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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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 RECIP. NAME RECIPIENT AFFILIATION  
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SUBJECT: Forwards implementation status for facility re Generic Ltr  
 83-28, "Required Actions Based on Generic Implications...."

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U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Gentlemen:


Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Status of Implementation - Required Actions  
Based on Generic Implications of Salem ATWS Events  
(Generic Letter 83-28)

Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events," issued July 8, 1983, required licensees to take certain actions to address issues related to reactor trip system reliability and general management capability.

Your letter of October 4, 1989 (Gordon E. Edison to J. H. Goldberg) requested that Florida Power & Light Company (FPL) provide a status of implementation of actions required by Generic Letter 83-28. Attached is the implementation status for Turkey Point Units 3 and 4.

Should there be any questions on the attached information, please contact us.

Very truly yours,

  
K. N. Harris  
Vice President  
Turkey Point Nuclear Plant

KNH/TCG/gp

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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## ATTACHMENT

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Status of Implementation - Required Actions  
Based on Generic Implications of Salem ATWS Events  
(Generic Letter 83-28)

### Item 1.1, Post-Trip Review - Program Description and Procedure (NRC TAC Nos. 52810 and 52811)

Item 1.1 required licensees to describe their program for ensuring that unscheduled reactor shutdowns are analyzed and that a determination is made that the plant can be restarted safely.

By letters dated November 8, 1983 (FPL letter No. L-83-555) and May 31, 1985 (FPL letter No. L-85-214) FPL provided information regarding its post-trip review program and procedures for Turkey Point Units 3 and 4. By letter dated June 25, 1985, the NRC provided a Safety Evaluation Report (SER) stating that the post-trip review program and procedures were acceptable. There are no actions remaining.

### Item 1.2, Post-Trip Review - Data and Information Capability (NRC TAC Nos. 53643 and 53644)

Item 1.2 required that licensees have or have planned a capability to record, recall and display data and information to permit diagnosing the causes of unscheduled reactor shutdowns prior to restart for ascertaining the proper functioning of safety-related equipment.

By letters dated November 8, 1983 (FPL letter No. L-83-555) and September 27, 1985 (FPL letter No. L-85-364), and by telephone on August 15, 1985, FPL provided information regarding its post-trip review program data and information capabilities for Turkey Point Units 3 and 4. By letter dated November 27, 1985 the NRC provided an SER stating that the post-trip review data and information capabilities were acceptable. There are no actions remaining.

### Item 2.1, Equipment Classification and Vendor Interface - Reactor Trip System Components (NRC TAC Nos. 52891 and 52892)

Item 2.1 required licensees to confirm that all components whose functioning is required to trip the reactor are identified as safety-related on all plant documentation and in information handling systems that are used to control all activities performed on the safety-related equipment, and to confirm that an interface has been established with the Nuclear Steam Supply System (NSSS) vendor or with the vendors of each of the components of the reactor trip system.

By letters dated November 8, 1983 (FPL letter No. L-83-555) and April 17, 1987 (FPL letter No. L-87-174) FPL provided the confirmation required by Item 2.1.

By letter dated September 2, 1988 the NRC provided an SER that concluded that the programs described by FPL met the requirements of Item 2.1 (Parts 1 and 2) and were acceptable. There are no actions remaining.

**Item 2.2, Equipment Classification and Vendor Interface - Programs for All Safety-Related Components (NRC TAC Nos. 53726 and 53727)**

Item 2.2 required licensees to describe their program for ensuring that all components of safety-related systems necessary for accomplishing required safety functions are identified as safety-related on plant documentation used to control safety-related activities, and to establish, implement, and maintain a continuing program to ensure that vendor information for safety-related components is complete, current and controlled throughout the life of the plant, and appropriately referenced or incorporated in plant instructions and procedures.

By letters dated November 8, 1983 (FPL letter No. L-83-555), October 19, 1984 (FPL letter No. L-84-290), June 14, 1985 (FPL letter No. L-85-233), and April 17, 1987 (FPL letter No. L-87-174) FPL provided information in response to the requirements of Item 2.2.

The NRC has not yet completed its review of this item.

**Item 3.1, Post-Maintenance Testing - Reactor Trip System Components (NRC TAC Nos. 52972 and 52973, 53053 and 53054)**

Item 3.1 required that licensees submit the results of their review of test and maintenance procedures and Technical Specifications to assure that post-maintenance operability testing of safety-related components in the reactor trip system is required to be conducted and that the testing demonstrates that the equipment is capable of performing its safety functions before being returned to service. It also required licensees to submit the results of their checks of vendor and engineering recommendations to ensure that any appropriate test guidance is included in the test and maintenance procedures or the Technical Specifications, where required, and identify, if applicable, any post-maintenance test requirements in existing Technical Specifications which can be demonstrated to degrade rather than enhance safety.

