3.3 CONTAINMENT

Applicability: Applies to the integrity of the containment.

Objective: To define the operating status of the containment.

Specification:

1. CONTAINMENT INTEGRITY

a. The containment integrity (as defined in 1.5) shall not be violated unless the reactor is in the cold shutdown condition.

b. The containment integrity shall not be violated when the reactor vessel head is removed unless the reactor is in the refueling shutdown condition.

2. INTERNAL PRESSURE

If the internal pressure exceeds 3 psig or the internal vacuum exceeds 2 psig, the condition shall be corrected within 8 hours or the reactor shall be brought to hot shutdown.

3. CONTAINMENT ISOLATION VALVES

With $K_{eff} \geq 0.99$, % thermal power excluding decay heat ≥ 0, and an average coolant temperature $T_{avg} \geq 200°F$, the following conditions shall be met:

The containment isolation valves for Phase A containment isolation, Phase B containment isolation, and Containment Ventilation Isolation shall be operable with the isolation times of each power operated or automatic valve within the limits established for testing in accordance with Seciton XI of ASME Boiler and Pressure Vessel Code and applicable Addenda as requried by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i), or the valve is closed.

3.5 INSTRUMENTATION

Applicability: Applies to reactor safety features and accident monitoring instrumentation systems.

Objective: To delineate the conditions of the instrumentation and safety circuits necessary to ensure reactor safety.

Specification:

1. Tables 3.5-1 through 3.5-5 state the minimum instrumentation operation conditions.

2. With the number of OPERABLE accident monitoring instrumentation channel(s) less than the Total Number of Channels shown in Table 3.5-5, either restore the inoperable channel(s) to OPERABLE status within 7 days, or be in a condition with K_{eff} <0.99, % thermal power excluding decay heat equal to zero, and an average coolant temperature T_{avg} < 350°F within the next 12 hours.

3. With the number of OPERABLE accident monitoring instrumentation channels less than the MINIMUM CHANNELS OPERABLE requirements of Table 3.5-5, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in a condition with K_{eff} < 0.99, % thermal power excluding decay heat equal to zero, and an average coolant temperature T_{avg} < 350°F within the next 12 hours.

TABLE 3.5-2

ENGINEERED SAFETY FEATURES ACTUATION

NO.	FUNCTIONAL UNIT	1 MIN. OPERABLE CHANNELS	2 MIN. DEGREE OF REDUNDANCY	3 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET
1.	SAFETY INJECTION			
1.1	Manual	1	0	Cold Shutdown
1.2	High Containment Pressure	2	1	Cold Shutdown
1.3	High Differential Pressure between any Steam Line and the Steam Line Header	2	1	Cold Shutdown
1.4	Pressurizer Low Pressure*	2	1	Cold Shutdown
1.5	High Steam Flow in 2/3 Steam Lines with Low T_{avg} or Low Steam Line Pressure	1/line in each of 2 lines	1	Cold Shutdown
2.	CONTAINMENT SPRAY			
2.1	High Containment Pressure and High-High Containment Pressure (Coincident)	2 per set	1/set	Cold Shutdown
3.	AUXILIARY FEEDWATER			
3.1	Low-Low Steam Generator Level	2	1	Hot Shutdown
3.2	Loss of Voltage (both 4KV busses)	2	0	Cold Shutdown
3.3	Safety Injection	(---See 1 above---)		
3.4	Trip of both Main Feedwater Pump Breakers	2	0	Cold Shutdown

* This signal may be manually bypassed, when the reactor is shut down and pressure is below 2000 psig.

TABLE 3.5-4

ENGINEERED SAFETY FEATURE

SET POINTS

NO.	FUNCTIONAL UNIT	CHANNEL ACTION	SET POINT
1.	High Containment Presure	Safety Injection Containment Spray* Steam Line Isolation* Containment Isolation*	$\leq$ 6 psig
2.	High-High Containment Pressure	See No. 1	$\leq$ 30 psig
3.	Pressurizer Low Pressure	Safety Injection	$\geq$ 1715 psig
4.	High Steam Line Differential Pressure (2/3 between any header and any line)	Safety Injection	$\leq$ 150 psi
5.	High Steam Line Flow (2/3 lines)	Safety Injection Steam Line Isolation	d/p for 3.84×10^6 lb/hr, 770 psig, 100% RP d/p for 0.64×10^6 lb/hr, 1005 psig, 0% RP d/p linear with 1st stg. press., 0-100% RP
	Coincident with:		
	Low Steam Line Pressure, or		$\geq$ 600 psig
	Low $T_{avg.}$		$\geq$ 531 F
6.	Low-Low Steam Generator Level	Auxiliary Feedwater	$\geq$ 15% narrow range
7.	Loss of Voltage (both 4 KV busses)	Auxiliary Feedwater	N. A.
8.	Safety Injection	Auxiliary Feedwater	All SI setpoints
9.	Trip of both Main Feedwater Pump Breakers	Auxiliary Feedwater	N.A.

