DEC 2 1 2016

L-2016-233
10 CFR 50.90

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Re: Turkey Point Nuclear Plant, Units 3 and 4
Docket Nos. 50-250 and 50-251
Renewed Facility Operating Licenses DRR-31 and DPR-41

License Amendment Request 250, Modify Technical Specifications for Auxiliary Feedwater Actuation on Bus Stripping and on Trip of all Main Feedwater Pump Breakers

Pursuant to 10 CFR Part 50.90, Florida Power& Light Company (FPL) hereby requests an amendment to Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant Units 3 and 4, respectively. The proposed changes modify Technical Specification (TS) 3/4.3.2, Engineered Safety Features Actuation System Instrumentation, by modifying the requirements for Auxiliary Feedwater (AFW) Functional Unit (FU) 6(d), Bus Stripping, and AFW FU 6(e), Trip of all Main Feedwater (MFW) Pump Breakers, in Table 3.3-2, Engineered Safety Features Actuation System (ESFAS) Instrumentation.

The Enclosure to this letter provides FPL's evaluation of the proposed changes. Attachment 1 to the enclosure provides the existing TS pages marked up to show the changes. Attachment 2 provides the retyped (clean copy) TS pages. Attachment 3 provides existing TS Bases pages marked up to show the changes. The TS Bases changes are provided for information only and will be incorporated in accordance with the TS Bases Control Program upon implementation of the approved amendment.

As discussed in the evaluation, the proposed changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no environmental impacts associated with the change.

The Turkey Point Onsite Review Group has reviewed the proposed license amendment. In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the designee of the State of Florida.

There are no new commitments in this submittal.

FPL requests approval of this amendment request by December 2017 and implementation within 90 days.

Should you have any questions regarding this submittal, please contact Mr. Mitch Guth, Licensing Manager, at 305-246-6698.

ADD1
NRR

I declare under penalty of perjury that the foregoing is true and correct.

Executed on the 21 day of December 2016.

Sincerely,

Thomas Summers
Site Vice President
Turkey Point Nuclear Plant

Enclosure

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Senior Resident Inspector, Turkey Point Nuclear Plant
Ms. Cindy Becker, Florida Department of Health

Enclosure

Evaluation of the Proposed Change

Turkey Point Units 3 and 4
License Amendment Request (LAR) No. 250)
Modify Engineered Safety Features Actuation System Instrumentation Technical Specifications for Auxiliary Feedwater Actuation on Bus Stripping and on Trip of all Main Feedwater Pump Breakers

Enclosure

1.0 SUMMARY DESCRIPTION

Florida Power& Light Company (FPL) hereby requests an amendment to Renewed Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Plant (Turkey Point) Units 3 and 4, respectively. The proposed change modifies Technical Specification (TS) 3/4.3.2, Engineered Safety Features Actuation System Instrumentation, by modifying the requirements for Auxiliary Feedwater (AFW) Functional Unit (FU) 6(d), Bus Stripping, and AFW FU 6(e), Trip of all Main Feedwater (MFW) Pump Breakers, in Table 3.3-2, Engineered Safety Features Actuation System (ESFAS) Instrumentation. The proposed change serves to alleviate the commencement of a Unit shutdown for an inoperable FU 6(d) or FU 6(e) instrument channel by establishing a 48-hour completion time, consistent with industry precedents for these anticipatory ESFAS functions.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

2.1.1 AFW System

The dual train AFW system is shared between Turkey Point Units 3 and 4 and supplies feedwater to the steam generators (SGs) during transients when normal feedwater is not available. Three quick starting steam turbine-driven AFW pumps are provided with each pump capable of delivering approximately 624 gallons per minute to the SGs.

The three AFW pumps are installed such that each supplies auxiliary feedwater to either Unit 3 or 4 or both, with any single pump supplying the total feedwater requirement of either Unit. Two pumps (B and C) are normally aligned to AFW train 2, and the third pump (A) is aligned to AFW train 1.

