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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  
 AUTH. NAME: UHRIG, R.E. AUTHOR AFFILIATION: Florida Power & Light Co.  
 RECIP. NAME: EISENHUT, D.G. RECIPIENT AFFILIATION: Division of Operating Reactors

SUBJECT: Ack receipt of 790913 ltr re followup actions resulting from  
 NRC review of TMI. Forwards response including info re  
 emergency power supply requirement, relief & safety valve  
 testing, direct indication of valve position & recombiners.

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October 22, 1979  
L-79-293

Office of Nuclear Reactor Regulation  
Attention: Mr. Darrell G. Eisenhut, Acting Director  
Division of Operating Reactors  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: Turkey Point Units 3 & 4  
Docket Nos. 50-250 & 50-251  
NUREG-0578

We have reviewed your letter of September 13, 1979 regarding the followup actions resulting from NRC staff review of the TMI-2 event, and our response for Turkey Point Units 3 and 4 is attached. While we are attempting to meet the staff's proposed schedule, this will not be possible in every instance. We believe that the commitments made in our response represent a realistic and reasonable schedule.

Very truly yours,

*for E. L. Edomast*  
Robert E. Uhrig

Vice President  
Advanced Systems & Technology

REU/MAS/cph

Attachment

cc: Mr. James P. O'Reilly, Region II  
Harold F. Reis, Esquire

App  
3/3  
Add:  
J OLSHIN  
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910250

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## ATTACHMENT

### 2.1.1 EMERGENCY POWER SUPPLY REQUIREMENT

Preliminary reviews to date indicate that Turkey Point Units 3 and 4 presently meet the requirements of NUREG-0578, Item 2.1.1. Therefore, the functional and schedular requirements are expected to be fully met. Should the ongoing review show that modifications are required, they will be evaluated and scheduled and we will inform the NRC of such schedule.

### 2.1.2 RELIEF AND SAFETY VALVE TESTING

Florida Power & Light Company is part of an owners group formed by utilities utilizing Westinghouse reactors in their plants. The Westinghouse Owners Group is working in conjunction with the other PWR owners and the Electric Power Research Institute (EPRI) to develop a program for qualification of relief and safety valves under expected operating conditions including solid-water and two-phase flow conditions. The program descriptions and schedule will be submitted by the required date of January 1, 1980.

### 2.1.3.a DIRECT INDICATION OF VALVE POSITION

The Turkey Point Units 3 and 4 primary system relief and safety valves will be provided with direct position or flow indication devices which meet the functional requirements of NUREG-0578, item 2.1.3.a. It is FPL's intent to install the required equipment during each unit's scheduled 1980 refueling outage. This commitment assumes that equipment procurement will not impact the desired schedule.

### 2.1.3.b INSTRUMENTATION FOR INADEQUATE CORE COOLING

Turkey Point Units 3 and 4 are proceeding with the purchase of Subcooling Meters for installation in the control room. The meters will continuously display the margin to saturation in units of either temperature or pressure through the use of a selector switch. A vendor has been selected and advised of our decision in order to expedite delivery in parallel with the processing of documents required for the purchase of the equipment.

The procedures to be used by an operator to recognize inadequate core cooling will be developed based on analyses being performed as required by Item 2.1.9, Transient & Accident Analysis, Analysis of Inadequate Core Cooling. Procedural guidelines developed by the Westinghouse Owners Group will be used to establish generic resolutions no later than January 1, 1980.

The functional requirements and a conceptual design for a reactor vessel level measurement device are being reviewed by Florida Power & Light Company. This effort includes a survey of currently available technology and assessment of the feasibility of various

alternatives. If required as a result of the generic resolutions discussions with the NRC Staff, the functional requirements and conceptual design will be submitted for proposal review by the NRC Staff prior to implementation. The installation schedule for such a device, should it be deemed necessary, will be established during the Proposal Review.

