

March 4, 1988

Docket No. 50-382

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Mr. J. G. Dewease
Senior Vice President - Nuclear Operations
Louisiana Power and Light Company
317 Baronne Street, Mail Unit 17
New Orleans, Louisiana 70112

Dear Mr. Dewease:

SUBJECT: ISSUANCE OF AMENDMENT NO. 31 TO FACILITY OPERATING LICENSE
NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3
(TAC NO. 66792)

The Commission has issued the enclosed Amendment No. 31 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 December 11, 1987, as supplemented by letter dated December 22, 1987.

The amendment changes the Appendix A Technical Specifications by changing the method of fire detection in the containment annulus.

A copy of the Safety Evaluation supporting the amendment is also enclosed. Notice of Issuance will be included in the Commission's next Bi-weekly Federal Register notice.

Sincerely,

15/

David L. Wigginton, Project Manager
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 31 to NPF-38
- 2. Safety Evaluation

cc w/enclosures:
See next page

LTR NAME: WATERFORD 3 AMENDMENT NO. 70

PD4/LA *LA*
PNoonan
01/15/88

PD4/PM *PM*
JWilson/DWigginton:vh
01/19/88

1/20/88
ECEB *CEB*
CMcCracken
01/20/88

OGC *OGC*
01/28/88

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JCalvo
01/1/88
3/4/88

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P PDR

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Senior Vice President - Nuclear Operations
Louisiana Power and Light Company
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01/28/88

PD4/D *MAC*
JCalvo
01/ /88
3/4/88

Mr. Jerrold G. Dewease
Louisiana Power & Light Company

Waterford 3

cc:

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Resident Inspector/Waterford NPS
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Baton Rouge, Louisiana 70825-1697

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Louisiana Power & Light Company
317 Baronne Street
New Orleans, Louisiana 70112



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

LOUISIANA POWER AND LIGHT COMPANY

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 31
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Louisiana Power and Light Company (the licensee) dated December 11, 1987, as supplemented December 22, 1987, 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.

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P PDR

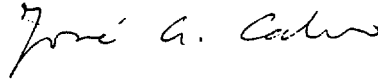
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 31, 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



Jose A. Calvo, Director
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 4, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 31
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.

Remove

3/4 3-49
3/4 3-52
3/4 3-53

Insert

3/4 3-49
3/4 3-52*
3/4 3-53

*Amendment Number was inadvertently marked out when issued as an overleaf page to Amendment No. 24. Page reissued correctly.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

- a. With any, but not more than one-half the total in any fire zone Function A fire detection instruments shown in Table 3.3-11 inoperable except for the annulus, restore the inoperable instrument(s) to OPERABLE status within 14 days or within the next 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours or monitor air temperature at least once per hour at the locations listed in Specification 4.6.1.5.
- b. With more than one-half of the Function A fire detection instruments in any fire zone shown in Table 3.3-11 inoperable except for the annulus, or with any Function B fire detection instruments shown in Table 3.3-11 inoperable, or with any two or more adjacent fire detection instruments shown in Table 3.3-11 inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours or monitor air temperature at least once per hour at the locations listed in Specification 4.6.1.5.
- c. With both annulus detection instruments inoperable, restore at least 1 detector to operable status or within the next 1 hour establish a fire watch patrol to inspect the zone at least once per eight hours.*
- d. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8.1 Each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.8.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months. Circuits which are not accessible during plant operation shall be demonstrated OPERABLE during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

* Fire watch patrol may be temporarily suspended during performance of Specification 4.6.6.1.a.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

4.3.3.8.3 The nonsupervised circuits associated with detector alarms between the instrument and the control room shall be demonstrated OPERABLE at least once per 31 days.

4.3.3.8.4 Each of the resistor wires required by Table 3.3-11 shall be demonstrated OPERABLE at least once per 6 months by verifying the proper wire resistance.

