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10 CFR 50.90
10 CFR 50.91
L-2009-093
April 15, 2009

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

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Emergency License Amendment Request No. 197
Revision of Technical Specification 3.9.10: Water Level – Reactor Vessel

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(5), Florida Power and Light Company (FPL) requests approval of a change to Turkey Point Unit 3 and Unit 4 Facility Operating Licenses DPR-31 and DPR-41, respectively. The change concerns the elimination of control rods from the Applicability, Action and SR of Refueling Operations Technical Specification (TS) 3.9.10, Water Level – Reactor Vessel. The change is consistent with Standard Technical Specifications – Westinghouse Plants, NUREG-1431, Revision 3. A description of the proposed change is included in Attachment 1 to this letter.

The Turkey Point Plant Nuclear Safety Review Committee has reviewed and approved the proposed amendment.

FPL requests approval of the proposed amendment by 1200 hours on April 15, 2009, based on the current schedule for lifting the Unit 3 reactor vessel closure head from the reactor vessel. The need to request an emergency TS change arose when control rod D-6 failed to move during post-refueling testing. As a result of diagnostic activities, it has been concluded that control rod D-6 is mechanically bound. In order to further diagnose the cause of the binding, it is necessary to remove the reactor vessel closure head (RVCH) from the reactor vessel. RVCH removal may result in control rod D-6 being moved from its reactor core location. This will be a noncompliance with TS LCO 3.9.10. In order to avoid the noncompliance, a revision of TS 3.9.10 Applicability is needed to remove control rod movement as an applicability condition. Conforming changes are also needed to TS 3.9.10 Action and SR 4.9.10. The reason for this request is to ensure a violation of TS 3.9.10 does not occur should a control rod be lifted from the reactor with the RVCH with the water level in the reactor cavity less than 23 feet above the top of the reactor vessel flange. As described in Attachment 1, public safety is not compromised by the proposed TS change.

Therefore, in accordance with 10 CFR 50.91 "Notice for public comment; State consultation," paragraph (a)(5), FPL is requesting NRC approval of the proposed amendment on an emergency basis. Sufficient time is not available to support 30 days for prior public comment on a schedule to prevent an unnecessary delay in the Unit 3 restart schedule. An explanation of the emergency and why it could not be avoided is included in Attachment 1. Once approved, this amendment will be

implemented prior to lifting the Unit 3 reactor vessel closure head. As a permanent change, it will also apply to Unit 4, in addition to Unit 3, in the future.

The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1), using the criteria in 10 CFR 50.92(c). FPL has determined that the proposed change involves no significant hazards considerations.

In accordance with 10 CFR 50.91(b)(1), a copy of the proposed amendment is being forwarded to the State Designee for the State of Florida.

One commitment is made associated with this license amendment application as described in Attachment 4.

Please contact Mr. Robert Tomonto, Licensing Manager, at 305-246-7327, if there are any questions regarding this application.

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

Very truly yours,

4/15/09
Executed on



William Jefferson, Jr.
Vice President – Turkey Point Nuclear Plant

- Attachments:
- 1) Proposed License Amendment
 - 2) Marked Up Technical Specification Page
 - 3) Camera-Ready Technical Specification Page
 - 4) Commitment Description

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant
Mr. W. A. Passetti, Florida Department of Health

