

50-250/251



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001  
February 24, 1998

Mr. T. F. Plunkett  
President - Nuclear Division  
Florida Power and Light Company  
P.O. Box 14000  
Juno Beach, Florida 33408-0420

**SUBJECT: EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50, APPENDIX R,  
FOR TURKEY POINT UNITS 3 AND 4, REGARDING FIRE BARRIERS IN OUTSIDE  
AREAS, EXCLUDING THE TURBINE AREA (TAC NOS. M97422 AND M97423)**

Dear Mr. Plunkett:

By letter dated December 12, 1996, as supplemented by letters dated July 31 and October 31, 1997, you requested an exemption from certain requirements of Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," for Turkey Point Units 3 and 4. Specifically, you requested an exemption from the requirements of Appendix R, Section III.G.2.a, for raceway fire barriers in outdoor fire zones, excluding the Open Turbine Building.

We have reviewed the information you provided in support of your exemption request. On the basis of the submitted information and as discussed in the enclosed exemption, the NRC staff has concluded that:

1. The proposed actions for fire zones 47, 54, 113, 114, 115, 116, 118, 119, 120, and 143 provide an adequate level of fire protection. The request for these zones is granted.
2. It cannot be determined whether the proposed actions for fire zone 106R provide an adequate level of fire safety due to the uncertainty of the combustibility and fire classification of the control building roof. The request for this zone is denied.
3. The proposed actions and the exemption request for the remaining zones are being evaluated separately to consider information you recently provided.

We find that granting an exemption, with respect to the fire zones specified in conclusion 1 above, from the requirements of 10 CFR Part 50, Appendix R, Section III.G.2.a, is authorized by law, will not present an undue risk to public health and safety, and is consistent with the common defense and security, and that special circumstances described in 10 CFR 50.12(a)(2)(ii) are present. Accordingly, your request for an exemption in fire zones 47, 54, 113, 114, 115, 116, 118, 119, 120, and 143 has been granted.

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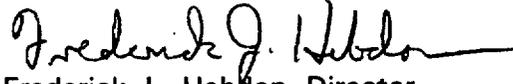
Mr. T.F. Plunkett

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February 24, 1998

A copy of the exemption is enclosed. The exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,



Frederick J. Hebdon, Director  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure: Exemption

cc w/encl: See next page

Mr. T.F. Plunkett

- 2 -

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/s/

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
FLORIDA POWER AND LIGHT COMPANY	)	Docket Nos. 50-250 and 50-251
	)	
	)	
(Turkey Point Units 3 and 4)	)	
	)	

EXEMPTION

I.

Florida Power and Light Company (the licensee) is the holder of Facility Operating Licenses Nos. DPR-31 and DPR-41, which authorize operation of Turkey Point Units 3 and 4 (the facility) at a steady-state reactor power level not in excess of 2300 megawatts thermal per unit. The facility is a pressurized-water reactor located at the licensee's site in Dade County, Florida. The licenses provide, among other things, that the facility is subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (the Commission or NRC) now or hereafter in effect.

II.

In exemptions dated March 27, 1984, and August 12, 1987, the staff approved the use of 1-hour rated fire barriers in lieu of 3-hour barriers in certain outdoor areas at Turkey Point Units 3 and 4. In addition, the staff found that, for certain outdoor areas not protected by automatic fire detection and suppression systems, separation of cables and equipment and associated nonsafety circuits of redundant trains by a horizontal distance of 20 feet free of intervening combustibles provided an acceptable level of fire safety.

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Based on the results of the industry's Thermo-Lag fire endurance testing program, the licensee concluded that the outdoor Thermo-Lag fire barrier designs cannot achieve a 1-hour fire resistive rating but can achieve a 30-minute fire resistive rating when exposed to a test fire that follows the ASTM E-119 standard time-temperature curve. Because of these test results, the licensee in a letter dated June 15, 1994, requested an exemption to use 30-minute fire barriers for outdoor applications in lieu of the 1-hour fire barriers previously approved; however, the exemption request was withdrawn by letter dated June 28, 1996.