The turbine-driven pumps are supplied with steam from the Unit which has lost its normal feedwater supply. Steam can also be supplied from the Unit having normal feedwater supply or from the Unit's auxiliary steam supply. The supply valves will automatically open by any one of the following five signals.

1) Safety Injection (SI)

2) Low-Low Level in any of the three SGs

3) Loss of both feedwater pumps under normal operating conditions.

4) Bus Stripping

   a. Loss of voltage on either the A or B 4.16 KV bus.

   b. Degraded voltage on one 480V load center (instantaneous) coincident with safety injection and the diesel generator breaker open.

   c. Degraded voltage on one 480V load center (delayed) coincident with the diesel generator breaker open

5) Anticipated Transient Without Scram (ATWS) Mitigating System Actuating Circuitry (AMSAC) signal.

The analyses for loss of normal feedwater and loss of non-emergency AC power conclude that the AFW system provides sufficient heat removal capability to prevent reactor coolant inventory relief through the Pressurizer power-operated relief valves or the code-safety valves. For each event, the worst single active failure is assumed to occur in the AFW system, resulting in the availability of only one AFW pump supplying three steam generators.

2.1.2 ESFAS System

The ESFAS system measures temperatures, pressures, flows, and levels in the reactor coolant, steam, reactor containment and auxiliary systems, actuates the engineered safety features, and monitors their operation. Process variables required on a continuous basis for the startup, operation, and shutdown of the Units are indicated, recorded and controlled from the Control Room. The quantity and types of process instrumentation provided ensures safe and orderly operation of all systems and processes over the full operating range of the Units.

The ESFAS systems are actuated by the ESFAS actuation channels. Each coincidence network energizes an ESFAS actuation device that operates the associated engineered safety features equipment, motor starters and valve operators. The channels are designed to combine redundant sensors, and independent channel circuitry, coincident trip logic and different parameter measurements so that a safe and reliable system is provided in which a single failure will not defeat the channel function. The ESFAS instrumentation actuates (depending on the severity of the condition) the safety injection, containment isolation, emergency containment cooling and the containment spray systems.

Regarding the ESFAS functions 'AFW actuation on Bus Stripping' and 'AFW actuation on Trip of all MFW Pump Breakers', there are two AFW auto-start channels per nuclear Unit. For AFW actuation on Bus Stripping, each 4.16 kV bus has one associated sequencer and each sequencer actuates one AFW auto-start channel. Hence there is one AFW actuation on Bus Stripping channel per applicable 4.16 kV bus (1/bus). Upon loss of voltage to either 4.16 kV bus, the associated sequencer will initiate bus stripping and AFW auto-start. For AFW actuation on Trip of All MFW Pump Breakers, there are two MFW pumps per nuclear Unit, each powered by a 4.16kV breaker and each with one Control Room control switch. Since each MFW Pump breaker and control switch circuit has but one input into each AFW auto-start channel, there is one 'AFW actuation on Trip of all MFW Pump Breakers' channel per operating pump breaker (1/breaker/operating pump). A MFW pump breaker in the tripped position inputs into the AFW auto-start circuitry such that AFW is initiated upon trip of the second operating pump. If only one MFW Pump is running, trip of its associated breaker will initiate AFW. If both MFW Pump breakers are intentionally opened, (pumps stopped) the circuitry defeats the 'AFW actuation on Trip of All MFW Pump Breakers' function.

2.1.3 AMSAC System

Title 10 CFR 50.62 requires that all pressurized water reactors have backup equipment, diverse from the Reactor Protection System (RPS), to automatically initiate the AFW system and turbine trip under conditions indicative of an Anticipated Transient Without Scram (ATWS) event.

