

March 7, 1988

Docket No. 50-335

Mr. C. O. Woody
Executive President
Florida Power & Light Company
P. O. Box 14000
Juno Beach, Florida 33408

Dear Mr. Woody:

SUBJECT: ST. LUCIE UNIT 1 - ISSUANCE OF AMENDMENT RE: INSERVICE INSPECTION
AND INSERVICE TESTING OF ASME CODE CLASS 1, 2 AND 3 COMPONENTS
(TAC NOS. 63059 AND 66642)

The Commission has issued the enclosed Amendment No.90 to Facility Operating License No. DPR-67 for the St. Lucie Plant, Unit No. 1. This amendment consists of changes to the Technical Specifications in response to your applications dated August 17, 1987 and November 16, 1987, as supplemented December 30, 1987.

This amendment upgrades the technical specifications dealing with the inservice inspection of ASME Code Class 1, 2, and 3 components and inservice testing of ASME Code Class 1, 2, and 3 pumps and valves.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by

E. G. Tourigny, Project Manager
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

8803180154 880307
PDR ADDCK 05000335
PDR

Enclosures:

- 1. Amendment No.90 to DPR-67
- 2. Safety Evaluation

cc w/enclosures:
See next page

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

March 7, 1988

Docket No. 50-335

Mr. C. O. Woody
Executive Vice President
Florida Power & Light Company
P. O. Box 14000
Juno Beach, Florida 33408

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A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in dark ink, appearing to read "E. G. Tourigny".

E. G. Tourigny, Project Manager
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 90 to DPR-67
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. C. O. Woody
Florida Power & Light Company

St. Lucie Plant

cc:

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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 90
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by Florida Power & Light Company, (the licensee) dated August 17, 1987 and November 16, 1987, as supplemented December 30, 1987, comply 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.

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P PDR

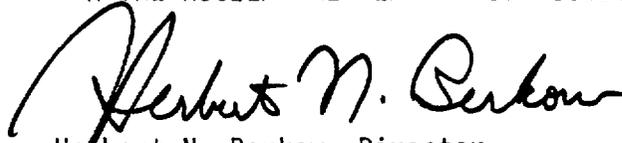
2. Accordingly, Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 2.C.(?) to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 90, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 7, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 90

TO FACILITY OPERATING LICENSE NO. DPR-67

DOCKET NO. 50-335

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove Pages

3/4 0-2
--
3/4 1-8
3/4 1-10 through 3/4 1-15
3/4 4-2
3/4 4-3
3/4 4-26 through 3/4 4-55
3/4 5-4
3/4 5-5
3/4 5-6
3/4 6-15
3/4 6-16
3/4 6-18
3/4 6-19
3/4 6-26
3/4 7-1
3/4 7-4
3/4 7-5
3/4 7-9
3/4 7-14
3/4 7-15
3/4 7-16
3/4 7-17
--
B3/4 4-2
B3/4 4-12
B3/4 4-13

Insert Pages

3/4 0-2
3/4 0-3
3/4 1-8
3/4 1-10 through 3/4 1-15
3/4 4-2
3/4 4-3
3/4 4-26 through 3/4 4-55
3/4 5-4
3/4 5-5
3/4 5-6
3/4 6-15
3/4 6-16
3/4 6-18
3/4 6-19
3/4 6-26
3/4 7-1
3/4 7-4
3/4 7-5
3/4 7-9
3/4 7-14
3/4 7-15
3/4 7-16
3/4 7-17
B3/4 0-3
B3/4 4-2
B3/4 4-12
B3/4 4-13

APPLICABILITY

SURVEILLANCE REQUIREMENTS

4.0.2 Each Surveillance Requirement shall be performed within the specified time interval with:

- a. A maximum allowable extension not to exceed 25% of the test interval, and
- b. A total maximum combined interval time for any 3 consecutive surveillance intervals not to exceed 3.25 times the specified surveillance interval.

4.0.3 Performance of a Surveillance Requirement within the specified time interval shall constitute compliance with OPERABILITY requirements for a Limiting Condition for Operation and associated ACTION statements unless otherwise required by the specification.

4.0.4 Entry into an OPERATIONAL MODE or other specified applicability condition shall not be made unless the Surveillance Requirement(s) associated with the Limiting Condition for Operation have been performed within the stated surveillance interval or as otherwise specified.

The provisions of Specification 4.0.4 are not applicable to the performance of surveillance activities associated with fire protection technical specifications 4.3.3.7.1, 4.3.3.7.2, 4.7.11.1, 4.7.11.2 and 4.7.12 until the completion of the initial surveillance interval associated with each specification.

4.0.5 Surveillance Requirements for inservice inspection and testing of ASME Code Class 1, 2 and 3 components shall be applicable as follows:

- a. Inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50, Section 50.55a(g)(6)(i).
- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

APPLICABILITY

SURVEILLANCE REQUIREMENTS (Continued)

4.0.5 (Continued)

ASME Boiler and Pressure
Vessel Code and applicable
Addenda terminology for
inservice inspection and
testing activities

Required frequencies
for performing inservice
inspection and testing
activities

Weekly
Monthly
Quarterly or every 3 months
Semiannually or every 6 months
Yearly or annually

At least once per 7 days
At least once per 31 days
At least once per 92 days
At least once per 184 days
At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

REACTIVITY CONTROL SYSTEMS

MINIMUM TEMPERATURE FOR CRITICALITY

LIMITING CONDITION FOR OPERATION

3.1.1.5 The Reactor Coolant System lowest operating loop temperature (T_{avg}) shall be $\geq 515^{\circ}\text{F}$ when the reactor is critical.

APPLICABILITY: MODES 1 and 2#.

ACTION:

With a Reactor Coolant System operating loop temperature (T_{avg}) $< 515^{\circ}\text{F}$, restore T_{avg} to within its limit within 15 minutes or be in HOT STANDBY within the next 15 minutes.

SURVEILLANCE REQUIREMENTS

4.1.1.5 The Reactor Coolant System temperature (T_{avg}) shall be determined to be $\geq 515^{\circ}\text{F}$.

- a. Within 15 minutes prior to achieving reactor criticality, and
- b. At least once per 30 minutes when the reactor is critical and the Reactor Coolant System temperature (T_{avg}) is $< 525^{\circ}\text{F}$.

With $K_{eff} \geq 1.0$.

