

Docket No.: 50-382

JUN 18 1985

Mr. R. S. Leddick
Senior Vice President - Nuclear Operations
Louisiana Power and Light Company
142 Delaronde Street
Post Office Box 6008
New Orleans, Louisiana 70174

Dear Mr. Leddick:

SUBJECT: ISSUANCE OF AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NPF-38
FOR WATERFORD 3

The Commission has issued the enclosed Amendment No. 1 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment consists of a change to the Technical Specifications in response to your application transmitted by letter dated May 14, 1985, and confirms the telephone notification given to Mr. K. Cook of Louisiana Power and Light Company on May 16, 1985, that the requested change has been granted.

The amendment revises Technical Specification 3/4.3.3.10 and 4.11.1.1.1 to provide for steam generator blowdown discharge through the Circulating Water System (CWS) with an automatic termination feature and to define the sampling and analysis program for steam generator blowdown discharge through the CWS or to the Waterford 3 waste pond.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance and Final Determination of No Significant Hazards Consideration and Opportunity for Hearing will be included in the Commission's Monthly Notice.

Sincerely,

Original signed by:
George W. Knighton

George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

Enclosures:

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

cc: See next page

Previously concurred on by:

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ISSUANCE OF AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NPF-38 FOR
WATERFORD 3

DISTRIBUTION

Docket File 50-382

NRC PDR

Local PDR

NSIC

PRC System

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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. 1
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment, dated May 14, 1985, by Louisiana Power and Light Company (licensee), complies with 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 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:

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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 1, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in this license. LP&L shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of May 16, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: **JUN 18 1985**

- 3 -

ATTACHMENT TO LICENSE AMENDMENTAMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. NPF-38DOCKET NO. 50-382

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. Also to be replaced are the following overleaf pages to the amended pages.

<u>Amendment Pages</u>	<u>Overleaf Pages</u>
3/4 3-56	3/4 3-55
3/4 3-58	3/4 3-57
3/4 3-59	3/4 3-60
3/4 11-3	-
3/4 11-3a	3/4 11-4
3/4 11-5a	3/4 11-5
3/4 11-6 (reissued without change)	

INSTRUMENTATION

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-12 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the methodology and parameters in the OFFSITE DOSE CALCULATION MANUAL (ODCM).

APPLICABILITY: At all times.

ACTION:

- a. With radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive liquid effluents monitored by the affected channel, or declare the channel inoperable.
- b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-12. Restore the inoperable instrumentation to OPERABLE status within the time specified in the ACTION or, explain in the next Semiannual Radioactive Effluent Release Report, pursuant to Specification 6.9.1.8, why this inoperability was not corrected within the time specified.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-8.

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

	<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1.	RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE		
a.	Boric Acid Condensate Discharge	1	28
b.	Waste, Waste Condensate and Laundry Discharge	1	28
c.	Dry Cooling Tower Sumps	1/sump	29
d.	Turbine Building Industrial Waste Sump	1	29
e.	Circulating Water Discharge (Blowdown Heat Exchanger and Auxiliary Component Cooling Water Pumps) [#]	1	29
2.	CONTINUOUS COMPOSITE SAMPLERS		
a.	Steam Generator Blowdown Effluent Line	1	29
3.	FLOW RATE MEASUREMENT DEVICES		
a.	Boric Acid Condensate Discharge	1	30
b.	Waste, Waste Condensate and Laundry Discharge	1	30
c.	Turbine Building Industrial Waste Sump*	N.A.	N.A.
d.	Dry Cooling Tower Sumps*	N.A.	N.A.
e.	Circulating Water Discharge* (Blowdown and Blowdown Heat Exchanger and Auxiliary Component Cooling Water Pumps)	N.A.	N.A.

[#]Automatic termination of blowdown discharge only

TABLE 3.3-12 (Continued)

TABLE NOTATIONS

- *Pump performance curves generated in place shall be used to estimate flow.

ACTION STATEMENTS

- ACTION 28 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 14 days provided that prior to initiating a release:
- a. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.1, and
 - b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge line valving;
- Otherwise, suspend release of radioactive effluents via this pathway.
- ACTION 29 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are analyzed for radioactivity at a lower limit of detection of at least 10^{-7} microcurie/mL.
- a. At least once per 12 hours when the specific activity of the secondary coolant is greater than 0.01 microcurie/gram DOSE EQUIVALENT I-131.
 - b. At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microcurie/gram DOSE EQUIVALENT I-131.
- ACTION 30 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases. Pump performance curves generated in place may be used to estimate flow.

