Docket No. 50-382 November 22, 1993

Mr. Ross P. Barkhurst
Vice President Operations
Entergy Operations, Inc.
Post Office Box B
Killona, Louisiana 70066

Dear Mr. Barkhurst:

SUBJECT: ISSUANCE OF AMENDMENT NO. 91 TO FACILITY OPERATING LICENSE NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3 (TAC NO. M84791)

The Commission has issued the enclosed Amendment No. 91 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 21, 1992.

The amendment changes the Appendix A Technical Specifications on component cooling water (CCW) radiation monitors to clearly distinguish between the monitors and to remove the requirement for monitor A/B during Modes 5 and 6 where operation is difficult due to low flow in the CCW line from containment.

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

Sincerely,

ORIGINAL SIGNED BY:
David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 91 to NPF-38
2. Safety Evaluation

cc w/enclosures:
See next page

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

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David L. Wigginton, Senior Project Manager
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See next page

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UNITED STATES
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. 91
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 October 21, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. 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. 91 , 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

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 22, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 91

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 page is also provided to maintain document completeness.

REMOVE PAGES	INSERT PAGES
3/4 3-29	3/4 3-29
3/4 3-31	3/4 3-31
3/4 3-32	3/4 3-32

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel Storage Pool Area Fuel Handling Building Ventilation System Isolation	2	*	$\leq$ 100 mR/h	10^{-1} - 10^{4} mR/h	24
b. Containment - Purge & Exhaust Isolation	1/train	1, 2, 3, 4 & **	40 mR/h or $\leq$ 2x background whichever is higher	20 - $5x10^{5}$ mR/h	25
2. PROCESS MONITORS					
a. Containment Atmosphere					
1) Gaseous Activity RCS Leakage Detection	1	1, 2, 3, & 4	Not Applicable	10^{-6} - 10^{-1} µCi/cc	23
2) Particulate Activity RCS Leakage Detection	1	1, 2, 3, & 4	Not Applicable	10^{-11} - 10^{-6} µCi/cc	23
b. Control Room Intake Monitors	1/intake	All MODES	$\leq$ 2x background	10^{-8} - 10^{-2} µCi/cc	26
c. Steam Generator Blowdown Monitor	1	1, 2, 3, & 4	$\leq 10^{-3}$ µCi/cc	10^{-6} - 10^{-1} µCi/cc	28
d. Component Cooling Water Monitors A&B	1/line	All MODES	$\leq 10^{-4}$µCi/cc	10^{-7} - 10^{-2} µCi/cc	28
e. Component Cooling Monitor A/B	1	1, 2, 3, & 4	$\leq 10^{-4}$ µCi/cc	10^{-7} - 10^{-2} µCi/cc	28

*With irradiated fuel in the storage pool.

**During CORE ALTERATIONS or movement of irradiated fuel within the containment.

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
3. EFFLUENT ACCIDENT MONITORS					
a. Containment High Range	2	1, 2, 3, & 4	Not Applicable	$1 - 10^8$ R/h	27
b. Plant Stack High Range	1	1, 2, 3, & 4	Not Applicable	$10^{-7} - 10^5$ µCi/cc	27
c. Condenser Vacuum Pump High Range	1	1, 2, 3, & 4	Not Applicable	$10^{-7} - 10^5$ µCi/cc	27
d. Fuel Handling Building Exhaust High Range	1	1*, 2*, 3*, & 4*	Not Applicable	$10^{-7} - 10^5$ µCi/cc	27
e. Main Steam Line High Range	1/steam line	1, 2, 3, & 4	Not Applicable	$1 - 10^5$ mR/h	27

*With irradiated fuel in the storage pool.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

ACTION 23 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1.

ACTION 24 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 25 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.

ACTION 26 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.

ACTION 27 - With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:

1. Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and

2. If the monitor is not restored to OPERABLE status within 7 days after the failure, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

ACTION 28 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, operation of the plant may continue for up to 30 days provided grab samples are taken once per 8 hours and these samples are analyzed for gross activity within 24 hours.

If the monitor is not restored to OPERABLE status within 30 days after the failure, continue sampling and prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1.	AREA MONITORS				
	a. Fuel Storage Pool Area Fuel Handling Building Ventilation System Isolation	S	R	M	*
	b. Containment - Purge & Exhaust Isolation	S	R	M	1, 2, 3, 4 & **
2.	PROCESS MONITORS				
	a. Containment Atmosphere				
	1) Gaseous Activity - RCS Leakage Detection	S	R	M	1, 2, 3, & 4
	2) Particulate Activity - RCS Leakage Detection	S	R	M	1, 2, 3, & 4
	b. Control Room Intake Monitors	S	R	M	ALL MODES
	c. Steam Generator Blowdown Monitor	S	R	M	1, 2, 3, & 4
	d. Component Cooling Water Monitors A&B	S	R	M	ALL MODES
	e. Component Cooling Water Monitor A/B	S	R	M	1, 2, 3, & 4

*With irradiated fuel in the storage pool.

**During CORE ALTERATIONS or movement of irradiated fuel within the containment.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 91 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By letter dated October 21, 1992, Entergy Operations, Inc. (the licensee), requested a revision to the Technical Specifications (TS) for the Waterford Steam Electric Station, Unit 3. The proposed amendment would revise radiation monitoring instrumentation of Table 3.3-6 by relaxing the operability requirements for the Component Cooling Water (CCW) radiation monitors and altering the applicability and action statements associated with these monitors.

