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ACCESSION NBR: 8103260543 DOC. DATE: 81/03/19 NOTARIZED: NO DOCKET #  
 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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 RECIP. NAME: HENDRIE, J.M. RECIPIENT AFFILIATION: Commissioners

SUBJECT: Requests exemption from certain requirements of 10CFR50.48  
 & App R extension of submittal & implementation dates re  
 fire protection program.

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MAR 27 1981

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March 19, 1981  
L-81-123

Honorable Joseph M. Hendrie  
Chairman, Nuclear Regulatory Commission  
Washington, D. C. 20555

Re: Turkey Point Nuclear Units 3 and 4;  
Docket Nos. 50-250 and 50-251  
Request for Exemption from Certain  
Requirements of 10 CFR 50.48 and  
Appendix R to 10 CFR Part 50

Dear Dr. Hendrie:

Florida Power & Light Company (FPL), in accordance with 10 CFR §§50.12(a) and 50.48(c)(6), hereby respectfully requests the Nuclear Regulatory Commission (NRC) to exempt Turkey Point Nuclear Units 3 and 4 from certain requirements set out in 10 CFR §50.48 and Appendix R to 10 CFR Part 50.\*

On November 19, 1980, the NRC promulgated amendments to 10 CFR Part 50, effective February 17, 1981, regarding a new fire protection program for operating nuclear power plants. These amendments added both a new §50.48 and a new Appendix R to Part 50. In Appendix R, the Commission set out fire protection features which it determined are necessary to satisfy Criterion 3 of Appendix A to Part 50. In Section 50.48(c), the Commission ordered schedules for compliance with each of the requirements of Appendix R. Except to the extent that specific exemptions are requested in this document, Turkey Point is in full compliance with the requirements of the rule. In those instances in which the rule requires submittal by March 19, 1981 of plans and schedules for proposed modifications, and FPL is not requesting an exemption from such requirements, the plans and schedules are submitted as a part of this document.

This request will be divided into four parts. Part I will state the specific relief requested.

Part II will discuss the general legal standards governing qualification.

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\* By seeking the particular relief requested in this petition and in presenting technical and legal justifications for such relief, FPL is not abandoning or waiving any of its claims or rights asserted in or arising out of the suit pending in the Court of Appeals for the District of Columbia Circuit in Connecticut Light and Power Company, et al. v. NRC, No. 81- 1050. Any commitments made by FPL in the instant petition are made conditionally, subject to a determination by the Court as to the validity of the provisions of the fire protection rule which are being challenged in that litigation.

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for exemptions pursuant to the Commission's rules.

Part III will address specific requests for exemptions from the implementation dates in 50.48(c). Each requirement of Appendix R for which an exemption from the implementation date is sought will be discussed, and the reasons that the implementation date cannot be met will be set forth therein. For each such request, FPL will provide a date by which it can meet the requirements of the rule and will request the Commission to substitute that date for the implementation date in §50.48(c).

Part IV will address requests for exemptions from specific requirements of Appendix R to 10 CFR Part 50.

I. Specific Relief Requested

In this request, FPL seeks the following relief from both the schedules set out in Section 50.48(c) and the requirements set out in Appendix R Part 50:

1. With respect to the requirements of Section III.G.2 and III.G.3 of Appendix R FPL requests that the Commission exempt it from the requirements of §50.48(c) as follows:
  - (a) Extend from March 19, 1981 for six months the date for:
    - (1) Submittal of plans and schedules and/or design descriptions for any modifications necessary to achieve compliance with Sections III.G.2 and III.G.3 of Appendix R for the Auxiliary Building Corridor and the Cable Spreading Room;
    - (2) Filing requests for additional exemptions from Sections III.G.2 and III.G.3 of Appendix R for the Auxiliary Building Corridor and the Cable Spreading Room pursuant to 10 CFR §§50.12(a) and 50.48(c)(6).
  - (b) Extend from March 19, 1981 for six months the date for submittal, if applicable, of design descriptions of alternative or dedicated shutdown systems to comply with Section III.G.
2. With respect to the requirements of Section III.A. of Appendix R, FPL requests exemption from the requirements of 10 CFR §50.48(c)(2) that modifications necessary to comply with Section III.A of Appendix R be completed by November 19, 1981. FPL requests that the Commission extend from November 19, 1981 to March 31 1984 the date by which Turkey Point must be in compliance with Section III.A of Appendix R.
3. With respect to Sections III.G.2 and III.G.3 of Appendix R, FPL requests exemption from the requirements of those sections for those areas of the plant which have been already reviewed and approved by the Commission as shown by the NRC's Fire Protection Safety Evaluation Report (SER) for Turkey Point Units 3 and 4, as amended.
  - (a) Should the Commission deny FPL's request for such exemption, extend the date for submittal of plans and schedules and/or design descriptions necessary to achieve compliance with the requirements of III.G.2 and III.G.3 for a period of twelve months following the date of such denial.
4. With respect to Section III.J of Appendix R, if deemed applicable to

Turkey Point, FPL requests an exemption from the requirements of that section.