REACTIVITY CONTROL SYSTEMS

3/4.1.2 BORATION SYSTEMS

FLOW PATHS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.1 As a minimum, one of the following boron injection flow paths and one associated heat tracing circuit shall be OPERABLE:

- a. A flow path from the boric acid makeup tank via either a boric acid pump or a gravity feed connection and charging pump to the Reactor Coolant System if only the boric acid makeup tank in Specification 3.1.2.7a is OPERABLE, or
- b. The flow path from the refueling water tank via either a charging pump or a high pressure safety injection pump* to the Reactor Coolant System if only the refueling water tank in Specification 3.1.2.7b is OPERABLE.

APPLICABILITY: MODES 5 and 6.

ACTION:

With none of the above flow paths OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one injection path is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.1 At least one of the above required flow paths shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that the temperature of the heat traced portion of the flow path is above the temperature limit line shown on Figure 3.1-1 when a flow path from the boric acid makeup tanks is used.

*The flow path from the RWT to the RCS via a single HPSI pump shall only be established if: (a) the RCS pressure boundary does not exist, or (b) no charging pumps are operable. In this case all charging pumps shall be disabled, and heatup and cooldown rates shall be limited in accordance with Fig. 3.1-1h.

REACTIVITY CONTROL SYSTEMS

FLOW PATHS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.2 At least two of the following three boron injection flow paths and one associated heat tracing circuit shall be OPERABLE:

- a. Two flow paths from the boric acid makeup tanks via either a boric acid pump or a gravity feed connection, and a charging pump to the Reactor Coolant System, and
- b. The flow path from the refueling water tank via a charging pump to the Reactor Coolant System.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one of the above required boron injection flow paths to the Reactor Coolant System OPERABLE, restore at least two boron injection flow paths to the Reactor Coolant System to OPERABLE status within 72 hours or make the reactor subcritical within the next 2 hours and borate to a SHUTDOWN MARGIN equivalent to at least 2000 pcm at 200°F; restore at least two flow paths to OPERABLE status within the next 7 days or be in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.2 At least two of the above required flow paths shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that the temperature of the heat traced portion of the flow path from the boric acid makeup tanks is above the temperature limit line shown on Figure 3.1-1.
- b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months during shutdown by verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection Actuation signal.

REACTIVITY CONTROL SYSTEMS

CHARGING PUMP - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.3 At least one charging pump or one high pressure safety injection pump* in the boron injection flow path required OPERABLE pursuant to Specification 3.1.2.1 shall be OPERABLE and capable of being powered from an OPERABLE emergency bus.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no charging pump or high pressure safety injection pump OPERABLE, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one of the required pumps is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.3 At least one of the above required pumps shall be demonstrated OPERABLE by verifying the charging pump develops a flow rate of greater than or equal to 40 gpm or the high pressure safety injection pump develops a total head of greater than or equal to 2571 ft. when tested pursuant to Specification 4.0.5.

*The flow path from the RWT to the RCS via a single HPSI pump shall be established only if: (a) the RCS pressure boundary does not exist, or (b) no charging pumps are operable. In this case, all charging pumps shall be disabled and heatup and cooldown rates shall be limited in accordance with Fig. 3.1-1b.

REACTIVITY CONTROL SYSTEMS

CHARGING PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.4 At least two charging pumps shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one charging pump OPERABLE, restore at least two charging pumps to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours; restore at least two charging pumps to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.4 At least two charging pumps shall be demonstrated OPERABLE by verifying that each pump develops a flow rate of greater than or equal to 40 gpm when tested pursuant to Specification 4.0.5.

REACTIVITY CONTROL SYSTEMS

BORIC ACID PUMPS - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.5 At least one boric acid pump shall be OPERABLE if only the flow path through the boric acid pump in Specification 3.1.2.1a above, is OPERABLE.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no boric acid pump OPERABLE as required to complete the flow path of Specification 3.1.2.1a, suspend all operations involving CORE ALTERATIONS or positive reactivity changes until at least one boric acid pump is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.5 The above required boric acid pump shall be demonstrated OPERABLE by verifying that on recirculation flow, the pump develops a discharge pressure of ≥ 75 psig when tested pursuant to Specification 4.0.5.

REACTIVITY CONTROL SYSTEMS

BORIC ACID PUMPS - OPERATING

LIMITING CONDITION FOR OPERATION

3.1.2.6 At least the boric acid pump(s) in the boron injection flow path(s) required OPERABLE pursuant to Specification 3.1.2.2a shall be OPERABLE if the flow path through the boric acid pump in Specification 3.1.2.2a is OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one boric acid pump required for the boron injection flow path(s) pursuant to Specification 3.1.2.2a inoperable, restore the boric acid pump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.1.2.6 The above required boric acid pump(s) shall be demonstrated OPERABLE by verifying that on recirculation flow, the pump develops a discharge pressure of ≥ 75 psig when tested pursuant to Specification 4.0.5.

REACTIVITY CONTROL SYSTEMS

BORATED WATER SOURCES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.2.7 As a minimum, one of the following borated water sources shall be OPERABLE:

- a. One boric acid makeup tank and one associated heat tracing circuit with a minimum contained volume of 1660 gallons of 8 weight percent boron.
- b. The refueling water tank with:
 1. A minimum contained volume of 125,000 gallons,
 2. A minimum boron concentration of 1720 ppm, and
 3. A minimum solution temperature of 40°F.

APPLICABILITY: MODES 5 and 6.

ACTION:

With no borated water sources OPERABLE, suspend all operations involving positive reactivity changes until at least one borated water source is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.1.2.7 The above required borated water source shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
 1. Verifying the boron concentration of the water,
 2. Verifying the water level of the tank, and
 3. Verifying the boric acid makeup tank solution temperature when it is the source of borated water.
- b. At least once per 24 hours by verifying the RWT temperature when it is the source of borated water and the site ambient air temperature is < 40°F.

REACTOR COOLANT SYSTEM

SAFETY VALVES - SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.4.2 A minimum of one pressurizer code safety valve shall be OPERABLE with a lift setting of 2500 PSIA \pm 1%.

APPLICABILITY: MODES 4 and 5.

ACTION:

With no pressurizer code safety valve OPERABLE, immediately suspend all operations involving positive reactivity changes and place an OPERABLE shutdown cooling loop into operation.

SURVEILLANCE REQUIREMENTS

4.4.2 No additional Surveillance Requirements other than those required by Specification 4.0.5.

REACTOR COOLANT SYSTEM

SAFETY VALVES - OPERATING

LIMITING CONDITION FOR OPERATION

3.4.3 All pressurizer code safety valves shall be OPERABLE with a lift setting of 2500 PSIA \pm 1%.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With one pressurizer code safety valve inoperable, either restore the inoperable valve to OPERABLE status within 15 minutes or be in HOT SHUTDOWN within 12 hours.