TABLE 4.3-8

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. RADIOACTIVITY MONITORS PROVIDING ALARMS AND AUTOMATIC TERMINATION OF RELEASE				
a. Boric Acid Condensate Discharge	P	P	R(3)	Q(1)
b. Waste, Waste Condensate and Laundry Discharge	P	P	R(3)	Q(1)
c. Dry Cooling Tower Sumps	D	M	R(3)	Q(5)
d. Turbine Building Industrial Waste Sump	D	M	R(3)	Q(5)
e. Circulating Water Discharge (Blowdown Heat Exchanger and Auxiliary Component Cooling Water Pumps) [#]	D	M	R(3)	Q(5)
2. CONTINUOUS COMPOSITE SAMPLERS				
a. Steam Generator Blowdown Effluent Line	D(6)	N.A.	R	Q
3. FLOW RATE MEASUREMENT DEVICES				
a. Boric Acid Condensate Discharge	D(4)	N.A.	R	Q
b. Waste, Waste Condensate and Laundry Discharge	D(4)	N.A.	R	Q
c. Turbine Building Industrial Waste Sump	N.A.	N.A.	N.A.	N.A.
d. Dry Cooling Tower Sumps	N.A.	N.A.	N.A.	N.A.
e. Circulating Water Discharge (Blowdown and Blowdown Heat Exchangers and Auxiliary Component Cooling Water Pumps)	N.A.	N.A.	N.A.	N.A.

[#]Automatic termination of Blowdown discharge only

TABLE 4.3-8 (Continued)

TABLE NOTATION

- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occur if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
- (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.
- (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system for over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.
- (4) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.
- (5) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway occurs if the instrument indicates measured levels above the alarm/trip setpoint and that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm set.
 2. Circuit failure.
 3. Instrument controls not set in operate mode.
- (6) CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous releases are made to the Circulating Water System or Waterford 3 waste pond.

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.11 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the methodology and parameters in the ODCM.

APPLICABILITY: As shown in Table 3.3-13.

ACTION:

- a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive gaseous effluents monitored by the affected channel, or declare the channel inoperable.
- b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Restore the inoperable instrumentation to OPERABLE status within the time specified in the ACTION or, explain in the next Semiannual Radioactive Effluent Release Report, pursuant to Specification 6.9.1.8, why this inoperability was not corrected within the time specified.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.11 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-9.

TABLE 4.11-1 (Continued)

LIQUID RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS	LOWER LIMIT OF DETECTION (LLD) ^a (μCi/mL)
B. Continuous Releases ^{e,f}	W	W	Principal Gamma Emitters ^c	5x10 ⁻⁷
1. Turbine Building Industrial Waste Sumps ^{**h}			I-131	1x10 ⁻⁶
2. Dry Cooling Tower Sump #1 ^{**i}	M	M	Dissolved and Entrained Gases (Gamma Emitters)	1x10 ⁻⁵
3. Dry Cooling Tower Sump #2 ^{**i}	W	M	H-3	1x10 ⁻⁵
	Grab Sample	Composite ^d	Gross Alpha	1x10 ⁻⁷
4. Circulating Water ⁱ	W	Q	Sr-89, Sr-90	5x10 ⁻⁸
Discharge- Steam Generator Blow-down HX	Grab Sample	Composite ^d	Fe-55	1x10 ⁻⁶
5. Auxiliary Component Cooling Water; Pumps				

**When release from this source is continuous in nature.

TABLE 4.11-1 (Continued)

LIQUID RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS	LOWER LIMIT OF DETECTION (LLD) ^a (μCi/mL)
B. Continuous Releases ^{e,f}	W Continuous ^k	W Composite ^d	Principal Gamma Emitters ^c	5x10 ⁻⁷
6. Steam Generator Blowdown Discharge ^{j,l}			I-131	1x10 ⁻⁶
	M Grab Sample	M	Dissolved and Entrained Gases (Gamma Emitters)	1x10 ⁻⁵
	W Continuous ^k	M Composite ^d	H-3	1x10 ⁻⁵
			Gross Alpha	1x10 ⁻⁷
	W Continuous ^k	Q Composite ^d	Sr-89, Sr-90	5x10 ⁻⁸
			Fe-55	1x10 ⁻⁶

