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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
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 WOODY, C. D. Florida Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards addl info for 860425 request for exemption from  
 certain App R, Section III. G. 2 requirements, per 870112  
 request. Equipment & large number of cables associated w/safe  
 shutdown functions located in outdoor fire zones.

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1. 1990年12月，在“中国—东盟”首脑会议上，中国领导人正式提出“中国—东盟自由贸易区”的构想。

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100-443888-100

1. 1990年12月，在《中国环境报》上刊登了“中国环境报”的创刊号，这是中国环境报创刊以来的第一份报纸。

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FEBRUARY 11 1987  
L-87-68

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Gentlemen:

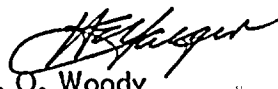
Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Request for Additional Information  
Exemption to 10 CFR 50, Appendix R, Section III.G.2  
NRC TAC Nos. 61428 and 61429

By letter dated April 25, 1986 (L-86-164) Florida Power & Light Company requested certain technical exemptions to 10 CFR 50, Appendix R, Section III.G.2 requirements for specific areas of Turkey Point Plant Units 3 and 4.

Our response to your January 12, 1987 request for additional information, required to complete your review of our April 25, 1986 submittal, is attached.

If there are any further questions, please contact us.

Very truly yours,

*for*   
C. O. Woody  
Group Vice President  
Nuclear Energy

COW/TCG/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF CHEMISTRY

CHICAGO, ILL.

TO THE EDITOR OF THE JOURNAL OF CHEMICAL PHYSICS  
FROM THE DEPARTMENT OF CHEMISTRY  
UNIVERSITY OF CHICAGO  
CHICAGO, ILL.

RECEIVED BY THE EDITOR  
JANUARY 1, 1934

THE FOLLOWING MANUSCRIPT HAS BEEN RECEIVED  
FROM THE DEPARTMENT OF CHEMISTRY

UNIVERSITY OF CHICAGO

CHICAGO, ILL.

MANUSCRIPT NO. 1234  
JANUARY 1, 1934

RECEIVED BY THE EDITOR

JANUARY 1, 1934

THE FOLLOWING MANUSCRIPT HAS BEEN RECEIVED  
FROM THE DEPARTMENT OF CHEMISTRY

## ATTACHMENT

### REQUEST FOR ADDITIONAL INFORMATION APPENDIX R EXEMPTION REQUESTS TURKEY POINT NUCLEAR PLANT DOCKET NOS. 50-250 AND 50-251

#### NRC QUESTIONS

The following information is needed to complete our evaluation of the Appendix R exemption request made in your April 25, 1986 letter.

1. Attachments 1 & 2\*

Provide details as to the number, location, and size of penetrations in the fire barrier. Quantify the fire load in terms of Btu per square foot. Provide the minimum separation between redundant safe shutdown cables in these areas.

2. Attachment 3

Identify and provide the location of the safe shutdown cables and equipment in these zones. Describe and give the location of any specific fire hazards present.

3. Attachment 4

Clarify the specific instances for which exemptions are requested. Identify the safe shutdown cables and equipment affected. Quantify the fire load in term of Btu per square foot and identify and give the location of specific fire hazards. Provide actual separation distances between safe shutdown cables and equipment.

Note: Attachment numbers in this RAI refer to those of the Licensee's submitted.



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# FPL RESPONSE

## 1. Attachments 1 & 2\*

- The following penetrations are located in the fire barriers addressed by Attachments 1 & 2:

| Fire Area/Zone<br>From To | Fire Barrier<br>No. | Penetration<br>No | Opening Size<br>& Type                | Penetrating<br>Item      |
|---------------------------|---------------------|-------------------|---------------------------------------|--------------------------|
| AAA/24 A/5                | 24F(floor)          | E002              | 2" embedded sleeve                    | Cables                   |
| AAA/24 A/5                | 24F                 | E003              | 2" embedded sleeve                    | Cables                   |
| AAA/24 A/5                | 24F                 | E008              | 2" embedded sleeve                    | Cables                   |
| AAA/24 A/5                | 24F                 | E009              | 2" embedded sleeve                    | Cables                   |
| AAA/24 A/4                | 24F                 | M001              | Slightly larger than penetrating item | 15-3/8" instrument tubes |
| F/48 A/10                 | 48F (floor)         | M005              | 6" embedded sleeve                    | 3" pipe                  |
| F/48 A/10                 | 48F                 | M006              | 6" embedded sleeve                    | 3" pipe                  |
| F/49 A/10                 | 49F (floor)         | M001              | 6" embedded sleeve                    | 3" pipe                  |
| F/50 A/10                 | 50F (floor)         | M001              | 6" embedded sleeve                    | 3" pipe                  |

