

September 30, 1985

Docket No. 50-302

DISTRIBUTION

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Dear Mr. Wilgus:

The Commission has issued the enclosed Amendment No. 84 to Facility Operating License No. DPR-72 for the Crystal River Unit No. 3 Nuclear Generating Plant (CR-3). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated September 28, 1984.

The amendment corrects errors and inconsistencies and clarifies certain radiological effluent Technical Specifications.

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

Sincerely,

*Harley Silver*  
Harley Silver, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

Enclosures:

- 1. Amendment No. 84 to DPR-72
- 2. Safety Evaluation

cc w/enclosures:  
See next page

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JSD12  
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OELD  
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9/26/85

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AD,OR:DL  
GLairas  
9/30/85

Mr. W. S. Wilgus  
Florida Power Corporation

Crystal River Unit No. 3 Nuclear  
Generating Plant

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

FLORIDA POWER CORPORATION  
CITY OF ALACHUA  
CITY OF BUSHNELL  
CITY OF GAINESVILLE  
CITY OF KISSIMMEE  
CITY OF LEESBURG  
CITY OF NEW SMYRNA BEACH AND UTILITIES COMMISSION, CITY OF NEW SMYRNA BEACH  
CITY OF OCALA  
ORLANDO UTILITIES COMMISSION AND CITY OF ORLANDO  
SEBRING UTILITIES COMMISSION  
SEMINOLE ELECTRIC COOPERATIVE, INC.  
CITY OF TALLAHASSEE

DOCKET NO. 50-302

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 84  
License No. DPR-72

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power Corporation, et al. (the licensees) dated September 28, 1984, 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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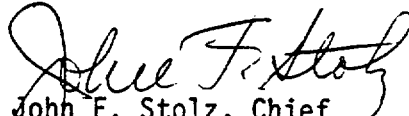
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 84, are hereby incorporated in the license. Florida Power Corporation shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

  
John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 30, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 84

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

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. The corresponding overleaf pages are also provided to maintain document completeness.

Pages

3/4 3-45

3/4 3-48

3/4 3-51

3/5 3-53

3/4 7-54

3/4 11-2

6-14b

6-17a

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. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE				
a. Auxiliary Building Liquid Radwaste Effluent Line (RM-L2)	D*	P	R(1)	M
b. Secondary Drain Tank Liquid Effluent Line (RM-L7)	D*	P	R(1)	M
2. FLOW RATE MEASUREMENT DEVICES				
a. Auxiliary Building Liquid Radwaste Effluent Line	D(2)	N.A.	R	N.A.
b. Secondary Drain Tank Liquid Effluent Line	D(2)	N.A.	R	N.A.

TABLE 4.3-8 (Continued)

TABLE NOTATION

\* During periods of release.

- (1) CHANNEL CALIBRATION shall be performed using:
  - a. One or more standards traceable to the National Bureau of Standards, or
  - b. Standards obtained from suppliers that participate in measurement assurance activities with the National Bureau of Standards, or
  - c. Standards related to previous calibrations performed using (a) or (b) above.
- (2) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. A CHANNEL CHECK shall be performed at least once per day on any day that continuous, periodic or batch releases are made.

## INSTRUMENTATION

### RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with the effluent release isolation alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The setpoints shall be determined in accordance with the OFFSITE DOSE CALCULATION MANUAL (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 above, without delay suspend the release of radioactive gaseous effluents monitored by the affected channel where applicable, or change the setpoint so that it is acceptably conservative, or declare the channel inoperable.
- b. With one or more radioactive gaseous effluent monitoring instrumentation channels inoperable, take the ACTION shown in Table 3.3-13. Exert best efforts to return the inoperable instrument(s) to OPERABLE status within 30 days. If the affected instruments cannot be returned to OPERABLE status within 30 days, provide information on reasons for inoperability and lack of timely corrective action in the next Effluent and Waste Disposal Semiannual Report.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- d. The reporting requirements of Specification 6.9.1.9.b are not applicable.

#### SURVEILLANCE REQUIREMENTS

4.3.3.9 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 during the MODES and frequencies shown in Table 4.3-9.



