

NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 94 License No. NPF-38

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated February 14, 1994, 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.

9405030151 940422 PDR ADOCK 05000382 PDR PDR Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 94, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Less lama

William D. Beckner, Director Project Directorate IV-1 Division of Reactor Projects - III/IV Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: April 22, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 94

TO FACILITY OPERATING LICENSE NO. NPF-38

DOCKET NO. 50-382

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

INSERT PAGES		
XX 3/4 3-1 3/4 3-8		
-		
3/4 3-13 3/4 3-22		
-		

LIST OF FIGURES

FIGURE		P	AGE
3.1~0	SHUTDOWN MARGIN AS A FUNCTION OF COLD LEG TEMPERATURE	3/4	1-3a
3.1-1	REQUIRED STORED BORIC ACID VOLUME AS A FUNCTION OF	3/4	1~13
3.1-1A	REQUIRED POWER REDUCTION AFTER SINGLE CEA DEVIATION	3/4	1-20a
3.1-2	CEA INSERTION LIMITS VS THERMAL POWER	3/4	1-27
3.1-3	PART LENGTH CEA INSERTION LIMIT VS THERMAL POWER	3/4	1-28a
3.2-1	ALLOWABLE PEAK LINEAR HEAT RATE VS TC	3/4	2-2
3.2-1A	ALLOWABLE PEAK LINEAR HEAT RATE VS To FOR COLSS OUT OF SERVICE	3/4	2-2A
3.2-2	DNBR MARGIN OPERATING LIMIT BASED ON CORE PROTECTION CALCULATORS (COLSS OUT OF SERVICE, CEACS OPERABLE)	3/4	2-8
3.2-3	DNBR MARGIN OPERATING LIMIT BASED ON CORE PROTECTION CALCULATORS (COLSS OUT OF SERVICE CEACS INOPERABLE)	3/4	2-9
3.4-1	DOSE EQUIVALENT I-131 PRIMARY COOLANT SPECIFIC ACTIVITY LIMIT VERSUS PERCENT OF RATED THERMAL POWER WITH THE PRIMARY COOLANT SPECIFIC ACTIVITY >1.0 µCi/GRAM DOSE EQUIVALENT I-131	3/4	4-27
3.4-2	REACTOR COOLANT SYSTEM PRESSURE/TEMPERATURE LIMITATIONS FOR 0-8 EFFECTIVE FULL POWER YEARS (HEATUP)	3/4	4-30
3.4-3	REACTOR COOLANT SYSTEM PRESSURE/TEMPERATURE LIMITATIONS FOR 0-8 EFFECTIVE FULL POWER YEARS (COOLDOWN)	3/4	4-31
4.7-1	SAMPLING PLAN FOR SNUBBER FUNCTIONAL TEST	3/4	7-26
5.1-1	EXCLUSION AREA		5-2
5.1-2	LOW POPULATION ZONE		5-3
5.1-3	SITE BOUNDARY FOR RADIOACTIVE GASEOUS AND LIQUID EFFLUENTS		5-4
6.2-1	OFFSITE ORGANIZATION FOR MANAGEMENT AND TECHNICAL SUPPORT		6-3
6.2-2	PLANT OPERATIONS ORGANIZATION		6-4