5. With respect to Section III.0 of Appendix R, if deemed applicable to Turkey Point, FPL requests an exemption from the requirements of that section.

- (a) Should the Commission deny FPL's request for an exemption, extend pursuant to §§50.12(a) and 50.48(c)(6) the date for achieving compliance with the requirements of Section III.0 for a period of eighteen months from the date of denial.

## II. General Standards for Relief

The Commission's Regulations provide a general provision for exemption from regulations in Part 50. Section 50.12(a) provides that:

- "(a) The Commission may, upon applications by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest."

In addition, the fire protection regulations themselves, contain a specific exemption procedure, §50.48(c)(6), which provides that:

- "(6) In the event that a request for exemption from a requirement to comply with one or more of the provisions of Appendix R filed within 30 days of the effective date of this rule is based on an assertion by the licensee that such required modifications (on the schedule required) would not enhance fire protection safety in the facility or that such modifications (on the schedule required) may be detrimental to overall facility safety, the schedule requirements of paragraph (c) shall be tolled until final Commission action on the exemption request upon a determination by the Director of Nuclear Reactor Regulation that the licensee has provided a sound technical basis for such assertion that warrants further staff review of the request."

### 1. Relief Under §50.12

In FPL's view, both its requests for exemptions from the scheduling requirements set out in §50.48(c) (discussed in Part III) and its request for exemptions from the requirements of Appendix R (discussed in Part IV) meet the standards for granting exemptions in §50.12(a). FPL believes that such exemptions as it requests from the schedules set out in §50.48 and the requirements of Appendix R are authorized by law, will not endanger life or property or the common defense and security, and are in the public interest.

To begin, FPL points out that the scheduling provisions of §50.48 do not effectuate specific statutory requirements, but rather are regulations promulgated pursuant to the NRC's general statutory obligation regarding

public health and safety. Therefore, if the requested extension is not detrimental to the public health and safety, it is not contrary to the law.

There will be no detrimental effect on the public health and safety if FPL is granted the extensions of the time which it seeks. FPL must emphasize that the fire protection measures currently in place at Turkey Point--the majority of which have already been approved by the NRC Staff in its SER--are entirely adequate to protect the health and safety of the public.

Indeed, the Commission only recently so found. As the Commission pointed out on October 29, 1980, in the context of the Fire Protection Schedules for Operating Nuclear Plants, 45 Fed. Reg. 71569:

"Extensive fire protection measures have already been implemented at all operating plants . . . . No public health and safety interest would be served by forcing only those licensees unable to meet deadlines preceding the effectiveness of the final rule to shut down for the brief interim. To the contrary, the fire protection measures already implemented give reasonable assurance that all operating nuclear plants may continue to operate safely even though the final rule will require additional fire protection measures at many plants." (emphasis added)

In short, then, the Commission itself has found that continued operation of nuclear power plants (including Turkey Point) without any additional action required by §50.48 and Appendix R to Part 50 is not detrimental to the public health and safety.\*/ Moreover, in implementing the final rule the Commission did not find that the public health and safety require implementation of the requirements of Appendix R on the dates set in §50.48(c). Therefore, FPL's

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\* Such a finding is buttressed by the "Separate Comments of Commissions Hendrie and Kennedy" included with the proposed fire protection rule. 45 Fed. Reg. 36082 (May 29, 1980). In those comments, Commissioners Hendrie and Kennedy cautioned specifically against adopting too restrictive schedule requirements for implementing requirements in the final rule. The Commissioners noted that because of Three Mile Island and other "actions we have required" restricted schedule requirements were inappropriate, particularly in light of the fact that those factors, taken together, "may make it impossible for licensees to complete all of these measures in a carefully considered and thorough fashion." Id. Therefore, the Commissioners concluded:

"Since all operating plants have implemented a number of improvements in their fire safety postures, the remaining improvements to be required under the proposed rule do not seem to us so urgent as to require either shutting down of plants because of inability to complete these requirements on the short schedule proposed or to make those improvements in a hasty fashion."

request for exemptions which seek only extensions of the schedule for compliance with the final rule cannot be contrary to the public health and safety.

As FPL will explain in more detail in Part III, the schedules set by the Commission are, in the instances set out therein either simply insufficient for FPL to complete the review and initial design processes required to determine what plant modifications are necessary for compliance with Appendix R, or, in some cases, assuming that such a determination can be made, to complete the design, manufacturing, purchasing and installation of the modifications. The time prescribed by the Commission for compliance with

Appendix R is too short under the best circumstances. However, in this instance, compliance is made substantially more difficult because in many cases necessary personnel and material resources are already in short supply because of this and other current NRC backfitting requirements.

In FPL's view, the granting of the extensions requested is clearly in the public interest. In light of the fact that operation of Turkey Point prior to final compliance with the rule poses no risk to public health and safety, and in light of the fact that the granting of exemptions from schedule requirements is not contrary to the law, it is the position of FPL that the granting of exemptions from the schedule requirements of §50.48(c) is appropriate under §50.12(a).