TABLE 3.3-13

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. Waste Gas Decay Tank Monitor (RM-A11)			
a. Noble Gas Activity Monitor*	1	All MODES	24
b. Effluent System Flow Rate Monitor	1	All MODES	26
2. Reactor Building Purge Exhaust Duct Monitor (RM-A1)			
a. Noble Gas Activity Monitor			
i. Operating Range*	1	**	27
ii. Mid Range#	1	**	29
iii. High Range#	1	**	29
b. Iodine Sampler	1	**	25
c. Particulate Sampler	1	**	25
d. Effluent System Flow Rate Monitor	1	**	26
e. Sampler Flow Rate Monitor	1	**	26
3. Auxiliary Building and Fuel Handling Area Exhaust Duct Monitor (RM-A2)			
a. Noble Gas Activity Monitor			
i. Operating Range*	1	All MODES	28
ii. Mid Range#	1	1, 2, 3 & 4	29
iii. High Range#	1	1, 2, 3 & 4	29
b. Iodine Sampler	1	All MODES	25
c. Particulate Sampler	1	All MODES	25
d. Effluent System Flow Rate Monitor	1	All MODES	26
e. Sampler Flow Rate Monitor	1	All MODES	26

\* Provides control room alarm and automatic termination of release.  
 \*\* During periods of reactor building purge.

# There is no isolation setpoint or release termination function for this monitor. Alarm setpoints are determined by the appropriate system procedures.

CRYSTAL RIVER - UNIT 3

3/4 3-48

Amendment No. 84

TABLE 4.3-9

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

CRYSTAL RIVER - UNIT 3

3/4 3-51

Amendment No. 89, 84

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. WASTE GAS DECAY TANK MONITOR (RM-A11)					
a. Noble Gas Activity Monitor	P	P	R(1)	M	All MODES
b. Effluent System Flow Rate Monitor	P	N.A.	R	M	All MODES
2. REACTOR BUILDING PURGE EXHAUST DUCT MONITOR (RM-A1)					
a. Noble Gas Activity Monitor					
i. Operating Range	D	P	R(1)	M	#
ii. Mid Range	W	M	R(1)	M	#
iii. High Range	W	M	R(1)	M	#
b. Iodine Sampler	W	N.A.	N.A.	N.A.	#
c. Particulate Sampler	W	N.A.	N.A.	N.A.	#
d. Effluent System Flow Rate Monitor	D	N.A.	R	M	#
e. Sampler Flow Rate Monitor	D	N.A.	R	M	#
3. AUXILIARY BUILDING & FUEL HANDLING AREA EXHAUST DUCT MONITOR (RM-A2)					
a. Noble Gas Activity Monitor					
i. Operating Range	D	N.A.	R(1)	M	All MODES
ii. Mid Range	W	M	R(1)	M	1, 2, 3, 4
iii. High Range	W	M	R(1)	M	1, 2, 3, 4
b. Iodine Sampler	W	N.A.	N.A.	N.A.	All MODES
c. Particulate Sampler	W	N.A.	N.A.	N.A.	All MODES
d. Effluent System Flow Rate Monitor	D	N.A.	R	M	All MODES
e. Sampler Flow Rate Monitor	D	N.A.	R	M	All MODES

TABLE 4.3-9 (Continued)  
TABLE NOTATION

# During periods of Reactor Building Purge.

(1) CHANNEL CALIBRATION shall be performed using:

- a. One or more standards traceable to the National Bureau of Standards, or
- b. Standards obtained from suppliers that participate in measurement assurance activities with the National Bureau of Standards, or
- c. Standards related to previous calibrations using (a) or (b) above.

INSTRUMENTATION

WASTE GAS DECAY TANK - EXPLOSIVE GAS MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The Waste Gas Decay Tanks shall have one hydrogen and one oxygen monitoring channel OPERABLE.

APPLICABILITY: ALL MODES.

- ACTION:
- a. With the number of OPERABLE channels less than required above, operation of this system may continue, provided grab samples are collected and analyzed:
    - (1) at least once per 4 hours during degassing operations
    - (2) at least once per 24 hours during other operations
  - b. If the affected channel(s) cannot be returned to OPERABLE status within 14 days, submit a special report to the Commission pursuant to Specification 6.9.2 within 30 days describing the reasons for inoperability and a schedule for corrective action.
  - c. The provisions of 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 The Waste Gas Decay Tank explosive gas monitoring instrumentation shall be demonstrated operable by performing the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST, and CHANNEL CALIBRATION at the frequencies shown in Table 4.3-10.