In a letter dated December 12, 1996, the licensee submitted an exemption request (evaluated herein) for outdoor areas, excluding the turbine building area. The licensee requested that the NRC approve the use of 25-minute raceway fire barriers for these outdoor applications in lieu of the 1-hour fire barriers which were previously approved (refer to SEs dated March 27, 1984, and August 12, 1987). This request was based on the following: (1) the fire loading and potential fire severities are low; (2) there are minimal ignition sources; (3) transient ignition sources and combustibles are controlled in these zones; and (4) manual fire fighting equipment is readily accessible to the zones.

10 CFR 50, Appendix R, Section III.G.2.a requires:

Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier.

The underlying purpose of this rule is to provide reasonable assurance that one safe shutdown train and associated circuits used to achieve and maintain safe shutdown are free of fire damage.

In its December 12, 1996, exemption request, as supplemented by letters dated July 31 and October 31, 1997, the licensee requested an exemption for outdoor fire

zones, excluding the turbine area, permitting the use of the following in lieu of Section III.G.2.a requirements:

- 1) Separation of cables and equipment and associated nonsafety circuits of redundant trains west of the Open Turbine Building Structure column line A by a 1-hour rated fire barrier until a horizontal distance of 20 feet is attained. Water suppression systems are provided for the major combustible sources, however no suppression or detection is provided for the raceways. This request is applicable to fire zones 81; and 86 West of the A-line.
- 2) Separation of cables and equipment and associated non-safety circuits of redundant trains by a 25-minute rated fire barrier until a horizontal distance of 20 feet is attained. No suppression or detection is provided. This request is applicable to fire zones 47 and 54; 86 North of column line 22 and East of the A-line; 79, 84, 88 and 89 East of the Jc-line; and 106R, 113, 114, 115, 116, 118, 119, 120, 131 and 143.
- 3) Separation of cables and equipment and associated non-safety circuits of redundant trains by a 25-minute rated fire barrier until a horizontal distance of 10 feet is attained in Roof Top locations. No suppression or detection is provided. This request is applicable to fire zones 106R, 114, 115, 118 and 143.
- 4) Separation of cables and equipment and associated non-safety circuits of redundant trains by a radiant energy shield having an equivalent 30-minute fire rating until a horizontal distance of 20 feet is attained. A radiant energy shield is a line of sight barrier between redundant equipment and/or components. The radiant energy shield may be combustible. No suppression or detection is provided. This request is applicable to fire zones 47 and 54; 86 North of column line 22 and East of the A-line; 79, 84, 88 and 89 East of the Jc-line; and 106R, 113, 114, 115, 116, 118, 119, 120, 131 and 143.

- 5) The existing separation of approximately 12 feet on center for the Component Cooling Water (CCW) Pumps combined with fire detection and a dual-header partial-coverage suppression system for the pumps. This request is applicable to fire zones 47 and 54.
- 6) The existing separation of approximately 14 feet on center for the Intake Cooling Water (ICW) Pumps and associated conduits, with fire detection for the pumps. No suppression is provided. This request is applicable to fire zones 119 and 120.
- 7) The use of a partial height (10 feet high) fire barrier between the Unit 3 Emergency Diesel Generator(EDG) "A" and "B" radiator rooms. No suppression or detection is provided. This request is applicable to fire zone 131.

### III.

In summary, according to the licensee's submittal, the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

In addition, the licensee asserts that special circumstances as set forth in 10 CFR 50.12, paragraphs (a)(2)(ii) and (a)(2)(iii) are present, i.e., (1) application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule since the alternative actions proposed by the licensee will assure that a fire in the power plant will not disable the capability to safely shut down the plant, and (2) compliance with the regulation would result in costs significantly in excess of those contemplated when the regulation was adopted, since it was not foreseen that the fire barriers would have to be upgraded.