TABLE 3.3-11
FIRE DETECTION INSTRUMENTS

<u>ZONE</u>	<u>ROOM NAME/NUMBER</u>	<u>ELEVATION</u> <u>(ft)</u>	<u>TOTAL NUMBER OF</u> <u>INSTRUMENTS*</u>		
			<u>HEAT</u> <u>(x/y)</u>	<u>FLAME</u> <u>(x/y)</u>	<u>SMOKE</u> <u>(x/y)</u>
1. REACTOR AUXILIARY BUILDING					
RAB 1A	Main Control Panels 1,2,3,4,6,7,8,35,36	+46			10/0
RAB 1A	Control Room Proper/304	+46			20/0
RAB 1B	Emergency Equip. H&V Room/314	+46			0/12
RAB 1D	Computer Room (above raised floor)/306	+46			5/0
	Computer Room (below raised floor)/306	+46			0/7
RAB 2	Ventilation Equip. Room/299	+46			0/36
RAB 3	RAB Corridor to Relay Room/261	+35	0/1(3)		4/0
	RAB HVAC Switchgear Equip. Room/323	+46			0/10
RAB 3A	RAB Battery Exhaust Fan Room/406	+69			0/2
RAB 4	Cable Vault/260	+35			0/27
RAB 5	Electrical Penetration Area "A"/263	+35			0/13
RAB 6	Electrical Penetration Area "B"/263A	+35			0/14
RAB 7	Relay Room/262	+35	(3)		12/0
	Isolation Panels (9 Compartments - 2 per comp.)	+35			2/0
RAB 8A	High Voltage Switchgear Room "A"/212A	+21	0/1(1)		18/0
RAB 8B	Electrical Equip. Room/225B and High Voltage Switchgear Room "B"/212	+21	0/1(2)		28/0
	480V Switchgear 3A32 Room	+21	(2)		2/0
RAB 8C	High Voltage Switchgear Room "A-B"/212B	+21	(1)		8/0
RAB 8E	CEA M/G Set Room/216	+21			2/0
RAB 9	Remote Shutdown Panel Room/217	+21			1/0
RAB 11	Battery Room "B"/213	+21			2/0
RAB 12	Battery Room "AB"/214A	+21			2/0
RAB 13	Battery Room "A"/214	+21			2/0
RAB 15	Emergency Diesel Gen. "B" Room/222	+21	0/1		
RAB 15A	Emergency Diesel Gen. "B" Feed TK Room/328A	+46	0/1		
RAB 16	Emergency Diesel Gen. "A" Room/221	+21	0/1		
RAB 16A	Emergency Diesel Gen. "A" Feed Tk. Room 328A	+46	0/1		
RAB 17	CCW Heat Exchanger "B"/236	+21			0/4
RAB 18	CCW Heat Exchanger "A"/220	+21			0/4
RAB 19	CCW Pump "A"/235	+21			0/2
RAB 20	CCW Pump "AB"/234	+21			0/2
RAB 21	CCW Pump "B"/233	+21			1/0
RAB 23	Corridor to CCW Pumps/218, Corridor to CCW Heat Exchangers/219 and Corridor to Emergency Diesel Gen./225A	+21			0/39

(1)Common Resistor Wire
(2)Common Resistor Wire
(3)Common Resistor Wire
WATERFORD - UNIT 3