SURVEILLANCE REQUIREMENTS

4.4.3 No additional Surveillance Requirements other than those required by Specification 4.0.5.

REACTOR COOLANT SYSTEM

PRESSURIZER

LIMITING CONDITION FOR OPERATION

3.4.9.2 The pressurizer temperature shall be limited to:

- a. A maximum heatup of 100°F in any one hour period,
- b. A maximum cooldown of 200°F in any one hour period, and
- c. A maximum Reactor Coolant System spray water temperature differential of 350°F.

APPLICABILITY: At all times.

ACTION:

With the pressurizer temperature limits in excess of any of the above limits, restore the temperature to within the limits within 30 minutes; perform an analysis to determine the effects of the out-of-limit condition on the fracture toughness properties of the pressurizer; determine that the pressurizer remains acceptable for continued operation or be in at least HOT STANDBY within the next 6 hours and reduce the pressurizer pressure to less than 500 psia within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.9.2 The pressurizer temperatures shall be determined to be within the limits at least once per 30 minutes during system heatup or cooldown. The spray water temperature differential shall be determined to be within the limit at least once per 12 hours during steady state operation.

REACTOR COOLANT SYSTEM

3.4.10 STRUCTURAL INTEGRITY

ASME CODE CLASS 1, 2, AND 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

3.4.10.1 The structural integrity of ASME Code Class 1, 2 and 3 components (except steam generator tubes) shall be maintained in accordance with Specification 4.4.10.1.

APPLICABILITY: All MODES.

ACTION:

- a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature more than 50°F above the minimum temperature required by NDT considerations.
- b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the Reactor Coolant System temperature above 200°F.
- c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.10.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

DELETED

TABLE 4.4-6

INSERVICE INSPECTION PROGRAM - SAFETY CLASS 1 COMPONENTS

SECTION 1. REACTOR VESSEL AND CLOSURE HEAD

DELETED

ST. LUCIE - UNIT 1

3/4 4-28

Amendment No. 90

TABLE 4.4-6 (Cont'd)

SECTION 1. REACTOR VESSEL AND CLOSURE HEAD

DELETED

TABLE 4.4-6 (Cont'd)

SECTION 1. REACTOR VESSEL AND CLOSURE HEAD

DELETED

ST. LUCIE - UNIT 1

3/4 4-30

Amendment No. 90

TABLE 4.4-6 (Cont'd)

SECTION 2. PRESSURIZER

DELETED

ST. LUCIE - UNIT 1

3/4 4-31

Amendment No. 90

TABLE 4.4-6 (Cont'd)

SECTION 2. PRESSURIZER

DELETED

ST. LUCIE - UNIT 1

3/4 4-32

Amendment No. 90

TABLE 4.4-6 (Cont'd)

SECTION 3. STEAM GENERATORS

DELETED

ST. LUCIE - UNIT 1

3/4 4-33

Amendment No. 90

TABLE 4.4-6 (Cont'd)

SECTION 4. PIPING PRESSURE BOUNDARY

DELETED

ST. LUCIE - UNIT 1

3/4 4-34

Amendment No. 90

TABLE 4.4-6 (Cont'd)

SECTION 5. PUMP PRESSURE BOUNDARY AND PUMP FLYWHEELS

ST. LUCIE - UNIT 1

3/4 4-35

Amendment No. 90

DELETED

TABLE 4.4-6 (Cont'd)

SECTION 6. VALVE PRESSURE BOUNDARY

DELETED

ST. LUCIE - UNIT 1

3/4 4-36

Amendment No. 90

REACTOR COOLANT SYSTEM

SAFETY CLASS 2 COMPONENTS

LIMITING CONDITION FOR OPERATION

DELETED

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

DELETED

TABLE 4.4-7

INSERVICE INSPECTION PROGRAM - SAFETY CLASS 2 COMPONENTS

SECTION C1. PRESSURE VESSELS

DELETED

ST. LUCIE - UNIT 1

3/4 4-39

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C1. PRESSURE VESSELS

DELETED

ST. LUCIE - UNIT 1

3/4 4-40

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C1. PRESSURE VESSELS

DELETED

ST. LUCIE - UNIT 1

3/4 4-41

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C2. PIPING

DELETED

ST. LUCIE - UNIT 1

3/4 4-42

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C2. PIPING

DELETED

ST. LUCIE - UNIT 1

3/4 4-43

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C2. PIPING

DELETED

ST. LUCIE - UNIT 1

3/4 4-44

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C2. PIPING

DELETED

ST. LUCIE - UNIT 1

3/4 4-45

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C2. PIPING

DELETED

ST. LUCIE - UNIT 1

3/4 4-46

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C2. PIPING

DELETED

ST. LUCIE - UNIT 1

3/4 4-47

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C3. PUMPS

DELETED

ST. LUCIE - UNIT 1

3/4 4-48

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C3. PUMPS

DELETED

ST. LUCIE - UNIT 1

3/4 4-49

Amendment No. 90

TABLE 4.4-7 (Cont'd)

SECTION C4. VALVES

DELETED

TABLE 4.4-7 (Cont'd)

SECTION C4. VALVES

DELETED

TABLE 4.4-7 (Cont'd)

SECTION C4. VALVES

DELETED

ST, LUCIE - UNIT 1

3/4 4-52

Amendment No. 90

REACTOR COOLANT SYSTEM

SAFETY CLASS 3 COMPONENTS

LIMITING CONDITION FOR OPERATION

DELETED

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

DELETED

TABLE 4.4-8

INSERVICE INSPECTION PROGRAM - SAFETY CLASS 3 COMPONENTS

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ST. LUCIE - UNIT 1

3/4 4-55

Amendment No. 90

REACTOR COOLANT SYSTEM

3.4.11 DELETED

EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS - $T_{avg} \geq 325^{\circ}\text{F}$

LIMITING CONDITION FOR OPERATION

3.5.2 Two independent ECCS subsystems shall be OPERABLE with each subsystem comprised of:

- a. One OPERABLE high-pressure safety injection (HPSI) pump (one ECCS subsystem shall include HPSI pump A and the second ECCS subsystem shall include either HPSI pump B or C),
- b. One OPERABLE low-pressure safety injection pump, and
- c. An independent OPERABLE flow path capable of taking suction from the refueling water tank on a Safety Injection Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal.