By letters dated November 8, 1983 (FPL letter No. L-83-555), June 19, 1986 (FPL letter No. L-86-258) and July 31, 1986 (FPL letter No. L-86-294) FPL provided information in response to the requirements of Item 3.1. By letters dated November 14, 1985 and January 14, 1987 the NRC provided SERs stating that FPL's responses were acceptable and met the intent of the generic letter. A re-

review of the Reactor Trip System as part of the Select System Review was completed (SEG Phase II Report dated December 1, 1986).

There are no actions remaining.

**Item 3.2, Post-Maintenance Testing - All Other Safety-Related Systems (NRC TAC Nos. 53809 and 53810, 53892 and 53893)**

Item 3.2 required that licensees submit a report documenting the extending of test and maintenance procedure and Technical Specifications review to assure that post-maintenance operability testing of all safety-related equipment is required to be conducted and that the testing demonstrates that the equipment is capable of performing its safety functions before being returned to service. It also required licensees to submit the results of their check of vendor and engineering recommendations to ensure that any appropriate test guidance is included in the test and maintenance procedures or the Technical Specifications where required, and to identify, if applicable, any post-maintenance test requirements in existing Technical Specifications which are perceived to degrade rather than enhance safety.

By letters dated November 8, 1983 (FPL letter No. L-83-555) and July 31, 1986 (FPL letter No. L-86-294) FPL provided information in response to the requirements of Item 3.2. By letters dated November 14, 1985 and January 14, 1987, the NRC provided SERS stating that FPL's responses were acceptable and met the intent of the generic letter. FPL's program to update vendor manuals was completed in November 1987. The Select System Reviews identified in the January 14, 1987 SER were completed and documented in the SEG Phase II Select System Review Reports issued in December 1986 and October 1989, and in the Design Basis Verification Reports issued in May and June 1989. As discussed in Item 3.2.1 in the January 14, 1987 SER, FPL committed to a re-review of existing maintenance procedures to ensure that post maintenance testing adequately verifies component capability to perform all required safety functions. The current requirements for post maintenance testing are embodied in the Post Maintenance Test procedure, AP-0190.28, with support from the Plant Work Order Preparation procedure, O-ADM-701. The PWO procedure requires that a PWO include post maintenance test instructions using the guidelines of procedure AP-0190.28. The post maintenance procedure sets forth the minimum testing criteria required to ensure that safety-related equipment is capable of performing all required safety functions following the completion of maintenance. The additional reviews of test and maintenance procedures to ensure that appropriate vendor and engineering recommendations for testing and maintenance are incorporated are scheduled to be completed by September 1, 1990.

**Item 4.1, Reactor Trip System Reliability - Vendor-Related Modifications (NRC TAC Nos. 53107 and 53108)**

Item 4.1 required that all vendor-recommended reactor trip breaker modifications be reviewed to verify that either: (1) each modification has, in fact, been implemented; or (2) a written evaluation of the technical reason for not implementing a modification exists.

For example, the modification recommended by Westinghouse in NCD Elec-18 for the DB-50 breakers and a March 31, 1983, letter for the DS-416 breakers shall be implemented or a justification for not implementing shall be made available. Modification not previously made shall be incorporated or a written evaluation shall be provided.

By letter dated November 8, 1983 (FPL letter No. L-83-555) FPL provided information in response to Item 4.1. By letter dated May 1, 1986, the NRC provided an SER stating that FPL's response was acceptable and met the intent of the generic letter. There are no actions remaining.

**Item 4.2, Reactor Trip System Reliability - Preventative Maintenance and Surveillance Program for Reactor Trip Breakers (NRC TAC Nos. 53160 and 53161, 53947 and 43948)**

Item 4.2 required that licensees describe their preventative maintenance and surveillance program to ensure reliable reactor trip breaker operation. The program was required to include the following:

1. A planned program of periodic maintenance, including lubrication, housekeeping, and other items recommended by the equipment supplier.
2. Trending of parameters affecting operation and measured during testing to forecast degradation of operability.
3. Life testing of the breakers (including the trip attachments) on an acceptable sample size.
4. Periodic replacement of breakers or components consistent with demonstrated life cycles.

