



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FLORIDA POWER CORPORATION
CITY OF ALACHUA
CITY OF BUSHNELL
CITY OF GAINESVILLE
CITY OF KISSIMMEE
CITY OF LEESBURG
CITY OF NEW SMYRNA BEACH AND UTILITIES COMMISSION, CITY OF NEW SMYRNA BEACH
CITY OF OCALA
ORLANDO UTILITIES COMMISSION AND CITY OF ORLANDO
SEMINOLE ELECTRIC COOPERATIVE, INC.
CITY OF TALLAHASSEE

DOCKET NO. 50-302

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 152
License No. DPR-72

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power Corporation, et al. (the licensee) dated May 31, 1995, as supplemented November 28 and December 21, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 152, are hereby incorporated in the license. Florida Power Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 13, 1996

ATTACHMENT TO LICENSE AMENDMENT NO.152

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove

3.3-4
3.3-14
3.3-17
3.3-23
3.3-25
3.3-28
3.3-40
3.3-43
3.9-3
B 3.3-29
B 3.3-56
B 3.3-59
B 3.3-77
B 3.3-81
B 3.3-98
B 3.3-143
B 3.3-149
B 3.9-8

Insert

3.3-4
3.3-14
3.3-17
3.3-23
3.3-25
3.3-28
3.3-40
3.3-43
3.9-3
B 3.3-29
B 3.3-56
B 3.3-59
B 3.3-77
B 3.3-81
B 3.3-98
B 3.3-143
B 3.3-149
B 3.9-8

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.1.5 -----NOTES----- 1. Neutron detectors and RC flow sensors are excluded from this Surveillance. 2. Verification of bypass function is excluded from this Surveillance. ----- Perform CHANNEL CALIBRATION.</p>	<p>92 days</p>
<p>SR 3.3.1.6 -----NOTE----- Neutron detectors and RCPPM current and voltage sensors are excluded from CHANNEL CALIBRATION. ----- Perform CHANNEL CALIBRATION.</p>	<p>24 months</p>
<p>SR 3.3.1.7 -----NOTE----- Neutron detectors and RCPPM current and voltage sensors and the watt transducer are excluded from RPS RESPONSE TIME testing. ----- Verify RPS RESPONSE TIME is within limits.</p>	<p>24 months on a STAGGERED TEST BASIS</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.3.5.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.5.2	<p>-----NOTE----- When an ESAS channel is placed in an inoperable status solely for performance of this Surveillance, entry into associated Conditions and Required Actions may be delayed for up to 8 hours, provided the associated ES Function is maintained. -----</p> Perform CHANNEL FUNCTIONAL TEST.	31 days
SR 3.3.5.3	Perform CHANNEL CALIBRATION.	24 months
SR 3.3.5.4	Verify ESF RESPONSE TIME within limits.	24 months on a STAGGERED TEST BASIS

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.6.1 Perform CHANNEL FUNCTIONAL TEST.	24 months

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. (continued)	B.4 Verify SDM is $\geq 1\% \Delta k/k$.	1 hour <u>AND</u> Once per 12 hours thereafter

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.3.9.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.9.2 -----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. ----- Perform CHANNEL CALIBRATION.	24 months
SR 3.3.9.3 Verify at least one decade overlap with intermediate range neutron flux channels.	Once each reactor startup prior to source range counts exceeding 10^6 cps if not performed within the previous 7 days

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.10.2 -----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. ----- Perform CHANNEL CALIBRATION.</p>	<p>24 months</p>
<p>SR 3.3.10.3 Verify at least one decade overlap with power range neutron flux channels.</p>	<p>Once each reactor startup prior to intermediate range indication exceeding 1E-5 amp if not performed within the previous 7 days</p>

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required Action and associated Completion Time not met for Functions 1.c, 2, 3, or 4.	F.1 Reduce once through steam generator (OTSG) pressure to < 750 psig.	12 hours

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.11-1 to determine which SRs shall be performed for each EFIC Function.