TABLE 4.11-1 (Continued)

TABLE NOTATION

^aThe LLD is defined, for purposes of these specifications, as the smallest concentration of radioactive material in a sample that will yield a net count, above system background, that will be detected with 95% probability with only 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system, which may include radiochemical separation:

$$LLD = \frac{4.66 s_b}{E \cdot V \cdot 2.22 \times 10^6 \cdot Y \cdot \exp(-\lambda \Delta t)}$$

Where:

- LLD is the "a priori" lower limit of detection as defined above, as microcuries per unit mass or volume,
- s_b is the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate, as counts per minute,
- E is the counting efficiency, as counts per disintegration,
- V is the sample size in units of mass or volume,
- 2.22×10^6 is the number of disintegrations per minute per microcurie,
- Y is the fractional radiochemical yield, when applicable,
- λ is the radioactive decay constant for the particular radionuclide, and
- Δt for plant effluents is the elapsed time between the midpoint of sample collection and the time of counting.

Typical values of E, V, Y, and Δt should be used in the calculation.

It should be recognized that the LLD is defined as an a priori (before the fact) limit representing the capability of a measurement system and not as an a posteriori (after the fact) limit for a particular measurement.

^bA batch release is the discharge of liquid wastes of a discrete volume. Prior to sampling for analyses, each batch shall be isolated, and then thoroughly mixed by a method described in the ODCM to assure representative sampling.

TABLE 4.11-1 (Continued)

TABLE NOTATIONS

^cThe principal gamma emitters for which the LLD specification applies include the following radionuclides: Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141, and Ce-144. This list does not mean that only these nuclides are to be considered. Other gamma peaks that are identifiable, together with those of the above nuclides, shall also be analyzed and reported in the Semiannual Radioactive Effluent Release Report pursuant to Specification 6.9.1.8.

^dA composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged and in which the method of sampling employed results in a specimen that is representative of the liquids released.

^eA continuous release is the discharge of liquid wastes of a nondiscrete volume, e.g., from a volume of a system that has an input flow during the continuous release.

^fPrior to analyses, all samples taken for the composite shall be thoroughly mixed in order for the composite sample to be representative of the effluent release.

^gIf the contents of the filter flush tank or the regenerative waste tank contain detectable radioactivity, no discharges from these tanks shall be made to the UNRESTRICTED AREA and the contents of these tanks shall be directed to the liquid radwaste treatment system.

^hTurbine Building Industrial Waste Sump (TBIWS)

The TBIWS shall be required to be sampled and analyzed in accordance with this table if any of the following conditions exist:

- (1) Primary to secondary leakage is occurring; or,
- (2) Activity is present in the secondary system as indicated by either the SGB monitors or secondary sampling and analysis; or,
- (3) Activity was present in the TBIWS during the previous 4 weeks.

If none of the above situations exists, then the sampling and analysis of this stream need not be performed.

ⁱSampling and analysis of the dry cooling tower sumps and the auxiliary component cooling water pump discharge will be required only when detectable activity exists in the CCW.

Sampling and analysis of the circulating water discharge-steam generator blowdown heat exchanger discharge (CWD-SGB) will be required only when detectable activity exists in the secondary system.

Table 4.11-1 (Continued)

TABLE NOTATIONS

^j Sampling and analysis of the steam generator blowdown will be required only when the blowdown is directed to the circulating water system or Waterford 3 waste pond.

Steam generator blowdown to the Waterford 3 waste pond will be limited to situations requiring secondary chemistry control where the Circulating Water System is not available or the secondary chemistry is outside the requirements for Circulating Water System discharge. Blowdown to the waste pond will be terminated upon detection of sample activity greater than the LLD levels of Table 4.11-1 Section B.

^k To be representative of the quantities and concentration of radioactive materials in liquid effluents, samples shall be collected continuously in proportion to the rate of flow of the effluent stream.

^l Steam generator blowdown discharge to the waste pond shall be limited to a period of six months with the circulating water system discharge path not available unless radiation monitoring and automatic isolation capabilities are added to the waste pond discharge path.

