



AUG 18 2000

L-2000-170  
10 CFR 50.90  
10 CFR 50.91  
10 CFR 50.92

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

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed License Amendments  
480 Volt Load Centers Degraded Voltage Protection Scheme

In accordance with 10 CFR 50.90, Florida Power and Light Company (FPL) requests that Appendix A of Facility Operating Licenses DPR-31 and DPR-41 be amended to modify the Turkey Point Units 3 and 4 Technical Specification (TS) Section 3.3.2, Engineered Safety Features Actuation System Instrumentation, Table 3.3-2, ACTION statement 18. This change is required to allow performance of the monthly surveillance without placing the plant in a condition prohibited by TS, due to having the number of operable channels two less than the total number of channels, a condition prohibited by TS.

Turkey Point Units 3 and 4 TS Table 3.3-2, Loss of Power, Items 7.b and 7.c, addresses the requirements for the 480 volt load centers degraded voltage protection. Under the existing TS, the minimum required operable channels is "2 per load center" which is equal to the number of channels available. A test switch is used to test the operability of the relays periodically, in accordance with the Technical Specifications. During the performance of the monthly surveillance, the test switch is placed in the test position multiple times for no more than 90 seconds each time. During this time, when the switch is in the test position, both channels of the load center being tested are rendered inoperable. Table 3.3-2, Loss of Power, Items 7.b and 7.c and the related ACTION statement 18, do not address this condition. As a result, TS 3.0.3 is applicable for the time the monthly surveillance is being performed. FPL will submit Licensee Event Report 250/2000-02 to document the previously unrecognized entries into TS 3.0.3.

FPL proposes to revise ACTION statement 18 of Table 3.3-2. The proposed change will allow performance of the required monthly surveillance without placing the plant in a condition prohibited by TS. In addition, an administrative change to Item 7.b. of Tables 3.3-2, 3.3-3, and 4.3-2 is requested to change "Degraded Voltage" to "Undervoltage," to make it consistent with the UFSAR description.

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A description of the proposed license amendments is provided in Attachment 1. FPL has determined that the proposed license amendments do not involve a significant hazards consideration pursuant to 10 CFR 50.92. The no significant hazards consideration determination and environmental consideration in support of the proposed Technical Specification changes are provided in Attachment 2. Attachment 3 provides marked up pages for the proposed changes to the Technical Specifications.

The proposed license amendments have been reviewed by the Turkey Point Plant Nuclear Safety Committee and the FPL Company Nuclear Review Board.

In accordance with 10 CFR 50.91(b), a copy of the proposed license amendments is being forwarded to the State Designee for the State of Florida.

FPL requests that the NRC review the proposed license amendments by November 1, 2000. The Technical Specification surveillance requirement for degraded voltage protection scheme requires each train (2 Load Centers per train, 2 channels per Load Center) to be tested at least every 62 days on a staggered test basis. The next surveillance is due no later than August 17, 2000. By letter L-2000-162, dated August 14, 2000, FPL requested an exemption from the 10 CFR 50.73 reporting requirements. The exemption was requested to be effective from the date of the FPL letter until NRC approval of the proposed revised Technical Specifications.

Should there be any questions, please contact us.

Very truly yours,



R. J. Hovey  
Vice President  
Turkey Point Plant

Attachments

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant  
Florida Department of Health

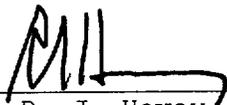
Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed License Amendments  
480 volt Load Centers Degraded Voltage Protection Scheme

STATE OF FLORIDA            )  
  ) ss.  
COUNTY OF MIAMI-DADE    )

R. J. Hovey being first duly sworn, deposes and says:

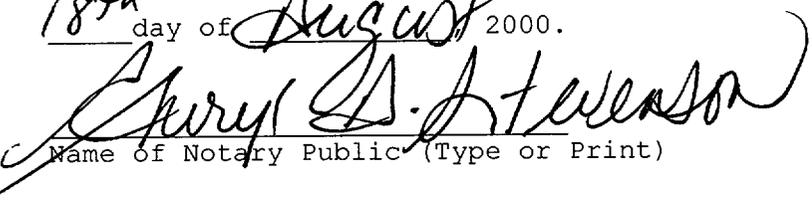
That he is Vice President, Turkey Point Plant, of Florida Power and Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this 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.