The requirement has been satisfied by the addition of AMSAC, which in addition to the requirements of 10 CFR 50.62 to automatically initiate the AFW system and trip the turbine, will trip the reactor. AMSAC serves as a non-safety related backup protective system to the RPS by preventing over-pressurization of the Reactor Coolant System, conserve SG inventory, and insert the reactor control rods following an ATWS event. AMSAC is initiated when low steam generator level is sensed and the RPS fails to respond with an automatic reactor trip. The output signals from AMSAC generate turbine trip, reactor trip and AFW initiation.

For operation at full-power conditions, the two most limiting RCS overpressure ATWS transients from the Westinghouse generic ATWS analyses, loss of normal feedwater and loss of load, were analyzed. The analyses concluded that the peak primary system pressure following an ATWS event remains below the acceptance limit and that the AMSAC meets the requirements of 10 CFR 50.62.

2.2 Description of the Proposed Change

TS 3/4.3.2, ESFAS Instrumentation, provides the Limiting Conditions for Operation (LCO), ACTION(s) and Surveillance Requirements (SRs) for the Turkey Point Units 3 and 4 ESFAS instrumentation. ESFAS function FU 6, AFW, of Table 3.3-2, specifies the Total Number of Channels, Channels to Trip, Minimum Channels Operable, Applicable Modes and ACTION(s) for AFW auto-start instrumentation FU 6(d), Bus Stripping, and FU 6(e), Trip of all MFW Pump Breakers.

With the number of OPERABLE FU 6(d) or FU 6(e) channels one less than the Minimum Channels Operable requirement, Table 3.3-2 of TS 3/4.3.2 invokes ACTION 23. ACTION 23 requires compliance with TS 3.0.3 whereby the commencement of a Unit shutdown must begin within one-hour.

The proposed change modifies ACTION 23 of Table 3.3-2 by establishing a 48-hour completion time for restoring an inoperable FU 6(d) or FU 6(e) AFW auto-start instrument channel to OPERABLE status.

The proposed change is as indicated below:

TABLE 3.3-2
ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

	FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6.	Auxiliary Feedwater (###)					
	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

Auxiliary feedwater manual initiation is included in Specification 3.7.1.2.

TABLE 3.3-2 (Continued)
ACTION STATEMENTS

ACTION 23 With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, ~~comply with Specification 3.0.3.~~ ***restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.***

3.0 TECHNICAL EVALUATION

3.1 Modify TS ACTION for Inoperable FU 6(d), Bus Stripping, Channel

The proposed change modifies ACTION 23 of Table 3.3-2, ESFAS Instrumentation, to establish a 48-hour completion time for restoring AFW auto-start instrument channel, FU 6(d), Bus Stripping, to OPERBLE status.

The emergency power distribution system response to an undervoltage signal is controlled by load sequencers which initiate bus stripping action on the affected 4.16 kV and associated 480V load centers. The following ESFAS functions provide protection against a loss of non-emergency power:

- Reactor trip on low-low water level in any steam generator
- Three turbine-driven AFW pumps started on any of the following:

  1) Low-Low Level in Steam Generator
  2) Any Safety Injection signal
  3) Loss of offsite power (automatic transfer to diesel generators).
  4) Loss of "A" or "B" 4.16 kV bus on either Unit
  5) Trip of all MFW pumps on either Unit
  6) Manual actuation

Per Turkey Point accident analyses, the sequence of events that follow a loss of non-emergency power credit AFW flow ninety-five seconds after a reactor trip triggered by low-low SG water level. In the case of ATWS, AFW flow is credited after AMSAC initiation triggered by low SG water level. As such, the loss of normal power transient does not rely upon AFW auto-start on Bus Stripping as the primary success path for postulated accident mitigation as defined in 10 CFR 50.36(c)(2)(ii). AFW auto-start on Bus Stripping will not preclude SG water levels from reaching the S/G low-low level set point value for tripping the reactor or otherwise activating AMSAC. The FU 6(d) function, Bus Stripping, is an anticipatory ESFAS function neither credited in accident analyses nor relied upon for safe shutdown or accident mitigation.