## IV.

The NRC staff has reviewed the licensee's supporting information for its exemption request and conducted a site visit.

During its site visit the staff performed the following actions during walkdowns of the outdoor areas:

- Reviewed the general area and assessed fire protection features (manual and automatic).
- Reviewed the location of the fire brigade equipment.
- Reviewed fire brigade accessibility to the area.
- Observed fire hazards and fire loadings associated with the area.
- Observed the material conditions of the plant and of the fire protection equipment.
- Observed the adequacy of administrative controls (noted any transient combustibles).
- Reviewed the adequacy of the fire rating of the raceway fire barriers in the area.

Based on the plant open/outdoor configuration of the fire zones noted below, the impact a fire may have on the plant and its ability to shut down in the event of a fire tends to be localized to the zone of concern. During its site evaluation the staff observed that the hot fire gases and smoke would be directly vented to the atmosphere. Therefore, components required to achieve and maintain safe shutdown would not be subjected to convective heat. In outdoor areas a ceiling jet and hot gas layer would not develop, unlike enclosed compartments.

Fire Zone 47 - Unit 4 Component Cooling Water Pump Room and

Fire Zone 54 - Unit 3 Component Cooling Water Pump Room

Fire zone 47, the Unit 4 component cooling water pump room, is located outdoors near the southeast corner of auxiliary building elevation 18'-0". This fire zone is separated from other auxiliary building fire areas by 3-hour fire rated walls. This zone does not have

a ceiling and is open to the atmosphere. Fire zone 54, the Unit 3 component cooling water pump room, is located outdoors near the northeast corner of auxiliary building elevation 18'-0". This fire zone is open to the atmosphere and is separated from other auxiliary building fire areas by 3-hour fire barriers.

The major safe-shutdown-related equipment in these zones are the CCW pumps (three pumps) and heat exchangers. The pumps are arranged in an "L" configuration and are spaced approximately 12 feet on center. The power cables for each pump are routed in embedded conduit with the exception of a short length from the embedded conduit to the motor terminal box which is flexible steel conduit. The local control stations for these pumps are more than 20 feet apart. The conduits and their post-fire safe shutdown functions (identified in the Appendix) are protected by an electrical raceway fire barrier system which has a minimum fire resistive rating of 25 minutes.<sup>1</sup>

These CCW pumps and cabling lack the required 20 feet of spacial separation as specified in Appendix R III.G.a.2.b. The NRC approved this configuration in an exemption dated March 27, 1984, on the basis that the licensee had installed redundant open-head deluge fire control-suppression systems activated by ultraviolet (UV) fire detectors; however, this area was resubmitted for review since cabling with less than 20 feet of separation is protected by a 25-minute rated fire barrier. The in-situ fire load in this area is low, consisting of two horizontal cable trays installed approximately 10 feet above the floor and 1 gallon of lubricating oil in each pump. Manual hose stations and portable fire extinguishers are accessible. If a fire occurred in either of these fire zones, it is anticipated

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<sup>1</sup> As specified by the licensee's exemption request, the fire resistive rating of 25-minute electrical raceway fire barrier system applications (e.g., fire barrier application for various conduit diameters, lateral bends, radial bends, junction boxes, conduit bank enclosures) will be bounded by tests and will be representative of the tested configurations. The fire endurance and hose stream testing will also be done in accordance with Generic Letter 86-10, Supplement 1, and will have met the acceptance criteria.

that the UV fire detectors would react and activate the deluge fire suppression system. Since the suppression system would provide fast total coverage of the CCW pumps, there is reasonable assurance that a fire affecting one pump would be confined to that pump. The 12 feet of separation between the pumps provides adequate passive protection to assure that one train of CCW pumps would remain free of fire damage. In addition, since these fire zones are outdoor areas with no significant equipment or component obstructions, there is reasonable assurance that the required post-fire safe shutdown functions protected by the 25-minute electrical raceway fire barrier system would remain free of fire damage until the deluge system activated and controlled the fire. The staff has determined that licensee's proposal provides adequate protection, will not pose an undue risk to public health and safety, and that the underlying purpose of the rule is satisfied. Therefore, the staff finds the licensee's proposed exemption for these areas to be acceptable.