It is FPL's view that granting of exemptions from the requirements of Appendix R also is authorized under §50.12(a). As in the case of the scheduling provisions, the requirements of Appendix R do not effectuate specific statutory requirements but rather are regulations promulgated pursuant to the NRC's general statutory obligation regarding public health and safety. Therefore, if the requested exemptions are not detrimental to the public health and safety, they are not contrary to the law.

FPL will justify (see Part IV) its requests for exemptions from specific requirements of Appendix R on the basis that implementation of such requirements either will not enhance fire protection safety at Turkey Point or that it will be detrimental to overall facility safety. In either event, of course, the granting of the requested exemptions would not be detrimental to the public health and safety.

Granting FPL's request for such exemptions would also clearly be in the public interest. After all, it is hardly in the public interest to require FPL to make modifications to facilities not required to enhance safety and which in fact might even degrade safety.

## 2. Relief Under §50.48(c)(6)

In FPL's view, both the majority of its requests for exemptions from the scheduling requirements of §50.48(c) and its requests for exemptions from the requirements of Appendix R meet the standards under §50.48(c)(6). That section provides for filing applications to the Commission for exemption from one or more of the requirements of the rule by March 19, 1981, and so long as specified conditions are met the schedule for compliance with the rule shall be tolled until final

Commission action on the exemption. The conditions are that (1) the request be for the exemption from a requirement on the grounds that fire protection safety will not be enhanced by the requirements or that it would be detrimental to overall facility safety; and (2) the Director of Nuclear Reactor Regulation determines "that the licensee's request has provided a sound technical basis for such assertion that warrants further staff review of the request."

FPL's requests for extensions of the time set out in §50.48(c) to file the plans and schedules and/or design descriptions required by Section III.G of Appendix R fall within the scope of §50.48(c)(6). This is so because in FPL's view adherence to those schedules may in fact be detrimental to overall facility safety. As FPL will discuss in more detail in Part III, below, to require FPL to submit such plans and schedules and/or design descriptions as it might be able to do without completing more detailed review would require it to short cut many important stages in the review process, which could result in a situation in which a plan or design is chosen, and steps to implement it undertaken, which are less than the optimum from a design, construction, operational and safety standpoint.\*/ Therefore, it is clear that, if FPL is not granted the extensions which it seeks, the result could be an adverse effect on overall facility safety.

In addition to the request for relief from the schedules in §50.48(c), FPL's requests for exemptions from the requirements of Appendix R also should be considered under §50.48(c)(6). Those requests will be set forth in Part IV, below, and as FPL will show, each is justified on the grounds that compliance with the rule's requirements will not enhance fire protection safety in the facility and may in fact be detrimental to overall plant safety.

### 3. Additional Grounds for Relief

There is an additional ground which FPL believes supports its requests for relief from the requirements of Section III.G and if appropriate, from Sections III.J and III.O, of Appendix R.

The rule specifically provides that, notwithstanding the earlier approval of certain fire protection features as "satisfying the provisions of Appendix A to Branch Technical Position BTP APCSB 9.5-1 reflected in Staff fire protection safety evaluation reports issued prior to the effective date of this rule" (10 CFR. §50.48(b) (footnote omitted)) all the requirements of Sections III.G, III.J and III.O are applicable to each licensed facility. In short, the rule requires backfitting at Turkey Point of the features required by Sections III.G, III.J and III.O.

As FPL will discuss below, it has been issued a Staff Safety Evaluation Report (SER) for fire protection measures required in certain areas of the Turkey Point plant pursuant to Appendix A to BTP APCSB 9.5-

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\*/ The likelihood that a schedule which does not allow sufficient time for compliance would have such an effect was specifically recognized by Commissioners Hendrie and Kennedy.

1. Moreover, FPL has received from the Staff approval of the oil collection system installed on the reactor coolant pump motors at Turkey Point (NRC letter dated December 18, 1980). The SER and the Staff approval are evidence that with respect to the matters covered therein, fire protection is adequate. FPL is aware of no evidence that backfitting Turkey Point to comply with Section III.G, in the areas previously reviewed and approved by the Staff, Section III.J with regard to emergency lighting; and Section III.O, the oil collection system, will substantially enhance fire protection capability at Turkey Point. And in the absence of evidence on the issue and a specific finding thereon, the Commission may not require such backfitting.

Section 50.109(a) allows the Commission to order backfitting of a facility only "if it finds that such action will provide substantial, additional protection which is required for the public health and safety. . . ."

Thus, before the Commission can require, by regulation or otherwise, backfitting of fire protection features required by Section III.G in areas already approved at Turkey Point, and in Sections III.J and III.O, it is obligated to make a record of findings sufficient to support a conclusion that these modifications, if implemented at Turkey Point, would provide "substantial, additional protection." To FPL's knowledge, the Commission has made no such finding.

