



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. 60
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company, (the licensee) dated April 13, 1983 as supplemented, 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.

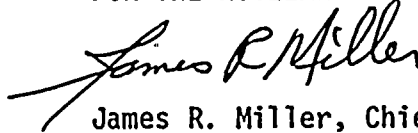
2. Accordingly, Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the Attachment to this license amendment, and by amending paragraph 2.C(2) to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 60, 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



James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 16, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 60
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.

Pages

Ia
V
X
1-6b (new)
3/4 1-8
3/4 1-12
3/4 4-59 (new)
3/4 4-60 (new)
3/4 5-7
B 3/4 4-15(new)

INDEX

DEFINITIONS

<u>SECTION</u>	<u>PAGE</u>
<u>1.0 DEFINITIONS</u>	
Defined Terms	1-1
Thermal Power	1-1
Rated Thermal Power	1-1
Operational Mode	1-1
Action	1-1
Operable - Operability	1-1
Reportable Occurrence	1-1
Containment Vessel Integrity	1-2
Channel Calibration	1-2
Channel Check	1-2
Channel Functional Test	1-3
Core Alteration	1-3
Shutdown Margin	1-3
Identified Leakage	1-3
Unidentified Leakage	1-4
Pressure Boundary Leakage	1-4
Controlled Leakage	1-4
Azimuthal Power Tilt	1-4
Dose Equivalent I-131	1-4
\bar{E} - Average Disintegration Energy	1-4
Staggered Test Basis	1-5
Frequency Notation	1-5
Axial Shape Index	1-5
Unrodded Planar Radial Peaking Factor - F_{xy}	1-5
Shield Building Integrity	1-5
Reactor Trip System Response Time	1-6
Engineered Safety Feature Response Time	1-6
Physics Tests	1-6
Unrodded Integrated Radial Peaking Factor	1-6
Load Follow Operation	1-6

INDEX

DEFINITIONS

<u>SECTION</u>	<u>PAGE</u>
Gaseous Radwaste Treatment Systems	1-6
Member(s) of the Public	1-6a
Offsite Dose Calculation Manual (ODCM)	1-6a
Process Control Program (PCP)	1-6a
Purge - Purging	1-6a
Site Boundary	1-6a
Source Check	1-6a
Unrestricted Area	1-6a
Low Temperature RCS Overpressure Protection Range	1-6b

INDEX

LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
3/4.4.4 PRESSURIZER.....	3/4 4-4
3/4.4.5 STEAM GENERATORS.....	3/4 4-5
3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE.....	3/4 4-12
Leakage Detection Systems.....	3/4 4-12
Reactor Coolant System Leakage.....	3/4 4-14
3/4.4.7 CHEMISTRY.....	3/4 4-15
3/4.4.8 SPECIFIC ACTIVITY.....	3/4 4-17
3/4.4.9 PRESSURE/TEMPERATURE LIMITS.....	3/4 4-21
Reactor Coolant System.....	3/4 4-21
Pressurizer.....	3/4 4-25
3/4.4.10 STRUCTURAL INTEGRITY.....	3/4 4-26
Safety Class 1 Components.....	3/4 4-26
Safety Class 2 Components.....	3/4 4-37
Safety Class 3 Components.....	3/4 4-53
3/4.4.11 CORE BARREL MOVEMENT.....	3/4 4-56
3/4.4.12 PORV BLOCK VALVES.....	3/4 4-58
3/4.4.13 POWER OPERATED RELIEF VALVES.....	3/4 4-59
3/4.4.14 REACTOR COOLANT PUMP - STARTING.....	3/4 4-60
 <u>3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)</u>	
3/4.5.1 SAFETY INJECTION TANKS.....	3/4 5-1
3/4.5.2 ECCS SUBSYSTEMS - $T_{avg} \geq 325^{\circ}\text{F}$	3/4 5-3
3/4.5.3 ECCS SYBSYSTEMS - $T_{avg} < 325^{\circ}\text{F}$	3/4 5-7
3/4.5.4 REFUELING WATER TANK.....	3/4 5-8