TABLE 4.3-10WASTE GAS SYSTEM EXPLOSIVE GAS MONITORING INSTRUMENTATIONSURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. Hydrogen Monitors	D	Q*	M
2. Oxygen Monitors	D	Q*	M

\* The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

Hydrogen Monitors

- a. 1 volume percent hydrogen, balance nitrogen.
- b. 4 volume percent hydrogen, balance nitrogen.

Oxygen Monitors

- c. 1 volume percent oxygen, balance nitrogen.
- d. 4 volume percent oxygen, balance nitrogen.

PLANT SYSTEMS

WASTE SOLIDIFICATION SYSTEM

LIMITING CONDITION FOR OPERATION

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3.7.13.4 The solid radwaste system shall be used in accordance with a PROCESS CONTROL PROGRAM to process wet radioactive wastes to meet shipping and burial ground requirements.

APPLICABILITY: At all times.

ACTION:

- a. With the provisions of the PROCESS CONTROL PROGRAM not satisfied, suspend shipments of defectively processed or defectively packaged solid radioactive wastes from the site.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- c. The reporting requirements of Specification 6.9.1.9.b are not applicable.

SURVEILLANCE REQUIREMENTS

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4.7.13.4 The PROCESS CONTROL PROGRAM shall be used to verify the SOLIDIFICATION of at least one representative test specimen from at least every tenth batch of each type of wet radioactive waste (e.g., filter sludges, spent resins, evaporator bottoms, and boric acid solutions).

## PLANT SYSTEMS

### WASTE GAS DECAY TANK - EXPLOSIVE GAS MIXTURE

#### LIMITING CONDITION FOR OPERATION

3.7.13.5 The concentration of oxygen in any Waste Gas Decay Tank shall be limited to less than or equal to 2% by volume whenever the concentration of hydrogen in that Waste Gas Decay Tank is greater than or equal to 4% by volume.

APPLICABILITY: At all times.

#### ACTION:

Whenever the concentration of hydrogen in any Waste Gas Decay Tank is greater than or equal to 4% by volume, and:

- a. The concentration of oxygen in that Waste Gas Decay Tank is greater than 2% by volume, but less than 4% by volume, without delay begin to reduce the oxygen concentration to within its limit.
- b. The concentration of oxygen in that Waste Gas Decay Tank is greater than or equal to 4% by volume, immediately suspend additions of waste gas to that Waste Gas Decay Tank and without delay begin to reduce the oxygen concentration to within its limit.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

4.7.13.5 The concentrations of hydrogen and oxygen in the in-service Waste Gas Decay Tank shall be continuously monitored with the hydrogen and oxygen monitors and OPERABLE BY Specification 3.3.3.10 or by sampling in accordance with Specification 3.3.3.10 if the hydrogen and/or oxygen monitors are inoperable.

## 3/4.11 RADIOACTIVE EFFLUENTS.

### 3/4.11.1 LIQUID EFFLUENTS

#### CONCENTRATION

#### LIMITING CONDITION FOR OPERATION

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3.11.1.1 The concentration of radioactive material released to UNRESTRICTED AREAS (see Figure 5.1-3) shall be less than or equal to the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be less than or equal to  $2 \times 10^{-4}$  microcuries/ml. total activity.

APPLICABILITY: At all times.

#### ACTION:

- a. With the concentration of radioactive materials released to UNRESTRICTED AREAS exceeding the above limits, without delay restore the concentration of radioactive materials being released to UNRESTRICTED AREAS to within the above limits. If the concentration of radioactive materials being released in excess of the above limits is related to a plant operating characteristic, appropriate corrective measures (e.g., power reduction, plant shutdown) shall be taken to restore the concentration of radioactive materials being released to UNRESTRICTED AREAS to within the above limits.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.
- c. The reporting requirements of Specification 6.9.1.9.b are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.11.1.1.1 Radioactive liquid wastes shall be sampled and analyzed in accordance with the sampling and analysis program of Table 4.11-1.

4.11.1.1.2 The results of the radioactivity analyses shall be used in accordance with the methods in the OFFSITE DOSE CALCULATION MANUAL (ODCM) to assure the concentrations of radioactive material released from the site are maintained within the limits of Specification 3.11.1.1.