ACTION 23 of TS 3.3.2, Table 3.3-2 requires that with the number of OPERABLE FU 6(d) channels one less than the minimum channels OPERABLE requirement, the station must comply with TS 3.0.3. The station has just one FU 6(d) channel for each applicable safety-related bus and as such, loss of a FU 6(d) channel on either bus requires the commencement of a shutdown on the applicable Unit within one-hour. Since the primary success path for safe shutdown and accident mitigation is provided by the SG low-low level signal, loss of the anticipatory ESFAS/AFW actuation function, FU 6(d), does not place the plant in an unanalyzed condition and therefore, a Unit shutdown should not be required. Unit shutdown for an inoperable ESFAS function that is neither relied upon for accident mitigation nor credited in accident analyses places an unreasonable burden on plant personnel and equipment.

Modifying ACTION 23 to provide for a 48-hour completion time for an inoperable FU 6(d) instrument channel would not alter the manner in which the instrumentation and controls are operated. The subject AFW actuation instrumentation would continue to be

maintained in accordance with station surveillance frequency control and maintenance program procedures such that the existing defense in depth and diversity described in the Turkey Point Final Safety Analysis Report (UFSAR) would remain unchanged.

In summary, the proposed change revises the requirement for an immediate Unit shutdown for the loss of a FU 6(d) channel by establishing a 48-hour completion time to restore the instrument channel to OPERABLE status. Unit shutdown for the loss of an anticipatory ESFAS function that is neither relied on for accident mitigation nor credited in accident analyses is unreasonable. Establishing a 48-hour completion time to restore the anticipatory ESFAS function does not place the plant in an unanalyzed condition. The FU 6(d) instrumentation and controls will continue to be operated and maintained in their present manner. As such, the proposed change to establish a 48-hour completion time to restore an inoperable FU 6(d), Bus Stripping, channel is reasonable.

3.2 Modify TS ACTION for Inoperable FU 6(e), Trip of All MFW Pump Breakers, Channel

The proposed change modifies ACTION 23 of Table 3.3-2, ESFAS Instrumentation, to establish a 48-hour completion time for restoring AFW actuation instrument channel, FU 6(e), Trip of All MFW Pump Breakers, to OPERBLE status.

A trip of all MFW pumps is an indication of the need for some method of decay heat and sensible heat removal to bring the reactor back to no-load temperature and pressure. The following ESFAS functions provide the necessary protection against a loss of MFW:

- Reactor trip on low-low water level in any steam generator
- Three turbine-driven AFW pumps started on any of the following:

  1) Low-Low Level in any Steam Generator
  2) Any Safety Injection signal
  3) Loss of offsite power (automatic transfer to diesel generators).
  4) Loss of "A" or "B" 4.16 kV bus on either Unit
  5) Trip of all MFW pumps on either Unit
  6) Manual actuation

Per Turkey Point accident analyses, the sequence of events that follow a loss of MFW conservatively credit AFW flow initiation ninety-five seconds after a reactor trip triggered by low-low SG water level. In the case of ATWS, AFW flow is credited ninety-five seconds after AMSAC initiation triggered by low SG water level. As such, neither limiting events rely on a loss of MFW signal as the primary success path for postulated accident mitigation as defined by 10 CFR 50.36(c)(2)(ii), Criterion 3. AFW initiation on loss of MFW will not preclude SG water levels from reaching the S/G low-low level set point value for tripping the reactor or otherwise activating AMSAC. The FU 6(e) function, Loss of All MFW Pump Breakers, is an anticipatory ESFAS function neither credited in accident analyses nor relied on for safe shutdown and accident mitigation.

