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MIDDLE SOUTH UTILITIES SYSTEM

December 3, 1984

W3P84-3247
3-A1.01.04
Q-3-A29.14

Director of Nuclear Reactor Regulation
Attention: Mr. G.W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Knighton:

Subject: Waterford 3 SES
Docket No. 50-382
FSAR Chapter 14

Reference: 1) W3P84-1607 dated June 11, 1984

The purpose of this letter is to clarify some of the information submitted via Reference 1. Some of the proposed changes in that letter deleted notes in the test descriptions within Subsection 14.2.12.2 which indicated that certain portions of the described test might or would be performed after fuel load. These notes were shown to be deleted in instances where the Phase II test procedures had been completed and no major procedural goals remained to be accomplished after fuel load.

However, in the cases of Subsections 14.2.12.2.15, 14.2.12.2.57, 14.2.12.2.58, and 14.2.12.2.62, the notes were intended to indicate that testing on these systems would continue after fuel load, under the Phase III program. These notes were inadvertently deleted by the referenced letter, whereas they should have been modified to indicate further testing would be done during Phase III. The attached pages reflect the correct wording for these subsections.

In addition, Subsections 14.2.12.2.7, 14.2.12.2.23 and 14.2.12.2.28 should be modified per the attached pages. The first of these makes the FSAR and the testing program consistent. The other two are necessitated by plans to load the subject systems' filter units after fuel load, with testing following filter loading.

All FSAR changes will be implemented in a future amendment in accordance with 10CFR50.71(e) requirements.

If you have any questions, please do not hesitate to call.

Yours very truly,

K.W. Cook
Nuclear Support & Licensing Manager

KWC/PC/cal
Attachment



B001
1/1

cc: E.L. Blake, W.M. Stevenson, J.T. Collins, D.M. Cruthchfield, J. H. Wilson, G.L. Constable, T.A. Flippo, R. Beker, R. Gruel (BNWI)

FSAR/LICE

14.2.12.2.7 PLANT COMPUTER *

14.2.12.2.7.1 Objective

To verify that the plant computer is installed properly, responds correctly to external inputs, and provides proper inputs to computer peripheral equipment.

14.2.12.2.7.2 Prerequisites

A. Construction activities on the systems to be tested are complete.

B. Applicable vendor and owner manuals are available.

C. External test instrumentation is available and calibrated.

D. Plant systems required to support testing are operable, or temporary systems are installed and operable.

14.2.12.2.7.3 Test Method

A. Test programs will be run as specified by Louisiana Power & Light to verify the reliability of the computer system to perform the required hardware functions.

B. External inputs to the system will be simulated and measured.

C. Computer functional programs for selected programs will be verified using proper software or control panel inputs where applicable.

D. Alarm and indication functions will be verified by the computer instrumentation.

12.2.12.2.7.4 Acceptance Criteria

The plant computer performs as described in Subsection 7.7.1.6.

* Portions of this testing will be completed after fuel loading.

14.2.12.2.15 TURBINE BUILDING CLOSED COOLING WATER SYSTEM* | 29

14.2.12.2.15.1 Objective

To verify proper operation of the Turbine Building Closed Cooling Water System.

8

14.2.12.2.15.2 Prerequisites

A. Construction activities on the systems to be tested are complete. | 18

B. Plant systems required to support testing are operable, or temporary systems are installed and operable. | 15

C. Test instrumentation is available and calibrated. | 8

D. Permanently installed instrumentation is operable and calibrated. | 29

14.2.12.2.15.3 Test Method

A. Verify all control logic. | 8

B. Verify the proper operation of the cooling pumps, including head and flow characteristics.

C. Demonstrate flow paths and verify heat exchanger temperature rise, inlet and outlet water temperatures, equipment temperature and monitor performance and make appropriate flow rate adjustments to satisfy performance parameters. | 35

D. Demonstrate that the heat exchangers will operate at design flow rate without exceeding heat exchanger design pressure drop.