  
\_\_\_\_\_  
R. J. Hovey

Subscribed and sworn to before me this

18<sup>th</sup> day of August 2000.

  
Name of Notary Public (Type or Print)

**CHERYL A. STEVENSON**  
NOTARY PUBLIC - STATE OF FLORIDA  
COMMISSION # CC928876  
EXPIRES 6/19/2004  
BONDED THRU ASA 1-888-NOTARY1

R. J. Hovey is personally known to me.

## DESCRIPTION OF PROPOSED LICENSE AMENDMENTS

### **1.0 Introduction**

In accordance with 10 CFR 50.90, Florida Power and Light Company (FPL) requests that Appendix A of Facility Operating Licenses DPR-31 and DPR-41 be amended to modify the Turkey Point Units 3 and 4 Technical Specification (TS) Section 3.3.2, Engineered Safety Features Actuation System Instrumentation, Table 3.3-2, ACTION statement 18. This change is required to allow performance of the monthly surveillance without placing the plant in a condition prohibited by TS, due to having the number of operable channels two less than the total number of channels, a condition prohibited by TS. In addition, an administrative change to Item 7.b. of Tables 3.3-2, 3.3-3, and 4.3-2 is requested to change "Degraded Voltage" to "Undervoltage" to make it consistent with the UFSAR description.

### **2.0 Background**

On July 21, 2000, operators were reviewing the surveillance procedure 3-OSP-006.2, "480 Volt Switchgear - Undervoltage Test," and questioned the operability of the undervoltage relays during testing. Subsequent analysis by plant engineering indicated that the load center undervoltage relay testing design and the plant Technical Specifications as written would place the plant in Technical Specification 3.0.3 during the time that the test switch was in any position other than normal. Placing either the five-position test switch (for undervoltage relay testing without a coincident Safety Injection signal) or the three-position test switch (for undervoltage relay testing coincident with a Safety Injection signal) out of its normal position will bypass the trip circuit of both channels blocking the trip signal from its associated load center.

Turkey Point Units 3 and 4 Technical Specifications Table 3.3-2, Loss of Power, Items 7.b and 7.c, address the requirements for the 480 volt load centers degraded voltage protection. Under the existing TS, the minimum required operable channels is "2 per load center" which is equal to the number of channels available. A test switch is used to test the operability of the relays periodically, in accordance with the Technical Specifications. During the performance of the monthly surveillance, the test switch is placed in the test position multiple times for no more than 90 seconds each time. During this time, when the switch is in the test position, both channels of the load center being tested are rendered inoperable. Table 3.3-2, Loss of Power, Items

7.b and 7.c and the related ACTION statement 18 do not address this condition. As a result, TS 3.0.3 is applicable for the time the monthly surveillance is being performed.

### **3.0 System Description**

The undervoltage monitoring system on the 480 volt safety related load centers is provided to ensure timely separation of the safety related buses from offsite power during (sustained) degraded voltage conditions. Two protection schemes are provided. One is provided for undervoltage conditions concurrent with a Safety Injection (SI) signal while the other is provided for degraded voltage conditions during normal operation (non-SI). Both schemes ensure that loads are not damaged by degraded voltage conditions.

The relevant portion of the 480 Volt AC System consists of Load Centers (LCs) A, B, C, and D. The system is powered from the 4.16 kV Emergency Safety Feature (ESF) buses A and B through four step-down transformers.

#### Non-Safety Injection (Non-SI) Situation

The non-SI scheme has four voltage sensing relays on each load center. Channel 1 utilizes one 327I and one 327T relay; channel 2 does the same. The relays are interconnected in a "one out of two taken twice" channel trip logic such that the logic trips (initiates bus stripping) if degraded voltage is detected by either channel 1 relay (327I or 327T) concurrently with either channel 2 relay (327I or 327T).