ACTION 23 of TS 3.3.2, Table 3.3-2 requires that with the number of OPERABLE FU 6(e) channels one less than the minimum channels OPERABLE requirement, the station must comply with TS 3.0.3. The station has but one AFW auto-start on Trip of MFW Pump Breakers channel for each MFW pump and as such, loss of a FU 6(e) channel on either MFW pump requires the commencement of a shutdown on the applicable Unit within one-hour. Since the primary success path for safe shutdown and accident mitigation is provided by the SG low-low level signal, loss of the anticipatory ESFAS/AFW actuation function does not place the plant in an unanalyzed condition and therefore, an immediate Unit shutdown should not be required. Unit shutdown for an inoperable

ESFAS function that is neither relied upon for accident mitigation nor credited in accident analyses places an unreasonable burden on plant personnel and equipment.

Modifying ACTION 23 to provide for a 48-hour completion time for an inoperable FU 6(e) instrument channel would not alter the manner in which the instrumentation and controls are operated. The subject AFW actuation instrumentation would continue to be maintained in accordance with station surveillance frequency control and maintenance program procedures such that the existing defense in depth and diversity described in the Turkey Point Final Safety Analysis Report (UFSAR) would remain unchanged.

In summary, the proposed change relieves the burden of commencing an immediate Unit shutdown for the loss of FU 6(e) channel by establishing a 48-hour completion time to restore the instrument channel to OPERBLE status. Unit shutdown for the loss of an anticipatory ESFAS function that is neither relied upon for accident mitigation nor credited in accident analyses is unreasonable. Establishing a 48-hour completion time to restore the anticipatory ESFAS function does not place the plant in an unanalyzed condition. The FU 6(e) instrumentation and controls will continue to be operated and maintained in their present manner. As such, the proposed change to establish a 48-hour completion time to restore an inoperable FU 6(e), Loss of All MFW Pump Breakers, channel is reasonable.

4.0 REGULATORY SAFETY ANALYSIS

4.1 Applicable Regulatory Requirements/Criteria

1) 10 CFR 50.36, Technical Specifications, requires the establishment of an LCO for any structure, system or component (SSC) satisfying the criteria of 10 CFR 50.36(c)(2)(ii).

2) 1967 NRC Proposed General Design Criteria 15 states that protection systems shall be provided for sensing accident situations and initiating the operation of necessary engineered safety features.

3) 1967 NRC Proposed GDC 20 states that the redundancy and independence designed into protection systems shall be sufficient to assure that no single failure on removal from service of any component or channel of such a system will result in loss of the protection function. The redundancy provided shall include, as a minimum, two channels of protection for each protection function to be served.

4) 1967 NRC Proposed GDC 23 states that the effects of adverse conditions to which redundant channels or protection systems might be exposed in common, either under normal conditions or those of an accident, shall not result in loss of the protection function or shall be tolerable on some other basis.

5) 1967 NRC Proposed GDC 38 states that all engineered safety features shall be designed to provide such functional reliability and ready testability as is necessary to avoid undue risk to the health and safety of the public.

6) 1967 NRC Proposed GDC 41 states that engineered safety features, such as the emergency core cooling system and the containment heat removal system, shall provide sufficient performance capability to accommodate the failure of any single active component without resulting in undue risk to the health and safety of the public.

7) 1967 NRC Proposed GDC 42 states that engineered safety features shall be designed so that the capability of these features to perform their required function is not impaired by the effects of a loss-of-coolant accident to the extent of causing undue risk to the health and safety of the public.

8) 1967 NRC Proposed GDC 43, states that protection against any action of the engineered safety features which would accentuate significantly the adverse after-effects of a loss of normal cooling shall be provided.

The proposed change complies with the requirements of 10 50.36(c)(2)(ii) and does not alter the manner in which the ESFAS functions are operated and maintained, consistent with 1967 Proposed GDCs 15, 20, 23, 38, 41, 42 and 43. Therefore, all applicable regulatory requirements will continue to be satisfied as a result of this proposed change.

4.2 Precedents

The following precedents establish a basis for the proposed changes.