TABLE 3.3-11 (Continued)
FIRE DETECTION INSTRUMENTS

<u>ZONE</u>	<u>ROOM NAME/NUMBER</u>	<u>ELEVATION (ft)</u>	<u>TOTAL NUMBER OF INSTRUMENTS*</u>		
			<u>HEAT (x/y)</u>	<u>FLAME (x/y)</u>	<u>SMOKE (x/y)</u>
1. REACTOR AUXILIARY BUILDING (Continued)					
RAB 25	Equip. Access Area/226 (wing area)	+21			15/0
RAB 27A	H&V Room/124	+ 7			0/6
RAB 27B	Electrical Area and Health Physics Offices/122	+ 7			0/35
RAB 27C	I&C Room/120	+ 7			0/6
RAB 27D	Communications Equip. Room/123	+ 7			1/0
RAB 31	Corridors and Passageways	- 4			0/24
	Corridors on eastside	- 4			0/21
RAB 32	Wing Area westside - Auxiliary Com- ponent Cooling Water Pump "A"/B53 & and Pipe Penetration Area/B100	-35 & - 4			32/0
	Wing Area Center/B53 and B100	-35 & - 4			28/0
	Wing Area eastside-Component Cooling Water Pump "B"/B53 and Pipe Penetration Area/B100	-35 - 4			31/0
RAB 33	S/D Cooling Heat Exchangers A&B/B20 & B48	-35			0/18
RAB 34	Valve Operating Enclosure Bay Room "A"/B54	-15.5			2/0
	Valve Operating Enclosure Bay Room "B" B55A	-15.5			4/0
RAB 35	Safety Injection Pump Room B/B16	-35			10/0
RAB 36	Safety Injection Pump Room A/B15	-35			10/0
RAB 37	Motor-Driven Emergency Feedpump "A"/B49A	-35			0/1
RAB 38	Motor-Driven Emergency Feedpump "B"/B49B	-35			1/0
RAB 39	General Equipment Area/B5, 12, 13, & 49	-35			0/10
	Corridors & General Equip. Areas/B5, 1, 2, 3, 4, 39, 40, 41, 42, 44 & 46	-35			0/28
	East Corridor & General Equip. Areas/ B17, 23 & 25	-35			0/15
	BA Make-up Tank "A"/B38	-35			4/0
	BA Make-up Tank "B"/B53A	-35			4/0
RAB 40	Diesel Storage Tank "A"/B50	-35			3/0
RAB 41	Diesel Storage Tank "B"/B52	-35			3/0

TABLE 3.3-11 (Continued)
FIRE DETECTION INSTRUMENTS

<u>ZONE</u>	<u>ROOM NAME/NUMBER</u>	<u>ELEVATION</u> (ft)	<u>TOTAL NUMBER OF INSTRUMENTS*</u>		
			<u>HEAT</u> (x/y)	<u>FLAME</u> (x/y)	<u>SMOKE</u> (x/y)
2. REACTOR CONTAINMENT BUILDING**					
RCB 1	Annulus/420***	+46			2/0
RCB 2	Electrical Penetration Area A	+21			24/0
RCB 3	Electrical Penetration Area B	+21			21/0
RCB 4	Reactor Cable Trays	+46			16/0
CT 1&3	Wet & Dry Cooling Tower "A" Cable Tray		1/0		
CT 2&4	Wet & Dry Cooling Tower "B" Cable Tray		1/0		
3. FUEL HANDLING BUILDING					
FHB 2	Purification Pump Room/B155, Fuel Pool Pump "A"/B157, Fuel Pool Pump "B"/B156, Fuel Pool Heater Exchanger/B158 and Access Area/B-161	+ 1			10/0
	Emergency Filter Train Unit/B152	+ 1			6/0
	Emergency Elect. Equip. Room/B151	+ 1			1/0
4. CHARCOAL AIR FILTER UNITS					
E-35 (3A-SA)	FHB Emergency Filter Train "A"	+ 1	1/0		
E-35 (3B-SB)	FHB Emergency Filter Train "B"	+ 1	1/0		
E-17 (3A-SA)	Shield Building Ventilation System Filter Train "A"	+46	1/0		
E-17 (3B-SB)	Shield Building Ventilation System Filter Train "B"	+46	1/0		
E-23 (3A-SA)	Controlled Ventilation Area System Filter Train "A"	+46	1/0		
E-23 (3A-SB)	Controlled Ventilation Area System Filter Train "B"	+46	1/0		
S-8 (3A-SA)	Control Room Emergency Filter Train "A"	+46	1/0		
S-8 (3B-SB)	Control Room Emergency Filter Train "B"	+46	1/0		

TABLE NOTATIONS

*(x/y): x is the number of Function A (early warning fire detection and notification only) instruments.
y is the number of Function B (actuation of fire suppression systems and early warning and notification) instruments.

**The fire detection instruments located within the containment are not required to be OPERABLE during the performance of Type A containment leakage rate tests.

***Annulus detection is provided by smoke detectors mounted on the duct of the Annulus Negative Pressure System. This segment of duct is physically located in the RAB H&V Equipment Room (299).