III. Request for Exemptions from Implementation Dates in 10 CFR 50.48(c)

FPL is requesting an exemption from those schedules set out in Section 50.48(c) as they apply to certain requirements of Appendix R. More specifically, FPL requests that it be exempted from the implementation requirements of 10 CFR 50.48(c) with respect to each of the following requirements of Appendix R. In each instance, FPL will suggest schedules for compliance with the several requirements to be substituted in place of those in the rule.

I. III.G - "Fire Protection of Safe Shutdown Capability"

III.L - "Alternative and Dedicated Shutdown Capability"

Section 50.48(b) makes it clear that the provisions of Section III.G of Appendix R apply to Turkey Point notwithstanding any prior approval by the NRC Staff.

Section III.G requires, among other things, that fire damage be limited so that one train of systems necessary to achieve and maintain safe shutdown conditions will, in the event of a fire, remain free of fire damage. In order to determine whether Turkey Point is in compliance with Section III.G, FPL must reassess all those areas of the plant,

" . . . where cables or equipment, including associated non-safety circuits, that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground (of) redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment. . . ."

to determine whether the requirements of III.G.2 are satisfied. If those requirements are not met for each such area FPL must (1) provide for that area modifications to bring it into compliance, or (2) provide an alternative



shutdown capability which conforms with III.G.3, or (3) request an exemption if there is a justifiable basis for so doing. The design parameters for the alternative shutdown capability are set out in Section III.L. In addition to specific design parameters, Section III.L also offers FPL the option of either adopting an alternate fire shutdown capability for each specific fire area, or adopting a single alternative and dedicated shutdown capability for the entire plant.

Section 50.48(c)(5) requires FPL to submit, by March 19, 1981, "plans and schedules" for any modifications to a specific area necessary to comply with Section III.G.2. That section further requires prior Staff approval of any proposed alternative shutdown capability required by Section III.G.3, and also requires that "design descriptions of such proposed alternatives be submitted by March 19, 1981.

FPL is proceeding on a course of action which will allow it to make a reasoned determination with respect to the modifications to the plant required to achieve compliance with the requirements of Section III.G and, if appropriate, Section III.L. Upon reaching a conclusion with respect to the necessary modifications, FPL will be in a position to determine whether to implement such modifications or whether in its best judgment a request for exemption from the requirements of III.G and III.L is justified.

Despite its best efforts, however, for two specific areas of the plant which fall within the scope of Section III.G.2, the Auxiliary Building Corridor and Cable Spreading Room, \*/ FPL is unable to meet the March 19, 1981 filing requirements of 50.48(c)(5) with respect to plans and schedules (III.G.2) and, if appropriate, design descriptions (III.G.3) of modifications necessary for compliance with Section III.G.

Since November 19, 1980, FPL and its consultants have expended in excess of 1000 manhours on these requirements alone. It is important to understand, that this effort has and will continue to be worked by personnel that are totally familiar with virtually all aspects of the plant's electrical design. These types of key personnel are also required to work on other major nuclear tasks such as post TMI-Lessons Learned changes, Environmental Qualification of electrical equipment, etc. Hence these fire protection tasks must be integrated into other scheduled NRC commitments. Furthermore, NRC letter dated February 20, 1981 requests additional evaluations and information which places an ever higher burden on available key manpower. As an example, just the Associated Circuit evaluations will likely require as much as 30 man months of engineering effort. Therefore, the magnitude of the design and engineering effort to determine what is necessary for compliance simply makes it impossible to meet the March 19 date for such submittals. FPL therefore requests that the Commission extend the date for making those filings from

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\*/Both these areas were "open" in the Staff's fire protection SER.

March 19, 1981 for six months. Moreover, FPL intends to file, pursuant to §50.48(c)(6), requests with the Commission for exemption from certain specific requirements of Sections III.G.1 and III.G.3 for these areas. However, before FPL can request under §50.48(c)(6) an exemption from the requirements of Section III.G in these areas it must first determine what is necessary to achieve that compliance. Therefore, FPL is unable to file such requests for exemption by March 19, 1981 and asks that the Commission extend the March 19, 1981 date for six months.

Extensive efforts are required in order for FPL to determine the modifications necessary for compliance with the requirements of Section III.G with respect to the Auxiliary Building Corridor and the Cable Spreading Room.

With respect to the areas under consideration, FPL then must assess each of the relevant cables or items of equipment to determine whether the fire barrier/separation/detection and suppression criteria of Section III.G.2 are met. Assuming those criteria are not met, FPL must identify what modifications are necessary to meet the criteria and whether the modifications can in fact be made. This step involves substantial preliminary design and engineering work. In order to prepare a preliminary design of any modification necessary, it is necessary for FPL to evaluate numerous possible effects on other safety-related systems or equipment in order to assure that none of the potential impacts will adversely affect facility safety. For example, for each of these areas FPL will have to assess the potential impacts of installation and operations of automatic detection and suppression systems and barriers on plant operation, under both normal and postulated accident conditions.