SURVEILLANCE	FREQUENCY
SR 3.3.11.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.11.2 Perform CHANNEL FUNCTIONAL TEST.	31 days
SR 3.3.11.3 Perform CHANNEL CALIBRATION.	24 months
-----NOTE----- Only required to be performed in MODES 1 and 2. -----	
SR 3.3.11.4 Verify EFIC RESPONSE TIME is within limits.	24 months on a STAGGERED TEST BASIS

SURVEILLANCE REQUIREMENTS

-----NOTE-----
 These SRs apply to each PAM instrumentation Function in Table 3.3.17-1.

SURVEILLANCE	FREQUENCY
SR 3.3.17.1 -----NOTE----- Not required for Function 4. ----- Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 days
SR 3.3.17.2 -----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. ----- Perform CHANNEL CALIBRATION.	-----NOTE----- The Frequency for Function 12 is 18 months. ----- 24 months

SURVEILLANCE REQUIREMENTS

-----NOTE-----
 These SRs apply to each Remote Shutdown System Instrumentation Function in
 Table 3.3.18-1.

SURVEILLANCE	FREQUENCY
SR 3.3.18.1 Perform CHANNEL CHECK for each required instrumentation channel that is normally energized.	31 days
SR 3.3.18.2 -----NOTE----- Not required for Function 1.a. ----- Perform CHANNEL CALIBRATION for each required instrumentation channel.	24 months

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.9.2.1 Perform CHANNEL CHECK.	12 hours
SR 3.9.2.2 -----NOTE----- Neutron detectors are excluded from CHANNEL CALIBRATION. ----- Perform CHANNEL CALIBRATION.	24 months

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.1.5 (continued)

This Surveillance is modified by two Notes. The first clarifies that neutron detectors and RC flow sensors (tubes) are not required to be tested as part of this Surveillance. In the case of the neutron detectors, there is no adjustment that can be made to the detectors. Furthermore, adjustment of the detectors is unnecessary because they are passive devices with minimal drift. Slow changes in detector sensitivity are compensated for by performing the daily calorimetric calibration and the monthly axial channel calibration. RCS flow detectors are excluded from this SR, but are surveilled as part of SR 3.3.1.6 on a refueling basis. This is based on their inaccessibility during power operations. The second note clarifies that the bypass function associated with the test Functions need only be performed once per fuel cycle. This is consistent with the definition of CHANNEL CALIBRATION.

SR 3.3.1.6

The CHANNEL CALIBRATION is a complete check of the instrument channel, including the sensor. The test verifies that the channel responds to the measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift to ensure that the instrument channel remains operational between successive tests. The 24 month Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04.

A Note to the Surveillance indicates that neutron detectors and RCPPM current and voltage sensors are excluded from CHANNEL CALIBRATION. In the case of the neutron detectors, this Note is necessary because of the difficulty in generating an appropriate detector input signal. Excluding the detectors is acceptable because the principles of detector operation ensure a virtually instantaneous response. RCPPM current and voltage sensors are excluded due to the fact no adjustments can be made to these sensors.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.5.3

CHANNEL CALIBRATION is a complete check of the instrument channel, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channel adjusted to account for instrument drift to ensure that the instrument channel remains operational between successive tests.

The Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04.

SR 3.3.5.4

SR 3.3.5.4 ensures that the ESAS actuation channel response times are less than or equal to the maximum times assumed in the accident analysis. The response time values are the maximum values assumed in the safety analyses. Individual component response times are not modeled in the analyses. Response time testing acceptance criteria are on a Function basis and are included in Reference 1. The analyses model the overall or total elapsed time from the point at which the parameter exceeds the actuation setpoint value at the sensor to the point at which the end device is actuated. Thus, this SR encompasses the automatic actuation logic components addressed under LCO 3.3.7 and the operation of the ES end devices.