INSTRUMENTATION

LOOSE-PART DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The loose-part detection system shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With one or more loose-part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of:

- a. a CHANNEL CHECK at least once per 24 hours,
- b. a CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. a CHANNEL CALIBRATION at least once per 18 months.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 31 TO

FACILITY OPERATING LICENSE NO. NPF-38

LOUISIANA POWER AND LIGHT COMPANY

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated December 11, 1987, as supplemented by letter dated December 22, 1987, Louisiana Power and Light Company (LP&L or the licensee) requested changes to Facility Operating License No. NPE-38 for Waterford Steam Electric Station, Unit 3 (Waterford 3). The proposed changes would revise Technical Specification Limiting Condition for Operation (LCO) 3.3.3.8 and its associated Table 3.3-11 to implement a proposed change in method of fire detection for the annulus wherein the current system will be replaced with fire detection instruments mounted on the Annulus Negative Pressure System (ANPS) ductwork.

2.0 DISCUSSION

The licensee has proposed to change the method of fire detection for the annulus area, citing the desire for a more accessible and improved detection system as the primary reason for replacing the existing system. The licensee has met with the staff to discuss this change, and has documentation describing the proposed system and demonstrated that the changes will not reduce the level of fire protection at Waterford 3.

The existing annulus fire detection system consists of 69 ionization type smoke detectors circling the annulus in three loops at elevations -4, +21, and +46. These three loops comprise two zones of detection for alarm purposes. The proposed fire detection system consists of two photoelectric smoke detectors mounted on the ANPS ductwork with sample tubes penetrating into the duct. The ANPS operates continuously during normal plant operation to maintain the annulus negative pressure greater than five inches water gauge in accordance with TS 3.6.6.2.

Table 3.3-11 lists fire detection instruments, by function and location, which are subject to the LCO and Surveillance Requirements of Technical Specification 3/4.3.3.8. The proposed changes to Table 3.3-11 consists of reducing the number of Function A detection instruments from 69 to two, the number of zones from two to one; and indicating detection at elevation +46 only. Further, a footnote will be added to the table to clarify that the fire detection instruments for the annulus are physically

installed on the ANPS doctwork in the RAB. The change to Statement c of TS 3.3.3.8 does not change the intent of the statement, but rather modifies the language to be consistent with the proposed system configuration. As a result of moving the detection instruments to a location outside the annulus, the surveillance interval requirements of TS 4.3.3.8.1 and 4.3.3.8.2 will change from "each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months" to "at least once per 6 months". However, this occurs within the context of the existing surveillance requirement language.

3.0 EVALUATION

The proposed Technical Specification changes will implement a proposed change in the annulus fire detection system. The staff reviewed information provided by the licensee relative to the fire detection system change as part of its evaluation of the proposed Technical Specification change. The information which has been provided indicates that conditions in the annulus provide little opportunity for a fire to occur. These unfavorable conditions include: minimal combustible loading; an absence of ignition sources; low oxygen concentration; and strict control of transient combustibles and access to the annulus. The licensee has verified operability of the proposed system by performing a field test of a mock-up which closely approximates the proposed system design. An added measure of assurance that the proposed modification will provide appropriate protection for the attendant hazards is found in the fact that penetrations traversing the annulus are located below and in the same relative vicinity of the annulus as the intake duct of the ANPS. Thus, combustion byproducts originating at or near the penetrations are expected to be rapidly pulled into the ANPS intake duct and quickly sensed by the smoke detectors mounted therein. In addition, the proposed changes will increase system reliability through the elimination or significant reduction in spurious alarms, and the accessibility of detection instruments for maintenance activities and surveillance testing, thus reducing personnel exposure. The staff concludes that the proposed changes to Technical Specification LCO 3.3.3.8 and its associated Table 3.3-11, result in an acceptable level of fire protection, are consistent with the provisions of Branch Technical Position CMEB 9.5-1, and are, therefore, acceptable.

4.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Administrator, Nuclear Energy Division, Office of Environmental Affairs, State of Louisiana of the proposed determination of no significant hazards consideration. No comments were received.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment relates to changes in installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 issued a proposed finding that this 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 this amendment.