Fire Zone 106R - Control Room Air Conditioner Condensing Units on the Control Building

Fire Zone 106R is the control building roof. The major safe shutdown equipment on the roof are the cable spreading room and computer room chillers and the control room air conditioning evaporative units. The control building roof is of concrete construction and is covered with a composite, built-up roof. The staff requested the licensee to evaluate the combustibility of this roof design and consider the potential effect of a fire on the combustible (Thermo-Lag) raceway fire barriers and the components they protect. The licensee determined that this roof consists of (1) a Koroseal vapor barrier; (2) Flintkote roof insulation; (3) Lexsucu adhesive; (4) eight layers of Ruberiod asphalt felt; and (5) clean, dry, opaque 1/4" to 5/8" gravel. The licensee determined that this roof is the original roof; its fire classification is indeterminate. Because of the uncertainty as to the combustibility and fire classification of the control building roof, the licensee's proposed exemption which

would permit it to separate cables and equipment and associated nonsafety circuits of redundant trains by a 25-minute rated fire barrier until a horizontal distance of 10 feet is attained is not acceptable.

Roof and Fire Zone 118 - Control and Auxiliary Building Roof

Fire zone 118 is the control and auxiliary building roof. The auxiliary building roof construction is concrete without an asphalt roof membrane. There are minimal in-situ combustibles in this fire zone and intervening combustibles between redundant safe shutdown functions is not a concern. In addition, this roof is inside the radiation control area of the facility. The only transient combustible materials admitted are those used in maintenance or work activity within this area and controlled by the licensee's administrative controls. Therefore, transient combustibles are not a concern.

Located in fire zone 118 are redundant safe shutdown trains of DC equipment/inverter room heating ventilation and air conditioning (HVAC) (Component Nos. E16D, E16E, E16F), electrical equipment room HVAC (Component Nos. E232/V76, E16E/E16F), cable spreading room HVAC (S74A/S75A, S74B/S75B), and the auxiliary building exhaust fan (V8A, V8B). In addition, the cabling and raceway associated with this equipment are routed in this fire zone. The conduits and the associated post-fire safe shutdown functions (identified in the appendix) are separated from the redundant train in this fire zone by a 25-minute rated fire barrier until a horizontal distance of 10 feet is attained. All other post-fire safe shutdown equipment (e.g., components, power and control circuits, and power distribution circuits) located in this fire zone are separated from their redundant equipment by a horizontal distance of greater than 10 feet. In addition, the space between the equipment is free of fixed combustibles. Since this fire zone is outdoors and the in-situ fire load is minimal, there is reasonable assurance that any fire would be small and that the required post-fire safe shutdown equipment protected by the

25-minute electrical raceway fire barrier system would remain free of fire damage until the fire burned itself out or was detected by plant personnel and adequately controlled and suppressed by the plant fire brigade. The staff has determined that licensee's proposal provides adequate protection, will not pose an undue risk to public health and safety, and that the underlying purpose of the rule is satisfied. Therefore, the staff finds the licensee's proposed exemption for this area to be acceptable.

Fire Zone 113 - Unit 4 Feedwater Platform and

Fire Zone 116 - Unit 3 Feedwater Platform

Fire zones 113 and 116 are the feedwater platforms for Units 3 and 4, respectively. These platforms are located in the outdoor area on elevation 38'-0". The major safe shutdown equipment located in each of these fire zones is two trains of auxiliary feedwater control valves and the auxiliary building supply fans. The train A valves (three valves) are located above the platform, on elevation 42'-0" and the train B valves (three valves) are on elevation 30'-7". They are separated by a 1/4-inch thick steel checker-plate platform. In addition, these areas contain the associated feedwater and auxiliary feedwater systems that penetrate the reactor containment building. The area is bounded on two sides, north and west, by concrete walls. The east side is bounded by the respective Unit 3 or 4 reactor containment building. The south side is open to the atmosphere and the ceiling is concrete. The redundant post-fire safe shutdown trains located in these areas are not protected by an automatic suppression system. However, these fire zones are protected by UV fire detection capabilities, manual hose stations, and portable fire extinguishers.

