of recommended changes to the Director, Organization Effectiveness Services.

j. Reports documenting each of the activities performed under this commitment shall be maintained. Copies shall be provided to the NSRB.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. N/A	A.1 N/A	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.13.2.1 N/A	N/A

BASES

The requirements contained in this selected licensee commitment were relocated from the Oconee Technical Specifications with the approval of the U. S. Nuclear Regulatory Commission. Changes to this SLC shall be considered a change in an NRC commitment and shall be made only in accordance with the approved Compliance Manual Procedure for the Control of Selected Licensee Commitments and by use of the 10 CFR 50.59 evaluation process.

This SLC implements the review requirements of ANSI N18.7-1976/ANS-3.2 and ANSI N45.2.11-1974 as referenced in the Duke Power Company Topical Report, Quality Assurance Program, Duke-I-A.

REFERENCES:

1. ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel.
2. ANSI N18.7-1976/ANS-3.2, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.
3. ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants.
4. Compliance Manual Procedure for the Control of Selected Licensee Commitments.
5. Nuclear System Directive 209, 10 CFR 50.59 Evaluations.
6. 10 CFR 50.59.
7. Nuclear System Directive 703, Administrative Instructions for Station Procedures.

16.13 CONDUCT OF OPERATIONS

16.13.3 Plant Operations Review Committee

COMMITMENT

A Plant Operations Review Committee (PORC) shall be established and maintained for the site. The PORC shall be composed of the Manager of Safety Assurance, the Station Manager and his/her direct reports most responsible for station operation and maintenance, the Manager of Engineering and his/her direct reports most responsible for engineering support of station operation and maintenance, or designated alternates. The PORC Chairperson, members, and alternate members shall be qualified in accordance with ANSI N18.1-1971 and be appointed by the Site Vice President. The quorum necessary for conducting the PORC functions shall consist of the Chairperson, or his/her designated alternate, and at least three other PORC members including alternates.

Reports of reviews encompassed by this Selected Licensee Commitment shall be prepared and forwarded to the Site Vice President and the Nuclear Safety Review Board.

a. The PORC shall be responsible for reviewing the following prior to final approval:

   1. All proposed tests and experiments which affect station nuclear safety and are not addressed in the UFSAR or Technical Specifications;

   2. OPERABILITY evaluations resulting in a Justification for Continued Operation;

   3. OPERABILITY evaluations resulting in the decision that affected systems, structure or components are OPERABLE but degraded; and

   4. All proposed changes to the station Technical Specifications (and affected Bases that are included with the license amendment request submittal package) or the Facility Operating License.

b. The PORC shall be responsible for reviewing the effectiveness of corrective actions for:

   1. Licensee Event Reports and Special Reports made to the NRC;

   2. Violations of Technical Specifications;

3. Special reviews and investigations as requested by the Site Vice President; and

4. Reports on unplanned onsite releases of radioactive material to the environs.

C. The PORC shall review additional programs, procedures and plant activities as directed by the Site Vice President.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. N/A	A.1 N/A	N/A

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 16.13.3.1 N/A	N/A

BASES

The PORC shall be established to recommend to the Station Manager approval or disapproval of the items listed under this commitment prior to their final approval.

The PORC shall report to the Site Vice President on the areas of responsibility specified in this selected licensee commitment.

REFERENCES:

1. ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel.
2. ANSI N18.7-1976/ANS-3.2, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants.
3. Nuclear System Directive 308, Plant Operations Review Committee.

HEPA filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine. Bypass leakage for the charcoal adsorbers and particulate removal efficiency for HEPA filters are determined by halogenated hydrocarbon and DOP respectively. The laboratory carbon sample test results indicate a radioactive methyl iodide removal efficiency for expected accident conditions.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated. Replacement adsorbent should be qualified according to the guidelines of Regulatory Guide 1.52. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be replaced. Any HEPA filters found defective should be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

If painting, fire or chemical release occurs during system operation such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals or foreign materials, the same tests and sample analysis should be performed as required for operational use.

REFERENCES

1. Regulatory Guide 1.52, Rev. 2.

2. ITS 5.5.12, Ventilation Filter Testing Program.