6.0 CONCLUSION

Based upon its evaluation of the proposed changes to the Waterford 3 Technical Specifications, the staff has concluded that: there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and 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. The staff, therefore, concludes that the proposed changes are acceptable, and are hereby incorporated into the Waterford 3 Technical Specifications.

Dated: March 4, 1988

Principal Contributor: J. Wilson



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

March 4, 1988

Docket No. 50-382

Mr. J. G. Dewease
Senior Vice President - Nuclear Operations
Louisiana Power and Light Company
317 Baronne Street, Mail Unit 17
New Orleans, Louisiana 70112

Dear Mr. Dewease:

SUBJECT: ISSUANCE OF AMENDMENT NO. ³¹ TO FACILITY OPERATING LICENSE
NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3
(TAC NO. 66792)

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The amendment changes the Appendix A Technical Specifications by changing the method of fire detection in the containment annulus.

A copy of the Safety Evaluation supporting the amendment is also enclosed. Notice of Issuance will be included in the Commission's next Bi-weekly Federal Register notice.

Sincerely,

David L. Wigginton, Project Manager
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 31 to NPF-38
2. Safety Evaluation

cc w/enclosures:
See next page

~~8803110267~~ 2 pp.

Mr. Jerrold G. Dewease
Louisiana Power & Light Company

Waterford 3

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Mr. K. W. Cook
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Louisiana Power & Light Company
317 Baronne Street
New Orleans, Louisiana 70112



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

LOUISIANA POWER AND LIGHT COMPANY

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 31
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Louisiana Power and Light Company (the licensee) dated December 11, 1987, as supplemented December 22, 1987, 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.

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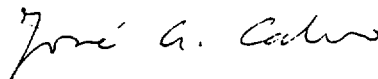
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 31, 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



Jose A. Calvo, Director
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 4, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 31

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.

Remove

3/4 3-49

3/4 3-52

3/4 3-53

Insert

3/4 3-49

3/4 3-52*

3/4 3-53

*Amendment Number was inadvertently marked out when issued as an overleaf page to Amendment No. 24. Page reissued correctly.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

- a. With any, but not more than one-half the total in any fire zone Function A fire detection instruments shown in Table 3.3-11 inoperable except for the annulus, restore the inoperable instrument(s) to OPERABLE status within 14 days or within the next 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours or monitor air temperature at least once per hour at the locations listed in Specification 4.6.1.5.
- b. With more than one-half of the Function A fire detection instruments in any fire zone shown in Table 3.3-11 inoperable except for the annulus, or with any Function B fire detection instruments shown in Table 3.3-11 inoperable, or with any two or more adjacent fire detection instruments shown in Table 3.3-11 inoperable, within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect that containment zone at least once per 8 hours or monitor air temperature at least once per hour at the locations listed in Specification 4.6.1.5.
- c. With both annulus detection instruments inoperable, restore at least 1 detector to operable status or within the next 1 hour establish a fire watch patrol to inspect the zone at least once per eight hours.*
- d. The provisions of Specification 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8.1 Each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.8.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months. Circuits which are not accessible during plant operation shall be demonstrated OPERABLE during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

* Fire watch patrol may be temporarily suspended during performance of Specification 4.6.6.1.a.

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

4.3.3.8.3 The nonsupervised circuits associated with detector alarms between the instrument and the control room shall be demonstrated OPERABLE at least once per 31 days.

4.3.3.8.4 Each of the resistor wires required by Table 3.3-11 shall be demonstrated OPERABLE at least once per 6 months by verifying the proper wire resistance.