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.6 CONTAINMENT SYSTEMS</u>	
3/4.6.1 CONTAINMENT VESSEL.....	3/4 6-1
Containment Vessel Integrity.....	3/4 6-1
Containment Leakage.....	3/4 6-2
Containment Air Locks.....	3/4 6-10
Internal Pressure.....	3/4 6-12
Air Temperature.....	3/4 6-13
Containment Vessel Structural Integrity.....	3/4 6-14
3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS.....	3/4 6-15
Containment Spray System.....	3/4 6-15
Spray Additive System.....	3/4 6-16a
Containment Cooling System.....	3/4 6-17
3/4.6.3 CONTAINMENT ISOLATION VALVES.....	3/4 6-18
3/4.6.4 COMBUSTIBLE GAS CONTROL.....	3/4 6-23
Hydrogen Analyzers.....	3/4 6-23
Electric Hydrogen Recombiners - <u>W</u>	3/4 6-24
3/4.6.5 VACUUM RELIEF VALVES.....	3/4 6-26
3/4.6.6 SECONDARY CONTAINMENT.....	3/4 6-27
Shield Building Ventilation System.....	3/4 6-27
Shield Building Integrity.....	3/4 6-30
Shield Building Structural Integrity.....	3/4 6-31
<u>3/4.7 PLANT SYSTEMS</u>	
3/4.7.1 TURBINE CYCLE	3/4 7-1
Safety Valves.....	3/4 7-1
Auxiliary Feedwater System.....	3/4 7-4
Condensate Storage Tank.....	3/4 7-6
Activity.....	3/4 7-7
Main Steam Line Isolation Valves.....	3/4 7-9
Secondary Water Chemistry.....	3/4 7-10

INDEX

BASES

SECTION

PAGE

3/4.4 REACTOR COOLANT SYSTEM

3/4.4.1	REACTOR COOLANT LOOPS AND COOLANT CIRCULATION.....	B 3/4 4-1
3/4.4.2	and 3/4.4.3 SAFETY VALVES.....	B 3/4 4-1
3/4.4.4	PRESSURIZER.....	B 3/4 4-2
3/4.4.5	STEAM GENERATORS.....	B 3/4 4-2
3/4.4.6	REACTOR COOLANT SYSTEM LEAKAGE.....	B 3/4 4-4
3/4.4.7	CHEMISTRY.....	B 3/4 4-4
3/4.4.8	SPECIFIC ACTIVITY.....	B 3/4 4-5
3/4.4.9	PRESSURE/TEMPERATURE LIMITS.....	B 3/4 4-6
3/4.4.10	STRUCTURAL INTEGRITY.....	B 3/4 4-12
3/4.4.11	CORE BARREL MOVEMENT.....	B 3/4 4-13
3/4.4.12	PORV BLOCK VALVES.....	B 3/4 4-14
3/4.4.13	POWER OPERATED RELIEF VALVES and 3/4.4.14 REACTOR COOLANT PUMP - STARTING.....	B' 3/4 4-15

3/4.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3/4.5.1	SAFETY INJECTION TANKS.....	B 3/4 5-1
3/4.5.2	and 3/4.5.3 ECCS SUBSYSTEMS.....	B 3/4 5-1
3/4.5.4	REFUELING WATER STORAGE TANK (RWST).....	B 3/4 5-2

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1	CONTAINMENT VESSEL.....	B 3/4 6-1
3/4.6.2	DEPRESSURIZATION AND COOLING SYSTEMS.....	B 3/4 6-2
3/4.6.3	CONTAINMENT ISOLATION VALVES.....	B 3/4 6-3
3/4.6.4	COMBUSTIBLE GAS CONTROL.....	B 3/4 6-3
3/4.6.5	VACUUM RELIEF VALVES.....	B 3/4 6-4
3/4.6.6	SECONDARY CONTAINMENT.....	B 3/4 6-4

INDEX

BASES

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.0 APPLICABILITY</u>	B 3/4 0-1
<u>3/4.1 REACTIVITY CONTROL SYSTEMS</u>	
3/4.1.1 BORATION CONTROL	B 3/4 1-1
3/4.1.2 BORATION SYSTEMS	B 3/4 1-2
3/4.1.3 MOVABLE CONTROL ASSEMBLIES	B 3/4 1-3
<u>3/4.2 POWER DISTRIBUTION LIMITS</u>	
3/4.2.1 LINEAR HEAT RATE	B 3/4 2-1
3/4.2.2 TOTAL PLANAR RADIAL PEAKING FACTOR	B 3/4 2-1
3/4.2.3 TOTAL INTEGRATED RADIAL PEAKING FACTOR - F_r^T	B 3/4 2-1
3/4.2.4 AZIMUTHAL POWER TILT	B 3/4 2-1
3/4.2.5 DNB PARAMETERS	B 3/4 2-2
<u>3/4.3 INSTRUMENTATION</u>	
3/4.3.1 and 3/4.3.2 PROTECTIVE AND ENGINEERED SAFETY FEATURES INSTRUMENTATION	B 3/4 3-1
3/4.3.3 MONITORING INSTRUMENTATION	B 3/4 3-1