APPLICABILITY: MODES 1, 2 and 3*.

ACTION:

- a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.
- b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

*With pressurizer pressure ≥ 1750 psia.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

<u>Valve Number</u>	<u>Valve Function</u>	<u>Valve Position</u>
1. V-3659	1. Mini-flow isolation	1. Open
2. V-3660	2. Mini-flow isolation	2. Open

- b. At least once per 31 days by:
1. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:
1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
 2. Of the areas affected within containment at the completion of containment entry when CONTAINMENT INTEGRITY is established.
- d. At least once per 18 months by:
1. Verifying automatic isolation of the shutdown cooling system from the Reactor Coolant System when the Reactor Coolant System pressure is above 300 psig.
 2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- e. At least once per 18 months, during shutdown, by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection Actuation Signal.
 - 2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection Actuation Signal;
 - a. High-Pressure Safety Injection pump.
 - b. Low-Pressure Safety Injection pump.
 - 3. Verifying on a Sump Recirculation Actuation Test Signal, the containment sump isolation valves open and the recirculation valve to the refueling water tank closed.

- f. By verifying that each of the following pumps develops the specified total developed head on recirculation flow when tested pursuant to Specification 4.0.5:
 - 1. High-Pressure Safety Injection pumps: greater than or equal to 2571 ft.
 - 2. Low-Pressure Safety Injection pumps: greater than or equal to 350 ft.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWT on a Containment Spray Actuation Signal and automatically transferring suction to the containment sump on a Recirculation Actuation Signal. Each spray system flow path from the containment sump shall be via an OPERABLE shutdown cooling heat exchanger.

APPLICABILITY: MODES 1, 2 and 3*.

ACTION:

- a. With one containment spray system inoperable and all four containment fan coolers OPERABLE, restore the inoperable spray system to OPERABLE status within 30 days or be in HOT SHUTDOWN within the next 12 hours.
- b. With one containment spray system inoperable and one containment fan cooler inoperable, restore either the inoperable spray system or the inoperable fan cooler to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is positioned to take suction from the RWT on a Containment Pressure -- High High test signal.
- b. By verifying that on recirculation flow, each spray pump develops a discharge pressure of ≥ 200 psig, when tested pursuant to Specification 4.0.5.

* Applicable when pressurizer pressure is ≥ 1750 psia.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months, during shutdown, by:
 - 1. Verifying that each automatic valve in the flow path actuates to its correct position on a CSAS test signal.
 - 2. Verifying that each spray pump starts automatically on a CSAS test signal.
 - 3. Verifying that upon a recirculation actuation signal, the containment sump isolation valves open and that a recirculation mode flow path via an OPERABLE shutdown cooling heat exchanger is established.

- d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

CONTAINMENT SYSTEMS

CONTAINMENT COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 Four containment fan coolers shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one containment fan cooler inoperable and both containment spray systems OPERABLE, restore the inoperable fan cooler to OPERABLE status within 30 days or be in HOT SHUTDOWN within the next 12 hours.
- b. With one containment fan cooler inoperable and one containment spray system inoperable, restore either the inoperable fan cooler or the inoperable spray system to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each containment fan cooler shall be demonstrated OPERABLE at least once per 31 days on a STAGGERED TEST BASIS by:

- a. Starting each unit from the control room,
- b. Verifying that each unit operates for at least 15 minutes, and
- c. Verifying a cooling water flow rate of \geq 1200 gpm to each cooling unit.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 The containment isolation valves specified in Table 3.6-2 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) specified in Table 3.6-2 inoperable, either:

- a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or
- b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or
- c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange; or
- d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1.1 The isolation valves specified in Table 3.6-2 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the cycling test, and verification of isolation time.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each isolation valve specified in Table 3.6-2 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

- a. Verifying that on a Containment Isolation test signal, and/or SIAS test signal, each isolation valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic valve of Table 3.6-2 shall be determined to be within its limits when tested pursuant to Specification 4.0.5.

TABLE 3.6-2

CONTAINMENT ISOLATION VALVES

<u>Valve Tag Number</u>	<u>Penetration Number</u>	<u>Function</u>	<u>Testable During Plant Operation</u>	<u>Isolation Time (Sec)</u>
A. CONTAINMENT ISOLATION				
1. I-FCV-25-4,5	10	Containment purge air exhaust, CIS	No	5
2. I-FCV-25-2,3	11	Containment purge supply, CIS	No	5
3. I-MV-15-1	7	Primary makeup water, CIS	Yes	19
4. I-MV-18-1	9	Instrument air supply, CIS	No	28
5. V-6741	14	Nitrogen supply to safety injection tanks, CIS	Yes	5
6. I-HCV-14-1 & 7	23	Reactor coolant pump cooling water supply, SIAS	No	5
7. I-HCV-14-6 & 2	24	Reactor coolant pump cooling water return, SIAS	No	5
8. V-2515,2516	26	Letdown line, CIS, SIAS	No	5
9. V-5200,5203	28	Reactor coolant sample, CIS	Yes	5
10. V-5201,5204	29	Pressurizer surge line sample, CIS	Yes	5
11. V-5202,5205	29	Pressurizer steam space sample, CIS	Yes	5
12. V-6554,6555	31	Containment vent header, CIS	Yes	5
13. I-LCV-07-11A,11B	42	Reactor cavity sump pump discharge, CIS	Yes	10
14. V-6301,6302	43	Reactor drain tank pump suction, CIS	Yes	5
15. V-2505	44	Reactor coolant pump controlled bleedoff, CIS	No	5
16. I-SE-01-1	44	Reactor coolant pump controlled bleedoff, CIS	No	5

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

3. Verifying during a recombiner system functional test that the heater sheath temperature increases to $\geq 1200^{\circ}\text{F}$ within 5 hours and is maintained for at least 4 hours.
4. Verifying the integrity of the heater electrical circuits by performing a continuity and resistance to ground test immediately following the above required functional test. The resistance to ground for any heater phase shall be $\geq 10,000$ ohms.

CONTAINMENT SYSTEMS

3/4.6.5 VACUUM RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.6.5.1 The containment vessel to annulus vacuum relief valves shall be OPERABLE with an actuation setpoint of less than or equal to 2.25 ± 0.25 inches Water Gauge differential.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment vessel to annulus vacuum relief valve inoperable, restore the valve to OPERABLE status within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.1 No additional Surveillance Requirements other than those required by Specification 4.0.5 and at least once per 3 years verify that the vacuum relief valves open fully within 8 seconds at 2.25 ± 0.25 inches Water Gauge differential.