ATTACHMENT 1

**Turkey Point Unit 3
Docket No. 50-250
License No. DPR-31**

**Turkey Point Unit 4
Docket No. 50-251
License No. DPR-41**

Emergency License Amendment Request No. 197

Revision of Technical Specification 3.9.10: Water Level – Reactor Vessel

**Description of Proposed Change, Technical Analysis, and
No Significant Hazards Consideration**

ATTACHMENT 1

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1.0 INTRODUCTION

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Florida Power and Light Company (FPL) is proposing that the Turkey Point Unit 3 and Unit 4 Facility Operating Licenses be amended to revise the Technical Specifications (TS) associated with the reactor cavity water level during refueling operations. The proposed change to TS 3.9.10, Water Level – Reactor Vessel would remove control rods from the Applicability, Action and Surveillance Requirements. FPL requests approval of the proposed amendment by 1200 hours on April 15, 2009, based on the current schedule for lifting the Unit 3 reactor vessel closure head from the reactor vessel. The need to request an emergency TS change arose when control rod D-6 failed to move during post-refueling testing. As a result of diagnostic activities, it has been concluded that control rod D-6 is mechanically bound. In order to further diagnose the cause of the binding, it is necessary to remove the reactor vessel closure head (RVCH) from the reactor vessel. RVCH removal may result in control rod D-6 being moved from its reactor core location. This will be a noncompliance with TS Limiting Condition for Operation (LCO) 3.9.10. In order to avoid the noncompliance, a revision of TS 3.9.10 Applicability is needed to remove control rod movement as an applicability condition. Conforming changes are also needed to TS 3.9.10 Action and Surveillance Requirement (SR) 4.9.10. The reason for this request is to ensure a violation of TS 3.9.10 does not occur should a control rod be lifted from the reactor with the RVCH with the water level in the reactor cavity less than 23 feet above the top of the reactor vessel flange. FPL is requesting NRC approval of the proposed change on an emergency basis, as sufficient time is not available to allow 30 days for prior public comment on a schedule to prevent delay in plant restart. As described in Section 5.0 below, revising TS 3.9.10 in the proposed manner will not compromise public safety.

On April 3, 2009, while lowering the RVCH following a core reload, one of the control rod extension shafts made momentary contact with an edge of a head penetration funnel in the vicinity of core location E-5. The shaft was observed to have deflected and may have been subjected to a load not exceeding 8,000 lb. The refueling crew took immediate action to raise the RVCH and visually inspect the extension shaft. The refueling crew confirmed that the extension shaft had straightened after the load was relieved and there were no indications of permanent damage. The crew then guided the extension shaft into its funnel and lowered the RVCH to the flange. No further load deviations were noted and there were no visual observations indicating dragging or binding during insertion of the control rod extension shaft into its RVCH penetration.

A condition report was written to document the event and analysis was performed by the original equipment manufacturer on the affected components. Based on the analysis results and field reports, no damage was anticipated. However, it was recognized that the extension shaft was vulnerable to buckling stresses dependent on the angle of contact. As part of the normal refueling sequence, rod testing is performed which confirms rod control system operability.

During rod stepping, at approximately 1500 on April 11, 2009, no movement was noted from control rod D-6. Control rod D-6 is at core location D-6 and is adjacent to core location E-5. Additional testing was conducted to ensure proper operation of the associated rod position indicator and the control rod drive mechanism power cabinets. The test results indicated possible mechanical binding.

Operating experience was applied to attempt to free the control rod. After several attempts, a decision was made to cool down and depressurize in preparation to remove the RVCH for further inspections. The Turkey Point Unit 3 RVCH will be removed from the reactor vessel to determine the cause of the inability to move control rod D-6.

There is a small potential for binding in the thermal sleeve. An evaluation at the elevation of the thermal sleeve centering pads shows that the potential exists for yielding of the thermal sleeve assuming an 8,000 lb load if minimum material properties are assumed. Since the thermal sleeve material will have a slightly greater yield strength than the minimum, any yielding of the thermal sleeve is expected to be minimal. Yield under this load, if significant enough, could cause an increase in the drag force on the drive rod. When the RVCH is raised, this binding might be sufficient to lift the control rod with the RVCH.