2.0 DISCUSSION

The CCW system is a closed loop system that supplies cooling to plant systems and components. Each loop services specified equipment, and radiation monitoring is provided to detect reactor coolant system (RCS) leakage from the reactor coolant pump (RCP) seals. A continuously operating radiation monitor is provided in each of the redundant headers on the discharge side of the pumps. These monitors (CCW monitors A and B) are the safety-related instruments specified in Table 3.3-6, item 2d. A third monitor, not safety-related, is provided on the return line from containment in the nonessential seismically qualified loop. This instrument (item 2e, CCW monitor A/B) monitors the cooling water from the components inside the containment (i.e., the four RCP pump seals and motor control element drive mechanism (CEDM) coolers).

The purpose of the third monitor (CCW monitor A/B) is to provide early detection of RCS leakage from the RCP seals. The current TS requires this monitor to be operable during all modes of operation. The licensee proposes to revise this requirement to exclude Mode 5 cold shutdown and Mode 6 refueling, because of the reduced RCS pressure and reduced CCW flow while in these modes. In Mode 5, reactor coolant pressure is lower, resulting in lower stresses and reduced potential for RCP seal leakage. In Mode 6, CCW flow through the nonessential seismically qualified loop is reduced and isolated at the containment to facilitate refueling operations (i.e., disassembly of the control element drive mechanism and testing of the containment isolation valve testing).

During refueling, this line is isolated at the containment to facilitate refueling activities. The flow in the CCW return line is reduced during this mode, and the differential pressure across the monitor sample line tap is insufficient to create an adequate sample flow. This results in declaring the monitor inoperable and entering the associated action that requires sampling and analysis. (On September 24, 1992, an 8-hour sample was missed, resulting in Licensee Event Report 92-011.) If the RCP seals should leak during Mode 5 depressurization, any leakage would still be identified by the two continuous CCW radiation monitors A and B.

In addition, CCW pressure and temperature are monitored at each of the RCP seal outlets. A high temperature or pressure signal annunciates an automatic isolation of the affected RCP seal cooler.

On the basis of the above and the following TS changes, the staff finds that the applicability requirements for CCW monitor A/B is justified and will not pose a threat to safety.

The licensee proposed to revise TS 3/4.3.3, "Radiation Monitoring Instrumentation," which prescribes the operability requirements for the radiation monitoring instruments shown in Table 3.3-6. Items 2d and 2e of this table provide the specified limits for three CCWS radiation monitoring instrumentation channels. In order to easily distinguish the monitors, the licensee proposes to revise items 2d and 2e to indicate monitor A & B and monitor A/B, respectively. The applicability requirements for item 2e (monitor A/B) have been changed from all modes to Modes 1 through 4 because of the operational difficulties experienced from reduced CCW flow. These changes are as follows:

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	APPLICABLE MODES
2. PROCESS MONITORS	
d. Component Cooling Water ~~System~~ Monitors A&B	ALL MODES
e. Component Cooling Water ~~System~~ Monitor A/B	1, 2, 3, & 4 ~~ALL MODES~~

Identical changes have been made to Table 4.3-3 "Radiation Monitoring Instrumentation Surveillance Requirements," as shown in the following:

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	MODES FOR WHICH SURVEILLANCE IS REQUIRED
2. Process Monitors	
d. Component Cooling Water ~~System~~ MONITORS A&B	ALL MODES
e. Component Cooling Water ~~System~~ MONITOR A/B	1, 2, 3, & 4 ~~ALL MODES~~

In addition, Action Statement 28 was modified to include the special report criteria of Specification 6.9.2. as follows:

TABLE 3.3-6
(Continued)

ACTION STATEMENT

ACTION 28- With the number of channel OPERABLE less than required by the Minimum Channels OPERABLE requirements, operation of the plant may continue for up to 30 days provided grab samples are taken once per 8 hours and these samples are analyzed for gross activity within 24 hours.

If the monitor is not restored to OPERABLE status within 30 days after the failure, continue sampling and prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

The special report will ensure that in the unlikely event that these monitors are out of service beyond 30 days a schedule for returning the monitor to service will be established.

3.0 EVALUATION

The staff evaluated the radiological aspects of the revised TS requirements for the radiation monitoring instrumentation in Table 3.3-6 which relax the operability requirements for the CCW radiation monitors in Mode 5 and Mode 6 and finds that the licensee's TS change is acceptable based on the following:

1. The proposed change will allow one less CCW monitor during cold shutdown and refueling modes while maintaining system integrity with two continuous radiation monitoring instruments.

2. Adding monitors A and B to item 2d and monitor A/B to item 2e is purely administrative in nature and clarifies the specifications. It does not involve a reduction in a margin of safety.

3. Removing the operability requirements for Modes 5 and 6 from CCW radiation monitor A/B will have no effect on accidents previously evaluated. Radiation detection will continue to be performed by CCW radiation monitors A and B.

The staff concludes that the primary function of these process monitors is to provide early detection (and ALARA, but no automatic isolation) of the leakage of radioactive materials into normally nonradioactive systems, and the proposed changes, therefore, are acceptable to the staff.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC 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 issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (57 FR 55580). 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.

6.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Minns

Date: November 22, 1993