3/4.7 PLANT SYSTEMS

3.4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves shall be OPERABLE with lift settings as specified in Table 4.7-1.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With both reactor coolant loops and associated steam generators in operation and with one or more main steam line code safety valves inoperable, operation in MODES 1, 2 and 3 may proceed provided that within 4 hours, either the inoperable valve is restored to OPERABLE status or the Power Level-High trip setpoint is reduced per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.1.1 No additional Surveillance Requirements other than those required by Specification 4.0.5.

TABLE 3.7-1MAXIMUM ALLOWABLE POWER LEVEL-HIGH TRIP SETPOINT WITH INOPERABLE
STEAM LINE SAFETY VALVES DURING OPERATION WITH BOTH STEAM GENERATORS

<u>Maximum Number of Inoperable Safety Valves on Any Operating Steam Generator</u>	<u>Maximum Allowable Power Level-High Trip Setpoint (Percent of RATED THERMAL POWER)</u>
1	93.2
2	79.8
3	66.5

ST. LUCIE - UNIT 1

3/4 7-3

TABLE 4.7-1
STEAM LINE SAFETY VALVES PER LOOP

	<u>VALVE NUMBER</u>		<u>LIFT SETTING ($\pm 1\%$)</u>	<u>ORIFICE SIZE</u>
	<u>Header A</u>	<u>Header B</u>		
a.	8201	8205	1000 psia	16 in. ²
b.	8202	8206	1000 psia	16 in. ²
c.	8203	8207	1000 psia	16 in. ²
d.	8204	8208	1000 psia	16 in. ²
e.	8209	8213	1040 psia	16 in. ²
f.	8210	8214	1040 psia	16 in. ²
g.	8211	8215	1040 psia	16 in. ²
h.	8212	8216	1040 psia	16 in. ²

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least three independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. Two motor driven feedwater pumps, and
- b. One feedwater pump capable of being powered from an OPERABLE steam supply system.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With one auxiliary feedwater pump inoperable, restore at least three auxiliary feedwater pumps (two motor driven pumps and one capable of being powered by an OPERABLE steam supply system) to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
 1. Verifying that each motor driven pump develops a discharge pressure of ≥ 1342 psig on recirculation flow.
 2. Verifying that the steam turbine driven pump develops a discharge pressure of ≥ 1342 psig on recirculation flow.*

*When not in MODES 1, 2 or 3, this surveillance shall be performed within 24 hours after entering MODE 3 and prior to entering MODE 2.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

3. Verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown by:
 1. Verifying that each automatic valve in the flowpath actuates to its correct position upon receipt of the Auto Start actuation test signal.
 2. Verifying that each auxiliary feedwater pump starts automatically as designed upon receipt of the Auto Start actuation test signal.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank shall be OPERABLE with a minimum contained volume of 116,000 gallons.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

With the condensate storage tank inoperable, restore the condensate storage tank to OPERABLE status within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3 The condensate storage tank shall be demonstrated OPERABLE at least once per 12 hours by verifying the water level.

PLANT SYSTEMS

MAIN STEAM LINE ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.5 Each main steam line isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- MODE 1 - With one main steam line isolation valve inoperable, POWER OPERATION may continue provided the inoperable valve is either restored to OPERABLE status or closed within 4 hours; otherwise, be in HOT SHUTDOWN within the next 12 hours.
- MODES 2 and 3 - With one main steam line isolation valve inoperable, subsequent operation in MODES 1, 2 or 3 may proceed after the inoperable valve is restored to OPERABLE status or the isolation valve is maintained closed; otherwise, be in HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.5 Each main steam line isolation valve that is open shall be demonstrated OPERABLE by verifying full closure within 6.0 seconds when tested pursuant to Specification 4.0.5.

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PLANT SYSTEMS

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

LIMITING CONDITION FOR OPERATION

3.7.2.1 The temperatures of both the primary and secondary coolants in the steam generators shall be $> 70^{\circ}\text{F}$ when the pressure of either coolant in the steam generator is > 200 psig.

APPLICABILITY: ALL MODES.

ACTION:

With the requirements of the above specification not satisfied:

- a. Reduce the steam generator pressure of the applicable side to ≤ 200 psig within 30 minutes, and
- b. Perform an analysis to determine the effect of the overpressurization on the structural integrity of the steam generator. Determine that the steam generator remains acceptable for continued operation prior to increasing its temperatures above 200°F .

SURVEILLANCE REQUIREMENTS

4.7.2.1 The pressure in each side of the steam generators shall be determined to be < 200 psig at least once per hour when the temperature of either the primary or secondary coolant in the steam generators is $< 70^{\circ}\text{F}$.

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection Actuation Signal.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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PLANT SYSTEMS

3/4.7.4 INTAKE COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent intake cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one intake cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two intake cooling water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection Actuation signal.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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PLANT SYSTEMS

3/4.7.5 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.5.1 The ultimate heat sink shall be OPERABLE with:

- a. Cooling water from the Atlantic Ocean providing a water level above -10.5 feet elevation, Mean Low Water, at the plant intake structure, and
- b. Two OPERABLE valves in the barrier dam between Big Mud Creek and the intake structure.

APPLICABILITY: At all times.

ACTION:

- a. With the water level requirement of the above Specification not satisfied, be in at least HOT STANDBY within six hours and provide cooling water from Big Mud Creek within the next 12 hours.
- b. With one isolation valve in the barrier dam between Big Mud Creek and the intake structure inoperable, restore the inoperable valve to OPERABLE status within 72 hours or, within the next 24 hours, install a temporary flow barrier and open the barrier dam isolation valve. The availability of the onsite equipment capable of removing the barrier shall be verified at least once per seven days thereafter.
- c. With both of the isolation valves in the barrier dam between the intake structure and Big Mud Creek inoperable, within 24 hours either:
 - 1) Install both temporary flow barriers and manually open both barrier dam isolation valves. The availability of the onsite equipment capable of removing the barriers shall be verified at least once per seven days thereafter, or
 - 2) Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.5.1.1 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average water level to be within limits.

4.7.5.1.2 The isolation valves in the barrier dam between the intake structure and Big Mud Creek shall be demonstrated OPERABLE at least once per six months by cycling each valve through at least one complete cycle of full travel.