* High and High-High coincident

TABLE 3.5-5

ACCIDENT MONITORING INSTRUMENTATION

	INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE
1.	Pressurizer Water Level	2	1
2.	Auxiliary Feedwater Flow Rate	2 per generator	1 per generator
3.	Reactor Coolant System Subcooling Margin Monitor	2*	1*
4.	PORV Position Indicator (Primary Detector)	1/valve	1/valve+
5.	PORV Block Valve Position Indicator	1/valve	1/valve+
6.	Safety Valve Position Indicator (Primary Detector)	1/valve	1/valve

NOTE: Not effective until installed.

* For the purpose of this Specification, the pressure and temperature inputs to the Reactor Coolant System Subcooling Margin Monitor are redundant.

\+ Or close the associated block valve and rack out its circuit breaker.

TABLE 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

	CHANNEL DESCRIPTION	CHECK	CALIBRATE	TEST	REMARKS
1.a.	Nuclear Power Range (Check, Calibrate and Test only applicable above 10% of rated power.)	S(1) M*(4)	D(2) Q*(4)	M(3)	1) Load vs. flux curve 2) Thermal power calculation 3) Signal to ΔT; bistable action (permissive, rod stop, trips) 4) Upper & lower detectors for symmetric offset (+5 to -5%).
b.	Power Distribution Map			M(1)	1) Following initial loading and prior to operation above 75% power. 2) Once per effective full power month. 3) Confirm hot channel factor limits.
2.	Nuclear Intermediate Range	S(1)†	N.A.	P(2)	1) Once/shift up to 50% R.P. 2) Log level;bistable action (permissive, rod stop, trip)
3.	Nuclear Source Range	S(1)	N.A.	P(2)	1) Once/shift when in service. 2) Bistable action (alarm, trip)
4.	Reactor Coolant Temperature	S†	R	B/W(1)† (2)†	1) Overtemperature- ΔT 2) Overpower- ΔT
5.	Reactor Coolant Flow	S†	R	M†	
6.	Pressurizer Water Level	M†	R	M†	
7.	Pressurizer Pressure	S†	R	M†	
8.	4 kv Voltage & Frequency	N.A.	R**	R	Reactor protection circuits only
9.	Analog Rod Position	S†	R	M†	With step counters.

TABLE 4.1-1 SHEET 3

	Channel Description	Check	Calibrate	Test	Remarks
23.	Environmental Radiological Monitors	N.A.	A(1)	M(1)	(1) Flow
24.	Logic Channels	N.A.	N.A.	M†	
25.	Emer. Portable Survey Instruments	N.A.	A	M	
26.	Seismograph	N.A.	N.A.	Q	Make trace. Test battery (change semi-annually)
27.	Auxiliary Feedwater Flow Rate	M†	R	N.A.	
28.	RCS Subcooling Margin Monitor	M†	R	N.A.	
29.	PORV Position Indicator (Primary Detector)	M†	N.A	R	Check consists of monitoring indicated position and verifying by observation of related parameters
30.	PORV Block Valve Position Indicator	M†	N.A	R	
31.	Safety Valve Position Indicator	M†	R	N.A.	
32.	Loss of Voltage (both 4kv busses)	N.A.	N.A.	R	For AFW actuation at power only
33.	Trip of both Main Feedwater Pump Breakers	N.A.	N.A.	R	For AFW actuation at power only

* Using moveable in-core detector system.
** Frequency only
*** Effluent monitors only. Calibration shall be as specified in 3.9.

S	-	Each Shift
D	-	Daily
W	-	Weekly
B/W	-	Every Two Weeks
M	-	Monthly
Q	-	Quarterly
P	-	Prior to each startup if not done previous week
R	-	Each Refueling Shutdown
A	-	Annually
N.A.	-	Not appliable
	-	N.A. during cold or refueling shutdowns. The specified tests, however, shall be performed within one surveillance interval prior to startup.
	-	N.A. during cold or refueling shutdowns. The specified tests, however, shall be performed within one surveillance interval prior to heatup above 200F.

