May 11, 1995

DISTRIBUTION
See attached sheet

Mr. J. H. Goldberg
President-Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS RE: REQUIREMENTS DURING CORE ALTERATIONS (TAC NOS. M90679 AND M90680)

Dear Mr. Goldberg:

The Commission has issued the enclosed Amendment No. 173 to Facility Operating License No. DPR-31 and Amendment No. 167 to Facility Operating License No. DPR-41 for the Turkey Point Plant, Unit Nos. 3 and 4, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated October 20, 1994, relating to allowing the containment personnel airlock doors to remain open during core alterations and changing the definition of core alterations. Please note that a portion of the request was not approved, as discussed with your staff on April 28, 1995. The enclosed Notice of Partial Denial of Amendment and Opportunity for Hearing has been forwarded to the Office of the Federal Register for Publication.

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

Sincerely,

(Original Signed By)

Richard P. Croteau, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-250
and 50-251

Enclosures:
1. Amendment No. 173to DPR-31
2. Amendment No. 167to DPR-41
3. Safety Evaluation
4. Notice of Partial Denial

cc w/enclosures: See next page

* see previous concurrence

Document Name: G:\TP90679.AMD

OFFICE	LA:PDI-2	PM:PDI-2	D:PDI-2	TERB	OGC	SCSB
NAME	Dunnington EJD	Croteau	Matthews	Miller*	Holler*	Barrett *RL for
DATE	5/11/95	5/11/95	5/11/95	2/2/95	5/9/95	5/2/95
COPY	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

OFFICIAL RECORD COPY

CP-1

100073

DF01

cc:

J. R. Newman, Esquire
Morgan, Lewis & Bockius
1800 M Street, NW
Washington, DC 20036

Jack Shreve, Public Counsel
Office of the Public Counsel
c/o The Florida Legislature
111 West Madison Avenue, Room 812
Tallahassee, Florida 32399-1400

John T. Butler, Esquire
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, Florida 33131-2398

Mr. Thomas F. Plunkett, Site
Vice President
Turkey Point Nuclear Plant
Florida Power and Light Company
P.O. Box 029100
Miami, Florida 33102

Joaquin Avino
County Manager of Metropolitan
Dade County
111 NW 1st Street, 29th Floor
Miami, Florida 33128

Senior Resident Inspector
Turkey Point Nuclear Generating
Station
U.S. Nuclear Regulatory Commission
P.O. Box 1448
Homestead, Florida 33090

Mr. Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Blvd.
Tallahassee, Florida 32399-0700

Mr. Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W. Suite 2900
Atlanta, Georgia 30323

Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, Florida 32304

Plant Manager
Turkey Point Nuclear Plant
Florida Power and Light Company
P.O. Box 029100
Miami, Florida 33102

Mr. H. N. Paduano, Manager
Licensing & Special Programs
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

Mr. Edward J. Weinkam
Licensing Manager
Turkey Point Nuclear Plant
P.O. Box 4332
Princeton, Florida 33032-4332

DATED: May 11, 1995

AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. DPR-31-TURKEY POINT UNIT 3
AMENDMENT NO. 167 TO FACILITY OPERATING LICENSE NO. DPR-41-TURKEY POINT UNIT 4

Distribution
Docket File
NRC & Local PDRs
PDII-1 Reading
S. Varga, 14/E/4
D. Hagan, T-4A-43
G. Hill, T-5C-3 (4)
C. Grimes, 11/F/23
ACRS (4)
OPA
OC/LFDCB
K. Landis, R-II

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

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT PLANT UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 173
License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Florida Power and Light Company (the licensee) dated October 20, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

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

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

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

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

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 173, are hereby incorporated in the license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 11, 1995

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

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT PLANT UNIT NO. 4

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 167
License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Florida Power and Light Company (the licensee) dated October 20, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

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

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

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

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

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

   (B) Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 167, are hereby incorporated in the license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 11, 1995

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 173 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 167 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove pages	Insert pages
1-2	1-2
3/4 9-4	3/4 9-4
B 3/4 9-1	B 3/4 9-1
---	B 3/4 9-1a

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

a. All penetrations required to be closed during accident conditions are either:

1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or

2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except as provided in Specification 3.6.4.

b. The equipment hatch is closed and sealed,

c. Each air lock is in compliance with the requirements of Specification 3.6.1.3,

d. The containment leakage rates are within the limits of Specification 3.6.1.2, and

e. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow supplied to the reactor coolant pump seals.