APPLICABILITY

BASES (Continued)

4.0.5 This specification ensures that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves will be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. Relief from any of the above requirements has been provided in writing by the Commission and is not a part of these Technical Specifications.

This specification includes a clarification of the frequencies for performing the inservice inspection and testing activities required by Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. This clarification is provided to ensure consistency in surveillance intervals throughout these Technical Specifications and to remove any ambiguities relative to the frequencies for performing the required inservice inspection and testing activities.

Under the terms of this specification, the more restrictive requirements of the Technical Specifications take precedence over the ASME Boiler and Pressure Vessel Code and applicable Addenda. For example, the requirements of Specification 4.0.4 to perform surveillance activities prior to entry into an OPERATIONAL MODE or other specified applicability condition takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows pumps to be tested up to one week after return to normal operation. And for example, the Technical Specification definition of OPERABLE does not grant a grace period before a device that is not capable of performing its specified function is declared inoperable and takes precedence over the ASME Boiler and Pressure Vessel Code provision which allows a valve to be incapable of performing its specified function for up to 24 hours before being declared inoperable.

3/4.4 REACTOR COOLANT SYSTEM

BASES

3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

The plant is designed to operate with both reactor coolant loops and associated reactor coolant pumps in operation, and maintain DNBR above the DNBR limit during all normal operations and anticipated transients. In MODES 1 and 2 with one reactor coolant loop not in operation, this specification requires that the plant be in at least HOT STANDBY within 1 hour.

In MODE 3, a single reactor coolant loop provides sufficient heat removal capability for removing decay heat; however, single failure considerations require that two loops be OPERABLE.

In MODE 4, and in MODE 5 with reactor coolant loops filled, a single reactor coolant loop or shutdown cooling loop provides sufficient heat removal capability for removing decay heat; but single failure considerations require that at least two loops (either shutdown cooling or RCS) be OPERABLE.

In MODE 5 with reactor coolant loops not filled, a single shutdown cooling loop provides sufficient heat removal capability for removing decay heat; but single failure considerations and the unavailability of the steam generators as a heat removing component, require that at least two shutdown cooling loops be OPERABLE.

The operation of one Reactor Coolant Pump or one shutdown cooling pump provides adequate flow to ensure mixing, prevent stratification and produce gradual reactivity changes during boron concentration reductions in the Reactor Coolant System. The reactivity change rate associated with boron reductions will, therefore, be within the capability of operator recognition and control.

The restrictions on starting a Reactor Coolant Pump are provided to prevent RCS pressure transients, caused by energy additions from the secondary system, which could exceed the limits of Appendix G to 10 CFR 50. The RCS will be protected against overpressure transients and will not exceed the limits of Appendix G by restricting starting of the Reactor Coolant Pumps to when the secondary water temperature of each steam generator is less than 30°F above each of the Reactor Coolant System cold leg temperatures.

3/4.4.2 and 3/4.4.3 SAFETY VALVES

The pressurizer code safety valves operate to prevent the RCS from being pressurized above its Safety Limit of 2750 psia. Each safety valve is designed to relieve 2×10^5 lbs per hour of saturated steam at the valve setpoint. The relief capacity of a single safety valve is adequate to relieve any overpressure condition which could occur during shutdown. In the event that no safety valves are OPERABLE, an operating shutdown cooling loop, connected to the RCS, provides overpressure relief capability and will prevent RCS overpressurization.

REACTOR COOLANT SYSTEM

BASES

3/4.4.2 and 3/4.4.3 SAFETY VALVES (Continued)

During operation, all pressurizer code safety valves must be OPERABLE to prevent the RCS from being pressurized above its safety limit of 2750 psia. The combined relief capacity of these valves is sufficient to limit the Reactor Coolant System pressure to within its Safety Limit of 2750 psia following a complete loss of turbine generator load while operating at RATED THERMAL POWER and assuming no reactor trip until the first Reactor Protective System trip setpoint (Pressurizer Pressure-High) is reached (i.e., no credit is taken for a direct reactor trip on the loss of turbine) and also assuming no operation of the pressurizer power operated relief valve or steam dump valves.

Demonstration of the safety valves' lift settings will occur only during shutdown and will be performed in accordance with the provisions of Section XI of the ASME Boiler and Pressure Code.

3/4.4.4 PRESSURIZER

A steam bubble in the pressurizer ensures that the RCS is not a hydraulically solid system and is capable of accommodating pressure surges during operation. The steam bubble also protects the pressurizer code safety valves and power operated relief valve against water relief. The power operated relief valve and steam bubble function to relieve RCS pressure during all design transients. Operation of the power operated relief valve in conjunction with a reactor trip on a Pressurizer-Pressure-High signal minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. The required pressurizer heater capacity is capable of maintaining natural circulation sub-cooling. Operability of the heaters, which are powered by a diesel generator bus, ensures ability to maintain pressure control even with loss of offsite power.

3/4.4.5 STEAM GENERATORS

One OPERABLE steam generator provides sufficient heat removal capability to remove decay heat after a reactor shutdown. The requirement for two steam generators capable of removing decay heat, combined with the requirements of Specifications 3.7.1.1, 3.7.1.2 and 3.7.1.3 ensures adequate decay heat removal capabilities for RCS temperatures greater than 325°F if one steam generator becomes inoperable due to single failure considerations. Below 325°F, decay heat is removed by the shutdown cooling system.

The Surveillance Requirements for inspection of the steam generator tubes ensure that the structural integrity of this portion of the RCS will be maintained. The program for inservice inspection of steam generator tubes is based on a modification of Regulatory Guide 1.83, Revision 1. Inservice inspection of steam generator tubing is essential in order to maintain surveillance of the conditions of the tubes in the event that there is evidence of mechanical damage or progressive degradation due to design, manufacturing errors, or inservice conditions that lead to corrosion. Inservice inspection of steam generator tubing also provides a means of characterizing the nature and cause of any tube degradation so that corrective measures can be taken.

DELETED

REACTOR COOLANT SYSTEM

BASES

for piping, pumps and valves. Below this temperature, the system pressure must be limited to a maximum of 20% of the system's hydrostatic test pressure of 3125 psia.

The number of reactor vessel irradiation surveillance specimens and the frequencies for removing and testing these specimens are provided in Table 4.4-5 to assure compliance with the requirements of Appendix H to 10 CFR Part 50.

The limitations imposed on the pressurizer heatup and cooldown rates and spray water temperature differential are provided to assure that the pressurizer is operated within the design criteria assumed for the fatigue analysis performed in accordance with the ASME Code requirements.