[illegible]

4.10 AUXILIARY FEEDWATER SYSTEM

Applicability: Applies to periodic testing requirements of the auxiliary feedwater system.+

Objective: To verify the operability of the auxiliary feedwater system and its ability to respond properly when required.

Specifications:

1. Each turbine-driven auxiliary feedwater pump shall be started at intervals not greater than one month; run for 15 minutes and a flow rate of 600 gpm established to the steam generators.

2. The auxiliary feedwater discharge valves shall be tested by operator action during pump tests.

3. Steam supply and turbine pressure valves shall be tested during pump tests.

4. These tests shall be considered satisfactory if control panel indication and visual observation of equipment demonstrate that all components have operated properly.

5. At least once per 18 months:

   a. Verify that each automatic valve in the flow path actuates to its correct position upon receipt of each auxiliary feedwater actuation test signal.

   b. Verify that each auxiliary feedwater pump receives a start signal as designed automatically upon receipt of each auxiliary feedwater actuation test signal.

+ N.A. during cold or refueling shutdowns (only for the Unit at cold or refueling shutdown). The specified tests, however, shall be performed within one surveillance interval prior to starting the turbine.

TABLE 6.2-1

MINIMUM SHIFT CREW COMPOSITION#

LICENSE CATEGORY QUALIFICATIONS	One or Two Units Operating[A]	All Units Shutdown
SRO*	2	1**
RO	3	2
Non-Licensed Auxiliary Operators	3	3
Shift Technical Advisor	1+	None Required

+ This position may be filled by one of the SRO's above, provided the individual meets the qualification requirements of 6.3.1

* Includes the licensed Senior Reactor Operator serving as Shift Supervisor.

** Does not include the licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling, supervising the movement of any component within the reactor presssure vessel with the vessel head removed and fuel in the vessel.

A Operating is defined as $K_{eff} \geq 0.99$, % thermal power excluding decay heat greater than or equal to zero, and an average coolant temperature $T_{avg} \geq 200°F$.

\# Shift crew composition may be one less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of on-duty shift crew members provided immediate action is taken to restore the shift crew composition to within the minimum requirements of Table 6.2-1. This provision does not permit any shift crew position to be unmanned upon shift change due to an oncoming shift crewman being late or absent.

d. An individual qualified in radiation protection procedures shall be on site when fuel is in the reactor.

e. ALL CORE ALTERATIONS shall be directly supervised by either a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.

f. At least three (3) persons shall be maintained on site at all times for Fire Emergency response. This excludes two (2) members of the shift crew.

6.3 FACILITY STAFF QUALIFICATIONS

6.3.1 Each member of the facility staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design and in the response and analysis of the plant for transients and accidents.

6.3.2 HEALTH PHYSICS SUPERVISOR QUALIFICATIONS

6.3.2.1. The Health Physics Supervisor at the time of appointment to the position, shall, except as indicated below, meet the following:

1. He shall have a bachelor's degree or equivalent in a science or engineering subject, including some formal training in radiation protection.

2. He shall have five years of professional experience in applied radiation protection; where a master's degree in a related field is equivalent to one year experience and a doctor's degree in a related field is equivalent to two years of experience.

3. Of his five years of experience, three years shall be in applied radiation protection work in a nuclear facility dealing with radiological problems similar to those encountered at Turkey Point Plant.

6.3.2.2 When the Health Physics Supervisor does not meet the above requirements, compensatory action shall be taken which the Plant Nuclear Safety Committee determines, and the NRC Office of Nuclear Reactor Regulation concurs that the action meets the intent of Specification 6.3.2.1.

6.4 TRAINING

6.4.1 A retaining and replacement program for the facility staff shall be maintained under the direction of the Training Supervisor and shall meet or exceed the requirements and recommendations of Section 5.5, ANSI N18.1-1971 and Appendix A to 10 CFR Part 55.

STATE OF FLORIDA)
)
ss.
COUNTY OF DADE)

Robert E. Uhrig, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this said document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee.

Robert E. Uhrig

Robert E. Uhrig

Subscribed and sworn to before me this

23rd day of December, 1980

Lois I. Marino

NOTARY PUBLIC, in and for the county of Dade, State of Florida

My commission expires: NOTARY PUBLIC STATE OF FLORIDA at LARGE MY COMMISSION EXPIRES AUGUST 24, 1981 BONDED THRU MAYNARD BONDING AGENCY