#### 2.1.4 DIVERSE CONTAINMENT ISOLATION

Turkey Point Units 3 and 4 meet the requirement for diverse containment isolation in that containment isolation is initiated from a containment pressure signal and also from a safety injection actuation signal. In order to be in full compliance with the intent of NUREG-0578, item 2.1.4, modifications to prevent inadvertent repositioning of isolation valves are being implemented. These modifications should be completed by January 1, 1980.

#### 2.1.5.a DEDICATED H<sub>2</sub> CONTROL PENETRATIONS

Turkey Point Units 3 and 4 have redundant purge connections which are independent of the large containment penetrations. However, we have not concluded our engineering review to determine if the design criteria specified in NUREG-0578, item 2.1.5.a are met. This review will be completed and Florida Power & Light Company will provide a plan description which meets the intent of the NUREG-0578 requirements by January 1, 1980. Any required modification will be completed during the 1981 refueling outages for each unit.

#### 2.1.5.c RECOMBINERS

Turkey Point Units 3 and 4 do not currently employ hydrogen recombiners for control of hydrogen gas in the containment resulting from zirc-water reaction. As a result, no procedures exist, nor are any required for recombiner usage at this time. Should future requirements result in the installation of recombiners, procedures for their use will be provided at that time.

#### 2.1.6.a SYSTEMS INTEGRITY FOR HIGH RADIOACTIVITY

FPL is currently developing a program which will identify leaks in systems outside containment that could potentially contain highly radioactive fluids during a serious transient or accident. The program will identify applicable systems, develop procedures, and establish inspection frequencies and acceptance criteria. Our preliminary evaluations indicate that applying this program to gaseous systems will be considerably more difficult than to the liquid systems, however, our intent is to complete the short term leakage reduction programs during each unit's 1980 refueling outage.

#### 2.1.6.b PLANT SHIELDING REVIEW

Our A/E is presently performing the required design review. They have advised us that a review of the plants and identification of potential problems can be completed prior to January, 1980, however,

dose calculations affecting personnel access and sensitive equipment will be completed by July 1, 1980. Our intent is to attempt to implement required shielding or other modifications during the 1981 refueling outages for each unit. However, this is obviously dependent on the extent of the required modifications. We will provide the actual schedule as soon as it can be established.

2.1.7.a AUTOMATIC INITIATION OF AUXILIARY FEED

Turkey Point Units 3 and 4 presently have automatic initiation of auxiliary feed with the exception that the normal operating mode has the flow control valves closed requiring manual modulation from the control room by the designated operator. We intend to add automatic time delayed opening of the discharge valves, thus giving fully automatic auxiliary feedwater initiation. However, our A/E has not indicated that a January 1, 1980 completion date is feasible. We will make every attempt to fully comply with this item during the 1980 refueling outages for each unit.

2.1.7.b AUXILIARY FEED FLOW INDICATION

Our A/E has indicated that qualified transmitters cannot be procured by January 1, 1980. Our intent would be to complete installation that would satisfy the NUREG-0578 requirements during the 1980 refueling outages for each unit (if somehow we can get the required equipment within this time frame). If these plans are precluded by unavailability of equipment, we would complete the required work as soon thereafter as practical.

2.1.8.a POST ACCIDENT SAMPLING

In conjunction with Section 2.1.6.b above, a design review is in progress to identify areas where the post-accident sampling capability can be improved. This review is scheduled for completion by January 1, 1980. Additionally, plant procedures are undergoing a detailed review in order to accomplish the same end including the minimization of personnel exposure. Procedure revisions are scheduled for completion by July 1, 1980. If plant modifications are required, a description of any such modifications and a schedule for implementation will be submitted to the NRC.

If the radiological spectral analysis cannot be performed in a prompt manner with existing equipment, design modifications, equipment procurement, or contractual arrangement will be undertaken to accomplish a spectral analysis. The two hour time restriction is considered to be neither practical nor critically essential. It should be noted that we anticipate complex and potentially insurmountable difficulties in complying with the requirements regarding chlorine and boron analyses. Our investigations indicate that a highly-radioactive chloride and boron analysis could not be performed on-site. A contractual arrangement is being investigated along with on-line boron-monitoring capabilities. Following the resolution of these specific requirements, an implementation schedule will be submitted to the NRC.