CORE ALTERATIONS

1.9 CORE ALTERATIONS shall be the movement of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe position.

DOSE EQUIVALENT I-131

1.10 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microCurie/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites" or Table E-7 of NRC Regulatory Guide 1.109, Revision 1, October 1977.

$\bar{E}$-AVERAGE DISINTEGRATION ENERGY

1.11 $\bar{E}$ shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (MeV/d) for the radionuclides in the sample isotopes, other than iodines, with half lives greater than 30 minutes, making up at least 95 percent of the total non-iodine activity in the coolant.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment door closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is closed, or, both doors of the containment personnel airlock may be open if:

1) at least one personnel airlock door is capable of being closed,

2) the plant is in MODE 6 with at least 23 feet of water above the fuel, and

3) a designated individual is available outside the personnel airlock to close the door.

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:*

1) Closed by an isolation valve, blind flange, or manual valve, or

2) Be capable of being closed by an OPERABLE automatic containment ventilation isolation valve.

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

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic containment ventilation isolation valve within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are in their closed/isolated condition, or

b. Testing the containment ventilation isolation valves per the applicable portions of Specification 4.6.4.2.

*Exception may be taken under Administrative Controls for opening of certain valves and airlocks necessary to perform surveillance or testing requirements.

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: (1) the reactor will remain subcritical during CORE ALTERATIONS, and (2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the safety analyses. With the required valves closed during refueling operations the possibility of uncontrolled boron dilution of the filled portion of the RCS is precluded. This action prevents flow to the RCS of unborated water by closing flow paths from sources of unborated water. The boration rate requirement of 16 gpm of 3.0 wt% (5245 ppm) boron or equivalent ensures the capability to restore the SHUTDOWN MARGIN with one OPERABLE charging pump.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the Source Range Neutron Flux Monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core. There are four source range neutron flux channels, two primary and two backup. All four channels have visual and alarm indication in the control room and interface with the containment evacuation alarm system. The primary source range neutron flux channels can also generate reactor trip signals and provide audible indication of the count rate in the control room and containment. At least one primary source range neutron flux channel to provide the required audible indication, in addition to its other functions, and one of the three remaining source range channels shall be OPERABLE to satisfy the LCO.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short-lived fission products. This decay time is consistent with the assumptions used in the safety analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The containment airlocks, which are part of the containment pressure boundary, provide a means for personnel access during MODES 1, 2, 3, and 4 operation. During periods of shutdown when containment closure is not required, the door interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary. During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, both doors of the containment personnel airlock may be open provided (a) at least one personnel airlock door is capable of being closed, (b) the plant is in MODE 6 with at least 23 feet of water above the fuel, and (c) a designated individual is available outside the personnel airlock to close the door.

The requirements on containment penetration closure ensure that a release of fission product radioactivity within containment will be restricted from escaping to the environment. The closure restrictions are sufficient to restrict fission product radioactivity release from containment due to a fuel handling accident during refueling.

During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, the most severe radiological consequences result from a fuel handling accident. The fuel handling accident is a postulated event that involves damage to irradiated fuel. The in-containment fuel handling accident involves dropping a single irradiated fuel assembly, resulting in damage to a single row of fuel rods. The minimum decay time of 100 hours prior to CORE ALTERATIONS, ensure that the release of fission product radioactivity, subsequent to a fuel handling accident, results in doses that are well within the guidelines values specified in 10 CFR 100.

During CORE ALTERATIONS or movement of irradiated fuel assemblies within containment, one PAL door must be capable of being closed in the event of an accident. The restriction to be in Mode 6 with at least 23 feet of water above the fuel provides sufficient time to respond to a loss of shutdown cooling and ensures a minimum water level exists to provide sufficient shielding during fuel movement. The presence of a designated individual available outside of the personnel airlock, to close the door following evacuation of personnel within containment will minimize the release of radioactive materials.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity conditions during CORE ALTERATIONS.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. DPR-31

AND AMENDMENT NO. 167TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By letter dated October 20, 1994, Florida Power and Light Company (FPL or the licensee) proposed a change to the Technical Specifications (TS) for Turkey Point Units 3 and 4. Three changes were requested involving refueling operations.

First, the definition of "core alteration" would be changed to more closely resemble the definition in the standard TS. In effect, this excludes movement of items not associated with reactivity from being considered a core alteration.