Having determined for each area what is involved in making the necessary modifications, FPL will be in a position to determine whether those modifications should be implemented, or whether for that particular area under consideration it should install alternate shutdown capability. If FPL determines that it should comply with Section III.G.2, it then will proceed to identify all equipment which could impair safe shutdown were it to be damaged by a fire and insure that redundant equipment or systems are available to prevent or mitigate such events. Following that analysis, conceptual designs of modifications necessary to correct identified problems will have to be prepared.

Should FPL determine that an alternative or dedicated shutdown is either preferable or required for a specific area, its efforts will be directed toward preparing design descriptions of such a system. This will entail consideration of numerous factors including design objectives, performance goals and design criteria. It will be necessary to develop plot plans and general arrangements showing location of alternative or dedicated shutdown equipment and identifying the general route of dedicated cable and barrier separations. In preparing design descriptions, it will be necessary to prepare one-line drawings of electrical distribution and process flow diagrams. The design description must include descriptions of electrical controls and descriptions of the essential function of each structure, system and component which will be involved in the shutdown system. Of great importance in the design process is the need to consider interface with safety-related systems and to establish criteria for those interfaces.

Once a determination has been made that alternate shutdown is required for one or more areas, it will then be possible for FPL to determine whether it should install one separate system for all such areas. Before that decision can be made, however, enough preliminary design and engineering work must be done to enable FPL to assess installation and cost of such a system so that it can be balanced against the alternatives. And again, such balancing must include detailed consideration of plant safety. Such a new and separate system would require its own building and its own board control system. The evaluations would also include installation of totally new boron injection pumps, auxiliary feedwater pumps, associated piping and electrical wiring and associated new installations of power supply. Installation of such a system would also include new penetrations into both the Auxiliary Building and the Containment Buildings.

It is not until all the work discussed above has been completed that FPL will be in a position to make its final determinations on the methods which it will use to comply with Sections III.G and/or III.L. Moreover, it will not be until that time that FPL will be in a position to request exemptions from the requirements of Section III.G.

FPL wishes to emphasize that the fire protection measures currently installed at Turkey Point, including those approved by the Staff in its SER, are entirely adequate to protect health and safety of the public. As was discussed in Part II, above, the Commission recognizes this fact. Clearly, then, the granting of the above exemptions from the schedules established in §50.48(c) will in no way adversely affect the health and safety of the public. To the contrary, for the reasons set forth above, to impose the schedules in §50.48 upon FPL will create a very real risk that overall facility safety will be impaired.

## 2. III.A - "Water Supplies for Fire Suppression Systems"

In order to comply with the requirements of Section III.A at Turkey Point Units 3 and 4, FPL must, at a minimum, (1) modify the existing on-site 500,000 gallon water tank by installing a new standpipe to dedicate a minimum of 300,000 gallons of the capacity of that tank to fire protection purposes; (2) design, engineer, procure, and construct a new on-site water tank of 750,000 gallon capacity, to include a redundant water supply of at least 300,000 gallons; and (3) install an automatic starting diesel fire pump to supply the fire systems. The cost of installing these new components and modifying the existing tank is estimated to be \$1,860,000. It is FPL's intention to comply fully with the requirements of Section III.A. However, FPL is unable to achieve full compliance with Section III.A on the date required by the rule. The schedule set out in §50.48(c)(2) applies to the installation of the modifications described above. That schedule requires that those modifications be installed nine months after the effective date of the rule, or by November 19, 1981. FPL, despite its best efforts, will be unable to comply fully with Section III.A before March 31, 1984.

The new on-site water tank will be approximately 750,000 gallons capacity. It is necessary to install a tank of that size in order to both meet the NRC's requirements that a total of 600,000 gallons of water (300,000 gallons from each of the two on-site tanks) be dedicated for fire protection purposes from two separate, and redundant, sources and to supply the normal

needs of the four generating units - two fossil and two nuclear - on the Turkey Point Site. FPL began the preliminary design and engineering work necessary to meet the requirements of Section III.A promptly following the promulgation of the fire protection rule. The procurement process for the new tank as well as for the diesel fire pump has also begun. However, because of current NRC requirements, pumps of the type necessary to meet these standards are in heavy demand and in short supply throughout the country. Therefore, FPL cannot get delivery of the required diesel fire pump until June of 1982. Moreover, FPL cannot get delivery of the components necessary to construct the new storage tank until October 1982. Construction of the new water storage tank and installation of the diesel fire pump cannot be completed until October 1983. Modifications of the current tank cannot begin until completion of construction and availability of the new tank and therefore can not be completed until March 31, 1984.

For the reasons set forth above, it is impossible for FPL to comply with the schedule set out in §50.48(c)(2) with respect to the specifically discussed requirements of Section III.A of Appendix R. As discussed in Part II, above, granting of an exemption from the schedule requirement is authorized by law, will not endanger life or property or the common defense and security, and is in the public interest. Therefore, FPL requests that the Commission exempt Turkey Point Units 3 and 4 from the requirement set out in §50.48(c)(2) that the modifications required by Section III.A of Appendix R be implemented by November 19, 1981. FPL further requests that the Commission authorize FPL to bring Turkey Point Units 3 and 4 into compliance with the above requirements no later than March 31, 1984.