Where there are intervening combustibles between redundant safe shutdown trains or the required post-fire safe shutdown circuits or equipment (e.g., components, power and control circuits, and power distribution circuits) are not separated from its redundant equipment by a minimum of 20 feet, the equipment is protected by an electrical raceway

fire barrier system with a 25-minute fire resistive rating. The raceway protected by electrical raceway fire barrier systems are identified in the Appendix. These fire zones are outdoor areas and the in-situ fire load is low. Therefore, there is reasonable assurance that if a fire occurred the required post-fire safe shutdown equipment protected by the 25-minute electrical raceway fire barrier system would remain free of fire damage until the fire was automatically detected and then controlled and suppressed by the plant fire brigade. The staff has determined that licensee's proposal provides adequate protection, will not pose an undue risk to public health and safety, and that the underlying purpose of the rule is satisfied. Therefore, the staff finds the licensee's proposed exemption for this area to be acceptable.

Fire Zone 115 - Unit 3 Main Steam Platform and

Fire Zone 114 - Unit 4 Main Steam Platform

These two outside areas are located at the 53'-6" elevation. The major safe shutdown equipment in these fire zones consist of the main steam isolation valves, main steam isolation valve bypass valves, and the atmospheric dump valves. The redundant main steam isolation, bypass valves, and atmospheric dump valves are separated from each other by approximately 28 feet center to center. The redundant trains located in these areas are not protected by fixed fire suppression or automatic fire detection systems. Portable fire extinguishers and standpipes with the appropriate hose stations are available and accessible.

These areas are open to the atmosphere and do not have a ceiling. Redundant cables are separated horizontally by over 20 feet free off intervening combustibles and are routed in steel conduit. Where there are intervening combustibles or the required post-fire safe shutdown equipment (e.g., components, power and control circuits, and power distribution circuits) is not separated from its redundant equipment by a minimum of 20 feet, the

equipment is protected by a electrical raceway fire barrier system with a 25-minute fire resistive rating. The raceway protected by electrical raceway fire barrier systems are identified in the Appendix. Since these fire zones are outdoor areas and the in-situ fire load is low, there is reasonable assurance that if a fire occurred, it would be small and the required post-fire safe shutdown equipment protected by the 25-minute fire barrier system would remain free of fire damage until the fire burned itself out or was detected by plant personnel and controlled and suppressed by the plant fire brigade. The staff has determined that licensee's proposal provides adequate protection, will not pose an undue risk to public health and safety, and that the underlying purpose of the rule is satisfied. Therefore, the staff finds the licensee's proposed exemption for this area to be acceptable.

Fire Zone 119 - Unit 4 Intake Structure and

Fire Zone 120 - Unit 3 Intake Structure

The Unit 3 and 4 intake structures are contiguous and are designated fire zone 119 (Unit 4) and fire zone 120 (Unit 3) to differentiate between the units. These fire zones are outdoors and are not bounded by walls or a ceiling. The in-situ combustible in these fire zones is a small amount of lubricating oil contained in the motor housings. The fire protection features provided for these zones are manual fire hose stations and portable fire extinguishers. These fire zones are protected by automatic UV fire detectors.