The second and most significant change involves allowing the personnel airlock (PAL) doors to remain open during fuel movement and core alterations under certain conditions. Movement of irradiated fuel in containment and core alterations will be referred to as "core alterations" for the remainder of this evaluation.

The last change would allow containment building penetrations to be open under "administrative controls." The current TS only allow these penetrations to be open under administrative controls for surveillance or testing requirements.

2.0 BACKGROUND

2.1 System Description

The containment serves to contain fission product radioactivity that may be released from the reactor coolant system following an accident, such that offsite radiation exposures are maintained well within the requirements of 10 CFR 100. Additionally, the containment provides radiation shielding from the fission products that may be present in the containment atmosphere following accident conditions.

With the primary plant above 200^{o}F and pressurized, the containment itself may become pressurized during an accident. Therefore, the containment and its

penetrations must be operable by being capable of withstanding the pressure and thus prevent excessive fission product release to the environment.

During refueling (mode 6) the potential for containment pressurization as a result of an accident is not likely; therefore, requirements to isolate the containment from the outside atmosphere can be less stringent. The required condition is referred to as "containment closure" rather than "containment operability." Containment closure means that all potential escape paths are closed or capable of being closed. The closure restrictions are sufficient to restrict fission product radioactivity release from containment due to an in-containment fuel handling accident (FHA) during refueling.

The containment air locks, which are also part of the containment pressure boundary, provide a means for personnel access. Each air lock has a door at both ends. The doors are normally interlocked to prevent simultaneous opening when containment "operability" is required. During periods of unit shutdown when containment closure is not required, the door interlock mechanism may be disabled, allowing both doors of an air lock to remain open for extended periods when frequent containment entry is necessary.

2.2 History

During core alterations one PAL door has historically been required to be closed at all times. This means that personnel must enter one door with the other shut, shut the door just passed, then open the other door. During the 1994 Turkey Point Unit 3 refueling outage, when the PAL doors were closed for core alterations, the licensee estimated that these doors were cycled over 300 times a day. The licensee also believes that the crowding of personnel in the PAL during shift changes may cause an increase in personnel contaminations. The excessive cycling of the PAL doors was not anticipated in the design. Frequent maintenance of the door hinge pin, the door seals, the packing of the equalizing valve, and other components have been necessary due to heavy use.

Other licensees have experienced similar difficulties. Calvert Cliffs Nuclear Power Plant submitted an amendment request dated November 5, 1993, which would, in part, allow the PAL doors to remain open during core alterations. The amendment was issued on August 31, 1994, based primarily on the fact that calculated offsite dose and control room operator doses are within acceptable limits with the PAL doors open following an FHA.

3.0 EVALUATION

During core alterations, the most severe radiological consequences result from an FHA. The FHA is a postulated event that involves damage to irradiated fuel. FHAs include dropping a single irradiated fuel assembly and handling tool or a heavy object onto other irradiated fuel assemblies. The TS requirements associated with refueling are intended to ensure that the release of fission product radioactivity, subsequent to an FHA, results in doses that are "well within" the guideline values specified in 10 CFR 100. Standard Review Plan (SRP), Section 15.7.4, Rev. 1, defines "well within" 10 CFR 100 to be 25% or less of the 10 CFR 100 values, i.e., 6 rem to the whole body and 75 rem to the thyroid.

Regulatory Guide (RG) 1.25 provides acceptable assumptions that may be used in evaluating the radiological consequences of an FHA. The licensee's FHA analysis did not previously incorporate all of the assumptions of RG 1.25 since the design basis was established prior to the issuance of this RG. The licensee recalculated the doses and is revising the design basis for the FHA analysis to be consistent with RG 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors." Neither the current nor the revised design basis FHA analysis takes credit for the containment building barriers. The licensee's analysis calculated the doses for the 0-2 hour period at the exclusion area boundary to be 0.008 rem to the whole body and 2.5 rem to the thyroid. These calculated doses are within the SRP criteria of 6 rem to the whole body and 75 rem to the thyroid.

Control room habitability following an FHA must also be considered using the dose criteria in 10 CFR 50, Appendix A General Design Criteria 19 (GDC 19). The Turkey Point control room is designed with an emergency ventilation system, which is actuated by various safety signals and the Process Radiation Monitoring System (PRMS). The PRMS was designed to control the radioactive release from the plant under accident conditions such as a Loss of Coolant Accident (LOCA). The licensee stated that, since the doses expected from a LOCA event are significantly higher than the doses expected from an FHA, the requirements of GDC 19 are satisfied by the Process Radiation Monitoring System. TS 3/4.9.13 requires containment radiation monitors which initiate containment and control room ventilation isolation be operable during core alterations. If these monitors are not operable the control room emergency ventilation system must be isolated and operated in the recirculation mode.