TABLE 4.11-1

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) ( $\mu\text{Ci/ml}$ ) <sup>a</sup>
A. Batch Waste Release Tanks <sup>d</sup>	P Each Batch	P Each Batch	Principal Gamma Emitters <sup>e</sup>	$5 \times 10^{-7}$
			I-131	$1 \times 10^{-6}$
	P One Batch/M	M	Dissolved and Entrained Gases (Gamma Emitters)	$1 \times 10^{-5}$
			P Each Batch	M Composite <sup>b</sup>
	Gross Alpha	$1 \times 10^{-7}$		
	P Each Batch	Q Composite <sup>b</sup>		
			Fe-55	$1 \times 10^{-6}$
B. Continuous Releases <sup>d</sup>	Continuous <sup>c</sup>	W Composite <sup>c</sup>	Principal Gamma Emitters <sup>e</sup>	$5 \times 10^{-7}$
			I-131	$1 \times 10^{-6}$
	M Grab Sample	M	Dissolved and Entrained Gases (Gamma Emitters)	$1 \times 10^{-5}$
			Continuous <sup>c</sup>	M Composite <sup>c</sup>
	Gross Alpha	$1 \times 10^{-7}$		
	Continuous <sup>c</sup>	Q Composite <sup>c</sup>		
			Fe-55	$1 \times 10^{-6}$

## ADMINISTRATIVE CONTROLS

### ANNUAL AND SEMIANNUAL REPORTS (Continued)

evidence of irreversible damage are detected by the monitoring, the report shall provide an analysis of the problem and a planned course of action to alleviate the problem.

The Annual Radiological Environmental Operating Report, shall include summarized and tabulated results in the format of Regulatory Guide 4.8, December 1975, of all radiological environmental samples taken during the report period. In the event that some results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing results shall be submitted as soon as possible in a supplementary report.

The report, shall also include the following: a summary description of the radiological environmental monitoring program; a map of all sampling locations keyed to a table giving distances and directions from the reactor; the unavailability of milk or fresh leafy vegetable samples required by Table 3.12-1; the results of land use censuses required by Specification 3.12.1.2; and the results of licensee participation in the Interlaboratory Comparison Program, required by Specification 3.12.1.3.

- d. A semiannual Radioactive Effluent Release Report covering the operation of the unit during the previous 6 months of operation shall be submitted within 60 days after January 1 and July 1 of each year.

The Semiannual Radioactive Effluent Release Report shall include a summary of the quantities of radioactive liquid and gaseous effluents and solid waste released from the plant as outlined in Regulatory Guide 1.21, "Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," Revision 1, June 1974, with data summarized on a quarterly basis following the format of Appendix B thereof.

The Semiannual Radioactive Effluent Release Report which is submitted 60 days after January 1 of each year shall include an annual summary of hourly meteorological data collected over the previous year. This annual summary may be either in the form of

## ADMINISTRATIVE CONTROLS

### ANNUAL AND SEMIANNUAL REPORTS (Continued)

an hour-by-hour listing of wind speed, wind direction, atmospheric stability, and precipitation (if measured) on magnetic tape, or in the form of joint frequency distributions of wind speed, wind direction, and atmospheric stability.\* This same report shall include an assessment of the radiation doses due to the radioactive liquid and gaseous effluents released from the unit during the previous calendar year. This same report shall also include an assessment of the radiation doses from radioactive liquid and gaseous effluents to MEMBERS OF THE PUBLIC, due to their activities inside the SITE BOUNDARY (Figure 5.1-3) during the report period. All assumptions used in making these assessments (i.e., specific activity, exposure time and location) shall be included in these reports. The meteorological conditions concurrent with the time of release of radioactive materials in gaseous effluents (as determined by sampling frequency and measurement) shall be used for determining the gaseous pathway doses. The assessment of radiation doses shall be performed in accordance with the OFFSITE DOSE CALCULATION MANUAL (ODCM).

The radioactive effluent release report to be submitted 60 days after January 1 of each year shall also include an assessment of radiation doses to the hypothetical worst case individual from reactor releases (including doses from primary effluent pathways and direct radiation) for the previous calendar year.

Acceptable methods for calculating the dose contribution from liquid and gaseous effluents are given in Regulatory Guide 1.109, Revision 1.