The 327I relay protects the 480 volt system for degraded voltage over a long duration while the 327T relay protects the system during a large voltage transient for a short duration.

Each 327I relay has a fixed voltage setpoint and a fixed time delay of approximately 60 seconds. (The voltage setpoint is slightly different for each load center based upon specific loads supplied and length of cable runs.) If voltage remains below setpoint for 60 seconds, the relays initiate bus stripping on that 4kV bus.

The 327T's are inverse time delay relays, and provide protection for more severely degraded voltage of short durations. Each 327T relay has a voltage setpoint range set

below the 327I setpoint voltage. When voltage drops to this setpoint range, the time before relay drop-out will vary inversely with the severity of the voltage drop. At the higher end of the voltage range, the time delay is approximately 11 seconds and at the lower end the time could be as short as 3 seconds. If voltage drops into the setpoint range and does not recover before the time expires, the relays initiate bus stripping on that 4kV bus.

A five-position test switch (with positions labeled 12, 11, Normal, 21 and 22) enables the operator to test either relay on either channel. Placing the test switch in any position other than Normal will block the trip signal from its associated load center.

#### Safety Injection Situation

The scheme for safety injection has two voltage sensing relays (327H's) on each load center (one relay per channel, two channels per load center). If both relays on the load center sense an undervoltage condition (along with an SI signal and the associated EDG's output breaker being open), they will initiate bus stripping on the associated 4 KV bus.

The 327H relays provide a faster response and protection if an SI signal is present during the sustained degraded voltage condition. Each 327H relay has a fixed voltage setpoint and will drop out instantaneously upon undervoltage. If an SI signal is present and the EDG breaker is open, a 10 second timer will start. If voltage does not recover before the 10 seconds expires, bus stripping will initiate.

A three-position, spring return to Normal, test switch enables the operator to test either relay. Placing the test switch in any position other than Normal will bypass the trip circuit of both channels and block the trip signal from its associated load center.

#### **4.0 Proposed Technical Specification Changes**

##### **1. Changes to TS 3.3.2 - ACTION Statement 18:**

The current TS ACTION statement 18 reads as follows:

“With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION

may proceed provided the inoperable channel is placed in the tripped condition within 6 hours."

FPL proposes to revise ACTION statement 18 by adding the following sentence in bold, to read:

With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 6 hours. **Both channels of any one load center may be taken out of service for up to 8 hours in order to perform surveillance testing per Specification 4.3.2.1.**

Justification:

Degraded Voltage on 480 Volt Load Center Without a Safety Injection Signal (Non-SI)

As discussed in the system description section above, the Non-SI degraded voltage scheme has four voltage sensing relays on each load center, two relays per channel. The relays are interconnected in a "one out of two taken twice" channel trip logic such that bus stripping is initiated if degraded voltage is detected by either channel 1 logic concurrently with either channel 2 logic.

During surveillance testing, the design of the test switch is such that it would block the trip signal from its associated load center during the duration of a test. Should a degraded condition occur at the load center during testing, the degraded voltage would be sensed on the other load center of the same power train, and the trip signal would initiate sequencer action. Therefore, automatic safety function capability is maintained during the testing of the relays at any load center.

By letter L-92-215, "Request for Additional Information - Proposed License Amendments: 480 Volt Load Centers Degraded Voltage Protection Scheme," dated July 29, 1992, FPL provided the NRC details of the 480 volt load centers degraded protection logic scheme. By NRC letter "Turkey Point Units 3 and 4 - Issuance of Amendments Re: Degraded Voltage Protection Scheme," dated August 20, 1992, the NRC recognized that the undervoltage protection scheme provided appropriate protection logic to ensure the surveillances could be performed. The design of the undervoltage protection logic has not changed since the issuance of the referenced amendments. The intent of the design is to allow the performance of the Technical Specification required monthly surveillance while maintaining the automatic safety function. The requested change to ACTION statement 18 is consistent with the other ACTION statements in Table 3.3-2, by allowing a load center

protection scheme to be inoperable for up to 8 hours for the performance of the required surveillance.