TABLE 3.3-11
FIRE DETECTION INSTRUMENTS

<u>ZONE</u>	<u>ROOM NAME/NUMBER</u>	<u>ELEVATION</u> <u>(ft)</u>	<u>TOTAL NUMBER OF INSTRUMENTS*</u>		
			<u>HEAT</u> <u>(x/y)</u>	<u>FLAME</u> <u>(x/y)</u>	<u>SMOKE</u> <u>(x/y)</u>
1. REACTOR AUXILIARY BUILDING					
RAB 1A	Main Control Panels 1,2,3,4,6,7,8,35,36	+46			10/0
RAB 1A	Control Room Proper/304	+46			20/0
RAB 1B	Emergency Equip. H&V Room/314	+46			0/12
RAB 1D	Computer Room (above raised floor)/306	+46			5/0
	Computer Room (below raised floor)/306	+46			0/7
RAB 2	Ventilation Equip. Room/299	+46			0/36
RAB 3	RAB Corridor to Relay Room/261	+35	0/1(3)		4/0
	RAB HVAC Switchgear Equip. Room/323	+46			0/10
RAB 3A	RAB Battery Exhaust Fan Room/406	+69			0/2
RAB 4	Cable Vault/260	+35			0/27
RAB 5	Electrical Penetration Area "A"/263	+35			0/13
RAB 6	Electrical Penetration Area "B"/263A	+35			0/14
RAB 7	Relay Room/262	+35	(3)		12/0
	Isolation Panels (9 Compartments - 2 per comp.)	+35			2/0
RAB 8A	High Voltage Switchgear Room "A"/212A	+21	0/1(1)		18/0
RAB 8B	Electrical Equip. Room/225B and High Voltage Switchgear Room "B"/212	+21	0/1(2)		28/0
	480V Switchgear 3A32 Room	+21	(2)		2/0
RAB 8C	High Voltage Switchgear Room "A-B"/212B	+21	(1)		8/0
RAB 8E	CEA M/G Set Room/216	+21			2/0
RAB 9	Remote Shutdown Panel Room/217	+21			1/0
RAB 11	Battery Room "B"/213	+21			2/0
RAB 12	Battery Room "AB"/214A	+21			2/0
RAB 13	Battery Room "A"/214	+21			2/0
RAB 15	Emergency Diesel Gen. "B" Room/222	+21	0/1		
RAB 15A	Emergency Diesel Gen. "B" Feed TK Room/328A	+46	0/1		
RAB 16	Emergency Diesel Gen. "A" Room/221	+21	0/1		
RAB 16A	Emergency Diesel Gen. "A" Feed Tk. Room 328A	+46	0/1		
RAB 17	CCW Heat Exchanger "B"/236	+21			0/4
RAB 18	CCW Heat Exchanger "A"/220	+21			0/4
RAB 19	CCW Pump "A"/235	+21			0/2
RAB 20	CCW Pump "AB"/234	+21			0/2
RAB 21	CCW Pump "B"/233	+21			1/0
RAB 23	Corridor to CCW Pumps/218, Corridor to CCW Heat Exchangers/219 and Corridor to Emergency Diesel Gen./225A	+21			0/39

(1)Common Resistor Wire
(2)Common Resistor Wire
(3)Common Resistor Wire
WATERFORD - UNIT 3

TABLE 3.3-11 (Continued)
FIRE DETECTION INSTRUMENTS

<u>ZONE</u>	<u>ROOM NAME/NUMBER</u>	<u>ELEVATION (ft)</u>	<u>TOTAL NUMBER OF INSTRUMENTS*</u>		
			<u>HEAT (x/y)</u>	<u>FLAME (x/y)</u>	<u>SMOKE (x/y)</u>
1. REACTOR AUXILIARY BUILDING (Continued)					
RAB 25	Equip. Access Area/226 (wing area)	+21			15/0
RAB 27A	H&V Room/124	+ 7			0/6
RAB 27B	Electrical Area and Health Physics Offices/122	+ 7			0/35
RAB 27C	I&C Room/120	+ 7			0/6
RAB 27D	Communications Equip. Room/123	+ 7			1/0
RAB 31	Corridors and Passageways	- 4			0/24
	Corridors on eastside	- 4			0/21
RAB 32	Wing Area westside - Auxiliary Com- ponent Cooling Water Pump "A"/B53 & and Pipe Penetration Area/B100	-35 & - 4			32/0
	Wing Area Center/B53 and B100	-35 & - 4			28/0
	Wing Area eastside-Component Cooling Water Pump "B"/B53 and Pipe Penetration Area/B100	-35 - 4			31/0
RAB 33	S/D Cooling Heat Exchangers A&B/B20 & B48	-35			0/18
RAB 34	Valve Operating Enclosure Bay Room "A"/B54	-15.5			2/0
	Valve Operating Enclosure Bay Room "B" B55A	-15.5			4/0
RAB 35	Safety Injection Pump Room B/B16	-35			10/0
RAB 36	Safety Injection Pump Room A/B15	-35			10/0
RAB 37	Motor-Driven Emergency Feedpump "A"/B49A	-35			0/1
RAB 38	Motor-Driven Emergency Feedpump "B"/B49B	-35			1/0
RAB 39	General Equipment Area/B5, 12, 13, & 49	-35			0/10
	Corridors & General Equip. Areas/B5, 1, 2, 3, 4, 39, 40, 41, 42, 44 & 46	-35			0/28
	East Corridor & General Equip. Areas/ B17, 23 & 25	-35			0/15
	BA Make-up Tank "A"/B38	-35			4/0
	BA Make-up Tank "B"/B53A	-35			4/0
RAB 40	Diesel Storage Tank "A"/B50	-35			3/0
RAB 41	Diesel Storage Tank "B"/B52	-35			3/0