By letters dated November 8, 1983 (FPL letter No. L-83-555) and January 18, 1985 (FPL letter No. L-85-31) FPL provided information in response to Item 4.2. By letter dated April 29, 1985 the NRC provided an SER stating that FPL's responses for Items 4.2.1 and 4.2.2 were acceptable. The trending program committed to in our January 18, 1985 letter was implemented by August 1985. The NRC has not yet completed its review of Items 4.2.3 and 4.2.4.

**Item 4.3, Reactor Trip System Reliability - Automatic Actuation of Shunt Trip Attachment for Westinghouse and B & W Plants (NRC TAC 53202 and 53203, 55384 and 55385)**

Item 4.3 required that Westinghouse and B & W reactors be modified by providing automatic reactor trip system actuation of the breaker shunt trip attachments. The shunt trip attachment was required to be considered safety related (Class IE).

By letters dated November 8, 1983 (FPL letter No. L-83-555), July 16, 1984 (FPL letter No. L-84-177) and November 29, 1984 (FPL letter No. L-84-351) FPL provided information in response to Item 4.3. By letter dated December 3, 1984, the NRC provided an SER concluding that FPL's proposed design modifications were acceptable.



and satisfied the pre-implementation review requirements of Item 4.3. The December 3, 1984 NRC letter requested that FPL provide confirmation of the seismic qualification of the shunt trip when the Westinghouse Owners Group qualification program was complete, and also submit proposed Technical Specifications to require periodic testing of the undervoltage shunt trip functions and the manual reactor trip switch contacts and wiring. Additional guidance on Technical Specifications was provided by the NRC in Generic Letter 85-09, "Technical Specifications for Generic Letter 83-28, Item 4.3," dated May 23, 1985.

The required modifications were implemented in Unit 3 by July, 1985 (PCM 85-03) and in Unit 4 by June, 1986 (PCM 85-04). Qualification testing of the shunt trip attachments used with Westinghouse Type DB-50 reactor trip circuit breakers (as used at Turkey Point) was completed and a report (WCAP 8687, Supplement 2-E62B, Addendum 1, Rev. 0) issued in April 1986. The testing demonstrated the ability of the shunt trip attachment to maintain its structural integrity and functional operability during and after a seismic event. FPL reviewed the Westinghouse Equipment Qualification Test Report for the DB-50 shunt trip attachment and found it acceptable for Turkey Point. As stated in FPL letter No. L-87-174 dated April 17, 1987, proposed Technical Specifications changes were submitted as part of the Technical Specification Upgrade effort on September 29, 1986. That submittal has been superseded by our June 5, 1989 submittal (FPL letter No. L-89-201). That submittal is being reviewed by the NRC.

**Item 4.4, Reactor Trip System Reliability - Improvements in Maintenance and Test Procedures for B & W Plants)**

This action applied to B & W licensees and OL applicants only.

**Item 4.5, Reactor Trip System Reliability - System Functional Testing (NRC TAC Nos. 54119 and 54120, 54036 and 54037)**

Item 4.5 required that licensees perform on-line functional testing of the reactor trip system, including independent testing of the diverse trip features:

1. The diverse trip features to be tested include the breaker undervoltage and shunt trip features.
2. Plants not currently designed to permit periodic on-line testing shall justify not making modifications to permit such testing. Alternatives to on-line testing proposed by licensees will be considered where special circumstances exist and where the objective of high reliability can be met in another way.

3. Existing intervals for on-line functional testing required by Technical Specifications shall be reviewed to determine that the intervals are consistent with achieving high reactor trip system availability when accounting for considerations such as:
  1. uncertainties in component failure rates
  2. uncertainty in common mode failure rates
  3. reduced redundancy during testing
  4. operator errors during testing
  5. component "wear-out" caused by the testing

Licensees currently not performing periodic on-line testing shall determine appropriate test intervals as described above. Changes to existing required intervals for on-line testing as well as the intervals to be determined by licensees currently not performing on-line testing shall be justified by information on the sensitivity of reactor trip system availability to parameters such as the test intervals, component failure rates, and common mode failure rates.

By letter dated November 8, 1983 (FPL letter No. L-83-555) FPL provided information in response to Item 4.5. In addition, the Westinghouse Owners Group provided information regarding Item 4.5.3 for all Westinghouse plants in a report, WCAP 10271 dated January 1983, followed by supplements in 1983 and 1986. By letters dated May 1, 1986 and June 12, 1989, the NRC provided SERs for Item 4.5.1, and for Items 4.5.2 and 4.5.3 respectively, concluding that FPL's response, as supplemented by the Westinghouse Owners Group reports, was acceptable and met the intent of the generic letter. There are no actions remaining.

8-10-31

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