TS LCO 3.9.10 requires “At least 23 feet of water shall be maintained over the top of the reactor vessel flange.” The Applicability of TS LCO 3.9.10 is “During movement of fuel assemblies or control rods within the containment when either the fuel assemblies being moved or the fuel assemblies seated within the reactor vessel are irradiated while in MODE 6.” When the RVCH is removed, the refueling cavity is not flooded to the level required by TS LCO 3.9.10. Therefore, if a control rod is lifted with the RVCH, then TS LCO 3.9.10 is not met. In addition, the required action for TS LCO 3.9.10 not met is “With the requirements of the above specification not satisfied, suspend all operations involving movement of fuel assemblies or control rods within the reactor vessel.” Lowering the RVCH with the suspended control rod or releasing the control rod from the RVCH would constitute noncompliance with the Action.

The basis of TS LCO 3.9.10 is briefly stated as “The restrictions on minimum water level ensure that sufficient shielding will be available during fuel movement and for removal of iodine in the event of a fuel handling accident. The minimum water depth is consistent with the assumptions of the safety analysis.” The safety analysis for a dropped irradiated fuel assembly does not consider collateral damage to a control rod. Control rods are moved with fuel assemblies into and out of the reactor during loading and unloading evolutions but the control rods do not add to the fission product inventory assumed to be released during a postulated irradiated fuel assembly drop accident. The accident analysis source term described in Regulatory Guide 1.183 considers a radioactive release from only the dropped irradiated fuel assembly and does not account for any material released from control rod damage.

Standard Technical Specifications – Westinghouse Plants, NUREG-1431, Revision 3, TS LCO 3.9.7 provides similar requirements as Turkey Point TS 3.9.10. STS LCO 3.9.7 provides the same reactor cavity water level requirement – greater than or equal to 23 feet above the top of the reactor vessel flange. STS 3.9.7 Applicability is “During movement of irradiated fuel assemblies within containment.” STS 3.9.7 Applicability does not contain the requirement for movement of control rods. The basis for STS 3.9.7 Applicability is “LCO 3.9.7 is applicable when moving irradiated fuel assemblies within containment. The LCO minimizes the possibility of a fuel handling accident in containment that is beyond the assumptions of the safety analysis. If irradiated fuel assemblies are not present in containment, there can be no significant radioactivity release as a result of a postulated fuel handling accident.” The STS 3.9.7 Applicability basis is clear that the condition of concern is only the handling of irradiated fuel assemblies in containment.

Basis for Emergency

The need to request an emergency TS change arose when control rod D-6 failed to move during post-refueling testing. As a result of diagnostic activities, it has been concluded that control rod D-6 is mechanically bound. In order to further diagnose the cause of the binding, it is necessary to remove the RVCH from the reactor vessel. RVCH removal may result in control rod D-6 being moved from its reactor core location. This will be a noncompliance with TS LCO 3.9.10. In order to avoid the noncompliance, a revision of TS 3.9.10 Applicability is needed to remove control rod movement as an applicability condition. Conforming changes are also needed to TS 3.9.10 Action and SR 4.9.10.

Turkey Point has not experienced any prior occurrences of control rod binding resulting in removal of a control rod with the RVCH when the RVCH was lifted. A search of industry operating experience revealed only two instances of this occurring. One was at another US facility in 1993 and the other at a German reactor. Therefore, FPL could not have anticipated the need for this change in order to avoid a request on an emergency basis. Additionally, there was no evidence of damage resulting from the momentary contact of the control rod extension shaft with an edge of a head penetration funnel at the time it was decided to complete installation of the RVCH.

This issue has been entered into the site Corrective Action Program for resolution and determination of causes and corrective actions.

FPL could not have foreseen the need for this TS change prior to identification of the potential for control rod D-6 to be lifted from the reactor with the RVCH. Therefore, FPL requests that this proposed TS change be considered under emergency circumstances as described in 10 CFR 50.91(a)(5).

2.0 DESCRIPTION OF PROPOSED CHANGE

FPL proposes to revise TS 3.9.10, Water Level – Reactor Vessel, as follows:

Revise the title of TS 3.9.10 to be:

Refueling Cavity Water Level

Revise TS LCO 3.9.10 to be:

Refueling cavity water level shall be maintained ≥ 23 ft above the top of reactor vessel flange.