DEFINITIONS

LOW TEMPERATURE RCS OVERPRESSURE PROTECTION RANGE

1.39 The LOW TEMPERATURE RCS OVERPRESSURE PROTECTIVE RANGE is that operating condition when (1) the cold leg temperature is $\leq 275^{\circ}\text{F}$ and (2) the reactor coolant system has pressure boundary integrity. The reactor coolant system does not have pressure boundary integrity when the reactor coolant system is open to containment and the minimum area of the reactor coolant system opening is greater than 1.75 square inches.

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:
 1. Cycling each testable power operated or automatic valve in the flow path required for boron injection through at least one complete cycle of full travel, and
 2. 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 make-up tanks is used.

*When the RCS temperature is less than 165°F, the flow path from the RWT to the RCS via the HPSI pumps shall only be established if the reactor coolant system pressure boundary integrity does not exist, or if no charging pump is operable.

REACTIVITY CONTROL SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. 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.
- c. At least once per 18 months during shutdown by:
 1. Cycling each power operated (excluding automatic) valve in the flow path that is not testable during plant operation, through at least once complete cycle of full travel.
 2. 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 the above required charging pump or high pressure safety injection pump shall be demonstrated OPERABLE at least once per 31 days by:

- a. Starting (unless already operating) the pump from the control room,
- b. Verifying pump operation for at least 15 minutes, and
- c. Verifying that the pump is aligned to receive electrical power from an OPERABLE emergency bus.

*When the RCS temperature is less than 165°F, the flow path from the RWT to the RCS via the HPSI pumps shall be established only if the reactor coolant system pressure boundary integrity does not exist, or if no charging pump is operable.

REACTOR COOLANT SYSTEM

PORV BLOCK VALVES

LIMITING CONDITION FOR OPERATION

3.4.12 Each Power Operated Relief Valve (PORV) Block Valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With one or more block valve(s) inoperable, within 1 hour either restore the block valve(s) to OPERABLE status or close the block valve(s) and remove power from the block valve(s)*; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.12 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel.

* Until October 1, 1981, in lieu of closing and removing power to the block valve V-1403, the PORV, V-1402, may be deenergized in the closed position such that it is incapable of being opened.

REACTOR COOLANT SYSTEM

POWER OPERATED RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.1.3 Two power operated relief valves (PORVs) shall be OPERABLE, with their setpoints selected to the low temperature mode of operation.

APPLICABILITY: MODES 4[#] and 5*.

ACTION:

- a. With less than two PORVs OPERABLE and while at Hot Standby during a planned cooldown, both PORVs will be returned to OPERABLE status prior to entering the applicable MODE unless:
 1. The repairs cannot be accomplished within 24 hours or the repairs cannot be performed under hot conditions, or
 2. Another action statement requires cooldown, or
 3. Plant and personnel safety requires cooldown to Cold Shutdown with extreme caution.
- b. With less than two PORVs OPERABLE while in COLD SHUTDOWN, both PORVs will be returned to OPERABLE status prior to startup.

SURVEILLANCE REQUIREMENTS

4.4.13. The PORVs shall be verified OPERABLE by:

- a. Verifying the isolation valves are open when the PORVs are reset to the low temperature mode of operation.
- b. Performance of a CHANNEL FUNCTIONAL TEST of the Reactor Coolant System overpressurization protection system circuitry up to and including the relief valve solenoids once per refueling outage.
- c. Performance of a CHANNEL CALIBRATION of the pressurizer pressure sensing channels once per 18 months.

#Reactor Coolant System cold leg temperature below 275°F.

*PORVs are not required at Reactor Coolant System temperatures below 165°F when all HPSI pumps and respective injection or header isolation valves are disabled and if a pressurizer bubble is formed with a pressurizer liquid level less than or equal to 40%. PORVs are also not required below 140°F when RCS does not have pressure boundary integrity.