Where there are intervening combustibles between redundant shutdown trains or the required post-fire safe shutdown equipment (e.g., components, power and control circuits, and power distribution circuits) is not separated from its redundant equipment by a minimum of 20 feet, the equipment is protected by an electrical raceway fire barrier system with a 25-minute fire resistive rating. The raceway protected by electrical raceway fire barrier systems are identified in the Appendix. Since these fire zones are outdoor areas and the in-situ fire load is low, there is reasonable assurance that if a fire occurred, the required

post-fire safe shutdown equipment protected by the 25-minute fire barrier system would remain free of fire damage and that the fire would be automatically detected and adequately controlled and suppressed by the plant fire brigade. The staff has determined that licensee's proposal provides adequate protection, will not pose an undue risk to public health and safety, and that the underlying purpose of the rule is satisfied. Therefore, the staff finds the licensee's proposed exemption for this area to be acceptable.

Fire Zone 143 - Unit 3 Emergency Diesel Generator Roof

The major safe shutdown equipment on the Unit 3 emergency diesel generator building roof consists of the emergency diesel generator exhaust silencers. The roof construction is concrete without an asphalt roof membrane. There are no in-situ combustibles located in this fire zone; therefore, intervening combustibles between redundant safe shutdown equipment is not a concern.

All post-fire safe shutdown equipment (e.g., components, power and control circuits, and power distribution circuits) located in this fire zone is separated from its redundant equipment by a horizontal distance of greater than 10 feet. The space between the equipment is free of fixed combustibles. Therefore, the licensee is relying on spacial separation in lieu of physical protection (e.g., raceway fire barriers) and has determined that the use of raceway fire barriers to assure that one train of required safe shutdown equipment remains free of fire damage is not required in this fire zone to provide reasonable assurance the equipment would be available. Since this fire zone is outdoors and there are no in-situ combustibles, there is reasonable assurance that any fire in this area would be small and that the required 10-foot separation of redundant safe shutdown trains would maintain one train free of fire damage until the fire burned itself out or was detected by plant personnel and controlled and suppressed by the plant fire brigade. The staff has determined that licensee's proposal provides adequate protection, will not pose an undue

risk to public health and safety, and that the underlying purpose of the rule is satisfied.

Therefore, the staff finds the licensee's proposed exemption for this area to be acceptable.

Generic Application of Alternative Physical and Spacial Separation Fire Protection Schemes

The licensee requested that the staff approve an exemption to use any of the following generic protection schemes in lieu of installing the 3-hour fire barriers required by Appendix R, Section III.G.2.a, in any outdoor fire zone (excluding the turbine building):

- Separation of cables and equipment and associated nonsafety circuits of redundant trains west of the open turbine building structure column line A by 1-hour rated fire barriers until a horizontal distance of 20 feet is attained.
- Separation of cables and equipment and associated nonsafety circuits of redundant trains by 25-minute rated fire barriers until a horizontal distance of 20 feet is attained.
- For roof top fire zones, separation of cables and equipment and associated nonsafety circuits of redundant trains by 25-minute rated fire barriers until a horizontal distance of 10 feet is attained.
- Separation of cables and equipment and associated nonsafety circuits of redundant trains by a radiant energy heat shield having an equivalent 30-minute fire rating until a horizontal distance of 20 feet is attained.

By letter dated October 31, 1997, the licensee submitted its technical bases for these protection schemes. In certain cases, the staff may find these schemes an acceptable alternative to the specific requirements of Section III.G of Appendix R to 10 CFR Part 50. However, in responding to the staff's request for additional information of June 16, 1997, and to the request made during the meeting between the NRC staff and the licensee on July 7, 1997, the licensee did not submit an analysis for each fire zone which identifies the post-fire safe shutdown equipment (e.g., components, power and control

circuits, and power distribution circuits) in the zone, their relative safe shutdown importance, how the equipment is protected, including detailed evaluations of the fire hazards and the potential worst-case fires that may occur. Therefore, the staff cannot evaluate the generic acceptability of these schemes or whether the application of a specific protection scheme would provide reasonable assurance that one train of safe shutdown equipment (e.g., components, power and control circuits, and power distribution circuits) would be free of fire damage. Without a plant-specific fire-zone-by-fire-zone fire hazards analysis to support the use of these protection schemes on a case-by-case basis, the staff cannot assess the acceptability of these plant configurations and their ability to provide an adequate level of fire safety consistent with the underlying purpose of Section III.G of Appendix R to 10 CFR Part 50. However, additional information was recently submitted by the licensee and these remaining zones are being evaluated separately.