Response time tests are conducted on an 24 month STAGGERED TEST BASIS. This results in response time verification of all instrument channels every 72 months. The Frequency is based on plant operating experience, which shows that random failures of instrumentation components causing serious response time degradation but not channel failure are infrequent occurrences.

REFERENCES

1. FSAR, Chapter 7.
 2. FSAR, Chapter 14.
 3. FSAR, Chapter 6.
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BASES (continued)

ACTIONS

A Note has been added to the ACTIONS indicating separate Condition entry is allowed for each ESAS manual initiation Function.

A.1

With one manual initiation channel of one or more ESAS Functions inoperable, the channel must be restored to OPERABLE status within 72 hours. The Completion Time of 72 hours is based on plant operating experience and administrative controls, which provide alternative means of ESAS Function initiation via individual component controls. The 72 hour Completion Time is also consistent with the allowed outage time for a loss of redundancy condition for the safety systems actuated by ESAS.

B.1 and B.2

If the manual initiation channel cannot be restored to OPERABLE status within 72 hours, the plant must be placed in a MODE in which the LCO does not apply. To achieve this status, the plant must be placed in at least MODE 3 within 6 hours and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required MODES from full power conditions in an orderly manner and without challenging plant systems.

SURVEILLANCE
REQUIREMENTS

SR 3.3.6.1

SR 3.3.6.1 is a CHANNEL FUNCTIONAL TEST of the ESAS manual initiation. The SR verifies manual initiating circuitry is OPERABLE but does not actuate the end device (i.e., pump, valves, etc.). Proper operation of the Function is primarily monitored by ES logic matrix test lights (located on the ES Actuation relay cabinets). The 24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage and the potential for an unplanned transient if the Surveillance is performed with the reactor at power. This Frequency has been extended to 24 months based on operating experience, which shows these components usually pass the Surveillance when performed on an 18 month Frequency.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.9.2 (continued)

any failures in the detectors will be apparent as change in channel output. The Frequency of 24 months is based on the results of instrument drift data conducted in accordance with NRC Generic Letter 91-04.

SR 3.3.9.3

SR 3.3.9.3 is the verification of one decade of overlap between source and intermediate range neutron flux instrumentation. The SR is required to be performed prior to source range count rate exceeding 10^6 cps if it has not been performed within 7 days prior to reactor startup. Failure to verify one decade of overlap on one or more source range channels requires the plant to be maintained in subcritical condition until the verification can be made. This ensures a continuous source of neutron power indication during the approach to criticality. The verification may be omitted if performed within the previous 7 days. The 7 day portion of the Frequency is based on operating experience, which shows that source range and intermediate range instrument overlap does not change appreciably over this time interval.

REFERENCES

None.

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.10.2 (continued)

The SR is modified by a Note excluding neutron detectors from CHANNEL CALIBRATION. It is not necessary to test the detectors because generating a meaningful test signal is difficult. In addition, the detectors are of simple construction, and any failures in the detectors will be apparent as a change in channel output. The 24 month Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04.

SR 3.3.10.3

SR 3.3.10.3 is the verification of one decade of overlap between intermediate and power range neutron flux instrumentation. The SR is required to be performed prior to intermediate range indication exceeding $1E-5$ amp if it has not been performed within 7 days prior to reactor startup. Failure to verify one decade of overlap on one or more channels requires the plant to remain in a condition where the intermediate range channels provide adequate indication until the verification can be made. This ensures the power range nuclear instrumentation is functioning properly prior to the transition to this range of indication.

The test may be omitted if performed within the previous 7 days. The 7 day portion of the Frequency is based on operating experience, which shows that intermediate range instrument overlap does not change appreciably over this time interval.

REFERENCES

None.

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.11.1 (continued)

monitoring the same parameter should read approximately the same value. Significant deviations between instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious.