The staff did not validate the licensee's analysis, but instead performed an independent analysis. The staff's analysis used the accident source term given in RG 1.4, assumptions contained in RG 1.25, and the review procedures specified in SRP, Section 15.7.4. The staff assumed an instantaneous puff release of noble gases and radioiodine from the gap of the broken fuel rods as gas bubbles pass up through the 23 feet of water covering the fuel. All airborne radioactivity reaching the containment atmosphere is exhausted within 2 hours into the environment. As stipulated in the proposed TS change request, all radioactive material in the fuel rod gap is assumed to have decayed for a period of 100 hours. Consistent with current practice, the staff assumed an entire fuel assembly (15 X 15) of 225 fuel rods is damaged by the FHA rather than the 15 that the licensee assumed.

The staff computed the offsite doses for the Turkey Point exclusion area boundary using the above assumptions and the NRC computer code, ACTICODE. The control room operator doses were estimated using the methodology given in SRP, Section 6.4. These computed offsite and control room operator doses are within the acceptance criteria given in SRP, Section 15.7.4 and GDC 19, respectively. GDC-19 specifies that adequate radiation protection is to be provided to permit access and occupancy of the control room under accident conditions without personnel exposures in excess of 5 rem to the whole body or

its equivalent to any part of the body for the duration of the accident (30 rem to the thyroid). The resulting calculated values of the offsite and control room operator dose are listed in Table 1, and the assumptions used by the staff in calculating these doses are given in Table 2.

3.1 Change to the Definition of Core Alteration

The licensee proposed to change the definition of a core alteration from "the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel" to "movement of any fuel, sources, reactivity control components, or other components affecting reactivity within the reactor vessel with the vessel head removed and fuel in the vessel." The revised definition would more closely resemble the definition in the standard TS. In effect, this excludes movement of items not associated with reactivity from being considered a core alteration.

Core alterations are referenced in TS 3/4.9 "Refueling Operations." During core alterations TS require additional controls concerning such items as communications between the control room and the refueling station, the containment ventilation isolation system, and containment radiation monitors. In addition, core alterations must be terminated if such items as source range neutron flux monitors are not adequate. These requirements involve controlling and monitoring reactivity changes during refueling and mitigating the effects of an FHA. Therefore, movement of items which cannot affect reactivity or cause an FHA can be excluded from the definition of core alterations. The staff finds this change acceptable.

The licensee also proposed deleting the word "conservative" from the TS statement "suspension of core alterations shall not preclude completion of movement of a component to a safe conservative position." The staff considers the word "conservative" to be redundant to the word "safe" in this statement. This change is administrative and is, therefore, acceptable. The staff notes that the change is consistent with the standard TS.

3.2 Changes to Containment Building Penetrations TS

The licensee proposed to change TS 3.9.4 to allow both doors of the containment personnel airlock to be open if at least one door is capable of being closed, the plant is in mode 6 with at least 23 feet of water above the fuel, and a designated individual is available outside the personnel airlock to close the door. The licensee also proposed to allow cables or hoses across the PAL doors provided quick-disconnects are provided. Administrative guidelines would be established describing the responsibilities and appropriate actions of the designated individual, in the event of an FHA with the PAL doors open.

The staff finds the proposed changes acceptable since the consequences of an FHA with the PAL doors open meet the applicable acceptance criteria discussed previously in section 3.0. However, the lines and hoses run through the PAL should be minimized to ensure timely closing of a PAL door. The licensee should also ensure that these lines and hoses do not serve any personnel or equipment safety function which could be interrupted by disconnection.

The administrative guidelines should clearly identify responsibility for disconnecting these lines. The quick disconnects must be located near the PAL to allow timely closure of the PAL.

The licensee also proposed to change the footnote to this TS which previously allowed opening certain valves and airlocks necessary to perform surveillance or testing requirements provided that administrative controls were administered. The proposed change would extend this allowance for reasons other than surveillance or testing.