3/4.4.10 STRUCTURAL INTEGRITY

The inservice inspection program for ASME Code Class 1, 2 and 3 components ensure that the structural integrity of these components will be maintained at an acceptable level throughout the life of the plant. This program is in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR Part 50.55a(g) except where specific written relief has been granted by the Commission pursuant to 10 CFR Part 50.55a(g)(6)(i).

Components of the reactor coolant system were designed to provide access to permit inservice inspections in accordance with Section XI of the ASME Boiler and Pressure Vessel Code 1971 Edition and Addenda through Winter 1972.

REACTOR COOLANT SYSTEM

BASES

DELETED

REACTOR COOLANT SYSTEM

BASES

3/4.4.12 PORV BLOCK VALVES

The opening of the Power Operated Relief Valves fulfills no safety related function. The electronic controls of the PORVs must be maintained OPERABLE to ensure satisfaction of Specifications 4.5.1.d.1 and 4.5.2.d.1. Since it is impractical and undesirable to actually open the PORVs to demonstrate reclosing, it becomes necessary to verify operability of the PORV Block Valves to ensure the capability to isolate a malfunctioning PORV.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 90

TO FACILITY OPERATING LICENSE NO. DPR-67

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

INTRODUCTION

By application dated August 17, 1987, the Florida Power and Light Company (FP&L, the licensee) proposed to upgrade the technical specifications (TS) dealing with inservice inspection of ASME Code Class 1, 2, and 3 components. By application dated November 16, 1987, as supplemented December 30, 1987, the licensee also proposed to upgrade the TS dealing with inservice testing of ASME Code Class 1, 2, and 3 pumps and valves. The above two applications supersede previous applications dated July 1, 1977, September 16, 1977, and September 8, 1978. The proposed updated TS are in the same format and have the same content as the St. Lucie Plant Unit 2 TS and the Combustion Engineering-Standard Technical Specifications (CF-STs).

The first 10 year inservice inspection and testing program for the St. Lucie Plant, Unit No. 1 ends February 11, 1988. By letter dated September 2, 1987, the licensee submitted the second 10 year ISI program and associated relief requests. By letter dated September 4, 1987, the licensee submitted the second 10 year IST program and associated relief requests. The staff review of the second 10 year programs and associated relief requests will be the subject of other safety evaluations to be forwarded to the licensee at a later date.

The following evaluation deals with the proposed TS changes only; it is divided into three major sections: inservice inspection (ISI) TS changes, inservice testing (IST) TS changes, and other changes.

EVALUATION - ISI TS CHANGES

The present TS dealing with ISI are addressed in TS Section 3.4.10, entitled "Structural Integrity." TS 3.4.10.1, 2, and 3 address Class 1, 2, and 3 components, respectively. In addition, each TS section contains the ISI program for that particular class of component. For example, TS 3.4.10.1 contains the ISI program for Class 1 components. The present TS were issued in 1976 when the operating license was issued. Minor administrative changes to the TS were made December 6, 1985 (Amendment No. 69); these minor changes deleted certain reporting requirements.

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The form and content of the ISI TS have changed substantially since 1976. The presently preferred form and content are contained in the CE-STS and in the St. Lucie Plant, Unit 2 TS. The CE-STS do not include the ISI program as a TS, but require it as a licensee-controlled document. This is accomplished by adoption of a general surveillance requirement TS (TS 4.0.5), which requires the licensee to have an ISI program that meets the Commission's ISI regulation (10 CFR 50.55a(g)) and the ASME Code, Section XI. The licensee is proposing the same ISI form and content of the CE-STS as further discussed below.

The licensee proposes to combine the limiting conditions of operation (LCO), action statements, and surveillance requirements for the Code Class 1, 2, and 3 components (TS 3.4.10.1). The licensee proposes the same TS as contained in the CE-STS and the Unit 2 TS (including TS 4.0.5) with one exception. The licensee did not propose as a TS surveillance requirement that the reactor coolant pump flywheel be inspected per the recommendations of Regulatory Position C.4.5 of Regulatory Guide 1.14, Revision 1, August 1975. The reactor coolant pump flywheel inspection requirement would normally be an open item. However, the staff reviewed the proposed second 10 year ISI program, and the flywheel examination is included. The examination requirements use Regulatory Guide 1.14. Therefore, the staff will not require the licensee to add this inspection requirement to the TS.

The staff reviewed the existing TS to ensure that they are covered by the new TS. No LCO's have been deleted that are not covered by a new LCO. All operating modes are specified in the new applicability statement. No action statements have been deleted that are not covered by a new action statement. No surveillance requirements have been deleted that are not covered by proposed TS 4.0.5 and the second 10 year ISI program.

Although the staff's detailed review of the second 10 year ISI program will be the subject of another licensing action, the staff compared the program contained in the TS to the proposed second 10 year program. The purpose of the comparison was to ensure that the second 10 year program was equivalent to or better than the ISI program being deleted from the TS. The results of the staff review indicates the second 10 year program is superior to the program contained in the TS. The licensee has a more indepth knowledge of what constitutes a superior ISI program and has implemented this knowledge by way of the program.

Based upon the above evaluation, the licensee's proposed ISI TS changes are acceptable. It should be noted that acceptance of these TS changes should not be construed to mean that the staff is granting (at this time) any reliefs requested in the second 10 year IST program.

EVALUATION - IST TS CHANGES

The present TS dealing with inservice testing (IST) of pumps and valves are located throughout the TS on a system basis. The licensee proposes to remove those pump and valve testing requirements that are contained in the TS on the basis that the requirements are already contained in the IST program. IST-related TS were issued in 1976 when the operating license was issued.

The form and content of IST TS have also changed substantially since 1976. The presently preferred form and content are contained in the CE-STS and in the St. Lucie Plant, Unit 2 TS. The CE-STS do not include the IST of pumps and valves as a TS but requires it as a licensee-controlled document. This is accomplished by adoption of a general surveillance requirement TS (TS 4.0.5), which requires the licensee to have a IST program that meets the Commission's IST regulation (50.55a(g)) and the ASME Code, Section XI. The licensee is proposing the same form and content of the CE-STS as further discussed below, including the adoption of TS 4.0.5.