#### IV. Requests for Exemptions From Requirements of Appendix R to 10 CFR Part 50

FPL is requesting an exemption from certain provisions of Appendix R to Part 50 as they apply to Turkey Point Units 3 and 4. More specifically, FPL requests that it be exempted from the requirements of Sections III.G.2 and III.G.3 and, if applicable, Sections III.J and III.O of Appendix R in the following respects.

##### I. III.G - "Fire Protection of Safe Shutdown Capability"

The requirements of Section III.G of Appendix R apply to licensees notwithstanding prior acceptance by the NRC Staff. It is FPL's view that, for each area in the Turkey Point plant to which III.G.2 applies, and which was closed by the NRC Staff in its Fire Protection Safety Evaluation Report (SER) for Turkey Point, dated March 21, 1979, an exemption should be granted.

While there are some fire areas in Turkey Point that are not in literal compliance with the standards of Section III.G, they were reviewed and closed in the SER. FPL maintains that for each of these areas the fire protection measures that are already in place are more than adequate to protect public health and safety. The NRC Staff has reviewed each of these areas on the basis of fire protection and, as evidenced by virtue of having closed the SER, has determined that adequate protection against fires exists in each such area.

FPL maintains that, for these areas, performing any modifications that would be necessary to comply with Sections III.G.2 or III.G.3 would not

enhance fire protection safety at Turkey Point. The Commission has made no finding that strict compliance with the requirements of Section III.G is necessary to provide substantial additional protection to the public health and safety. Rather than mandatory literal compliance, FPL suggests that the Commission's enforcement of its new regulations should be tempered by considerations of practicality and reasonableness. Where licensees have complied with past fire protection requirements, sometimes at great cost, backfitting of facilities should not be mandated unless such modification would significantly enhance fire protection safety.

For Turkey Point, the cost of modifying these fire areas that were closed under the SER would be substantial in terms of dollars, disruption of plant operation and in the diversion of personnel from other important safety-related functions. The additional protection that such modifications would afford public health and safety, on the other hand, would be speculative at best. FPL seeks exemption for all areas of Turkey Point for which the SER was closed on the ground that undertaking the major modifications called for by Section III.G would not enhance fire protection at the facility.

The burdensome and superfluous nature of Section III.G as it pertains to these areas is best understood in light of FPL's efforts stretching over several years to upgrade and maintain fire protection levels at Turkey Point.

FPL's Fire Protection Report, "Fire Protection -- A Reevaluation of Existing Plant Design Features and Administrative Controls", submitted on February 25, 1977, successfully demonstrated the capability safely to bring the plant to cold shutdown given the design basis fires in each safe shutdown area. This successful demonstration was based on a number of inherent features designed in the plant. During the development stages of the Fire Report, FPL identified many areas that required attention with respect to fire safety. These areas were actively pursued and expediently corrected. Prior to the issuance of the Safety Evaluation Report, FPL had expended more than 1.2 million dollars at Turkey Point in fire protection equipment and piping costs alone.\*/ As FPL's fire protection report demonstrates, these efforts were shown to be far in excess of those recommended by the NRC's own Special Review Group on the Browns Ferry Fire (NUREG-0050) dated February, 1976. NUREG-0050 stated

"as the result of the calculation based on the Browns Ferry Fire, the study concludes that the potential for a significant release of radioactivity from such a fire is about 20% of that calculated from all other causes analyzed. This indicates that predicted potential accident risks from all cases were not greatly affected by consideration of the Browns Ferry Fire. This is one of the reasons that urgent action in regard to reducing risks due to potential fires is not required."

NUREG-0050 goes on to say, "Based on its review of the events transpiring before, during, and after the Browns Ferry Fire, the Review Group concludes that the probability of disruptive fires of the magnitude of the Browns Ferry event is small, and that there is no need to restrict operation of Nuclear

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\*/ . In 1980 dollars.

Power Plants for public safety."

The safe shutdown capability of Turkey Point is well protected from fire. In addition, all cable tray systems in the plant are coated with a proven fire retardant coating which further assures cable protection and precludes fire spread along the cable systems. No combustibles are stored in areas of concentrations nor is there any equipment in these areas which require combustibles for operation or maintenance. Early Warning Fire Detectors are installed in all of these areas which require combustibles for operation or maintenance. Extensive analysis by FPL for determining burn rates and gas and surface temperatures used fires far in excess of design basis fires and still no damage or fire propagation was shown to occur as a result of design basis fires. Furthermore, FPL has successfully demonstrated that the manual fire suppression capability at the facility is sufficient to extinguish all design basis fires.

It should be noted that NRC letter dated November 18, 1977 acknowledged that, based on the NRC's review of FPL's Fire Protection Report, FPL had substantially reduced "the potential for exposure fires by control of combustible material, control of sources of flame, and improvement of fire protection personnel."