Acceptance criteria are determined by plant staff and are presented in the Surveillance Procedure. The criteria are based on a combination of the channel instrument uncertainties.

The Frequency, about once every shift, is based on operating experience that demonstrates channel failure is unlikely. Thus, performance of the CHANNEL CHECK ensures that undetected overt channel failure is limited to time intervals between subsequent performances of the SR.

SR 3.3.11.2

A CHANNEL FUNCTIONAL TEST verifies the function of the required trip, interlock, and alarm functions of the channel. The Frequency of 31 days is based on operating experience and industry accepted practice.

SR 3.3.11.3

CHANNEL CALIBRATION is a complete check of the instrument channel including the sensor. The test verifies the channel responds to a measured parameter within the necessary range and accuracy. CHANNEL CALIBRATION leaves the channels adjusted to account for instrument drift to ensure that the instrument channel remains operational between successive tests. The Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04.

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.17.1 (continued)

A note to the Surveillance excludes the performance of a CHANNEL CHECK on Function 4. FPC requested, and was granted, exception from performing a CHANNEL CHECK on this instrumentation as part of Amendment 124, dated October 17, 1989. The basis for not performing this SR is based on the design of the system. The system utilizes differential pressure (dp) measurements across vertical elevations of the hot leg and the reactor vessel when the RCPs are tripped. Performance of the SR with the RCPs in operation provides no meaningful information, such that a CHANNEL CHECK of this Function is not required.

SR 3.3.17.2

CHANNEL CALIBRATION is a complete check of the instrument channel, including the sensor, to verify the channel responds to the measured parameter(s) within the necessary range and accuracy.

For the Containment Area Radiation instrumentation, a CHANNEL CALIBRATION consists of an electronic calibration of the channel, not including the detector, for range decades above 10 R/hr. The calibration also provides a one point check of the detector below 10 R/hr using a gamma test source (Reference NUREG 0737, Table II.F.1-3).

The 24 month Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04. The Frequency for the hydrogen monitors is 18 months based on operating experience and was originally selected to be consistent with the typical industry fuel cycle.

A Note clarifies that the neutron detectors are not required to be tested as part of the CHANNEL CALIBRATION. Adjustment of the detectors is unnecessary because they are passive devices and operating experience has shown them to exhibit minimal drift. Furthermore, there is no adjustment that can be made to the detectors.

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BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.18.2

CHANNEL CALIBRATION is a complete check of the instrument loop and sensor. The SR verifies that the channel responds to the measured parameters within the necessary range and accuracy.

A Note clarifies that Function 1.a., "Reactor Trip Breaker (RTB) Position" is not required to have a CHANNEL CALIBRATION. This indication is mechanical in nature, and thus, not subject to a calibration.

The 24 month Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04 and is justified by the assumption of a 30 month calibration interval in the determination of the magnitude of equipment drift.

REFERENCES

1. 10 CFR 50, Appendix A, GDC 19.
 2. 10 CFR 50, Appendix R, Section L.
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BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.9.2.2

SR 3.9.2.2 is the performance of a CHANNEL CALIBRATION every 24 months. The CHANNEL CALIBRATION for the source range nuclear instrumentation is a complete check and re-adjustment of the channels, from the pre-amplifier input to the indicators. The 18 month Frequency is based on engineering judgment and the need to perform this Surveillance during the conditions that exist during a plant outage. The 24 month Frequency is based on the results of a review of instrument drift data conducted in accordance with NRC Generic Letter 91-04.

Performance of SR 3.3.9.2 meets the requirements of this Surveillance, and one performance may be used to satisfy both requirements.

This SR is modified by a Note stating that neutron detectors are excluded from the CHANNEL CALIBRATION. It is not necessary to test the detectors because generating a meaningful test signal is difficult. The detectors are of simple construction, and any failures in the detectors will be apparent as change in channel output.

REFERENCES

1. FSAR, Section 7.3.1.2.
 2. FSAR, Section 14.1.2.4.
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