RADIOACTIVE EFFLUENTS

DOSE

LIMITING CONDITION FOR OPERATION

3.11.1.2 The dose or dose commitment to a MEMBER OF THE PUBLIC from radioactive materials in liquid effluents released to UNRESTRICTED AREAS (see Figure 5.1-3) shall be limited:

- a. During any calendar quarter to less than or equal to 1.5 mrems to the total body and to less than or equal to 5 mrems to any organ, and
- b. During any calendar year to less than or equal to 3 mrems to the total body and to less than or equal to 10 mrems to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits. This Special Report shall also include (1) the results of radiological analyses of the drinking water source and (2) the radiological impact on finished drinking water supplies with regard to the requirements of 40 CFR Part 141.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.1.2 Cumulative dose contributions from liquid effluents for the current calendar quarter and the current calendar year shall be determined in accordance with the methodology and parameters in the ODCM at least once per 31 days.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NO. NPF-38

LOUISIANA POWER AND LIGHT COMPANY

WATERFORD

DOCKET NO. 50-382

Introduction

By letter dated May 14, 1985, Louisiana Power and Light Company (licensee), requested an emergency change to the Technical Specifications (Appendix A to Facility Operating License NPF-38) for the Waterford Steam Electric Station, Unit 3. The proposed change would revise Technical Specification 3/4.3.3.10 and 4.11.1.1.1 to provide sampling and automatic termination of steam generator blowdown through the Circulating Water System and to require continuous sampling for steam generator blowdown to the Waterford 3 waste pond.

Discussion

Waterford 3 reached the 80% power test plateau on May 7, 1985. The plant is currently experiencing difficulties in maintaining secondary chemistry within specifications. The prime contributors appear to be a steam generator "hideout" condition, residual contaminants from construction, and air in-leakage. The in-leakage is aggravated by extended low power operation during which the moisture separators/reheaters operate under a partial vacuum. In addition, operational difficulties involving flushing during regeneration of the full flow condensate demineralizer beds resulted in high concentration of cations and anions in the secondary system and the possible occurrence of organics due to introduction of resin beads into the system. LP&L also stated that they had experienced some circulating water leakage to the condenser but that this condition has largely been corrected. As a by-product of steam production, contaminants concentrate in the steam generator and represent a potential contributor to steam generator corrosion. Blowing down the steam generators is necessary to remove these contaminants and enhances steam generator tube integrity.

Currently three flow paths exist for steam generator blowdown. (1) Blowdown can be directed to the radioactive waste management system. This pathway is used primarily when radioactive contaminants are present and is not an optimum path for disposing of normal, routine operation steam generator blowdown. (2) Steam generator blowdown can be discharged to the condenser hotwell and returned through the condensate/feedwater system. This path affords some cleanup via the condensate polishers, but at Waterford 3 this system is somewhat limited and its use to cleanup steam generator blowdown leads to rapid

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exhaustion of the demineralizer filter packages. (3) Finally, steam generator blowdown can be discharged to the Waterford 3 waste pond, however, this flow path is not currently in use because it does not contain appropriate monitors of the liquid effluent release pathway to the environment.

Because a large volume change is necessary to bring the feedwater into specification in order to circumvent the limitations in the condensate polishing system and avoid the rapid exhaustion of blowdown demineralizers, LP&L finds it necessary to have the ability to feed and bleed the secondary system. To provide this ability, LP&L intends to make modifications to the steam generator blowdown system. One change would provide a pathway from the steam generator blowdown line upstream of the blowdown demineralizers, to the circulating water system (CWS) discharge from the blowdown heat exchangers. This modification would utilize the existing monitor on the CWS line to provide an automatic shutoff of blowdown upon receipt of a high radiation signal and would add a continuous sampler in the steam generator blowdown effluent line. LP&L is proceeding with this modification and estimates that it will take approximately one month to complete and will require approval from the Environmental Protection Agency in the form of a change to the NPDES permit for Waterford 3. This modification requires a change to the Technical Specifications in that Tables 3.3-12 and 4.3-8 will reflect a change in the status of the existing CWS radiation monitor from an alarming function to an alarming and termination function for the new steam generator blowdown discharge line to the CWS. A continuous sampler will be added to both tables and will be used whenever the CWS pathway for steam generator blowdown is in use. Table 4.11-1 will be modified to require use of the continuous sampler for blowdown to the CWS. In the interim, until modifications for the blowdown discharge to the CWS are complete and LP&L has received EPA approval, Waterford 3 will use an existing flow path to direct blowdown to the Waterford 3 waste pond. This discharge will be used with the following administrative limitations:

- The pathway will not be used when there is detectable radioactivity in the steam generators.
- The pathway will only be used when necessary to control secondary chemistry within specifications when the circulating water discharge pathway is not available.
- Grab samples of the blowdown will be taken prior to release and at least every 12 hours during blowdown.
- The pathway to the waste pond will be manually isolated upon discovery of detectable activity in the pathway to the pond.