INDEX

WATERFORD - UNIT 3

XIX

AMENDMENT NO. 13, 27

INDEX

LIST OF	TABLES		
TABLE	PAGE		
1.1	FREQUENCY NOTATION		1-9
1.2	OPERATIONAL MODES		1-10
2.2-1	REACTOR PROTECTIVE INSTRUMENTATION TRIP SETPOINT LIMITS		2-3
2.2-2	CORE PROTECTION CALCULATOR ADDRESSABLE CONSTANTS		2-5
	MONITORING FREQUENCIES FOR BORON DILUTION DETECTION		
3.1-1	K _{eff} > 0.98	3/4	1-17
3.1-2	0.98 ≥ K _{eff} > 0.97	3/4	1-17a
3.1-3	0.97 ≥ K _{eff} > 0.96	3/4	1-17b
3.1-4	0.96 ≥ K _{eff} > 0.95	3/4	1-17c
3.1-5	K _{eff} ≤ 0.95	3/4	1-17d
3.3-1	REACTOR PROTECTIVE INSTRUMENTATION	3/4	3-3
4.3-1	REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4	3-10
3.3-3	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM	3/4	3-14
3.3-4	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES	3/4	3-19
4.3-2	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4	3-25
3.3-6	RADIATION MONITORING INSTRUMENTATION	3/4	3-29
4.3-3	RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4	3-32
3.3-7	SEISMIC MONITORING INSTRUMENTATION	3/4	3-36
4.3-4	SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4	3-37
3.3-8	METEOROLOGICAL MONITORING INSTRUMENTATION	3/4	3-39

XX

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protective instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-1.

4.3.1.2 The logic for the bypasses shall be demonstrated OPERABLE prior to each reactor startup unless performed during the preceding 92 days. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.1.3 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

4.3.1.4 The isolation characteristics of each CEA isolation amplifier and each optical isolator for CEA Calculator to Core Protection Calculator data transfer shall be verified at least once per 18 months during the shutdown per the following tests:

a. For the CEA position isolation amplifiers:

 With 120 volts AC (60 Hz) applied for at least 30 seconds across the output, the reading on the input does not exceed 0.015 volts DC.

WATERFORD - UNIT 3

3/4 3-1

AMENDMENT NO. 94

INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

- With 120 volts AC (60 Hz) applied for at least 30 seconds across the input, the reading on the output does not exceed 15.0 volts DC.
- b. For the optical isolators: Verify that the input to output insulation resistance is greater than 10 megohms when tested using a megohmmeter on the 500 wolt DC range.

4.3.1.5 The Core Protection Calculator System and the Control Element Assembly Calculator System shall be determined OPERABLE at least once per 12 hours by verifying that less than three auto restarts have occurred on each calculator during the past 12 hours.

4.3.1.6 The Core Protection Calculator System shall be subjected to a CHANNEL FUNCTIONAL TEST to verify OPERABILITY within 12 hours of receipt of a High CPC Cabinet Temperature alarm.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS

- 2. Within 4 hours:
 - a) All full-length and part-length CEA groups are withdrawn to and subsequently maintained at the "Full Out" position, except during surveillance testing pursuant to the requirements of Specification 4.1.3.1.2 or for control when CEA group 6 may be inserted no further than 127.5 inches withdrawn.
 - b) The "RSPT/CEAC Inoperable" addressable constant in the CPCs is set to the inoperable status.
 - c) The Control Element Drive Mechanism Control System (CEDMCS) is placed in and subsequently maintained in the "Off" mode except during CEA group 6 motion permitted by a) above, when the CEDMCS may be operated in either the Manual Group" or "Manual Individual" mode.
- 3. At least once per 4 hours, all full-length and partlength CEAs are verified fully withdrawn except during surveillance testing pursuant to Specification 4.1.3.1.2 or during insertion of CEA group 6 as permitted by 2.a) above, then verify at least once per 4 hours that the inserted CEAs are aligned within 7 inches (indicated position) of all other CEAs in its group.
- ACTION 7 With three or more auto restarts of one non-bypassed calculator during a 12-hour interval, demonstrate calculator OPERABILITY by performing a CHANNEL FUNCTIONAL TEST within the next 24 hours.
- ACTION 8 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

TABLE 3.3.2 has been deleted.