### CONCLUSIONS

On the basis of its evaluation and review that included a site walkdown of the fire zones, the staff concludes the following:

For fire zone 47 (Unit 4 CCW) and fire zone 54 (Unit 3 CCW room), the use of a 25-minute fire rated electrical raceway fire barrier system in lieu of a 1-hour fire barrier system as required by Section III.G.2 of Appendix R to 10 CFR Part 50 provides an adequate level of fire safety, poses no undue risk to public health and safety, meets the underlying purpose of the rule and is, therefore, acceptable.

For fire zone 113 (Unit 4 feedwater platform), fire zone 116 (Unit 3 feedwater platform), fire zone 119 (Unit 4 intake structure), and fire zone 120 (Unit 3 intake structure), the use of 25-minute fire barriers to separate cables and equipment and

associated nonsafety circuits of redundant trains until a horizontal distance of 20 feet free of intervening combustibles is attained provides an adequate level of fire safety, poses no undue risk to public health and safety, meets the underlying purpose of the rule and is, therefore, acceptable.

For fire zone 115 (Unit 3 main steam platform) and fire zone 114 (Unit 4 main steam platform), the use of 25-minute fire barriers to separate cables and equipment and associated nonsafety circuits of redundant trains until a horizontal distance of 20 feet free of intervening combustibles is attained provides an adequate level of fire safety, poses no undue risk to public health and safety, meets the underlying purpose of the rule and is, therefore, acceptable.

For fire zone 143 (Unit 3 emergency diesel generator roof) and fire zone 118 (control and auxiliary building roof), the use of 25-minute fire barriers to separate cables and equipment and associated nonsafety circuits of redundant trains until a horizontal distance of 10 feet free of intervening combustibles is attained provides an adequate level of fire safety, poses no undue risk to public health and safety, meets the underlying purpose of the rule and is, therefore, acceptable.

For fire zone 106R, based on the uncertain combustibility and indeterminate fire classification of the built-up asphalt roof design, with respect to the use of 25-minute fire barriers to separate cables and equipment and associated nonsafety circuits of redundant trains until a horizontal distance of 10 feet free of intervening combustibles is attained, the staff cannot determine if an adequate level of fire safety would be provided and the exemption request is, therefore, unacceptable. The licensee's request for exemption for this fire zone is denied.

Without a specific analysis for each fire zone which identifies the post-fire safe

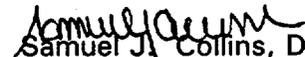
shutdown equipment (e.g., components, power and control circuits, and power distribution circuits) in the zone, their relative safe shutdown importance, and how the equipment is protected (including detailed evaluations of the fire hazards and the potential worst-case fires that may occur), the staff cannot evaluate the acceptability of the generic protection schemes or whether the application of a specific protection scheme provides the reasonable assurance needed to satisfy the underlying purpose of Section III.G.2 of Appendix R to 10 CFR Part 50. Therefore, the staff finds the generic applicability of these protection schemes to outdoor areas unacceptable at this time. However, additional information was recently submitted by the licensee and these remaining zones are being evaluated separately.

Pursuant to 10 CFR 51.32, the Commission has determined that granting this Exemption for fire zones 47, 54, 113, 114, 115, 116, 118, 119, 120, and 143 will not have a significant effect on the quality of the human environment (63 FR 8695).