The staff reviewed the pump testing requirements that are proposed to be deleted from the TS to determine if they are contained in the second 10 year IST program. The staff also reviewed the pump testing requirements that are proposed to be added to the TS to determine if they are in the same form and content of the CE-STS. A check against the Unit 2 TS was also made. Table A contains a summary of the staff review. The table contains the list of safety-related pumps, the affected TS sections, the TS to be deleted, the determination that the pump testing requirements are addressed in the IST program, the TS to be added, and the determination that the added TS are in the same form and content of the CE-STS. Since the deleted pump testing TS are covered by the second 10 year IST program and the added TS are in the same form and content as the CE-STS, the proposed changes related to the pump testing requirements are acceptable. It should be noted that acceptance of these TS changes should not be construed to mean that the staff is granting (at this time) any pump-related reliefs requested in the second 10 year IST program.

The staff reviewed the valve testing requirements that are proposed to be deleted from the TS to determined if they are contained in the second 10 year IST program. The staff also reviewed the valve testing requirements that are proposed to be added to the TS to determine if they are in the same form and content of the CE-STS. A check against the Unit 2 TS was also made. Table B contains a summary of the staff review. The table contains a list of safety-related systems whose valves require IST, the affected TS sections, the TS to be deleted, the determination that the valve testing requirements are covered in the IST program, the TS to be added, and the determination that the added TS are in the same format and content of the CE-STS. Since the deleted valve testing TS are covered by the second 10 year program and the added TS are in the same form and content as the CE-STS, the proposed changes related to the valve testing requirements are acceptable. It should be noted that acceptance of these TS changes should not be construed to mean that the staff is granting (at this time) any valve-related reliefs requested in the second 10 year IST program.

EVALUATION - OTHER CHANGES

The licensee requested a few changes that do not come under the scope of ISI and IST. The licensee requested that the containment sump isolation valve open test and recirculation valve to the refueling water tank closure test via the recirculation actuation signal be changed from monthly to 18 months. The present TS is contained in TS 4.5.2.b.3. The proposed TS would be contained in TS 4.5.2.3.3. In addition, the licensee requested that the containment sump isolation valve open test and recirculation mode flow path through an operable shutdown cooling heat exchanger test via the recirculation actuation signal

be changed from monthly to 18 months. The present TS is contained in TS 4.6.2.1.a.5. The proposed TS would be contained in TS.4.6.2.1.c.3. The staff evaluated the acceptability of the 18 month testing frequency in the establishment of the CE-STs and the Unit 2 TS. These proposed changes are acceptable since they are identical to the CE-STs.

The licensee requested an additional action statement to be associated with the operability of the main steam safety valves (MSSV) (TS 3.7.1.1). In addition, the licensee requested to reference the MSSV table on lift settings in the LCO, since the references would be deleted from the surveillance requirement. The added action statement reads: "The provisions of Specification 3.0.4 are not applicable." The licensee states that this proposed change is consistent with Table 3.7-1, "Maximum Allowable Power Level - High Trip Setpoint with Inoperable Steam Line Safety Valves During Operation with Both Steam Generators," in that startup and/or power operation is allowable with safety valves inoperable within the limitations of the action requirements. The staff agrees with the basis for changing the specification; therefore, the change is acceptable.

Lastly, some editorial changes are proposed. The deletion of various TS and addition of other TS will require TS numbering changes. These numbering changes are acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes a surveillance requirement. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: March 7, 1988

Principal Contributor:
E. Tourigny

Attachments:
Table A
Table B

Table A

Pump Related TS Changes

<u>Pump Type</u>	<u>TS Section</u>	<u>TS Deleted</u>	<u>Is Deleted TS Covered In IST Program</u>	<u>TS Added</u>	<u>Is Added TS in Form and Content of CE-STs</u>
Charging Pumps - Shutdown	3/4.1.2.3	4.1.2.3.a,b, and c	Yes	4.1.2.3	Yes
Charging Pumps - Operating	3/4.1.2.4	4.1.2.4.a and b	Yes	4.1.2.4	Yes
Boric Acid Pumps - Shutdown	3/4.1.2.5	4.1.2.5.a,b, and c	Yes	4.1.2.5	Yes
Boric Acid Pumps - Operating	3/4.1.2.6	4.1.2.6.a,b, and c	Yes	4.1.2.6	Yes
HPSI/LPSI Pumps	4.5.2	4.5.2.b.1 and 2	Yes	4.5.2.f	Yes
Containment Spray	3/4.6.2.1	4.6.2.1.a.1,2 and 3	Yes	4.6.2.1.b	Yes
AFW Pumps	3/4.7.1.2	4.7.3.1.a.1,2,3 and 4	Yes	4.7.1.2.a.1 & 2	Yes
CCW Pumps	3/4.7.3.1	4.7.3.1.a.1,2,3 and 4	Yes	None	Yes
ICW Pumps	3/4.7.4.1	4.7.4.1.a.1,2,3 and 4	Yes	None	Yes

Table B

Valve Related TS Changes

<u>Valve Type</u>	<u>TS Section</u>	<u>TS Deleted</u>	<u>Is TS Covered by IST Program</u>	<u>TS Added</u>	<u>Is Added TS in Form and Content of CE-STS</u>
Boration System Flow Path Auto Valves - Shutdown	3/4.1.2.1	4.1.2.1.a.1	Yes	None	Yes
Boration System Flow Path Auto Valves - Operating	3/4.1.2.2	4.1.2.2.a.1 4.1.2.2.c.1	Yes	None	Yes
Pressurizer Code Safety's	3/4.4.2 and 4.3	4.4.2 and 4.4.3	Yes	4.4.2 and 4.4.3	Yes
ECCS Flow Path Valves	3/4.5.2	4.5.2.b.4	Yes	None	Yes
Containment Spray Flow Path Valves	3/4.5.3	4.6.2.1.a.4 and 4.6.2.1.c.1	Yes	None	Yes
Containment Isolation Valves	3/4.6.3	4.6.3.1.1 4.6.3.1.2.b and c	Yes	4.6.3.1.3	Yes
Vacuum Relief Valves	3/4.6.5	4.6.5.1.a	Yes	4.6.5.1	Yes
MSSV's	3/4.7.1.1	4.7.1.1	Yes	4.7.1.1	Yes
AFW Flow Path Valves	3/4.7.1.2	4.7.1.2.a.2.4 and 4.7.1.2.b	Yes	None	Yes
MSIV's	3/4.7.1.5	4.7.1.5.a and b	Yes	4.7.1.5	Yes
CCW System Flow Path Valves	3/4.7.3.1	4.7.3.1.a.5 and b.1	Yes	None	Yes
ICW System Flow Path Valves	3/4.7.4.1	4.7.4.1.a.5 and b.1	Yes	None	Yes