Revise TS 3.9.10 Applicability to be:

During movement of irradiated fuel assemblies within containment.

Revise TS 3.9.10 Action to be:

With the refueling cavity water level not within limit, suspend movement of irradiated fuel assemblies within containment immediately.

Revise SR 4.9.10 to be:

Verify refueling cavity water level is ≥ 23 ft above the top of the reactor vessel flange within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of irradiated fuel assemblies within containment.

Revise Index page xiii for Section 3/4.9.10 to be:

REFUELING CAVITY WATER LEVEL

Discussion

The revisions above are intended to be as closely aligned as possible to Westinghouse STS 3.9.7 given the format differences between the STS and Turkey Point TSs.

The change in title of TS 3.9.10 to Refueling Cavity Water Level from Water Level – Reactor Vessel more accurately reflects the nature of the water level limit since the limit is not confined to the reactor vessel but extends to the refueling cavity above the reactor vessel. This is considered an editorial change and will not be discussed further in this application.

The reactor cavity water level limit in TS LCO 3.9.10 is unchanged at greater than or equal to 23 feet above the top of the reactor vessel flange. The change is editorial and is exactly as provided in STS LCO 3.9.7 and will not be discussed further in this application.

The Applicability of TS 3.9.10 is revised to only apply to movement of irradiated fuel assemblies and not to control rods. The Applicability is also changed editorially to be exactly as provided in STS 3.9.7 Applicability. The editorial aspect will not be discussed further in this application.

The Action of TS 3.9.10 is revised to only apply to movement of irradiated fuel assemblies and not to control rods. In addition, it is also revised to align better with the Applicability of TS 3.9.10. The Applicability is currently during movement of irradiated fuel assemblies and control rods in containment while the Action suspends movement of irradiated fuel assemblies and control rods within the reactor vessel if the LCO is not met. The revision will change the Action to suspend movement of irradiated fuel assemblies in containment, not just the reactor vessel. This aligns the Action with the Applicability. The Action is also revised editorially to be as close to the STS 3.9.7 Actions as possible regarding Condition, Required Action and Completion Time.

SR 4.9.10 is revised to only apply to movement of irradiated fuel assemblies and not to control rods, and editorially revised to align more closely with the wording in STS SR 3.9.7.1. The Turkey Point TSs do not contain Use and Application guidance as is provided by the STS. Therefore, while the periodic frequency of 24 hours is retained and is identical to STS SR 3.9.7.1, the initial performance of SR 4.9.10 is retained as 2 hours prior to the start of irradiated fuel assembly movement.

The section title change in the Index is an editorial change that will not be discussed further in this application.

3.0 BACKGROUND

Description of Events

On April 3, 2009, while lowering the RVCH following a core reload, one of the control rod extension shafts made momentary contact with an edge of a head penetration funnel. The shaft was observed to have deflected and may have been subjected to a load not exceeding 8,000 lb. The refueling crew took immediate actions to raise the RVCH and visually inspect the extension shaft. The refueling crew confirmed that the extension shaft had straightened after the load was relieved and there were no indications of permanent damage. The crew then guided the extension shaft into its funnel and lowered the RVCH to the flange. No further load deviations

were noted and there were no visual observations indicating dragging or binding during insertion of the control rod extension shaft into its RVCH penetration.

A condition report was written to document the event and analysis was performed by the original equipment manufacturer on the affected components. Based on the analysis results and field reports, no damage was anticipated. However, it was recognized that the extension shaft was vulnerable to buckling stresses dependent on the angle of contact. As part of the normal refueling sequence, rod testing is performed which confirms rod control system operability.

During rod stepping, at approximately 1500 on April 11, 2009, no movement was noted from control rod D-6. Additional testing was conducted to ensure proper operation of the associated Rod Position Indicator (RPI) and the Control Rod Drive Mechanism (CRDM) power cabinets. The test results indicated possible mechanical binding.