E. Verify the proper operation of the surge tank level control and upper and lower level alarms. | 8

F. Verify the proper operation of all protective devices, controls, interlocks, instrumentation, and alarms.

G. Verify, if applicable, the proper operation, failure mode, stroking speed, and position indication of control valves. | 15

14.2.12.2.15.4 Acceptance Criteria

The Turbine Building Closed Cooling Water System performs as described in Subsection 9.2.7. | 8

* All portions of this test with the exception of section 14.2.12.2.15.3.C will be completed prior to initial fuel load with the remainder of the test performed ~~at a power ascension.~~ as part of the Phase III program. | 35

14.2.12.2.23 AIRBORNE RADIOACTIVITY REMOVAL SYSTEM

14.2.12.2.23.1 Objective 8

To verify the proper operation of the Airborne Radioactivity Removal System.

14.2.12.2.23.2 Prerequisites 18

A. Construction activities on the systems to be tested are complete.

B. Plant systems required to support testing are operable, or temporary systems are installed and operable. 15

C. Permanently installed instrumentation is operable and calibrated. 29

D. Test instrumentation is available and calibrated.

14.2.12.2.23.3 Test Method

A. Verify all control logic. 8

B. Operate the system in the normal operating mode and verify system air balancing and air flow requirements.

C. Verify filter particulate removal efficiency and the air flow rate across the filter bank. *

D. Simulate actuation of the Reactor Coolant Pump Deluge System and verify that the Airborne Radioactivity Removal System shuts down automatically. 15 8

E. Verify the proper operation of all protective devices, controls, interlocks, and alarms, using actual or simulated inputs. 15 8

14.2.12.2.23.4 Acceptance Criteria

The Airborne Radioactivity Removal System performs as described in Subsection 9.4.5.2. 15

* Portions of this testing may be completed after full loading, but prior to entering Mode 4.

14.2.12.2.28 RAB NORMAL VENTILATION AND CONTAINMENT PURGE SYSTEMS | 18

14.2.12.2.28.1 Objective | 8

To verify the proper operation of the RAB Normal Ventilation and Containment Purge Systems. | 15

14.2.12.2.28.2 Prerequisites | 8

A. Construction activities on the systems to be tested are complete. | 18

B. Plant systems required to support testing are operable, or temporary systems are installed and operable. | 15

C. Permanently installed instrumentation is operable and calibrated. | 29

D. Test instrumentation is available and calibrated.

14.2.12.2.28.3 Test Method | 8

A. Verify all control logic.

B. Verify the proper operation of centrifugal fans, electrical heating coils, and air handling units in all modes and flow paths. | 15

C. Perform filter tests and verify filter particulate removal efficiency and filter bank air flow capacity. * | 8

D. Verify, if applicable, the proper operation, failure mode, stroking speed, and position indication of control valves and dampers. | 15

E. Operate the ventilating system in normal mode and verify air balance. | 8

F. Operate the Containment Purge System in conjunction with the RAB Normal Ventilation System and verify proper air flow. | 15 | 8

G. Verify that the containment purge valves close on receipt of a CIAS. | 15 | 8

H. Verify the proper operation of protective devices, controls, interlocks, computer inputs, instrumentation and alarms, using actual or simulated inputs. | 18 | 15

14.2.12.2.28.4 Acceptance Criteria | 8

The RAB Normal Ventilating and Containment Purge Systems perform as described in Subsections 9.4.3.1, 9.4.3.2, and 9.4.5.3. | 15 | 34

* Portions of this testing may be completed after fuel loading, but prior to entering Mode 4.

14.2.12.2.57 FIXED INCORE DETECTOR SYSTEM*

14.2.12.2.57.1 Objective

To verify the proper operation of the Fixed Incore Detector (Neutron Flux) System.