TABLE 3.3-11 (Continued)
FIRE DETECTION INSTRUMENTS

<u>ZONE</u>	<u>ROOM NAME/NUMBER</u>	<u>ELEVATION</u> <u>(ft)</u>	<u>TOTAL NUMBER OF INSTRUMENTS*</u>		
			<u>HEAT</u> <u>(x/y)</u>	<u>FLAME</u> <u>(x/y)</u>	<u>SMOKE</u> <u>(x/y)</u>
2. REACTOR CONTAINMENT BUILDING**					
RCB 1	Annulus/420***	+46			2/0
RCB 2	Electrical Penetration Area A	+21			24/0
RCB 3	Electrical Penetration Area B	+21			21/0
RCB 4	Reactor Cable Trays	+46			16/0
CT 1&3	Wet & Dry Cooling Tower "A" Cable Tray		1/0		
CT 2&4	Wet & Dry Cooling Tower "B" Cable Tray		1/0		
3. FUEL HANDLING BUILDING					
FHB 2	Purification Pump Room/B155, Fuel Pool Pump "A"/B157, Fuel Pool Pump "B"/B156, Fuel Pool Heater Exchanger/B158 and Access Area/B-161	+ 1			10/0
	Emergency Filter Train Unit/B152	+ 1			6/0
	Emergency Elect. Equip. Room/B151	+ 1			1/0
4. CHARCOAL AIR FILTER UNITS					
E-35 (3A-SA)	FHB Emergency Filter Train "A"	+ 1	1/0		
E-35 (3B-SB)	FHB Emergency Filter Train "B"	+ 1	1/0		
E-17 (3A-SA)	Shield Building Ventilation System Filter Train "A"	+46	1/0		
E-17 (3B-SB)	Shield Building Ventilation System Filter Train "B"	+46	1/0		
E-23 (3A-SA)	Controlled Ventilation Area System Filter Train "A"	+46	1/0		
E-23 (3A-SB)	Controlled Ventilation Area System Filter Train "B"	+46	1/0		
S-8 (3A-SA)	Control Room Emergency Filter Train "A"	+46	1/0		
S-8 (3B-SB)	Control Room Emergency Filter Train "B"	+46	1/0		

TABLE NOTATIONS

*(x/y): x is the number of Function A (early warning fire detection and notification only) instruments.
y is the number of Function B (actuation of fire suppression systems and early warning and notification) instruments.

**The fire detection instruments located within the containment are not required to be OPERABLE during the performance of Type A containment leakage rate tests.

***Annulus detection is provided by smoke detectors mounted on the duct of the Annulus Negative Pressure System. This segment of duct is physically located in the RAB H&V Equipment Room (299).