Operating experience was applied to attempt to free the control rod. After several attempts, a decision was made to cool down and depressurize in preparation to remove the RVCH for further inspections. The Turkey Point Unit 3 RVCH will be removed from the reactor vessel to determine the cause of the inability to move control rod D-6.

Basis for Current Requirements

The Turkey Point TS bases are contained in procedure 0-ADM-536, Technical Specification Bases Control Program. The basis for TS 3.9.10 is as follows: "The restrictions on minimum water level ensure that sufficient shielding will be available during fuel movement and for removal of iodine in the event of a fuel handling accident. The minimum water depth is consistent with the assumptions of the safety analysis."

The proposed change to TS 3.9.10 is consistent with the current TS basis. The safety analysis assumes the drop of one fuel assembly in the fuel handling accident analysis. The assumed water level in the reactor cavity is 23 feet and is an initial condition of the accident. Control rods play no part in the accident analysis. The release of radioactive material is only from the dropped fuel assembly.

Reason for Requesting Emergency Amendment

10 CFR 50.91(a)(5) states that where the Nuclear Regulatory Commission (NRC) finds that an emergency situation exists, in that failure to act in a timely manner would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment. The regulation also states that the NRC will decline to dispense with notice and comment on the determination of no significant hazards consideration if it determines

that the licensee has abused the emergency provision by failing to make timely application for the amendment and thus itself creating the emergency. The regulation requires that a licensee requesting an emergency amendment explain why the emergency situation occurred and why the licensee could not avoid the situation. As explained below, an emergency amendment is needed to further diagnose stuck control rod D-6 and ensure the resumption of operation of Turkey Point Unit 3. Without the amendment, Turkey Point Unit 3 would be in noncompliance with TS 3.9.10 if a control rod is moved when the RVCH is lifted. FPL could not have reasonably avoided the situation nor could it have made any more timely application for an amendment.

Reason Emergency Situation Has Occurred

The emergency situation resulted from an unforeseen problem that occurred during control rod step testing on April 11, 2009 when control rod D-6 did not move. As a result of diagnostic activities, it has been concluded that control rod D-6 is mechanically bound. In order to further diagnose the cause of the binding, it is necessary to remove the RVCH from the reactor vessel. If control rod D-6 is moved when the RVCH is lifted, then there will be a noncompliance with TS 3.9.10. Assurance of compliance to TS 3.9.10 when the RVCH is lifted is the cause for the current emergency situation for which a license amendment is being requested. An emergency amendment is needed to further diagnose stuck control rod D-6 and to ensure the resumption of operation of Turkey Point Unit 3 in a timely manner.

Reason the Situation Could Not Have Been Avoided

Turkey Point has not experienced any prior occurrences of control rod binding resulting in removal of a control rod with the RVCH when the RVCH was lifted. A search of industry operating experience revealed only two instances of this occurring. One was at another US facility in 1993 and the other at a German reactor. Therefore, FPL could not have anticipated the need for this change in order to avoid a request on an emergency basis. Additionally, there was no evidence of damage resulting from the momentary contact of the control rod extension shaft with an edge of a head penetration funnel at the time it was decided to complete installation of the RVCH.

FPL could not have foreseen the need for this TS change prior to identification of the potential for control rod D-6 to be lifted from the reactor with the RVCH. FPL therefore considers that the situation could not have been avoided and there is justification for requesting the proposed license amendment on an emergency basis.

4.0 REGULATORY REQUIREMENTS AND GUIDANCE

10 CFR 50.36, "Technical specifications," provides the regulatory requirements for the content required in a licensee's TS. Criterion 2 of 10 CFR 50.36(c)(2)(ii) require that "A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier" to be included in the TS. The refueling cavity water level limit satisfies this criterion.

FPL has determined that the proposed change does not require any exemption or relief from regulatory requirements, other than the TSs, and does not affect conformance to any General Design Criteria differently than described in the Updated Final Safety Analysis Report.