REACTOR COOLANT SYSTEM

REACTOR COOLANT PUMP - STARTING

LIMITING CONDITION FOR OPERATION

3.4.14 If the steam generator temperature exceeds the primary temperature by more than 45°F reactor coolant pump(s) shall not be started unless the pressurizer liquid level is less than 40%.

APPLICABILITY: MODES 4[#] and 5.

ACTION:

If a reactor coolant pump is started when the steam generator temperature exceeds primary temperature by more than 45°F and the pressurizer liquid level exceeds 40%, evaluate the subsequent transient to determine compliance with Specification 3.4.9.1.

SURVEILLANCE REQUIREMENTS

4.4.14 Prior to starting a reactor coolant pump, verify either that the steam generator temperature does not exceed primary temperature by more than 45°F or that a pressurizer bubble is drawn and the pressurizer level is equal to or less than 40%.

#Reactor Coolant System Cold Leg Temperature is less than 275°F.

EMERGENCY CORE COOLING SYSTEMS

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

LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

- a. In MODES 3* and 4, one ECCS subsystem composed of one OPERABLE high pressure safety injection pump and one OPERABLE flow path capable of taking suction from the refueling water storage tank on a safety injection actuation signal and automatically transferring suction to the containment sump on a sump recirculation actuation signal.
- b. Prior to decreasing the reactor coolant system temperature below 215°F a maximum of only one high pressure safety injection pump is to be OPERABLE with its associated header stop valves open.
- c. Prior to decreasing the reactor coolant system temperature below 165°F all high pressure safety injection pumps will be disabled and their associated header stop valves closed.

APPLICABILITY: MODES 3*, 4[#], and 5.

ACTION:

- a. With no ECCS subsystems OPERABLE in MODES 3* and 4, immediately restore one ECCS subsystem to OPERABLE status or be in COLD SHUTDOWN within 20 hours.
- b. With RCS temperature below 215°F and with more than the allowed high pressure safety injection pumps OPERABLE or injection valves and header isolation valves open, immediately disable the high pressure safety injection pump(s) or close the header isolation valves.
- c. 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.

SURVEILLANCE REQUIREMENTS

4.5.3.1 The ECCS subsystem shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.

4.5.3.2 The high pressure safety injection pumps shall be verified inoperable and the associated header stop valves closed prior to decreasing below the above specified Reactor Coolant System temperature and once per month when the Reactor Coolant System is at refueling temperatures.

*With pressurizer pressure < 1750 psia.

#REACTOR COOLANT SYSTEM cold leg temperature below 275°F .

EMERGENCY CORE COOLING SYSTEMS

REFUELING WATER TANK

LIMITING CONDITION FOR OPERATION

3.5.4 The refueling water tank shall be OPERABLE with:

- a. A minimum contained volume 401,800 gallons of borated water,
- b. A minimum boron concentration of 1720 ppm,
- c. A maximum water temperature of 100°F,
- d. A minimum water temperature of 55°F when in MODES 1 and 2, and
- e. A minimum water temperature of 40°F when in MODES 3 and 4

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the refueling water tank inoperable, restore the tank to OPERABLE status within 1 hour or be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.5.4 The RWT shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
 1. Verifying the water level in the tank, and
 2. Verifying the boron concentration of the water.
- b. At least once per 24 hours by verifying the RWT temperature.

REACTOR COOLANT SYSTEM

BASES

3/4.4.13 POWER OPERATED RELIEF VALVES and 3/4.4.14 REACTOR COOLANT PUMP - STARTING

The low temperature reactor coolant system overpressure mitigating system is provided to prevent RCS overpressurization above the 10 CFR 50, Appendix G, operating limit curves (Figure 3.4-2b or 3.4-2c, as applicable) at RCS temperatures below 275°F. The RCS overpressurization system is based on the use of the pressurizer power operated relief valves (I-V-1402 and I-V-1404) for the design basis mass injection transient, and the formation of a 60% pressurizer bubble by volume for the design basis energy addition transient. For the case when no pressurizer steam bubble is formed, protection against the design basis energy addition transient is derived by limiting the secondary-to-primary temperature differential below 50°F. The operability of the RCS overpressurization protection system will only be required during periods of heatup and cooldown below RCS temperatures below 275°F and periods of cold shutdown when the RCS has pressure boundary integrity.