#### Undervoltage on 480 Volt Load Center Coincident With a Safety Injection Signal

As discussed in the system description section above, the scheme for safety injection has two voltage sensing relays on each load center. If both relays on any of the load center sense an undervoltage condition (along with an SI signal and the associated EDG's output breaker being open), bus stripping will be initiated on the associated 4 KV bus.

During surveillance testing, the trip circuit of both channels is bypassed and blocks the trip signal from its associated load center. Should an undervoltage condition occur at the load center during surveillance testing, the undervoltage would be sensed on the other load center of the same power train, and the trip signal would initiate sequencer action. Therefore, automatic safety function capability is maintained during the testing of the relays at any load center. The requested change to ACTION statement 18 is consistent with the other ACTION statements in Table 3.3-2, by allowing a load center protection scheme to be inoperable for up to 8 hours during the performance of the required surveillance.

#### 2. Changes to TS Table 3.3-2, Item 7.b. Functional Unit description

Turkey Point Units 3 and 4 Technical Specifications Table 3.3-2, "Engineered Safety Features Actuation System Instrumentation," Loss of Power, Item 7.b addresses the requirements for the 480 volt load centers degraded voltage protection coincident with Safety Injection. Table 3.3-2, Item 7.b. Functional Unit description currently reads:

"480V Load Centers 3A, 3B, 3C, 3D, and 4A, 4B, 4C, 4D  
Degraded Voltage"

FPL proposes to change the Functional Unit description to read:

"480V Load Centers 3A, 3B, 3C, 3D, and 4A, 4B, 4C, 4D  
**Undervoltage**"

#### Justification

The proposed change is administrative in nature and is requested to make the functional unit description consistent with the UFSAR Section 8.2.2.1.1.2, Specifics of the Onsite AC Power System, Subsection "Electric Circuit Protection System Network," and with the 4 kV Bus Loss of Voltage and Bus Stripping Logic Diagram, 5610-TL-1, Sheet 13.

3. Changes to TS Table 3.3-3, Item 7.b. Functional Unit description

Turkey Point Units 3 and 4 Technical Specifications Table 3.3-3, "Engineered Safety Features Actuation System Instrumentation Trip Setpoints," Loss of Power, Items 7.b specifies the trip setpoints for the 480 volt load centers degraded voltage protection coincident with Safety Injection. Table 3.3-3, Item 7.b. Functional Unit description currently reads:

"480V Load Centers Degraded Voltage"

FPL proposes to change the Functional Unit description to read:

"480V Load Centers **Undervoltage**"

Justification

The proposed change is administrative in nature and is requested to make the functional unit description consistent with the UFSAR Section 8.2.2.1.1.2, Specifics of the Onsite AC Power System, Subsection "Electric Circuit Protection System Network," and with the 4 kV Bus Loss of Voltage and Bus Stripping Logic Diagram, 5610-TL-1, Sheet 13.

4. Changes to TS Table 4.3-2, Item 7.b. Functional Unit description

Turkey Point Units 3 and 4 Technical Specifications Table 4.3-2, "Engineered Safety Features Actuation System Instrumentation Surveillance Requirements," Loss of Power, Items 7.b address the surveillance requirements for the 480 volt load centers degraded voltage protection coincident with Safety Injection. Table 4.3-2, Item 7.b. Functional Unit description currently reads:

"480V Load Centers 3A, 3B, 3C, 3D, and 4A, 4B, 4C, 4D  
Degraded Voltage"

FPL proposes to change the Functional Unit description to read:

"480V Load Centers 3A, 3B, 3C, 3D, and 4A, 4B, 4C, 4D  
**Undervoltage**"

Justification

The proposed change is administrative in nature and is requested to make the functional unit description consistent with the UFSAR Section 8.2.2.1.1.2, Specifics of the Onsite AC Power System, Subsection "Electric Circuit Protection System Network," and with the 4 kV Bus Loss of Voltage and Bus Stripping Logic Diagram, 5610-TL-1, Sheet 13.

## NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

### **Description of Proposed License Amendments**

The purpose of the proposed license amendments is to revise the current requirements of Technical Specifications Section 3.3.2, Engineered Safety Features Actuation System Instrumentation, Table 3.3-2, Items 7.b and 7.c. Specifically, the proposed license amendments revise ACTION statement 18 to allow operation of the units with both channels of a load center bypassed for up to 8 hours to allow performance of the monthly surveillance without placing the units in a condition prohibited by the Technical Specifications. In addition, an administrative change to Item 7.b. of Tables 3.3-2, 3.3-3, and 4.3-2 is requested to change "Degraded Voltage" to "Undervoltage" to make it consistent with the UFSAR description.

### **Introduction**

The Nuclear Regulatory Commission has provided standards for determining whether a significant safety hazards consideration exists (10 CFR §50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed below for the proposed amendments.

### **Discussion**

- (1) Operation of the facility in accordance with the proposed amendments would not involve a significant increase in the probability or consequences of an accident previously evaluated.

Approval and implementation of this amendment will have no effect on the probability or consequences of accident previously evaluated. The proposed changes allow performance of the required surveillance without placing the plant in a condition prohibited by the Technical Specifications. The undervoltage and degraded voltage protection schemes of the 480 volt load centers are not affected. Therefore, there will be no impact on any accident probabilities by the approval of this amendment. Therefore, the proposed amendments do not involve a significant increase in the probability or consequences of any accident previously evaluated.

- (2) Operation of the facility in accordance with the proposed amendments would not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed changes do not alter the design, physical configuration, or modes of operation of the plant. No changes are being made to the plant that would introduce any new accident causal mechanisms. The proposed Technical Specification changes do not impact any plant systems that are accident initiators, since the 480 volt undervoltage and degraded voltage protection logics are not affected. The proposed change allows performance of the required surveillance without placing the plant in a condition prohibited by the Technical Specifications. No new accident causal mechanisms are created as a result of NRC approval of the proposed amendments request. Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

- (3) Operation of the facility in accordance with the proposed amendments would not involve a significant reduction in a margin of safety.

The proposed changes do not change the operation, function or modes of plant or equipment operation. The proposed changes do not change the undervoltage and degraded voltage protection logics of the 480 volt load centers. The ability of the 480 volt load center voltage protection schemes to detect degraded voltage and initiate a signal to the sequencers is maintained. No new hazards or failure modes are created or postulated which may cause an accident different from any accident previously analyzed. The proposed changes revise ACTION statement 18 to allow performance of the technical specification required surveillances without placing the plant in a condition prohibited by the Technical Specifications. Therefore, operation of the facility in accordance with the proposed amendments would not involve a significant reduction in a margin of safety.

#### **Summary**

Based on the discussion presented above, FPL has concluded that the proposed license amendments do not involve a significant safety hazards consideration.

**Environmental Consideration**

10 CFR 51.22(c)(9) provides criteria for identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not:

- (i) involve a significant hazards consideration,
- (ii) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and
- (iii) result in a significant increase in individual or cumulative occupational radiation exposure.

The proposed license amendments revise the Turkey Point Units 3 and 4 Technical Specifications to allow performance of the required Technical Specification surveillance without placing the plant in a condition prohibited by TS. The proposed amendments will have no effect on the probability or consequences of accidents previously evaluated. In addition, the proposed amendments do not create the possibility of a new or different kind of accident than any accident previously evaluated. Therefore, the proposed license amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite, and no significant increase in individual or cumulative occupational radiation exposure.

FPL has reviewed these proposed license amendments and concluded that the proposed amendments involve no significant hazards consideration and meet the criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment is not required in connection with issuance of the amendments.