5.0 TECHNICAL ANALYSIS

TS LCO 3.9.10 currently requires "At least 23 feet of water shall be maintained over the top of the reactor vessel flange." The Applicability of TS LCO 3.9.10 is "During movement of fuel assemblies or control rods within the containment when either the fuel assemblies being moved or the fuel assemblies seated within the reactor vessel are irradiated while in MODE 6." The control rods are included in this Specification because the plant design, as described in UFSAR Section 9.5, allowed for control rod also known as rod control cluster assemblies (RCCA) to be changed out within the refueling cavity. However, the current practice is to transfer the RCCAs to the spent fuel pool (SFP) with their associated fuel assemblies during the full core offload and perform the RCCA change outs in the SFP.

The proposed license amendment removes the restriction to maintain 23 feet of water above the reactor vessel flange during movement of RCCAs within the containment. The requirement to maintain 23 feet of water above the reactor vessel flange during movement of irradiated fuel assemblies is retained by this proposed change. This change does not reduce the level of safety provided to plant personnel and the public during refueling operations because:

- a) the RCCAs at Turkey Point Units 3 and 4 will not be intentionally moved within containment outside of the bounds of a fuel assembly when the water level above the flange is less than 23 feet, and
- b) the requirement to maintain 23 feet of water above the reactor vessel flange is part of the current Turkey Point Units 3 and 4 fuel handling accident analysis for a dropped fuel assembly.

Fuel assemblies that have control rods assigned to them are moved together as a single component to and from the spent fuel pool during core offload and reload activities. The

proposed LCO will require a minimum water level of 23 feet above the reactor vessel flange be maintained for these activities. If a transfer of RCCAs between fuel assemblies is required because a fuel assembly is either spent or designed to be relocated to an unrodded position of the core in a subsequent reload, the change out would typically be performed in the SFP. As described above, RCCA change out can also be performed in the containment building by moving the host fuel assembly and the target fuel assembly to the RCCA change fixture located in the refueling cavity. Even though this process would allow movement of a RCCA outside the bounds of a fuel assembly, the movement of the host fuel assembly to the RCCA change fixture would require a minimum water level of 23 feet above the reactor vessel flange in compliance with TS LCO 3.9.10.

The water level in the refueling canal and the refueling cavity is an initial condition design parameter in the analysis of a fuel assembly handling accident, as described in UFSAR Section 14.2.1. A minimum water level of 23 feet allows a decontamination factor of 200 to be used in the accident analysis for iodine as specified in Regulatory Guide 1.183. This relates to the assumption that 99.5% of the total iodine released from the pellet to cladding gap of all the dropped fuel assembly rods is retained by the refueling cavity water. With a minimum water level of 23 feet and a minimum decay time of 72 hours prior to fuel handling, the analysis and test programs demonstrate that the iodine release due to a postulated fuel handling accident is adequately captured by the water and offsite doses are maintained within allowable limits.

Adequate provisions have been included in the design of Turkey Point Units 3 and 4 to limit potential exposure of the public to well below the limits of 10 CFR 100 for a fuel handling accident (FHA). The restrictions on minimum water level in TS LCO 3.9.10 ensure that sufficient shielding will be available during fuel movement and for removal of iodine in the event of a FHA. The minimum water depth of 23 feet is consistent with the FHA analysis described in UFSAR Section 14.2.1. The following FHA accident scenarios are evaluated to ensure that no hazards are created:

1. A fuel assembly becomes stuck inside the reactor vessel.
2. A fuel assembly or RCCA is dropped onto the floor of the refueling canal or spent fuel pit.
3. A fuel assembly becomes stuck in the penetration valve.
4. A fuel assembly becomes stuck in the transfer carriage or the carriage becomes stuck.
5. A spent fuel cask is dropped in the passage between the SFP of Units 3 and 4 while transferring a fuel element between the SFPs.