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. In addition, special circumstances are present in that application of the regulation in these particular circumstances is not necessary to achieve underlying purpose of the rule which is to provide reasonable assurance that one safe shutdown train and its associated circuits used to achieve and maintain safe shutdown are free of fire damage. Therefore, the Commission hereby grants Florida Power and Light Company an exemption from the requirements of Section III.G.2.a of Appendix R to 10 CFR Part 50, as requested in the submittal, for fire

zones 47, 54, 113, 114, 115, 116, 118, 119, 120, and 143. This exemption is effective upon issuance. The exemption for fire zone 106R is denied. The exemption requested for the remaining fire zones is being evaluated separately.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,  
this 24th day of February 1998

**Post-fire Safe Shutdown Functions  
Raceway/Cables and Components Requiring Fire Barrier Protection  
Turkey Point Units 3 and 4**

<b>Raceway/Cables and Components Requiring Fire Barrier Protection</b>				
<b>Fire Zone</b>	<b>System</b>	<b>Component ID</b>	<b>Protected Raceway ID</b>	<b>Cable Function</b>
O/D 47	CCW	4P211B	4N1361	CCW pump control
O/D 54	CCW	3P211B	3N1372	CCW pump control
O/D 113	AFW	CV-4-2816	4K369 4K323	AFW flow control valve control
		CV-4-2817	4K379 4K265 4K612	
		CV-4-2818	4K614 4K389	
		CV-4-2831	4K1065 4K1244 PB4519 TB4835 4K1240 TB4835 4K1243 4K1407 4K1408	
		CV-4-2832	4K1240 4K1243 TB4835 4K1068 4K1244 PB4519 TB4835 4K1407 4K1409	
		CV-4-2833	4K1240 4K1243 TB4835 4K1066 4K1244 PB4519	

<b>Raceway/Cables and Components Requiring Fire Barrier Protection</b>				
<b>O/D 113</b>	<b>AFW</b>	<b>CV-4-2833</b>	<b>TB4835 4K1407 4K1410</b>	<b>AFW flow control valve control</b>
<b>O/D 116</b>	<b>AFW</b>	<b>CV-3-2816</b>	<b>3K368 3K369</b>	<b>AFW flow control valve control</b>
		<b>CV-3-2817</b>	<b>3K574 3K576 3K577</b>	
		<b>CV-3-2818</b>	<b>3K568 3K570 3K585</b>	
<b>O/D 114</b>	<b>MSS</b>	<b>POV-4-2604B</b>	<b>4K1403 4K1514 4K1518</b>	<b>Main Steam isolation valve control</b>
		<b>POV-4-2605B</b>	<b>4K1402 4K1515 4K1518</b>	
		<b>POV-4-2606B</b>	<b>4K1401 4K1517 4K1518</b>	
<b>O/D 115</b>	<b>MSS</b>	<b>POV-3-2604B</b>	<b>3K1624 3K1841 3K1843 3K1845 PB3946 PB3947</b>	<b>Main Steam isolation valve control</b>
		<b>POV-3-2605B</b>	<b>3K1624 3K1841 3K1843 3K1845 PB3946 PB3947 3K1623 3K1844</b>	
		<b>POV-3-2606B</b>	<b>3K1622 3K1841 3K1842 PB3946</b>	
<b>O/D 118</b>	<b>HVAC</b>	<b>E16F</b>	<b>4J1195</b>	<b>DC/Inverter HVAC E16F Power</b>
<b>O/D 119</b>	<b>ICW</b>	<b>4P9B</b>	<b>4R067 4R077</b>	<b>ICW Pump 4P-9B Power</b>
<b>O/D 120</b>	<b>ICW</b>	<b>3P9B</b>	<b>3R067 3R077</b>	<b>ICW Pump 3P-9B Power</b>

zones 47, 54, 113, 114, 115, 116, 118, 119, 120, and 143. This exemption is effective upon issuance. The exemption for fire zone 106R is denied. The exemption requested for the remaining fire zones is being evaluated separately.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Samuel J. Collins, Director  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,  
this 24th day of February 1998

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