The licensee stated that this was acceptable since the change was administrative in nature. The staff has reviewed this proposal and disagrees that the change is administrative. In fact, since this proposed change affects systems other than air locks, the staff is considering this proposal, along with other similar requests from other licensees, in the context of the staff's ongoing study of shutdown operations. Therefore, the staff chooses not to approve the licensee's request at this time. The staff is actively pursuing with the industry the broader issue of what controls are necessary during shutdown, and what controls may be relaxed or eliminated. The licensee may resubmit this request in the future once the staff and the industry have resolved these broader issues.

We find the requested changes acceptable, with the one exception noted, since the radiological consequences of an FHA meet the dose acceptance criteria with the proposed changes.

4.0 CONCLUSION

Based on the evaluations performed by the licensee and the staff, the staff concludes that the radiological consequences of not having a closed containment following a fuel handling accident are acceptable. The steps taken by the licensee to optimize the ability of plant personnel to close the personnel airlock, if needed, provide assurance that offsite radiological consequences will be minimized to the extent practical. Based on these reasons, the staff approves the proposed changes to TS 3.9.4, with the exception of the change to the footnote.

5.0 STATE CONSULTATION

Based upon the written notice of the proposed amendments, the Florida State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (59 FR 55869). Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR

51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

Principal Contributors: J. Minns, R. Croteau
Date: May 11, 1995

Table 1

CALCULATED RADIOLOGICAL CONSEQUENCES
(rem)

Exclusion Area Boundary	Dose	SRP Limits
Whole Body	0.1	6
Thyroid	34	75
Control Room Operator		**GDC-19 Limits**
Whole Body	0.1	5
Thyroid	11	Equivalent to 5 rem WB*

*Section 6.4 of the SRP defines the dose limit to the thyroid as 30 rem.

TABLE 2

ASSUMPTIONS USED FOR CALCULATING RADIOLOGICAL CONSEQUENCES

Parameters	Quantity
Power Level, Mwt	2300
Number of Fuel Rods Damaged	225
Shutdown Time, hours	100
Power Peaking Factor	1.5
Fission-Product Release Fractions, %	
Iodine	10
Noble gases	30
Pool Decontamination Factors	
Iodine	100
Noble gases	1
Iodine Forms, %	
Elemental	75
Organic	25
Atmospheric Relative Concentration, sec/m^3	1.54E-4
Fission-Product Release Duration, hours	2
Dose Conversion Factors	ICRP-30
CONTROL ROOM	
Atmospheric Relative Concentration, sec/m^3	9.58E-4
Filter Recirculation Rate, cfm	650
Unfiltered Inleakage, cfm	10
Filter Efficiency, %	95
Iodine Protection Factor	20.6
Geometry Factor	31.8
Control Room Volume, cubic feet	43,026

UNITED STATES NUCLEAR REGULATORY COMMISSION

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

NOTICE OF PARTIAL DENIAL OF AMENDMENT TO FACILITY OPERATING LICENSE AND OPPORTUNITY FOR HEARING

The U. S. Nuclear Regulatory Commission (NRC) has denied a portion of an amendment request by the Florida Power and Light Company (FPL or the licensee) for an amendment to Facility Operating License Nos. DPR-31 and DPR-41, issued to the licensee for operation of the Turkey Point Plant, Units 3 and 4, located in Dade County, Florida. Notice of Consideration of Issuance of this amendment was published in the FEDERAL REGISTER on November 9, 1994 (59 FR 55869).

The purpose of the licensee's amendment request was to revise the Technical Specification (TS) to revise the definition of core alterations, allow the personnel airlocks to be open during core alterations and revise a footnote pertaining to opening of certain valves.

The NRC staff has concluded that the portion of the licensee's request regarding the footnote allowing certain valves to be open during core alterations cannot be granted for the reasons stated in letter dated May 11, , 1995. The licensee was notified of the Commission's denial of the proposed change by letter dated May 11, , 1995.

By , 1995, the licensee may demand a hearing with respect to the denial described above. Any person affected by this proceeding may file a written petition for leave to intervene.

A request for hearing or petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC, 20555, Attention: Docketing and Service Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, by the above date. A copy of any petitions should also be sent to the office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to J. R. Newman, Esquire, Morgan, Lewis & Bockius, 1800 M Street, NW., Washington, DC 20036, attorney for the licensee.

For further details with respect to this action, see (1) the application for amendments dated October 20, 1994, and (2) the Commission's letter to the licensee dated May 11, , 1995. These documents are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the Florida International University, University Park, Miami, Florida 33199. A copy of Item (2) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Document Control Desk.

Dated at Rockville, Maryland this 11th day of May , 1994.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation