



L-2017-213  
10 CFR 50.90

**DEC 18 2017**

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

RE: Turkey Point Nuclear Plant, Unit 3  
Docket No. 50-250  
Renewed Facility Operating License DPR-31

License Amendment Request 256, One-Time Extension of 3A Containment Spray (CS) Pump Completion Time

Pursuant to 10 CFR Part 50.90, Florida Power & Light Company (FPL) hereby requests an amendment to Renewed Facility Operating License DPR-31 for Turkey Point Nuclear Plant Unit 3. The proposed license amendment modifies the Turkey Point Technical Specifications (TS) by extending on a one-time basis, the Completion Time for an inoperable 3A Containment Spray (CS) Pump from 72 hours to 14 days. The one-time license amendment is necessary to perform a planned modification of the pump while at-power.

The enclosure to this letter provides FPL's evaluation of the proposed license amendment. Attachment 1 to the enclosure provides a mark-up of the existing TS page to show the proposed change. No change is proposed to the current TS Bases as a result of this license amendment request.

FPL has determined that the proposed change does not involve a significant hazards consideration pursuant to 10 CFR 50.92(c), and there are no significant 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 the proposed license amendment is being forwarded to the State designee for the State of Florida.

Although the proposed license amendment is prompted by neither exigent nor emergency circumstances, FPL respectfully requests staff review and approval by April 1, 2018 and implementation within 90 days after issuance. To allow for orderly planning and scheduling, FPL requests authorization to exercise the extended Completion Time on a one-time basis anytime during the remainder of Unit 3 Cycle 29, which ends in fourth-quarter 2018.

This letter contains no new regulatory commitments.

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

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

Executed on December 18, 2017

Sincerely,

A handwritten signature in blue ink, appearing to read "T. Summers", is written over a horizontal line.

Thomas Summers  
Regional Vice President - Southern Region  
Florida Power & Light Company

Florida Power & Light Company

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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

## EVALUATION OF THE PROPOSED CHANGES

Turkey Point Nuclear Plant Unit 3  
License Amendment Request 256  
One-Time Extension of 3A Containment Spray (CS) Pump Completion Time

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Attachment 1 - Proposed Technical Specification Page (markup)

## 1.0 **SUMMARY DESCRIPTION**

Florida Power & Light Company (FPL) hereby requests an amendment to Renewed Facility Operating License DPR-31 for Turkey Point Nuclear Plant Unit 3. The proposed license amendment modifies the Turkey Point Units 3 and 4 Technical Specifications (TS) by extending on a one-time basis, the Completion Time for an inoperable 3A Containment Spray (CS) Pump from 72 hours to 14 days. The one-time license amendment is necessary in order to perform a planned modification of the 3A CS Pump while at-power. FPL requests authorization to exercise the extended 3A CS Pump Completion Time on a one-time basis anytime during the remainder of Unit 3 Cycle 29, which ends in fourth-quarter 2018.

## 2.0 **DETAILED DESCRIPTION**

### 2.1 **System Design and Operation**

The Containment Spray System sprays cool, borated water into the Containment atmosphere to prevent Containment pressure from exceeding design limits in the event of a loss-of-coolant accident (LOCA) or a main steam line break (MSLB). The system is sized to supply the necessary post-accident cooling capacity to reduce Containment pressure following blowdown and cooling of the core by safety injection. This protection is afforded for all pipe break sizes up to and including the hypothetical instantaneous circumferential rupture of a reactor coolant pipe. The Containment Spray System is also credited for post-accident Containment atmosphere iodine removal and hydrogen mixing. The Emergency Containment Cooling (ECC) System provides backup Containment cooling for the Containment Spray System. In the event of a LOCA or MSLB, the minimum available Containment Spray and ECC system equipment shall maintain the Containment pressure and temperature below the containment structural design values consistent with the limiting single active failure.

The Containment Spray System is comprised of two Containment Spray pumps, spray ring headers and nozzles, and associated piping and valves. All Containment Spray System components, piping, structures, and power supplies are designed to Seismic Class I criteria. The Containment Spray pumps are located in the Auxiliary Building and take suction directly from the Refueling Water Storage Tank (RWST). The pumps are protected by concrete enclosures designed to withstand missile impact. The Containment Spray System also utilizes the two Residual Heat Removal (RHR) pumps, two residual heat removal heat exchangers and associated valves and piping of the Safety Injection System for long term recirculation phase Containment cooling. The current Containment analysis models Containment Spray flow as a function of Containment pressure. For the limiting case of the Containment analysis, Containment Spray System flow capability at 50 psig is 1293 gallons per minute (gpm) during the initial injection phase and 1575 gpm during the cold leg recirculation phase.

Containment spray is actuated on coincident signals of two-out-of-three high and two-out-of-three containment high-high pressure signal channels or when a manual signal is given. The starting signal starts the Containment Spray pumps and opens the discharge valves to the spray headers. If required, the operator can manually actuate the system from the Control Room, and periodically, the operator will actuate system components to demonstrate operability.

The Containment Spray System is designed such that all associated components performing a specified safety function can be tested. Where practicable, all components are periodically exercised, inspected for leaks, etc., to assure system readiness. In

addition, air flow is periodically established through the spray headers to verify that the spray nozzles inside Containment are free from obstruction. The Containment Spray pumps are protected from dead-heading via one-inch mini-recirculation lines and are tested under design basis accident conditions via six-inch 'full-flow' recirculation lines.

## 2.2 Current Requirements

TS 3/4.6.2.1 states that two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and manually transferring suction to the Containment sump via the RHR System.

TS 3.6.2.1, ACTION (a), states that with one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

TS 3.6.2.1, ACTION (b), states that with two Containment Spray Systems inoperable restore at least one Spray System to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both Spray Systems to OPERABLE status within 72 hours of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

## 2.3 Description of the Proposed Change

The proposed change extends on a one time basis, the completion time of TS 3.6.2.1, ACTION (a) from 72 hours to 14 days for the purpose of performing planned maintenance on 3A Containment Spray Pump, 3P214A. The option to use the proposed one-time extension would expire at the end of Unit 3 Cycle 29. as indicated below:

### ACTION:

- a. *With one Containment Spray System inoperable restore the inoperable Spray System to OPERABLE status within 72 hours\*\* or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.*

Add new note to bottom of page.

Add double asterisk

\*\* *During Unit 3 Cycle 29 only, a one-time extension from 72 hours to 14 days is allowed to perform a planned modification of the 3A Containment Spray pump (3P214A).*

## 2.4 Reason for the Proposed Change

Increased pump and motor vibration on 3A Containment Spray (CS) Pump, 3P214A, has been observed during inservice testing performed in accordance with the American Society of Mechanical Engineers Code for Operations and Maintenance of Nuclear Power Plants (ASME OM Code) (Reference 6.1). The pump is currently in the Alert Range for vibration measurements and thereby subject to ASME OM Code comprehensive testing at twice the normal frequency. The increased vibration has been attributed to a degraded motor support frame and motor/pump foundation. Enhanced vibration testing and analyses revealed that the resonant frequency of the motor/base combination is sufficiently near the frequency of the running motor for the running motor to excite the pump base. Based upon similar operating experience, the condition is believed to cause an artificial misalignment of the pump to motor coupling which when running, increases pump and motor vibration levels. FPL resolved similar conditions on

the 3B CS Pump and both Unit 4 CS pumps by reworking the skid/foundation assembly. The pumps have not since experienced repetitive elevated vibration levels. However, the duration of the modifications were such that the 72 hour Completion Time allotted by TS 3.6.2.1, ACTION (a), would have been exceeded by several days had the modifications been performed at-power.

The modification is estimated to require approximately 10 days. Therefore, a one-time extension of the Completion Time from 72 hours to 14 days would provide adequate margin to address any unforeseen challenges that might be encountered during the planned modification. To provide for orderly planning and scheduling, FPL requests authorization to use the one-time 14 day Completion Time anytime during Unit 3 Cycle 29, which ends in fourth-quarter 2018.

### 3.0 TECHNICAL EVALUATION

The proposed license amendment modifies the Turkey Point TS by extending on a one-time basis, the Completion Time for an inoperable 3A CS Pump (3P214A) from 72 hours to 14 days. The one-time license amendment is necessary in order to complete a planned modification of the 3A CS Pump skid/foundation assembly. Though the elevated vibration levels recently displayed during inservice testing are not a true indication of pump health, delaying the modification to the next refueling outage increases the risk of exceeding the ASME OM Code vibrational limit and thereby prompting an emergency license amendment request or otherwise commencing a Unit shutdown within 72 hours. Completing the modification at the next available opportunity (i.e. at-power) restores both pump operating margin and improves pump performance.

In proposing a one-time Completion Time extension for the 3A CS Pump, FPL applied Regulatory Guide (RG) 1.177, An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications (Reference 6.2). RG 1.177 is consistent with but establishes a more detailed approach to evaluating TS changes than does RG 1.174, An Approach For Using Probabilistic Risk Assessment In Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis (Reference 6.3). The RG1.177 principles for evaluating one-time Completion Time changes are each addressed as follows:

#### 3.1 Compliance with Current Regulations

Pending authorization to implement the proposed Completion Time extension, no deviation from the Turkey Pont TS or other applicable regulatory requirements are proposed. The proposed Completion Time extension is not in conflict with any approved codes or standards relevant to safe nuclear plant operation and all applicable codes and standards will be met for the duration of the planned 3A CS Pump modification. Moreover, no exception to or exemption from the applicable 10 CFR 50, Appendix A, General Design Criteria (GDC) are proposed. The proposed one-time Completion Time extension will neither adversely affect the intended function and subsequent performance of the 3A CS Pump nor the CS system overall. As such, no change to the Maintenance Rule (MR) Program Monitoring Plan is proposed. Following the planned modification, the 3A CS Pump will continue to be maintained and monitored such that exceeding the applicable MR performance criteria will result in increased monitoring and goal setting in accordance with 10 CFR 50.65(a)(1).

#### 3.2 Defense in Depth

During the proposed one-time Completion Time extension, defense-in-depth measures will be applied to account for unknown and unforeseen failure mechanisms or other

phenomena and thereby ensure the capability to prevent Containment pressure from exceeding design limits in the unlikely event of a LOCA or MSLB. Risk Management Actions (RMAs) have been established in plant procedures to the extent practical and will be implemented at the earliest appropriate time in order to maintain defense in depth. By creating these multiple independent and redundant layers of defense, compliance with applicable general design criteria, national standards and engineering principles and the integrity of barriers to core damage and containment failure are assured.

### 3.2.1 Guarded and Protected Equipment

For the duration of the proposed one-time 3A CS Pump Completion Time extension, the following plant equipment will be guarded or protected in accordance with plant procedure OP-AA-102-1003, Guarded Equipment, as indicated below.

- 3B CS Pump and associated electrical breaker [Guarded]
- 3A, 3B and 3C Emergency Containment Coolers and associated electrical breakers [Protected]
- 3A, 3B Emergency Diesel Generators [Protected]
- Unit 3 Startup Transformer and associated onsite AC power distribution system [Protected]

Protecting or guarding the above equipment reduces the likelihood of a plant transient during the proposed Completion time and ensures plant capability to prevent Containment pressure from exceeding design limits and the availability of one CS train for Containment atmosphere iodine removal and hydrogen mixing in the event of LOCA or a MSLB. Though the CS and the ECC systems operate simultaneously to keep the Containment pressure from exceeding design pressure during a maximum hypothetical accident, each subsystem is equipped with sufficient redundancy to ensure the capability to accomplish their respective safety functions under any single active failure condition. Hence guarding the redundant CS Pump as well as protecting the ECC's ensures the fulfillment of the intended Containment cooling function. Should an emergent condition arise during the proposed Completion Time extension such that any of the above equipment becomes inoperable, the appropriate TS ACTION will be entered and additionally, the online (at-power) aggregate risk will be re-evaluated in accordance with plant on-line risk procedures, as described in Section 3.3, to avoid entry into a risk significant configuration and thereby minimize plant risk.

### 3.2.2 Human Performance

Prior to the start and during each shift of the proposed Completion Time extension, a pre-job briefing will be conducted to reinforce expected human performance behaviors and bolster defense-in-depth barriers to human errors. In order to minimize plant challenges, Operators and maintenance shift crews will be briefed on procedures for implementing and maintaining the equipment lineup necessary to perform the planned 3A CSP modification. Risk aspects of the proposed Completion Time extension will be emphasized during these briefings. Operators will be additionally briefed on responding to unintended and unforeseen circumstances that may rely on CS system operability during the proposed Completion Time extension.

### 3.2.3 Other Defense-in-Depth Considerations

A reasonable balance among prevention of core damage, prevention of containment failure and consequence mitigation will be preserved during the proposed Completion Time extension. The 3B CS train and the ECC's will be operational throughout the planned 3A CS Pump modification and thereby fully capable for performing their specified function of preventing Containment pressure from exceeding design limits in the event of a LOCA or MSLB. No other SSCs will be affected by the proposed Completion Time extension and no limits will be imposed on any SSC performing its specified function.

Elevated risk awareness and the protection of critical equipment will be executed during the proposed Completion Time extension in accordance with existing plant procedures. However, these programmatic activities will be accompanied by pre-job and periodic (e.g. shift change) briefings, equipment walk downs, progress updates, and increased operational and managerial scrutiny. As such, there will be no over-reliance on programmatic activities as compensatory measures during the proposed Completion Time extension.

The independence of the physical barriers to radiological releases will not be degraded as a result of the proposed Completion Time extension. The planned 3A CSP modification will not impact fuel cladding, Reactor Coolant System (RCS) or Containment integrity. No other systems, structures and components (SSC) will be affected by the proposed Completion Time extension and thereby no limits will be imposed on any SSC in performing its specified safety function.

Defenses against potential common-cause failures (CCFs) will be maintained by limiting non-essential maintenance and operation of SSCs having mitigatory roles credited in accident analyses. This includes SSCs providing similar and/or support functions for preventing Containment pressure from exceeding design limits in the unlikely event of a LOCA or MSLB. FPL's risk analysis (Section 3.3) quantified the possible CCF combinations for the CS pumps and concluded that the risk impact for the proposed Completion Time extension is insignificant. Moreover, FPL has a high degree of confidence that no new CCF mechanisms can be introduced given that the planned 3A CS Pump modification has been successfully applied to the 3B CS Pump and is similar to the 4A and 4B CS Pumps. Modification acceptance testing will confirm 3A CS Pump readiness to return to service.

Potentially risk significant plant configurations will not occur during the proposed one-time Completion Time extension due to online risk assessment tools and increased operational and managerial scrutiny of plant operations. During the planned 3A CS Pump modification, no risk significant plant equipment will be removed from service and protective measures will be implemented to reduce the likelihood of challenges to risk significant equipment. As a result, the functional redundancy, independence and diversity currently described in the Turkey Point Updated Final Safety Analysis Report (USFAR) will be maintained throughout the proposed Completion Time extension.

The 3A CS Pump modification will be conducted in accordance with FPL's Engineering Change (EC) process, thereby ensuring that all applicable design codes, standards and regulations will be met. Turkey Point's risk assessment analyses support the one-time Completion Time extension by demonstrating an



insignificant increase in the likelihood of a radiological release for all credible postulated events. Thereby, the intent of the plant's design criteria is maintained.

#### 3.2.4 Safety Margins

The proposed one-time amendment does not alter the design and operation of the CS system, will not result in plant operation in a configuration outside the design basis, and will not impact any assumptions or consequences specified in applicable safety analyses. Safety margins will be maintained in accordance with Turkey Point safety analyses acceptance criteria and no changes are proposed that affect any assumptions or inputs to applicable safety analyses. Sufficient CS and ECC equipment redundancy will exist during the proposed Completion Time extension to ensure Containment cooling capability for all applicable design basis accidents. As such, no safety margins are impacted by the proposed change.

### 3.3 Evaluation of Risk Impact

#### 3.3.1 Risk Assessment Evaluation

Using acceptable PRA methods, FPL evaluated the risk associated with extending on a one-time basis, the Completion Time for an inoperable 3A CS Pump from 72-hours to 14 days. The results are summarized below:

##### 3.3.1.1 Methodology

The change in Core Damage Frequency (CDF) and Large Early Release Frequency (LERF) with the 3A CS Pump out of service were quantified using PRAQuant 5.2 for Internal Events risk and FRANX 4.4 for Internal Flooding and Fire risk. Baseline CDF and LERF calculations were run with the test and maintenance events set to zero (0). CDF and LERF calculations were then run with the test and maintenance events set to zero (0) and the basic event for failure of the 3A CS Pump set to one (1).

##### 3.3.1.2 Assumptions/Bases

None

##### 3.3.1.3 Calculation

The current Internal Events and Internal Flooding models of record, and the latest Fire model were used for the risk calculations. The CDF runs were calculated at a truncation of 1E-12 per year, and the LERF runs were calculated at a truncation of 1E-13 per year.

##### 3.3.1.4 Results

The Turkey Point fire model contains various components that do not have their associated cables mapped and were therefore conservatively assumed to fail. The CS Pumps were treated this way and therefore their assumed failure as part of this risk evaluation had no impact.

The results of the quantification are listed below:

Run	Internal Events	Internal Flooding	Total
Baseline CDF, zero T&M	4.93E-07	1.36E-07	6.29E-07
CDF, zero T&M, 3A CS Pump OOS	4.94E-07	1.36E-07	6.30E-07
Baseline LERF, zero T&M	1.51E-08	5.91E-10	1.57E-08
LERF, zero T&M, 3A CS Pump OOS	1.52E-08	5.91E-10	1.57E-08
Delta CDF	1.28E-09	Negligible	1.28E-09
Delta LERF	6.00E-12	Negligible	6.00E-12

(OOS = out of service; T&M = test and maintenance)

With the proposed allowed-outage-time for the 3A CS Pump extended to 14 days, the Incremental Conditional Core Damage Probability (ICCDP) and Incremental Conditional Large Early Release Probability (ICLERP) are as follows:

$$\text{ICCDP} = (1.28\text{E-}09 \text{ per year}) \times (14 \text{ days}) / (365 \text{ days/year}) = 4.91\text{E-}11$$

$$\text{ICLERP} = (6.00\text{E-}12 \text{ per year}) \times (14 \text{ days}) / (365 \text{ days/year}) = 2.30\text{E-}13$$

#### 3.3.1.5 Other External Events Contribution

The impact of external events on the increase in risk associated with this LAR was not explicitly calculated due to the lack of seismic and other external events PRA models for Turkey Point which are not necessarily realistic and suitable for configuration-specific analysis. As an approximation, the external events' contribution was assumed to be equal to the internal events' contribution. If the above ICCDP and ICLERP values were doubled, they would remain well below the thresholds for minimal increase in radiological risk.

#### 3.3.1.6 Conclusion

With the proposed Completion Time extension for the 3A CS Pump from 72-hours to 14 days, the ICCDP and the ICLERP values are well below the NRC acceptance criteria of 1E-6 and 1E-7, respectively.

#### 3.3.2 Configuration Management

The calculated ICCDP and ICLERP values demonstrate an insignificant increase in the likelihood of a radiological release during the proposed Completion Time extension. As such, compensatory measures such as enhancements in plant design, procedures or programmatic methods are not warranted and no backup equipment, additional testing or specific training are proposed for the extended Completion Time. The deterministic defense in depth measures described above, along with online risk monitoring (below), are sufficient to ensure that configuration management will be maintained and that no risk significant plant configurations will occur during the proposed Completion Time extension.

#### 3.3.3 Online Risk Monitoring

Online (i.e. at-power) risk monitoring encompasses an integrated review of known and anticipated plant conditions in order to uncover risk-significant plant

configurations both during the work management process and for emergent plant operating conditions. Inputs to the risk analysis consider all aspects of work activities including maintenance, surveillances, chemistry activities, operations activities, scaffolding, etc. The probability and consequences of a work activity failure are also evaluated with consequences given more weight than probability.

At the start of and at least once per shift during the proposed Completion Time extension, an aggregate, online risk analysis will be performed in accordance with OP-AA-104-1007, Online Aggregate Risk, and O-ADM-225, On Line Risk Assessment and Management. The online risk analyses will consider the following risk inputs:

- Online Probabilistic Risk Assessment (PRA)
- Plan of the Day (POD) activities potentially impacting plant operations
- Schedule changes and emergent work requests for equipment to be removed from service
- Local weather potentially affecting the availability of offsite power
- Compensatory / contingency actions such as operability determinations, operator challenges and increased monitoring programs
- Control Room controllers normally in AUTO which are in manual and not in support of on-going maintenance or testing activities
- Control Room switch positions tagged in off-normal positions that are not in support of on-going maintenance or testing activities
- The LCO Items log and the LCO items scheduled for the shift
- Risk attributes identified on the opposite Unit (Unit 4)

Each shift during the proposed Completion Time extension, the above individual risk factors will be summed to obtain an aggregate risk factor and presented to the Shift Manager for review. Aggregate risk values above Low Aggregate Risk will be subject to additional site management review for opportunities to minimize plant overall risk including rescheduling and/or canceling planned work activities.

### 3.4 Conclusion

Using the guidance provided in RG 1.177 (Reference 6.2) for evaluating Completion Time changes, the above analysis demonstrates using both deterministic and risk-based perspectives, that the proposed license amendment to extend the Completion Time for an inoperable 3A CS Pump from 72-hours to 14 days on a one-time basis is reasonable.

#### 4.0 **REGULATORY EVALUATION**

##### 4.1 Applicable Regulatory Requirements/Criteria

- 10 CFR 50.36(c)(2)(i) states that Limiting Conditions for Operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.
- General Design Criteria (GDC) 52 of Appendix A to 10 CFR 50, states that where an active heat removal system is needed under accident conditions to prevent exceeding containment design pressure, this system shall perform its required function, assuming failure of any single active component..
- GDC 58 of Appendix A to 10 CFR 50, states that design provisions shall be made to the extent practical to facilitate the periodic physical inspection of all important components of the containment pressure reducing systems, such as pumps, valves, spray nozzles and sumps.
- GDC 59 of Appendix A to 10 CFR 50, states that the containment pressure reducing systems shall be designed, to the extent practical so that active components, such as pumps and valves, can be tested periodically for operability and required functional performance.
- GDC 60 of Appendix A to 10 CFR 50, states that a capability shall be provided to the extent practical to test periodically the delivery capability of the containment spray system at a position as close to the spray nozzles as is practical.
- GDC 61 of Appendix A to 10 CFR 50, states that a capability shall be provided to test initially under conditions as close as practical to the design and the full operational sequence that would bring the containment pressure-reducing systems into action, including the transfer to alternate power sources.
- 1967 NRC Proposed GDC 40 states that adequate protection for those engineered safety features, the failures of which could cause an undue risk to the health and safety of the public, shall be provided against dynamic effects and missiles that might result from plant equipment failures.
- 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.
- 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.

- 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 license amendment complies with the requirements of 10 CFR 50.36(c)(2)(i) and does not alter the manner in which the Turkey Point will be operated and maintained consistent with GDC(s) 52, 58, 59, 60, 61 and 1967 Proposed GDC(s) 40, 41, 42 and 43. All applicable regulatory requirements will continue to be satisfied as a result of the proposed license amendment.

#### 4.2 Precedent

The proposed license amendment modifies the Turkey Point TS by extending on a one-time basis, the Completion Time for an inoperable 3A Containment Spray Pump from 72-hours to 14 days. The NRC has recently approved on a one-time basis, similar non-emergent, non-emergency requests for a Completion Time extension, as indicated below:

- 4.2.1 Shearon Harris Nuclear Power Plant, Unit 1 - Issuance of Amendment on Temporary Changes to Technical Specifications for the 'A' Emergency Service Water Pump Replacement (CAC No. MF7017), dated September 16, 2016, (Reference 6.4)
- 4.2.2 Vogtle Electric Generating Plant, Unit 2 - Issuance of Amendment for 2B Nuclear Service Cooling Water Transfer Pump (CAC No. MF8274), dated October 31, 2016, (Reference 6.5)
- 4.2.3 Braidwood Station, Unit 2- Issuance of Amendments Regarding 2A Essential Service Water Pump Technical Specifications for Pump Repair (CAC No. MF8438), dated November 23, 2016, (Reference 6.6)

#### 4.3 No Significant Hazards Consideration

The proposed license amendment modifies the Turkey Point Units 3 and 4 Technical Specifications (TS) by extending on a one-time basis, the Completion Time for an inoperable 3A Containment Spray (CS) Pump from 72-hours to 14 days. As required by 10 CFR 50.91(a), FPL has evaluated the proposed change using the criteria in 10 CFR 50.92 and has determined that the proposed change does not involve a significant hazards consideration. An analysis of the issue of no significant hazards consideration is presented below:

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

Response: No

The proposed license amendment modifies the Turkey Point TS by extending the 3A Containment Spray Pump completion time from 72 hours to 14 days on a one-time basis. The proposed one-time extension extends the unavailability of the 3A Containment Spray Pump but otherwise does not alter the manner in which the Containment Spray System is operated or maintained. Planned maintenance is neither a precursor to an accident nor an accident initiator. The additional time the 3A Containment Spray Pump will be removed from service will not affect the ability of the Containment Spray System to operate as designed since the system has no time-dependent failure modes.

Therefore, facility operation in accordance with the proposed changes would not involve 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 license amendment modifies the Turkey Point TS by extending the 3A Containment Spray Pump completion time from 72 hours to 14 days on a one-time basis. The proposed change does not introduce new equipment, create new failure modes for existing equipment, or create new limiting single failures. The proposed amendment does not involve a physical alteration of any SSC, or a change in the way any SSC is operated or maintained. The proposed change does not involve operation of any SSCs in a manner or configuration different from that previously recognized or evaluated.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

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

Response: No

The proposed license amendment modifies the Turkey Point TS by extending the 3A Containment Spray Pump completion time from 72 hours to 14 days on a one-time basis. Extending the Completion Time does not involve change any limit on accident consequences specified in the Turkey Point license or applicable regulations, does not modify how accidents are mitigated and does not involve a change in a methodology. No limiting safety limits or limiting safety settings are affected by the proposed change.

Therefore, operation of the facility in accordance with the proposed change will not involve a significant reduction in the margin of safety.

Based upon the above analysis, FPL concludes that the proposed license amendment does not involve a significant hazards consideration, under the standards set forth in 10 CFR 50.92, "Issuance of Amendment," and accordingly, a finding of "no significant hazards consideration" is justified.

#### 4.4 Conclusion

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**

The proposed amendment modifies a regulatory requirement with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or changes an inspection or surveillance requirement. However, 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 effluents 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 forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## **6.0 REFERENCES**

- 6.1 American Society of Mechanical Engineers Code for Operations and Maintenance of Nuclear Power Plants, 2004 Edition with Addenda through 2006.
- 6.2 RG 1.177, An Approach for Plant-Specific, Risk-informed Decisionmaking: Technical Specifications, Revision 1, dated May 2011, (ADAMS Accession No. ML100910008)
- 6.3 RG 1.174, An Approach For Using Probabilistic Risk Assessment In Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis, Revision 2, dated May 2011 (ADAMS Accession No. ML100910006)
- 6.4 Shearon Harris Nuclear Power Plant, Unit 1 - Issuance of Amendment on Temporary Changes to Technical Specifications for the 'A' Emergency Service Water Pump Replacement (CAC No. MF7017), dated September 16, 2016, (ADAMS Accession No. ML16253A059)
- 6.5 Vogtle Electric Generating Plant, Unit 2 - Issuance of Amendment for 2B Nuclear Service Cooling Water Transfer Pump (CAC No. MF8274), dated October 31, 2016, (ADAMS Accession No. ML16265A162)
- 6.6 Braidwood Station Unit 2- Issuance of Amendments Regarding 2A Essential Service Water Pump Technical Specifications for Pump Repair (CAC No. MF8438), dated November 23, 2016, (ADAMS Accession No. ML16315A302)

**ATTACHMENT 1**

**PROPOSED TECHNICAL SPECIFICATION PAGES (MARKUP)**

(1 page follows)



## CONTAINMENT SYSTEMS

### 3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

#### CONTAINMENT SPRAY SYSTEM

##### LIMITING CONDITION FOR OPERATION

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3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and manually transferring suction to the containment sump via the RHR System.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

Add double asterik (\*\*)

- a. With one Containment Spray System inoperable restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two Containment Spray Systems inoperable restore at least one Spray System to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both Spray Systems to OPERABLE status within 72 hours of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

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4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position\* and that power is available to flow path components that require power for operation;
- b. By verifying that on recirculation flow, each pump develops the indicated differential pressure, when tested pursuant to Specification 4.0.5:  
  
Containment Spray Pump  $\geq 241.6$  psid while aligned in recirculation mode.
- c. In accordance with the Surveillance Frequency Control Program by verifying containment spray locations susceptible to gas accumulation are sufficiently filled with water.

\*\* During Unit 3 Cycle 29 only, a one-time extension from 72 hours to 14 days is allowed to perform 3A Containment Spray Pump (3P214A) planned maintenance.

\*Not required to be met for system vent flow paths opened under administrative control.