- Fire loading in each Fire Zone in terms of BTU per square foot:

| Fire Area/Zone | BTU/Sq. Ft. |
|----------------|-------------|
| A/4            | 32,800      |
| A/5            | 45,500      |
| AAA/24         | Negligible  |
| A/10           | 19,000      |
| F/48           | Negligible  |
| F/49           | Negligible  |
| F/50           | Negligible  |

- \* Attachment numbers refer to our submittal dated April 25, 1986.





- Minimum separation between safe shutdown cables measured through the unsealed penetrations.

| Fire Area/Zone<br>From To |        | Minimum Distance Between<br>Safe Shutdown Cables | Remarks   |
|---------------------------|--------|--|---|
| A/4                       | AAA/24 | 23'  | There are no safe shutdown cables in zones 01, 02, 03, 23 and 24 of Fire Area AAA. The closest safe shutdown cables are located two zones away from zone 24.  |
| A/5                       | AAA/24 | 23'  | See above   |
| A/10                      | F/48   | 17'  | There are no safe shutdown cables in Zone 48. Safe shutdown cables are located in the hallways on Elevations 10'0" and 18'0" in Zones 10 and 58 respectively. Zone 48 is enclosed by full height concrete shield walls and the doorway is protected by a shield door.                     |
| A/10                      | F/49   | 17'  | There are no safe shutdown cables in Zone 49. Safe shutdown cables are located in the hallways on Elevations 10'0" and 18'0" in Fire Zones 10 and 58 respectively. Zone 49 is enclosed by full height concrete shield walls and the floor penetration is located behind a labyrinth wall. |
| A/10                      | F/50   | 40'  | There are no safe shutdown cables in Zone 50. Safe shutdown cables are located in hallways on Elevations 10'0" and 18'0" in Zones 10 and 58 respectively. Zone 51 separates Zone 50 from Zone 58.   |

2. Attachment 3

Equipment and a large number of cables associated with safe shutdown functions are located in outdoor fire zones. The majority of the cables and equipment are located in Fire Zones 79, 84 and 89, for which exemptions were granted in the March 27, 1984, SER. The current exemption request is intended to ensure that all outdoor fire zones are addressed even though limited numbers of these safe shutdown cables are located in these zones. In addition, all 'B' train safe shutdown circuits located in outdoor fire zones are protected by one hour fire rated wrap.

The predominant fire hazards located in the Turbine Building are identified by the fire zone description listed in the exemption request. With the exception of condensate pumps, all of these hazards are located along the western perimeter of the Turbine Building, on the opposite side of the Turbine Building from Fire Zones 79, 84 and 89, which interface with the Auxiliary Building, Control Building and both Containment Buildings.

3. Attachment 4

Numerous safe shutdown related components and cables are located within the Unit 3 and Unit 4 Containment Buildings. Cables are routed in conduit and in cable trays, designated SA and SB, that usually run outside the secondary shield wall at tray elevations ranging from 18'7" to 80'0". These trays are not typically separated by a barrier but are vertically separated by a nominal distance of 4'0" and horizontally by 1'6". In addition, redundant circuits are separated by a horizontal distance of 20' or a radiant energy shield except in cases where exemptions were granted in the March 27, 1984, SER.

The fire load in terms of BTU per square foot is 121,000 BTU per square foot for Unit 3 Containment and 117,000 BTU per square foot for Unit 4 Containment. While the figures appear high, they are based on a small floor area (10,600 square feet) versus a large volume (1.5 million cubic feet.) and a combustible inventory which includes reactor coolant pump lubricating oil which is provided with an oil collection system as required by Appendix R Section III.0. The only other sources of concentrated combustibles are the charcoal filters and the polar crane gear case oil. The arrangement of these combustibles and a description of other containment features are included in the Turkey Point Appendix R Report submitted in April and June, 1983.



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