1) Donald C. Cook Nuclear Plant Unit 1 - Issuance of Exigent Amendment Regarding Revision to Technical Specifications for Engineered Safety Feature Actuation System Instrumentation, dated July 10, 2015. (Reference 6.1)

In Reference 6.1, the licensee proposed modifying Cook Nuclear Plant (CNP) Unit 1 TS 3.3.2, Engineered Safety Feature Actuation System Instrumentation, to add a new TS condition for one or more inoperable AFW auto-start on Trip of All MFW Pumps channels. The licensee explained that the CNP Unit 1 TS addressed a single inoperable MFW pump trip channel but because Unit 1 had two channels per MFW pump, failure of both channels subjected the station to TS 3.0.3, i.e. Unit shutdown. The licensee proposed a 48-hour completion time for one or more inoperable MFW pump trip channels on Unit 1 noting that in addition to being an anticipatory function, a 48-hour completion time was allowed on Unit 2 which had but one MFW pump trip channel per MFW pump. The licensee argued that the loss of both anticipatory trip channels on Unit 1 would not place the Unit in an unanalyzed condition, and therefore, entry into TS 3.0.3 should not be required.

In Reference 6.2, the staff granted the licensee's request to amend the CNP Unit 1 TS, noting amongst other conclusions, that the AFW auto-start on Trip of All MFW Pumps function was an anticipatory function and that the proposed completion time of 48 hours to restore one or more inoperable anticipatory trip channels was acceptable.

The staff's action is relevant to this license amendment request (LAR) because in Reference 6.2, the staff acknowledged the adequacy of a 48-hour completion time for restoring an anticipatory AFW actuation channel for a system with only one AFW actuation channel per applicable SSC. The Turkey Point TS requires entry into TS 3.0.3 for a single inoperable FU 6(d), Bus Stripping, or FU 6(e), Trip of All MFW Pump Breakers, channel, both of which support anticipatory AFW actuation functions. The proposed change modifies TS ACTION 23 by establishing a 48-hour completion time for an inoperable FU 6(d) or FU 6(e) channel, consistent with the CNP Unit 1 license amendment.

2) Watts Bar Nuclear Plant (WBN) Unit 1 - Technical Specification (TS) Change No. 08-07, Auxiliary Feedwater Auto-Start on Trip of the Turbine Driven Main Feedwater Pumps, dated September 18, 2008. (Reference 6.3)

In Reference 6.3, the licensee proposed modifying Mode 1 and 2 applicability for Function 6(e) of Watts Bar Nuclear Plant (WBN) Unit 1 TS, Table 3.3.2-1, Engineered Safety Feature Actuation System Instrumentation, and revising LCO 3.3.2, Condition J, to establish a 48-hour completion time for one or more inoperable MFW pump trip channels. In proposing to modify Condition J, the licensee noted that the AFW auto-start on loss of MFW function was anticipatory and that the plant had only one such MFW pump trip channel per MFW pump.

In Reference 6.4, the staff granted the licensee's request acknowledging that the AFW auto-start on loss of all MFW pump function was an anticipatory function and concluding that both MFW pumps' trip channels must be declared OPERABLE within 48 hours of entering Condition J or be in Mode 3 in accordance with Required Action J.2.

The staff's action is relevant to this LAR because in Reference 6.4, the staff acknowledged the adequacy of a 48-hour completion time for restoring an anticipatory ESFAS actuation signal for a system with only one anticipatory ESFAS actuation channel per applicable SSC. The Turkey Point TS requires entry into TS 3.0.3 for a single inoperable FU 6(d), Bus Stripping, or FU 6(e), Trip of All MFW Pump Breakers, channel, both of which support anticipatory ESFAS/AFW actuation functions. The proposed change modifies TS ACTION 23 by establishing a 48-hour completion time for an inoperable FU 6(d) or FU 6(e) channel, consistent with the WBN Unit 1 license amendment.

4.3 No Significant Hazards Consideration

FPL has evaluated whether a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, Issuance of amendment, as discussed below.

1) Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed change modifies ACTION 23 of TS 3.3.2, Table 3.3-2, to establish a 48-hour completion time for restoring two anticipatory ESFAS functions. The instrumentation associated with the proposed changes are not initiators of any accident previously evaluated, so the probability of accidents previously evaluated is unaffected. The proposed changes will not impact assumptions or conditions previously used in the radiological consequence evaluations. The subject ESFAS functions are not relied upon for accident mitigation and thus the proposed changes cannot affect the radiological consequences. The proposed changes will not impact any plant systems such that previously analyzed SSCs would be more likely to fail. The subject ESFAS functions will continue to be maintained and operated in a manner consistent with their intended function. The proposed changes do not adversely affect the protective and mitigative capabilities of the plant. The offsite and Control Room doses will continue to meet the requirements of 10 CFR 100, 10 CFR 50.67, and 10 CFR 50 Appendix A. Therefore, the proposed changes do not result in a significant increase in the probability or consequences of an accident previously evaluated.

2) Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change modifies the TS ACTION for two restoring anticipatory ESFAS functions. No new or different interactions with safety-related SSCs are created by the proposed change. The proposed changes will not introduce failure mechanisms, malfunctions, or accident initiators not already considered in the design and licensing bases. The subject ESFAS functions will continue to be operated and maintained such that the possibility of a new or different type of equipment malfunction is not created. No new accident scenarios, transient precursors, or limiting single failures are introduced as a result of the proposed changes. Therefore, the proposed changes do not create the possibility of a new or different accident from any accident previously evaluated.

3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed change modifies the TS ACTION for restoring two anticipatory ESFAS functions. The subject ESFAS functions are not relied upon for accident mitigation and are not credited in design bases accident analyses. Hence the proposed changes cannot alter any safety analyses assumptions, safety limits, limiting safety system settings, or methods of operating the plant. The proposed changes do not adversely impact plant operating margins or the reliability of equipment credited in the safety analyses. No changes in the methods, values or limits of a safety related function or accident analysis result from the proposed changes. Therefore, the proposed changes would not involve a significant reduction in the margin of safety.

Based on the above, FPL concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(b), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

FPL has evaluated the proposed amendment for environmental considerations. The review has determined that the proposed amendment would neither change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, nor an inspection or surveillance requirement. Additionally, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set for in 10 CFR 51.22(c)(9).

Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the proposed amendment.

6.0 REFERENCES

6.1 Donald C. Cook Nuclear Plant Unit 1, Exigent License Amendment Request Regarding Technical Specification 3.3.2, Engineered Safety Feature Actuation System (ESFAS) Instrumentation, dated June 29, 2015. (Accession No. ML15181A002)

6.2 Donald C. Cook Nuclear Plant Unit 1 - Issuance of Exigent Amendment Regarding Revision to Technical Specifications for Engineered Safety Feature Actuation System Instrumentation (TAC NO. MF6390), dated July 10, 2015. (Accession No. ML15187A002)

6.3 Watts Bar Nuclear Plant (WBN) Unit 1 - Technical Specification (TS) Change No. 08-07, Auxiliary Feedwater Auto-Start Upon Trip of the Turbine Driven Main Feedwater Pumps, dated September 18, 2008. (Accession No. ML082670543)

6.4 Watts Bar Nuclear Plant, Unit 1 - Issuance of Amendment Regarding Auxiliary Feedwater Start Upon Trip of Main Feedwater Pumps (TAC NO. MD9713), dated March 5, 2009. (Accession No. ML090480566)

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION PAGES (MARKUP)
(2 pages follow)

This page is for information only.
There are no changes to this page.

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

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
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 Feedwater 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 Undervoltage	2 per load center	2 on any load center	2 per load center	1, 2, 3, 4	18
Coincident with: Safety Injection	See Item 1. above for all Safety Injection initiating functions and requirements.				

TABLE 3.3-2 (Continued)

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. 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.

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 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.

restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ATTACHMENT 2

PROPOSED TECHNICAL SPECIFICATION PAGES (CLEAN COPY)
(1 page follows)

TABLE 3.3-2 (Continued)

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. 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.