LP&L desires to have this flow path available after the modifications are complete for discharge to the CWS to give them greater operational flexibility in the event that NPDES limits on pH or suspended solids, etc., do not permit discharge to the CWS but will not normally routinely use this flow path. The Technical Specification Table 4.11-1 will be changed to require that discharges of blowdown to the waste pond be sampled continuously. A notation (note j) will be included to clarify when sampling and analysis is required as well as to define the conditions under which blowdown may be discharged to the waste pond. An additional notation (note k) will, after six months terminate authorization to use this discharge line without automatic isolation by in line radiation monitors unless modifications to the CWS have been completed and are operable.

Evaluation

This proposed change falls into the category of an emergency change since absent the change, Waterford 3 would be required to shut down to maintain secondary chemistry within specifications. Additionally, it is desirable to maintain secondary chemistry as clean as possible and if contaminants are concentrating in the steam generators, to remove those contaminants as quickly as possible to protect steam generator integrity by limiting corrosion.

LP&L determined the need for discharge pathways to the circulating water system and the waste pond to maintain acceptable secondary chemistry on April 30, 1985. Efforts to that point had been ineffective in maintaining secondary chemistry within the requirements of the Secondary Water Chemistry program established in accordance with Section 6.8.4(c) of the technical specifications without changes to the existing facility. The staff recognizes that the prime contributors to secondary chemistry difficulties were residual contaminants from construction, steam generator hideout, air inleakage aggravated by extended low power operation during power ascension testing and system operational difficulties which reasonably could not have been avoided. On May 1, 1985, the licensee notified the NRC staff and requested a meeting to discuss plant modifications, supporting analyses and related technical specification changes; this meeting was subsequently held on May 9, 1985 in Bethesda, Maryland. The staff considers that the licensee acted in a timely manner upon identification that secondary chemistry could not be effectively controlled with the existing plant design.

LP&L has evaluated the off-site dose consequence of this change coincident with the most limiting accident. The most limiting accident from the point of view of off-site dose consequence is the steam generator tube rupture (SGTR) event analyzed in Chapter 15 of the FSAR. In that event, the off-site dose due to the release of steam from the secondary side safety valves is a factor of 100 under the 10 CFR 100 dose limitation requirements. The effects on the total off-site dose calculated for this event due to superimposing either a concurrent discharge to the Circulating Water System (CWS) or the Waterford 3 waste pond are minimal. For the CWS and waste pond pathways, the most adverse consequences are to the thyroid dose attributable to inhalation. For both pathways the thyroid dose is a small fraction of (one to two orders of magnitude less than) the steam release dose. The additional dose due to the CWS or waste pond pathway thus provides negligible impact on the SGTR event when compared with 10 CFR 100 requirements. As a result, operation of the facility in accordance with the proposed Technical Specification changes will not involve a significant increase in the consequences of any accident previously evaluated. The Technical Specification changes are being proposed to provide further means to maintain secondary water chemistry within approved specifications. One purpose for maintaining limits on secondary water chemistry is to preserve to the extent possible the integrity of the steam generator tubes. Therefore, the proposed Technical Specification changes will not involve a significant increase in the probability of any accident previously evaluated; rather the proposed changes will assist in maintaining the already low probability of a SGTR event.

CF enclosure

INITIAL
NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION
AND NOTICING ACTION

Docket No. 50-382 Facility: Waterford 3
Licensee: Louisiana Power & Light Date of application: 5/14/85
Request for: License amendment for steam generator
blowdown system changes.

(See attached notice or press release for more details.)

Initial Determination:

- Proposed determination - amendment request involves no significant hazards considerations (NSHC).
- Final determination - amendment request involves significant hazards considerations (SHC).

Basis for Determination

- Licensee's NSHC discussion has been reviewed and is accepted. See attached amendment request.
- Basis for this determination is presented in the attached notice.
- Other (state):

(Attach additional sheets as needed.)