Of these evaluated scenarios, only scenario 2 involves a fuel assembly or control rod (RCCA). The other scenarios involve only fuel assemblies. The scenarios involving fuel assemblies are unaffected by the proposed change since the minimum water depth of 23 feet remains consistent with the FHA analysis and enforced by TS LCO 3.9.10. For the dropped control rod scenario (scenario 2), there is also no impact on the FHA analysis because the RCCA can be assumed to have remained with its associated fuel assembly such that the requirement for 23 feet of water as required by TS LCO 3.9.10 is retained. As previously described, inside containment, RCCAs will not be intentionally moved while outside the bounds of their associated fuel assembly. Therefore, since a RCCA is always moved with its associated fuel assembly inside containment, the proposed change to TS 3.9.10 maintains the same level of protection (i.e., 23 feet of water level for shielding) for a dropped RCCA as it does for a dropped fuel assembly.

Furthermore, in the unlikely event that a RCCA is unintentionally moved, the requirements of TS LCO 3.9.1, "Boron Concentration," ensures that there would be no impact on shutdown margin. Adequate shutdown margin is verified prior to removing or unbolting the RVCH with the control rod of the highest reactivity worth assumed withdrawn from the core. Any unintentional movement of an RCCA during removal of the RVCH would likely be terminated by freeing the mechanical binding of the drive rod, or cutting the drive rod while the RCCA is partially withdrawn from the core location, allowing the RCCA to drop back to its fully inserted position. The RCCA drop in this case would be bounded by the impact of a RCCA drop that occurs during a reactor trip which is within the reference bounds of fuel assembly and RCCA design.

6.0 REGULATORY ANALYSIS

The proposed change to TS 3.9.10 is consistent with the current Turkey Point safety analysis for the fuel handling accident and the Westinghouse STS. The change aligns TS 3.9.10 more closely to STS 3.9.7 and removes a component (control rods) from TS 3.9.10 that plays no part in fuel handling accident analysis initiation or mitigation.

In conclusion, based on the considerations 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.

7.0 DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Description of amendment request:

The proposed license amendment to Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Unit 3 and Unit 4, respectively, will revise TS 3.9.10 to remove control rods from consideration in the Applicability, Action and SR.

Pursuant to 10 CFR 50.92, a determination may be made that a proposed license amendment 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; (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 consideration is discussed below.

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

Response: No.

The proposed change affects TS 3.9.10 in that control rods are removed from consideration in the Applicability, Action and SR for movement into or out of the reactor vessel. The fuel handling accident, as it relates to TS 3.9.10, presumes that an irradiated fuel assembly is dropped on a flat surface, dropped on another fuel assembly, or dropped on a sharp object. An initial condition of the fuel handling accident associated with TS 3.9.10 is that the reactor cavity water level is 23 feet above the damaged assembly. This limit is not changed. There is no change to the fuel assemblies themselves assumed in the accident analysis. Control rods are not part of the initial conditions or part of the required accident source term as described in Regulatory Guide 1.183. Therefore, to delete them from consideration in TS 3.9.10 has no impact on the fuel handling accident analysis.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the probability of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change will not alter the manner in which equipment operation is initiated, nor will the functional demands on credited equipment be changed. The proposed change limits consideration of movement only of irradiated fuel assemblies in the containment which is evaluated in the fuel handling accident analysis. Control rods have no fission product inventory to release, and are not required to be considered in the radiological source term described in Regulatory Guide 1.183. As such, no new failure modes are being introduced.

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

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed change does not alter the plant design and operation, nor does it affect the assumptions contained in the safety analyses. The initial condition, assumed in the safety analysis, of 23 feet of water above the top of the reactor vessel flange is preserved by the change. The change only removes a component (control rod) that is not assumed in the safety analysis as either an initiator or mitigator of the fuel handling accident. There are no safety margins associated with maintaining a level of 23 feet above the top of the reactor vessel flange when control rods, by themselves, are moved in containment. Control rods are only moved into and out of containment while inserted in a fuel assembly. Their presence in the assembly does not impact the assumption that all rods in the assembly are damaged in the fuel handling accident. Safety margins associated with criticality are preserved by the requirement for shutdown margin to be met with the complete withdrawal of the control rod associated with the largest reactivity worth and are not impacted by this proposed change.