The radioactive effluent release report shall include the following information for each type of solid waste shipped offsite during the report period:

- 1) container volume,
- 2) total curie quantity (specify whether determined by measurement or estimate),
- 3) principal radionuclides (specify whether determined by measurement or estimate),

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\* In lieu of submittal, these meteorological data may be retained in an on-site file and provided to the NRC upon request.

## ADMINISTRATIVE CONTROLS

### THIRTY-DAY WRITTEN REPORT

6.9.1.9 The types of events listed below shall be the subject of written reports to the Director of the Regional Office within 30 days of occurrence of the event. The written report shall include, as a minimum, a completed copy of a licensee event report form. Information provided on the licensee event report form shall be supplemented, as needed, by additional narrative material to provide complete explanation of the circumstances surrounding the event.

- a. Reactor protection system or engineered safety feature instrument settings which are found to be less conservative than those established by the technical specifications but which do not prevent the fulfillment of the functional requirements of affected systems.
- b. Conditions leading to operation in a degraded mode permitted by a limiting condition for operation or plant shutdown required by a limiting condition for operation.
- c. Observed inadequacies in the implementation of administrative or procedural controls which threaten to cause reduction of degree of redundancy provided in reactor protection systems or engineered safety feature systems.
- d. Abnormal degradation of systems other than those specified in 6.9.1.8.c above, designed to contain radioactive material resulting from the fission process.

## ADMINISTRATIVE CONTROLS

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Director of the Office of Inspection and Enforcement, Region II, within the time period specified for each report. These reports shall be submitted covering the activities identified below pursuant to the requirements of the applicable referenced specification:

- a. ECCS Actuation, Specification 3.5.2 and 3.5.3.
- b. Inoperable Seismic Monitoring Instrumentation, Specification 3.3.3.3.
- c. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.
- d. Seismic event analysis, Specification 4.3.3.2.
- e. Inoperable Fire Detection Monitoring Instrumentation, Specification 3.3.3.7.
- f. Inoperable Fire Suppression System, Specifications 3.7.11.1, 3.7.11.2, 3.7.11.3, and 3.7.11.4.
- g. Dose due to radioactive materials in liquid effluents in excess of specified limits, Specification 3.11.1.2.
- h. Dose due to noble gas in gaseous effluents in excess of specified limits, Specification 3.11.2.2.
- i. Total calculated dose due to release of radioactive effluents exceeding twice the limits of Specifications 3.11.1.2.a, 3.11.1.2.b, 3.11.2.2.a, 3.11.2.2.b, 3.11.2.3.a, or 3.11.2.3.b (required by Specification 3.11.3).
- j. Dose due to Iodine-131, Tritium, and radioactive particulates with greater than 8 day half-lives, in gaseous effluents in excess of specified limits, Specification 3.11.2.3.
- k. Failure to process liquid radwaste, in excess of limits, prior to release, Specification 3.7.13.2.
- l. Failure to process gaseous radwaste, in excess of limits, prior to release, Specification 3.7.13.3.
- m. Measured levels of radioactivity in environmental sampling medium in excess of the reporting levels of Table 3.12-2, when averaged over any quarterly sampling period, Specification 3.12.1.1.
- n. Inoperable Mid or High Range Noble Gas Effluent Monitoring Instrumentation, Specification 3.3.3.9.
- o. Inoperable explosive gas monitoring instrumentation, Specification 3.3.3.10.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 84 TO FACILITY OPERATING LICENSE NO. DPR-72  
FLORIDA POWER CORPORATION, ET AL.  
CRYSTAL RIVER UNIT NO. 3 NUCLEAR GENERATING PLANT  
DOCKET NO. 50-302

Introduction

By letter dated September 28, 1984, Florida Power Corporation (the licensee) made application to amend the Technical Specifications (TSs) for Crystal River Unit 3 Nuclear Generating Plant to correct errors and to clarify certain radiological effluent TSs.