INSTRUMENTATION

LOOSE-PART DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The loose-part detection system shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With one or more loose-part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of:

- a. a CHANNEL CHECK at least once per 24 hours,
- b. a CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- c. a CHANNEL CALIBRATION at least once per 18 months.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 31 TO

FACILITY OPERATING LICENSE NO. NPF-38

LOUISIANA POWER AND LIGHT COMPANY

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated December 11, 1987, as supplemented by letter dated December 22, 1987, Louisiana Power and Light Company (LP&L or the licensee) requested changes to Facility Operating License No. NPE-38 for Waterford Steam Electric Station, Unit 3 (Waterford 3). The proposed changes would revise Technical Specification Limiting Condition for Operation (LCO) 3.3.3.8 and its associated Table 3.3-11 to implement a proposed change in method of fire detection for the annulus wherein the current system will be replaced with fire detection instruments mounted on the Annulus Negative Pressure System (ANPS) ductwork.

2.0 DISCUSSION

The licensee has proposed to change the method of fire detection for the annulus area, citing the desire for a more accessible and improved detection system as the primary reason for replacing the existing system. The licensee has met with the staff to discuss this change, and has documentation describing the proposed system and demonstrated that the changes will not reduce the level of fire protection at Waterford 3.

The existing annulus fire detection system consists of 69 ionization type smoke detectors circling the annulus in three loops at elevations -4, +21, and +46. These three loops comprise two zones of detection for alarm purposes. The proposed fire detection system consists of two photoelectric smoke detectors mounted on the ANPS ductwork with sample tubes penetrating into the duct. The ANPS operates continuously during normal plant operation to maintain the annulus negative pressure greater than five inches water gauge in accordance with TS 3.6.6.2.

Table 3.3-11 lists fire detection instruments, by function and location, which are subject to the LCO and Surveillance Requirements of Technical Specification 3/4.3.3.8. The proposed changes to Table 3.3-11 consists of reducing the number of Function A detection instruments from 69 to two, the number of zones from two to one; and indicating detection at elevation +46 only. Further, a footnote will be added to the table to clarify that the fire detection instruments for the annulus are physically

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installed on the ANPS doctwork in the RAB. The change to Statement c of TS 3.3.3.8 does not change the intent of the statement, but rather modifies the language to be consistent with the proposed system configuration. As a result of moving the detection instruments to a location outside the annulus, the surveillance interval requirements of TS 4.3.3.8.1 and 4.3.3.8.2 will change from "each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months" to "at least once per 6 months". However, this occurs within the context of the existing surveillance requirement language.

3.0 EVALUATION

The proposed Technical Specification changes will implement a proposed change in the annulus fire detection system. The staff reviewed information provided by the licensee relative to the fire detection system change as part of its evaluation of the proposed Technical Specification change. The information which has been provided indicates that conditions in the annulus provide little opportunity for a fire to occur. These unfavorable conditions include: minimal combustible loading; an absence of ignition sources; low oxygen concentration; and strict control of transient combustibles and access to the annulus. The licensee has verified operability of the proposed system by performing a field test of a mock-up which closely approximates the proposed system design. An added measure of assurance that the proposed modification will provide appropriate protection for the attendant hazards is found in the fact that penetrations traversing the annulus are located below and in the same relative vicinity of the annulus as the intake duct of the ANPS. Thus, combustion byproducts originating at or near the penetrations are expected to be rapidly pulled into the ANPS intake duct and quickly sensed by the smoke detectors mounted therein. In addition, the proposed changes will increase system reliability through the elimination or significant reduction in spurious alarms, and the accessibility of detection instruments for maintenance activities and surveillance testing, thus reducing personnel exposure. The staff concludes that the proposed changes to Technical Specification LCO 3.3.3.8 and its associated Table 3.3-11, result in an acceptable level of fire protection, are consistent with the provisions of Branch Technical Position CMEB 9.5-1, and are, therefore, acceptable.

4.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Administrator, Nuclear Energy Division, Office of Environmental Affairs, State of Louisiana of the proposed determination of no significant hazards consideration. No comments were received.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment relates to changes in installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 issued a proposed finding that this 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 this amendment.

6.0 CONCLUSION

Based upon its evaluation of the proposed changes to the Waterford 3 Technical Specifications, the staff has concluded that: there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and 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. The staff, therefore, concludes that the proposed changes are acceptable, and are hereby incorporated into the Waterford 3 Technical Specifications.

Dated: March 4, 1988

Principal Contributor: J. Wilson