Therefore, the proposed change does not involve a significant reduction in margin of safety.

Based on the above, FPL concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of “no significant hazards consideration” is justified.

8.0 ENVIRONMENTAL CONSIDERATION

The proposed license amendment changes requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The proposed

amendment involves 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 since the proposed change does not impact the safety analysis initial condition that is associated with the change. FPL concluded that the proposed amendment involves no significant hazards consideration and meets the criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and that, pursuant to 10 CFR 51.22(b), an environmental impact statement or environmental assessment need not be prepared in connection with issuance of the amendment.

ATTACHMENT 2

**Turkey Point Unit 3
Docket No. 50-250
License No. DPR-31**

**Turkey Point Unit 4
Docket No. 50-251
License No. DPR-41**

Emergency License Amendment Request No. 197

Revision of Technical Specification 3.9.10: Water Level – Reactor Vessel

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REFUELING OPERATIONS

3/4.9.10 WATER LEVEL - REACTOR VESSEL
REFUELING CAVITY

LIMITING CONDITION FOR OPERATION

3.9.10 ~~At least 23 feet of water shall be maintained over the top of the reactor vessel flange.~~
Handwritten: Refueling cavity ≥ 23 ft above level

APPLICABILITY: ~~During movement of fuel assemblies or control rods within the containment, when either the fuel assemblies being moved or the fuel assemblies seated within the reactor vessel are irradiated while in MODE 6.~~
Handwritten: irradiated

ACTION:
Handwritten: refueling cavity water level within limit irradiated
With the ~~requirements of the above specification not satisfied, suspend all operations involving movement of fuel assemblies or control rods within the reactor vessel.~~
Handwritten: containment immediately

SURVEILLANCE REQUIREMENTS

4.9.10 ~~The water level shall be determined to be at least its minimum required depth within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of fuel assemblies or control rods.~~
Handwritten: Verify refueling cavity irradiated within containment
Handwritten: is ≥ 23 ft above the top of the reactor vessel flange

ATTACHMENT 3

**Turkey Point Unit 3
Docket No. 50-250
License No. DPR-31**

**Turkey Point Unit 4
Docket No. 50-251
License No. DPR-41**

Emergency License Amendment Request No. 197

Revision of Technical Specification 3.9.10: Water Level – Reactor Vessel

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REFUELING OPERATIONS

3/4.9.10 REFUELING CAVITY WATER LEVEL

LIMITING CONDITION FOR OPERATION

3.9.10 Refueling cavity water level shall be maintained \geq 23 feet above the top of the reactor vessel flange.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTION:

With the refueling cavity water level not within limit, suspend movement of irradiated fuel assemblies within containment immediately.

SURVEILLANCE REQUIREMENTS

4.9.10 Verify refueling cavity water level is \geq 23 feet above the top of the reactor vessel flange within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of irradiated fuel assemblies within containment.

ATTACHMENT 4

**Turkey Point Unit 3
Docket No. 50-250
License No. DPR-31**

**Turkey Point Unit 4
Docket No. 50-251
License No. DPR-41**

Emergency License Amendment Request No. 197

Revision of Technical Specification 3.9.10: Water Level – Reactor Vessel

Commitment Description

The following commitment is made as discussed in Section 5.0 of Attachment 1. The commitment will be incorporated into applicable plant procedures, the UFSAR and the Technical Specification bases.

Commitment:

The control rods (RCCAs) at Turkey Point Units 3 and 4 will not be intentionally moved within containment outside of the bounds of a fuel assembly when the water level above the reactor vessel flange is less than 23 feet.