14.2.12.2.57.2 Prerequisites

A. Construction activities on the systems to be tested are complete.

B. Permanently installed instrumentation is operable and calibrated.

C. Plant systems required to support testing are operable, or temporary systems are installed and operable.

D. Test instrumentation is available and calibrated.

14.2.12.2.57.3 Test Method

A. Using external test instrumentation, simulate incore detector signals into the signal (amplifier) circuits.

B. Vary the simulated inputs to the amplifier and record its outputs to the plant computer.

14.2.12.2.57.4 Acceptance Criteria

The Fixed Incore Detector System operates as described in Subsection 7.7.1.7.

*The electrical operability of the system will be tested prior to fuel load. However, the detector responsiveness and comparison testing will be done ~~after fuel load.~~ & under the Phase III program (See Subsection 14.2.12.3.3).

14.2.12.2.58 MOVABLE INCORE DETECTOR SYSTEM* | 29

14.2.12.2.58.1 Objective | 8

To verify the proper performance of the Movable Incore Detector System. | 15

14.2.12.2.58.2 Prerequisites | 8

A. Construction activities on the systems to be tested are complete. | 18

B. Permanently installed instrumentation is operable and calibrated. | 29

C. Plant systems required to support testing are operable, or temporary systems are installed and operable. | 15

D. Test instrumentation is available and calibrated. | 29

14.2.12.2.58.3 Test Method | 8

A. Operate one set of drive and transfer machines at a time and record all pertinent outputs, including encoder signals.

B. Using external instrumentation, simulate the plant computer command signals to drive the detectors and to change inlet-to-outlet instrument loop alignments. Monitor all feedback signals as required for verification of simulated commands. | 15

C. Operate the system from the main control room board and verify proper operation by monitoring the feedback signals. | 8

D. Operate the system from the local position with the portable control set and verify proper operation by monitoring the feedback signals. | 15

14.2.12.2.58.4 Acceptance Criteria | 8

The Movable Incore Detector System performs as described in Subsection 7.7.1.7. | 15

*The mechanical operability of the system will be tested prior to fuel load. However, the detector responsiveness and comparison testing will be done ~~after fuel load.~~ under the Phase III program (see Subsection 14.2.12.3.3). | 34

14.2.12.2.62 REACTOR POWER CUTBACK SYSTEM* | 34

14.2.12.2.62.1 Objective

To verify the ability of the reactor power cutback module (RPCM) and the reactor power cutback control panel (RPCCP) to provide outputs to initiate a step reduction in reactor power following an input for full load rejection or the loss of one main feedwater pump. | 15 | 8 | 34

14.2.12.2.62.2 Prerequisites

A. Plant systems required to support testing are operable, or temporary systems are installed and operable. | 15

B. Permanently installed instrumentation associated with the Reactor Power Cutback System operable and calibrated. | 8

C. Test instrumentation is available and calibrated. | 29

14.2.12.2.62.3 Test Method | 8

A. Demonstrate proper operational interface between the reactor power cutback control panel and the reactor power cutback module. | 15

B. Demonstrate the proper performance of all lamps and alarms.

C. Verify outputs to the Control Element Drive Mechanism Control System, Plant Monitoring System, Turbine Control System, Main Feedwater Pumps, and Nuclear Steam Supply System (NSSS) Control System. | 8 | 15

D. Demonstrate operation in both the auto and manual modes.

14.2.12.2.62.4 Acceptance Criteria | 8

The Reactor Power Cutback System operates in accordance with Subsection 7.7.1.9. | 15

X Response of system under transient conditions will be tested under the Phase III program (see Subsections 14.2.12.3.38 and 14.2.12.3.42).

~~*Portions of this test will be completed after fuel load.~~ | 34

W3P84-3247

bcc: R.S. Leddick, R.P. Barkhurst, F.J. Drummond, T.F. Gerrets, R.J. Murillo, P. Christofakis (Ebasco), G.G. Hofer (Ebasco), W.A. Cross (LP&L Bethesda Office), R.M. Nelson, B. Duncan, R. Novgrod, Project Files, Nuclear Records (3), Licensing Library