Initial Noticing Action: (Attach appropriate notice or input for monthly FRN)

1. Monthly FRN. Notice of opportunity for hearing (30 days) and request for comments on proposed NSHC determination - monthly FRN input is attached (Attachment 8).
2. Individual FRN (30 days). Same notice matter as above. Time does not allow waiting for next monthly FRN (Attachments 9a and 9b).

(THIS FORM SHOULD BE TYPED EXCEPT FOR UNUSUAL, URGENT CIRCUMSTANCES.)

- 3. () Local media notice. Valid exigent circumstances exist (evaluated below). Local media notice requesting public comments on proposed NSHC determination is attached (Attachment 10).
- 4. (✓) No notice. A valid emergency situation exists (evaluated below) and there is no time for public notice on proposed NSHC determination. (No attachment.)
- 5. () Individual FRN (30-days). Licensee's claim of exigent or emergency circumstances is invalid (evaluated below). Notice of opportunity for hearing (30 days) and request for comments on proposed NSHC determination is attached (Attachments 9a and 9b). Letter of explanation to licensee is also attached.
- 6. () Individual FRN (30-days). The amendment request involves SHC. Notice of opportunity for prior hearing is attached (Attachment 5). Letter to licensee also attached.
- 7. () Individual Short FRN. Valid emergency circumstances exist (evaluated below). There is no time for the usual 30-day FRN. (Attachment 16).

Evaluation of exigent or emergency circumstances (if applicable):

This proposed change falls into the category of an emergency change since absent the change, Waterford 3 would be required to shut down to maintain secondary chemistry within specifications. Additionally, it is desirable to maintain secondary chemistry as clean as possible and if secondary system purity is a problem, to correct it as quickly as possible to protect steam generator integrity by limiting corrosion. An accident involving this change, coincident with the most limiting accident, still falls within FSAR Chapter 15 analyses and thus does not involve an unreviewed safety issue (attach additional sheets as needed)

Approvals:

Date

- | | |
|--|----------------|
| 1. <u><i>Jamett H. Wilson</i></u>
(Project Manager) | <u>5/16/85</u> |
| 2. <u><i>Bernard Knighton</i></u>
(Branch Chief) | <u>5/16/85</u> |
| 3. <u><i>SE Turk</i></u>
(OELD) | <u>6/6/85</u> |

Additional approval (for noticing actions types 3, 4, 5, 6 and 7):

- | | |
|---|----------------|
| 4. <u><i>D M Turk</i></u>
(Assistant Director) | <u>5/16/85</u> |
|---|----------------|

Additional approval (for noticing action types 4 and 5):

- | | |
|--|----------------|
| 5. <u><i>Frank J. Muehle for HT</i></u>
(Director, Division of Licensing) | <u>5/17/85</u> |
|--|----------------|

Attachment: as indicated

cc: Original - Docket File (with note "Docket File only")
Project Manager
Licensing Assistant
Branch Files

Waterford 3 Steam Generator Blow down System Changes

Enclosure 2

EMERGENCY LICENSE AUTHORIZATION

CHECK LIST

1. Complete submittal (Section III, Item 1)
2. Prepare and sign handwritten SER, EIA, final NSHC and Technical Specifications (Section III, Item 3)
 - a. ORAB ^{and} or technical branch input (METB)
 - b. Resident or regional personnel input
3. "Best effort" to obtain state comments (Section III, Item 6)
4. Assistant Director concurrence (Section III, Item 7)
5. Assistant Director oral authorization to licensee (Section III, Item 8)
6. Telecopy Technical Specifications (Section III, Item 8)
7. Forward final two day license amendment with post notice and FNSHC (Section III, Item 9) (Prepare DLOP 228, Attachment 4)

talked to
State, 4:45 PM
No Problem
5/16/85

T. N. W. J. K.
5/16

K. Cook
5/16 PM
5/16/85

Project Manager J. Wilson

Branch Chief G. W. Knighton

ORAB Branch Chief / Tech. Review Branch Chief* W. Gammill

ORAB AD / Tech. Review Branch AD* D. Muller *del concurrence 5/16 AM*

Called R. Denise Rezin III 5 PM 5/16/85 - acceptable to Region II.

* To the extent practicable.

telephone concurrence 5/16/85

*Holahan
Crotchfield*