WATERFORD - UNIT 3

3/4 3-8 AMENDMENT NO. 12,40,94 Next page is 3/4 3-10

TABLE 4.3-1

REACTOR PROTECTIVE INSTRUMENTATION SURVEILLANCE REQUIREMENTS

UNIT	FUNCTIONAL UNIT		FUNCTIONAL UNIT CHANNEL CHANNEL CHANNEL CHANNEL CHANNEL CHANNEL		CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE
ω	1.	Manual Reactor Trip	N. A.	N.A.	R and S/II(1)	
	2.	Linear Power Level - High	S	D(2,4),M(3,4), Q(4)	Q	1, 2, 3*, 4*, 5*
3/4 3-10	3.	Logarithmic Power Level - High	S	R(4)	Q and S/U(1)	28 3 4 5
	4	Pressurizer Pressure - High	S	R	0	1 9
	5.	Pressurizer Pressure - Low	S	R	0	1, 2
	6.	Containment Pressure - High	5	R	4	1, 2
	7.	Steam Generator Pressure - Low	5	8	Q	1, 2
	8.	Steam Generator Level - Low	s	P	Q	1, 2
	9.	Local Power Density - High			Q	1, 2
AMENDWE	10	DNRR - Low	3	D(2,4), R(4,5)	Q, R(6)	1, 2
		UNDR LOW	S	S(7), D(2,4), M(8), R(4,5)	Q, R(6)	1, 2
	11.	Steam Generator Level - High	S	R	0	3 . 6
	12.	Reactor Protection System Logic	N. A.	N. A.	0 and 6/11/11	1, 2
-1					4 and 5/0(1)	1, 2, 3*, 4*, 5*

3/4 3-10

WATERFORD

.

AMENDMENT NO. AP. 69

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and bypasses shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.2 The logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. The total bypass function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.2.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 3.3-3

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT		TIONAL UNIT OF CHANNELS TO TRIP		CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION	
1.	SA a.	FETY INJECTION (SIAS) Manual (Trip Buttons)	2 sets of 2	1 set of 2	2 cots of 2			
	b.	Containment Pressure - High	4	2	3	1, 2, 3, 4	12	
	с.	Pressurizer Pressure - Low	4	2	3	1, 2, 3	13^, 14^	
	d.	Automatic Actuation - Logic	4	2	3	1, 2, 3(a)	13*, 14*	
2.	COM	MARNAL (Trip Putters)			3	1, 2, 3	12	
	b.	Containment Pressure	2 sets of 2	l set of 2	2 sets of 2	1, 2, 3, 4	12	
	с.	Automatic Actuation	4	2(b)	3	1, 2, 3	13*, 14*	
3.	CON	TAINMENT ISOLATION (CIAS)	4	2	3	1, 2, 3	12	
	a.	Manual CIAS (Trip Buttons)	2 sets of 2	1 set of 2	2 sets of 2	1, 2, 3, 4	12	
	b.	Containment Pressure - High	4	2	3	1, 2, 3	13* 14*	
	c.	Pressurizer Pressure - Low	4	2	3	1, 2, 3(a)	13* 14*	
	d.	Automatic Actuation Logic	4	2	3	1. 2. 3	12	
						-, -, -	-A.E.	

WATERFORD - UNIT 3

3/4 3-14

TABLE 3.3-4 (Continued)

TABLE NOTATIONS

- (1) Value may be decreased manually, to a minimum of 100 psia, as pressurizer pressure is reduced, provided the margin between the pressurizer and this value is maintained at less than or equal to 400 psi; the setpoint shall be increased automatically as pressurizer pressure is increased until the trip setpoint is reached. Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer is greater than or equal to 500 psia.
- (2) Value may be decreased manually as steam generator pressure is reduced, provided the margin between the steam generator pressure and this value is maintained at less than or equal to 200 psi; the setpoint shall be increased automatically as steam generator pressure is increased until the trip setpoint is reached.
- (3) % of this distance between steam generator upper and lower level instrument
- (4) Requires corresponding permissive trip signal of item 7.c., 7.d., or 7.e. to actuate EFAS.
- (5) Requires corresponding EFAS trip to actuate control valves.

TABLE 3.3.5 has been deleted.

WATERFORD - UNIT 3

3/4 3-22 AMENDMENT NO. 74,76,94 Next page is 3/4 3-25