Description

The proposed amendment provides for:

- 1) Revision of TS 3.3.3.8 to require source check prior to each release rather than daily.
- 2) Revision of TS 3.3.3.9 to change specified modes for applicability and surveillance on RM-A1 to "during periods of Reactor Building Purge."
- 3) Correction of a typographical error and the change of source check requirements in TS 3.3.3.9 for consistency with other TSs.
- 4) Addition of reporting requirements in TS 3.3.3.10 in the event of inoperability of Waste Gas Decay Tank monitors for more than 14 days, and deletion of the requirements of 3.0.3 and 3.0.4.
- 5) Clarification of TS 4.7.13.5, specifying that only the in-service Waste Gas Decay Tank need be continuously monitored.
- 6) Correction of an inconsistency in the requirements of TS 6.9.2 for reporting unavailability of vegetable samples, and clarification of TS 6.9.1.4 with respect to the group of individuals to be considered when reporting doses.

The licensee has stated that the changes proposed to Sections 3.3.3.8, 3.3.3.9, 3.7.13.5, 3.11.1.1, 6.9.1.4, and 6.9.2 are to correct errors or are for clarification purposes and are therefore administrative in nature.

The proposed change to Section 3.3.3.10, "Waste Gas Decay Tank - Explosive Gas Monitoring Instrumentation", would delete "for up to 14 days" from the ACTION Statement and add the following:

"b. If the affected channel(s) cannot be returned to OPERABLE status within 14 days, submit a special report to the Commission pursuant to Specification 6.9.2 within 30 days describing the reasons for inoperability and a schedule for corrective action.

"c. The provisions of 3.0.3 and 3.0.4 are not applicable."

Also, an additional special report requirement would be added to Specification 6.9.2 pursuant to item "b" above.

To support the change of TS 3.3.3.10.b, the licensee has stated that the present Specification 3.0.3 could be interpreted to require that a plant shutdown be initiated within one hour if the Waste Gas Decay Tanks' hydrogen and/or oxygen monitoring channels are inoperable for more than 14 days. During a plant shutdown, the reactor coolant releases hydrogen and oxygen due to the lower saturation concentration at the lower pressure. These released gases are generally vented to the Waste Gas Decay Tanks for holdup and radioactive decay. Thus a shutdown can cause an increase in the hydrogen concentrations in the Waste Gas Decay Tanks and is one of the times when monitoring is especially important. TS 3.3.3.10 requires operability of one hydrogen and oxygen monitoring channel in all modes. Therefore, it is inconsistent and inappropriate to require a shutdown when the monitoring channels are inoperable. The proposed change would clarify that continued power operation is allowed when the hydrogen and oxygen monitors on the Waste Gas Decay Tanks are inoperable provided grab sampling is continued.

The licensee has further stated that this change would improve plant safety. A shutdown will cause generation of additional waste gas which is not desirable when the tanks' explosive gas monitoring system is inoperable. Grab sampling will continue to be performed to periodically monitor the tanks' mixtures during monitor inoperability.

### Evaluation

The changes proposed to Sections 3.3.3.8, 3.3.3.9, 3.7.13.5, 3.11.1.1, 6.9.1.4, and 6.9.2 are of minor administrative nature, and are acceptable.

Regarding the change proposed to Section 3.3.3.10, the objective of the Standard Radiological Effluent Technical Specifications (NUREG-0472), regarding hydrogen and oxygen monitoring and concentrations, is to ensure that the concentration of potentially explosive gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of

hydrogen and oxygen. Maintaining the concentration of hydrogen and oxygen below their flammability limits provides assurance that the release of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

The proposed actions to be taken, if the minimum operability requirement is not met, differ from the Standard Radiological Effluent Technical Specifications in that operation of the waste gas holdup system is allowed if an inoperable hydrogen or oxygen channel is not restored to service within 14 days, provided that a special report is submitted to the NRC describing the reasons for inoperability and a schedule for corrective action. The proposed specification provides a level of protection against the uncontrolled release of radioactive materials which is equivalent overall to the level of protection afforded by the Standard Radiological Effluent Technical Specifications and, therefore, is acceptable.

The proposed changes to the TSs for Crystal River Unit 3 have been reviewed, evaluated and found to be in compliance with the requirements of the NRC regulations.

In view of the above considerations, we have concluded that these proposed changes to the Crystal River Unit 3 TSs are acceptable.

#### Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The amendment also relates to changes in recordkeeping, reporting, or administrative procedures or requirements. We have 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, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). 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.

#### Conclusion

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

Dated: September 30, 1985

Principal contributor:  
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