4/3/81

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	Docket Nos. 50-250
FLORIDA POWER AND LIGHT COMPANY	)	50-251
	)	(Proposed Amendments to Facility
(Turkey Point Nuclear Generating Unit Nos. 3 and 4)	)	Operating Licenses to Permit Steam Generator Repair)

AFFIDAVIT OF CHANDU P. PATEL ON CONTENTION 8

I, Chandu P. Patel, being duly sworn, state as follows:

1. Contention 8 states:

> The proposed method of radiation monitoring during repair of the steam generators will not provide accurate information to comply with 10 CFR Parts 20 and 50.

2. I have reviewed statements 2 and 3 of the statement of material facts accompanying the Applicant's April 8, 1981 motion for summary disposition of Contention 8 and concur therein.

3. I have also reviewed Sections 3.3.3 and 3.3.6.3 of the Applicant's Steam Generator Repair Report describing the control and monitoring of radioactive effluent releases to the environment during the steam generator repair. These sections are consistent with the Final Safety Analysis Report (Section 11, entitled "Waste Disposal and Radiation Protection System"), and the operating license Technical Specification 3.9 for liquid and gaseous waste disposal requirements. (copy attached).

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4. On the basis of this information, I conclude that the equipment in use for the monitoring of liquid radwaste will provide adequate information to assure compliance with 10 CFR Parts 20 and 10 CFR Part 50 values.

Chandu P Patel
Chandu P. Patel

Subscribed and sworn to before me
this 13th day of April, 1981

Marilyn Jolbrecht
Notary Public

My Commission expires: July 1, 1982

3.9 RADIOACTIVE MATERIALS RELEASE

Applicability: Applies to the controlled release of all liquid and gaseous waste discharged from the plant which may contain radioactive materials and to the handling of containers of radioactive materials.

Objective: To establish conditions for the release of liquid, gaseous and solid waste containing radioactive materials and to assure that all such releases are within the limits specified in 10CFR20. In addition, every reasonable effort shall be made to control the rate of release of radioactive materials in liquid and gaseous waste discharged from the plant to unrestricted areas as low as practicable.

Specifications:

1. LIQUID WASTES

a. If the release of radioactive materials in liquid wastes, when summed over a calendar quarter exceeds 5 curies, excluding tritium and dissolved gases:

1. An investigation shall be made to identify the cause for such release rates,

2. A program of action to reduce such release rates shall be defined and initiated.

3. A report shall be filed with the AEC within 30 days describing the results of the investigation and the corrective actions taken.

b. If the experienced release of radioactive material in liquid waste, when summed over a calendar quarter, exceeds 20 curies, excluding tritium and dissolved gases, immediate action shall be taken as may be appropriate, including reductions in power level,

to assure that such release rates are reduced.

c. The rate of release of radioactive materials in liquid waste from the plant to unrestricted areas shall be controlled such that the instantaneous concentration of radioactivity in liquid effluents does not exceed the values listed in 10CFR20, Appendix B, Table II, Column 2.

d. At least one circulating water pump shall be in operation when liquid radioactive wastes are being released.

e. The effluent control monitor shall be operable during releases and set to alarm and automatically close the waste discharge valve such that requirements of specification 1.c. are met.

f. Liquid waste discharged from all waste treatment systems shall be sampled prior to release. The activity release rate used for a particular batch release shall be based on the analyses of a sample from the tank (after it is thoroughly mixed) and on the circulating water flow rate.

g. The liquid effluent monitor detector shall be laboratory tested annually (Table 4.1-1) using a solution of expected energies. Normal response of the monitor shall be verified by comparison with the prerelease sample analysis during each planned release.

h. Activity released from the secondary side of the units shall be determined from samples following the schedule for Item 14 in Table 4.1-2.

i. Steam generator blowdown shall be continuously monitored during blowdown operations.

j. Measurements shall be made and analyses shall be performed using methods, procedures, frequencies and instrumentation comparable to the guidelines set forth in Section C-4 of AEC Safety Guide 21, "Monitoring and Reporting of Effluents from Nuclear Power Plants" of January 1972 except as conditioned by the detailed specifications in 1.a through 1.i above.

2. GASEOUS WASTES

a. If the rate of release of radioactive materials in gaseous wastes, when averaged over a calendar quarter exceeds the following:

1. A total of 12 millicuries per second or,

2. For I-131 and particulate radionuclides with half life greater than 8 days, a rate determined by:

$$\Sigma_i \frac{Q_i}{MPC_i} \leq 10{,}000 \frac{m^3}{sec} \quad *$$

i. An investigation shall be made to identify the causes for such release rates, and

ii. A program to reduce such release rates, including a reduction in power level shall be defined and initiated immediately.

iii. A report shall be filed with the AEC within 30 days describing the results of the investigation and the corrective actions taken.

* Q_i = release rate of the i^{th} radionuclide, curie/second.

MPC_i = Concentration values in Appendix B, Table II, Column 1, 10CFR20

b. The total release rate of radioactive materials shall not exceed 67 millicuries per second averaged over any 1 hour.

c. The maximum activity to be contained in one gas decay tank shall not exceed 70,000 curies of Xe-133 equivalent.

d. All radioactive wastes discharged through the plant vent shall be continuously monitored for gaseous activity and sampled for iodine and particulate radionuclides as stated in Table 4.1-2. This shall also apply to the Unit 3 spent fuel pit exhaust when spent fuel is in the pit.

e. The normal response of the plant vent gas monitor shall be verified by comparison with the prerelease sample analysis. The monitor shall be compared with an independent monitor that has a detector that can be laboratory tested. (See Table 4.1-1) Iodine and particulate samples shall be analyzed on the frequency stated in Table 4.1-2.

f. A sample of gas from the waste gas decay tank shall be taken and analyzed to determine isotopic quantities prior to release to the plant vent.

g. Containment atmosphere shall be sampled prior to purging to determine quantities of I-131 and particulate radioisotopes with half-lives greater than 8 days, and quantities of noble gases to be released.

h. When radioactivity is detected in the secondary system the following surveillance is required:

1. Releases of I-131 and particulate radioisotopes

with half-lives greater than 8 days via the blowdown flashtank vent and the condenser air ejectors shall be determined.

2. I-131 and particulate radioisotopes with half-lives greater than 8 days in steam released from the secondary system shall be determined from weekly samples of radioactivity in the main steam and a determination of the steam release rates. (Sources include safety valves, hogging jets, and water box priming jets).

3. Grab samples shall be taken from the air ejector discharge and analyzed for gaseous radioactivity daily whenever the air ejector off-gas monitor is inoperable during power operation.

i. Analysis shall be performed, records maintained and reports submitted in accordance with Sections C-1, C-2 and C-3 of AEC Safety Guide No. 21, "Monitoring and Reporting of Effluents from Nuclear Power Plants," of January 1972 except as conditioned by the detailed specifications in 2.a through 2.h above.

.3. CONTAINERIZED WASTES

Containers of radioactive waste materials shall be shipped from the site by licensed carriers in conformance with the Code of Federal Regulations.

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CERTIFICATE OF SERVICE

I hereby certify that copies of NRC STAFF RESPONSE TO APPLICANT'S MOTION FOR SUMMARY DISPOSITION OF CONTENTIONS 3, 6 AND 8 in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 22nd day of April, 1981.

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