#### 2.1.8.b HIGH RANGE RADIATION MONITORS

Florida Power & Light is proceeding to design, procure and install noble gas monitors in plant effluent lines and high range containment radiation monitors. We anticipate that installation of this system can be accomplished during or prior to the unit's scheduled 1981 refueling outage.

#### 2.1.8.c IMPROVED IN-PLANT IODINE INSTRUMENTATION

In view of the lead time involved in obtaining the equipment necessary to comply with this requirement, as well as the time needed to engineer and install the modification, we estimate that we will be unable to meet implementation schedule date of January 1, 1980. FP&L will, however, make every effort to accomplish the installation of this system at the earliest date practical.

#### 2.1.9 1. Transient and Accident Analysis

Analyses of small break loss-of-coolant accidents, symptoms of inadequate core cooling and required actions to restore core cooling, and analysis of transient and accident scenarios including operator actions not previously analyzed are being performed on a generic basis by the Westinghouse Owners Group of which Florida Power & Light Company is a member. The small break analyses has been completed and are reported in WCAP-9600, which was submitted to the Bulletins and Orders Task Force by the Owners Group on June 29, 1979. Incorporated in that report were guidelines that were developed as a result of the small break analyses. These guidelines have been reviewed with the B&O Task Force and were presented to the owners group utility representatives at a seminar held on October 16-19, 1979. Following this seminar, each utility will develop plant specific procedures and train their personnel on the new procedures. (It is intended that the revised procedures and training will be in place by December 31, 1979, in accordance with the requirement in Enclosure 6 to Mr. Eisenhut's letter of September 13.)

The work required to address the other two areas -- inadequate core cooling and other transient and accident scenarios -- is being performed in conjunction with the Bulletins and Orders Task Force, including establishment of information requirements to meet the duties specified in Enclosure 6. Analyses related to the definition of inadequate core cooling and guidelines for recognizing the symptoms of inadequate core cooling based on existing plant instrumentations and recovery from such a condition will be provided by October 31. Further work to better define the approaches to inadequate core cooling and recovery operations may be required and will be performed later. It is intended that the guidelines provided by October 31, 1979, will be incorporated into plant procedures and training accomplished by the required date of January 1, 1980.

The Owners Group is also providing pretest prediction analysis of the LOFT L3-1 nuclear small break experiment. This analysis will be submitted by the required date of November 15, 1979, in accordance with the schedule established by the B&O Task Force.

2. Containment pressure monitor.
3. Containment water level monitor.
4. Containment hydrogen monitor.

Items 2, 3, and 4 are presently being engineered and preliminary schedules provided by our A/E (assuming no unusual equipment procurement problems) indicate that FPL can complete installations of these items during the scheduled 1981 refueling outages for each unit.

#### 5. RCS Venting

FPL is presently evaluating functional requirements and conceptual designs for the addition of RCS vents to Turkey Point Units 3 and 4. These requirements and a conceptual design will be available for discussions with the NRC Staff to establish generic resolutions no later than January 1, 1980. A decision concerning installation of an RCS venting system at Turkey Point Units 3 and 4 will be made following completion of the generic resolution meetings.

#### 2.2.1.a SHIFT SUPERVISOR RESPONSIBILITIES

Plant procedures and practices in this area are undergoing review to ensure that reactor operations command and control responsibilities and authority are properly defined. Procedure revisions or other changes required as a result of this review will be incorporated by January 1, 1980. An operational policy directive specifying the duties, responsibilities, authority and lines of command covering the control room operators, the shift technical advisor and the shift supervisor will be issued by FP&L's corporate management by January 1, 1980.