Several visits by NRC Fire Protection Inspection Teams resulted in the approval of additional extensive actions taken by FPL to meet NRC fire protection concerns. The NRC's visit to Turkey Point during the period of March 27-30, 1978, produced a myriad of Staff concerns to which FPL directly provided responses and/or actions to provide virtual item-by-item compliance.

Those efforts were reflected in the NRC's Fire Protection SER for Turkey Point which listed some 40 modifications that were required by FPL. These modifications involved changes to the control room, switchgear rooms, ventilation system, reactor auxiliary building, containment buildings, diesel generator building, yard area -- in essence, every major area in the plant. These modifications have all been completed with a few exceptions: SER items 3.1.6; 3.1.9; 3.1.13, and 3.1.15 which have been rescheduled in accordance with the NRC's February 13, 1981 letter from the Commission.

To complete these modifications and meet the concerns of the Safety Evaluation Report, FPL has already invested more than 2.2 million dollars at Turkey Point in capital costs alone. Additionally, to meet the remaining open items of Appendix R, FPL will expend more than 18 million dollars at Turkey Point.

Thus, it is clear that FPL, in response to site visits by NRC Inspectors, and in response to NRC Safety Evaluations and related NRC correspondence, has been extremely responsive and compliant with NRC concerns regarding III.G items. Therefore, due to these efforts, FPL believes that those items closed in the SER should be considered as satisfying the intent of Section III.G.

It is FPL's position that, for the areas previously closed in the SER, an acceptable level of fire protection is provided for the safe shutdown capability of Turkey Point. The NRC Staff concurred with this assessment at the time that it agreed to close the items in the SER. FPL is aware of no supervening developments or practical evidence of any kind that indicates that

the previously approved fire protection items closed under the SER are inadequate. All that has apparently changed is the NRC's promulgation of a new rule adopting different fire protection standards without any evidence in the record which demonstrates that with respect to those areas, the criteria of Section III.G will provide substantially greater protection to the public health and safety than presently exists at Turkey Point.

FPL believes that it was never the intent of the Commission to require the backfitting of items previously closed under the SER. As the Commission is well aware, the proposed rule called for the complete retrofitting of plants if necessary to achieve compliance with Sections III.A-0. In numerous communications with members of the NRC Staff, FPL was repeatedly assured that the Commission had no intent to require the backfitting of previously closed items.

Although the final rule does not require backfitting to the extent called for in the proposed rule, nonetheless requiring licensees to modify their units to comply with Section III.G, still places a substantial burden on licensees that wasn't anticipated. FPL was quite perplexed when it learned that the final rule retained the requirement that licensees backfit their units to any extent for items previously closed under the SER. In light of the repeated assurances of the Staff that the Commission did not intend to impose backfitting requirements upon licensees, FPL believes that it is not the intent of the rule to require substantial modifications to a facility such as Turkey Point where adequate levels of fire protection already exist.

FPL therefore requests an exemption pursuant to §50.48(c)(6) from Section III.G for those items previously closed under the SER. In view of the present design of Turkey Point, including the many modifications implemented in the recent past to increase the protection against fire, FPL is confident that compliance with Section III.G with respect to the closed SER items would not enhance fire protection at the facility. The speculative nature of any safety benefits as compared to the substantial additional cost and burdens that compliance would impose upon FPL weighs heavily in favor of the issuance of an exemption in this case. This is particularly true in light of FPL's understanding that it was not the intent of the Commission to require that licensees retrofit items previously closed under the SER. Accordingly, FPL requests that the Commission grant an exemption for Turkey Point.

Should the Commission deny FPL's request for an exemption, FPL requests in the alternative that the Commission extend the date for submittal of plans and schedules and/or design descriptions necessary to achieve compliance with Sections III.G.2 and III.G.3 for a period of eight months from the date of such denial. The denial of the exemption request would mean that FPL would have to identify the modifications that would be necessary to comply with Sections III.G.2 and III.G.3, choose the optimum alternative, and prepare plans and schedules for submittal to the NRC. The steps necessary to complete those analyses are set out above, in Part III. An additional eight months would be necessary to permit FPL to proceed in a manner that maximizes protection against fires without degrading overall plant safety in other respects. FPL therefore seeks an exemption from the time schedule in the rule pursuant to §50.48(c)(6). FPL notes that such an exemption may also be granted in this particular instance under the standards of §50.12 of the Commission's rules.

2. III.J - "Emergency Lighting"

Pursuant to §50.48(b) of the Commission's rules, the requirements of Section III.J are applicable to Turkey Point notwithstanding the Staff's prior acceptance of the emergency lighting system. FPL has completed at Turkey Point Units 3 and 4 the installation of emergency lighting units with at least an eight-hour battery supply. The location of emergency lighting units was based on the identification of areas by the NRC in which augmented emergency lighting was needed for the operation of safe shutdown equipment and in access and egress routes thereto. FPL therefore believes that Turkey Point Units 3 and 4 are in full compliance with the intent of Section III.J.