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, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

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 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

PROPOSED TECHNICAL SPECIFICATION BASES PAGES (MARKUP)
(2 pages follow)

REVISION NO.: 19	PROCEDURE TITLE: TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	PAGE: 74 of 211
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

ATTACHMENT 2
Technical Specification Bases
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3/4.3.1 & 3/4.3.2 (Continued)

Item 5 of Table 3.3-2 requires that two trains of feedwater isolation actuation logic and relays be OPERABLE in MODES 1, 2 and 3. Operability requires:

- Isolation of both the normal feedwater branch and the bypass branch lines through automatic closure of the main feedwater and main feedwater bypass flow control valves (FCV) or automatic closure of the feedwater isolation valves (FIV) during a safety injection actuation signal or high-high steam generator water level signal, and
- Two independent trains of Automatic Actuation Logic and actuation relays.

In the event that maintenance and/or in-service testing is required on a feedwater regulating valve in Mode 1, 2 and 3, the above requirements can be met by closing the isolation valve upstream of the affected feedwater regulating valve, administratively controlling the position of the isolation valve, and controlling feedwater flow with an OPERABLE feedwater regulating valve (main or bypass).

DELETE →

When complying with ACTION 23 for Table 3.3-2 Functional Unit 6.d. the plant does **NOT** enter Limiting Condition for Operation (LCO) 3.0.3. ACTION 23, in the wording "comply with Specification 3.0.3", requires actions to be taken that are the same as those described in LCO 3.0.3, without any requirement to enter LCO 3.0.3. ACTION 23 has designated conditions under which the specific prescribed ACTIONS of within 1 hour action shall be initiated to place the unit, as applicable, in:

a. At least HOT STANDBY within the next 6 hours,

b. At least HOT SHUTDOWN within the following 6 hours, and

c. At least COLD SHUTDOWN within the subsequent 24 hours

These are required when the designated conditions of the number of OPERABLE channels one less than the Minimum Channels OPERABLE, are **NOT** met.

REVISION NO.: 19	PROCEDURE TITLE: TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	PAGE: 75 of 211
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ATTACHMENT 2
Technical Specification Bases
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3/4.3.1 & 3/4.3.2 (Continued)

DELETE

~~The definition of ACTION in Technical Specifications Section 1.1 is that part of a Technical Specification which prescribes remedial measures required under designated conditions. The TS Bases for 3.0.3 describe the fact that 3.0.3 establishes the shutdown ACTION requirements that must be implemented when a Limiting Condition for Operation is **NOT** met and the condition is **NOT** specifically addressed by the associated ACTION requirements. In the case of ACTION statement 23, shutdown ACTION requirements are specifically described in the ACTION statement as inferred in the wording "comply with Specification 3.0.3." **NO** reporting is necessary under ACTION 23 until a shutdown has begun.~~

ADD

For Table 3.3-2 Functional Unit (FU) 6.d, ACTION 23 establishes that if a FU 6.d channel is inoperable, 48 hours are allowed to return the channel to an OPERABLE status. If the FU 6.d channel cannot be returned to an OPERBLE status, 6 hours are allowed to place the Unit in MODE 3. The allowed Completion Time of 6 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging Unit systems. In MODE 4, the Unit does not have analyzed transients or conditions that require the explicit use of the protection function noted above.

For Table 3.3-2 Functional Unit (FU) 6.e, ACTION 23 establishes that if a FU 6.e channel is inoperable, 48 hours are allowed to return the channel to an OPERABLE status. If the FU 6.e channel cannot be returned to an OPERBLE status, 6 hours are allowed to place the Unit in MODE 3. The allowed Completion Time of 6 hours is reasonable, based on operating experience, to reach MODE 3 from full power conditions in an orderly manner and without challenging Unit systems. In MODE 3, the Unit does not have analyzed transients or conditions that require the explicit use of the protection functions noted above.