#### 2.2.1.b SHIFT TECHNICAL ADVISOR

FP&L will establish technical advisors, either on call or on each shift, during periods when one or both Turkey Point nuclear units are not in the cold shutdown or refueling modes as defined in the Technical Specifications. A minimum of 2 qualified individuals would be on call at all times and would be capable of responding within 45 minutes. Each individual on call will be supplied with two-way radios to enable communications with the plant. Coverage will commence on January 1, 1980. The technical advisor's primary function will be one of assessment and diagnosis during accidents or

abnormal transients. He may be assigned other collateral duties that will not interfere with his primary function. Training of technical advisors is scheduled to be completed by January 1, 1981, but this schedule may be impacted by the availability of simulator training time.

Operational experience evaluation and assessment may be performed by the technical advisor or other functional organizations either on-site or at FP&L's General Office. At such time that the man-machine interface is improved as a result of such activities as improved control room design and/or operator qualification, FP&L may elect to designate a qualified member of the operating shift to perform the accident/transient function.

2.2.1.c SHIFT TURNOVER PROCEDURES

Turkey Point Units 3 and 4 plan to meet the intent of NUREG-0578, item 2.2.1.c by January 1, 1980.

2.2.2a CONTROL ROOM ACCESS

Turkey Point Units 3 and 4 plan to meet the intent of NUREG-0578, item 2.2.2.a by January 1, 1980.

2.2.2.b ONSITE TECHNICAL SUPPORT CENTER

FPL is presently evaluating a design for a new facility and also determining if an appropriate existing structure is available at the Turkey Point Plant site. We will establish an interim Technical Support Center by January 1, 1980. The center will include as a minimum dedicated phone communication to the control room, and appropriate plant drawings. By January 1, 1980, we will provide our plans to establish the onsite Technical Support Center intended to meet the functional requirements of NUREG-0578, item 2.2.2.b. We will target completion of the upgraded center as near to January 1, 1981 as allowed by the integration of the following limiting concerns: equipment procurement times, structure construction times, and unit outage schedules.

2.2.2.c ONSITE OPERATIONAL SUPPORT CENTER

Turkey Point Units 3 and 4 plan to meet the intent of NUREG-0578, item 2.2.2.c by January 1, 1980.

Encl. 8 NEAR TERM EMERGENCY PREPAREDNESS IMPROVEMENTS

Florida Power & Light is in general agreement with the required improvements contained in Enclosure 8 to your September 13, 1979 letter. We believe we can implement these improvements consistent with the NRC schedule with the exceptions noted in Section 2.1.8 in addition to three other areas of concern as discussed in the following paragraphs.

Each of our sites has, in the past, routinely conducted site test exercises in conjunction with local, State, and Federal officials on an annual basis. The 1980 tests are scheduled to be conducted during August/September. As the improvements to the emergency plan are not scheduled for completion until June, 1980, we believe the present test exercise schedule is reasonable and can commit to meeting this requirement by October 1, 1980.

Regarding the upgrading of the emergency plans, we agree in principle with the recommendation to upgrade to Regulatory Guide 1.101. However we cannot at this time commit to the action level criteria as contained and described in that document and in NUREG-0610, Draft Emergency Action Level Guidelines for Nuclear Power. We require additional time to review the draft criteria. We believe we can forward our position on this item to the NRC by January 1, 1980.

With respect to the Emergency Operations Center, we believe that specific requirements are not sufficiently defined to enable FP&L to designate dedicated primary and alternate locations at this time. Once the criteria are firm, we will provide the NRC with primary and alternate locations and a schedule for implementation of upgrading requirements.

STATE OF FLORIDA )  
 )  
COUNTY OF DADE )

SS.

E. A. Adomat, being first duly sworn, deposes and says:

That he is Executive Vice President of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this said document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee

E. A. Adomat

E. A. Adomat

Subscribed and sworn to before me this

22 day of October, 1979

Theresa M. Miranda  
NOTARY PUBLIC, in and for the County of Dade,  
State of Florida

My commission expires:

NOTARY PUBLIC, STATE OF FLORIDA  
COMMISSION EXPIRES MAY 8 1981  
JANUARY 8 1981

May 8, 1981