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATION PAGES

3/4 3-19  
3/4 3-22  
3/4 3-28  
3/4 3-33a

TABLE 3.3-2 (Continued)  
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. Auxiliary Feedwater### (Continued)					
b. Stm. Gen. Water Level-- Low-Low	3/steam generator	2/steam generator in any steam generator	2/steam generator	1, 2, 3	15
c. Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				
d. Bus Stripping	1/bus	1/bus	1/bus	1, 2, 3	23
e. Trip of All Main Feed-water Pumps Breakers	1/breaker	(1/breaker) /operating pump	(1/breaker) /operating pump	1, 2	23
7. Loss of Power					
a. 4.16 kV Busses A and B (Loss of Voltage)	2/bus	2/bus	2/bus	1, 2, 3, 4	18
b. 480 V Load Centers 3A, 3B, 3C, 3D and 4A, 4B, 4C, 4D <del>Degraded Voltage</del> <u>Undervoltage</u> Coincident with: Safety Injection	2 per load center	2 on any load center	2 per load center	1, 2, 3, 4	18
	See Item 1. above for all Safety Injection initiating functions and requirements				

## TABLE NOTATION (Continued)

- ACTION 18 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 6 hours. Insert
- ACTION 19 - With less than the Minimum Number of Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.
- ACTION 20 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 8 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.
- ACTION 21 - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the ACTION required by Specification 3.7.1.5.
- ACTION 22 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 8 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.
- ACTION 23 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, comply with Specification 3.0.3.
- ACTION 24 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, within 1 hour isolate the control room Emergency Ventilation System and initiate operation of the Control Room Emergency Ventilation System in the recirculation mode.
- ACTION 25 - With the number of OPERABLE channels one less than the Total number of channels, STARTUP and/or POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 6 hours. For subsequent required DIGITAL CHANNEL OPERATIONAL TESTS the inoperable channel may be placed in bypass status for up to 4 hours.

Attachment 3 to  
L-2000-170

**INSERT**

Both channels of any one load center may be taken out of service for up to 8 hours in order to perform surveillance testing per Specification 4.3.2.1.

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM  
INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>ALLOWABLE VALUE #</u>	<u>TRIP SETPOINT</u>
7. Loss of Power (Continued)		
b. 480V Load Centers		
<del>Degraded Voltage</del> <u>Undervoltage</u> Load Center		
3A	[ ]	430V ±5V (10 sec ±1 sec delay)
3B	[ ]	438V ±5V (10 sec ±1 sec delay)
3C	[ ]	434V ±5V (10 sec ±1 sec delay)
3D	[ ]	434V ±5V (10 sec ±1 sec delay)
4A	[ ]	435V ±5V (10 sec ±1 sec delay)
4B	[ ]	434V ±5V (10 sec ±1 sec delay)
4C	[ ]	434V ±5V (10 sec ±1 sec delay)
4D	[ ]	430V ±5V (10 sec ±1 sec delay)
Coincident with: Safety Injection and	See Item 1. above for all Safety Injection Allowable Values.	See Item 1. above for all Safety Injection Trip Setpoints.
Diesel Generator Breaker Open	N.A.	N.A.

3/4 3-28

AMENDMENT NOS. 176 AND 170

TURKEY POINT - UNITS 3 & 4

3/4 3-33a

AMENDMENT NOS. 152 AND 147

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>CHANNEL FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST#</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
6. Auxiliary Feedwater (Continued)						
c. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.					
d. Bus Stripping	N.A.	R	N.A.	R	N.A.	1, 2, 3
e. Trip of All Main Feedwater Pump Breakers.	N.A.	N.A.	N.A.	R	N.A.	1, 2
7. Loss of Power						
a. 4.16 kV Busses A and B (Loss of Voltage)	N.A.	R	N.A.	R	N.A.	1, 2, 3, 4
b. 480V Load Centers 3A,3B,3C,3D and 4A,4B,4C,4D <del>Degraded Voltage</del> <i>Under voltage</i> Coincident with: Safety Injection	S	R	N.A.	M(1)	N.A.	1, 2, 3, 4
	See Item 1. above for all Safety Injection Surveillance Requirements.					
c. 480V Load Centers 3A,3B,3C,3D and 4A,4B,4C,4D Degraded Voltage	S	R	N.A.	M(1)	N.A.	1, 2, 3, 4