Should the Commission not agree with FPL's assessment, however, FPL requests that it be granted an exemption. Any further modifications to the emergency lighting system would not, in FPL's view, enhance fire protection safety at the facility. Accordingly, FPL requests that the Commission grant an exemption pursuant to §§50.12(a) and 50.48(c)(6) of the rules.

3. III.0 - "Oil Collection System for Reactor Coolant Pump"

Section 50.48(b) makes it clear that the provisions of Section III.0 of Appendix R apply to Turkey Point notwithstanding prior acceptance by the Staff. Section III.0 requires that the oil collection system

"shall be so designed, engineered, and installed such that failure will not lead to fire during normal or design basis accident conditions and that there is reasonable assurance that the system will withstand the Safe Shutdown Earthquake."\*/

On October 7, 1980, FPL forwarded to the NRC Staff support for its earlier commitment to design "the Turkey Point RCP oil collection system to prevent loss of operability of safety-related equipment during a SSE."

On December 8, 1980 the Staff informed FPL by letter that it had completed its evaluation of the reactor coolant pump motor oil collection systems at Turkey Point. In its evaluation the Staff concluded that "Based on the licenses verification, we conclude that there is reasonable assurance that the oil collection system will withstand an SSE which meets Section III.0 of Appendix R of 10 CFR Part 50 and, therefore, is acceptable." In the letter transmitting that evaluation, the Staff stated that, "Based on your verification, we conclude that the proposed oil collection system for reactor coolant pumps meets Section III.0 - 'Oil Collection system for Reactor Coolant Pump,' of Appendix R to 10 CFR Part 50 and, therefore, is acceptable,"

Based on the above exchange, FPL reviews the matter of the oil collection system for Turkey Point reactor coolant pumps to be closed. In fact, FPL would point out that it has completely installed the oil collection systems. However, the fire protection rule appears to require FPL to reevaluate the matter.

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\*/ See Regulatory Guide 1.29 "Seismic Design Classification" Paragraph C.2.



In FPL's view, the oil collection system meets the requirements of Section III.0. First, with respect to the SSE, the system is designed for the Maximum Hypothetical Earthquake in accordance with Appendix 5A of the Turkey Point Units 3 and 4 FSAR. Second, with respect to design basis accidents, the system, as designed, will withstand the containment environment associated with some design basis accidents, but not those associated with a loss-of-coolant-accident (LOCA).

However, FPL does not believe that it is the intent of the rule that the design of the oil collection system be evaluated in the context of a LOCA in conjunction with a fire. First, the rules specifically states that the system must be designed so that its "failure will not lead to fire during normal or design basis accident conditions." The containment environmental conditions associated with a LOCA are such that a fire is virtually precluded. Consequently, failure of the system during a LOCA will not "lead to fire" and therefore the rule does not require the system be designed to that level. Second, at no time during the review process which resulted in the final rule was there any indication that any fire protection equipment be designed to withstand DBAs. Indeed, it was specifically stated otherwise. Neither Branch Technical Position APCS 9.5-1 nor Regulatory Guide 1.120, Revision 1 required that a plant have such a capability, i.e., "Fires need not be postulated to be concurrent with non-fire-related failures in safety systems, other plant accidents, or the most severe natural phenomena." Moreover, the capability to manually load the pumps onto the diesel generators is always maintained. Third, FPL's position with respect to the oil collection system satisfying the rule is reinforced by the fact that the Staff, in evaluating the system following publication of the rule, found that it complied. FPL believes that the Commission's interpretation would be similar.

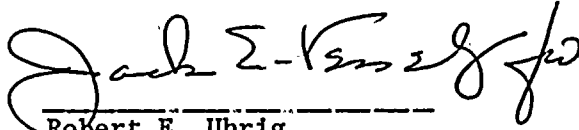
However, should FPL's understanding as to the intent of the rule be incorrect; that is, should the Commission really intend that the oil collection system be designed to withstand the containment environment associated with a LOCA, then FPL requests an exemption from that provision.

The basis for such request is that upgrading the present oil collection systems to the level necessary to withstand such conditions will not enhance fire protection safety in the facility, pursuant to §50.48(c)(6). Because containment environment during a LOCA virtually precludes occurrence of a fire, any such upgrading will not enhance fire safety.

If, as shown above, meeting the requirement of Appendix R, Section III.0 by upgrading the oil collection systems at Turkey Point will not enhance overall facility safety, then FPL should be exempted from that requirement of the regulations, pursuant to §50.48(c)(6). Moreover, as discussed in Part II, above, such exemption is authorized by law, will not endanger life or property or the common defense and security, and is in the public interest.

Should the Commission not allow FPL's request for an exemption, FPL estimates that the modifications that would be necessary to comply with Section III.0 could not be completed prior to the fall of 1983. Accordingly, should the Commission not allow FPL's request for an exemption as discussed above, FPL requests an exemption pursuant to §50.12(a) from the time schedule in §50.48(c)(2) so that FPL may have until the fall of 1983 to attain compliance with Section III.0.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Robert E. Uhrig", written over a horizontal line.

Robert E. Uhrig  
Vice President - Advanced  
Systems and Technology