FPL.

AUG 0 2 2018

L-2018-147 10 CFR 50.90

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

RE:

St. Lucie Units 1 and 2

Docket Nos. 50-335 and 50-389

Renewed Facility Operating Licenses DPR-67 and NPF-16

License Amendment Request to Remove the Site Area Map from the Technical

Specifications

Reference:

1. FPL Letter L-2018-120 dated July 25, 2018, "License Amendment Request to Remove the Site Area Map from the Technical Specifications" (Adams Accession No. ML18206A275)

Pursuant to 10 CFR Part 50.90, in Reference 1 above, Florida Power & Light Company (FPL) requested amendments to Renewed Facility Operating Licenses DPR-67 for St. Lucie Nuclear Plant Unit 1 and NPF-16 for St. Lucie Nuclear Plant Unit 2. The proposed license amendments modify the St. Lucie Unit 1 and St. Lucie Unit 2 (St. Lucie) Technical Specifications (TS) by removing Figure 5.1-1, Site Area Map, removing TS references to Figure 5.1-1, and adding a site description. This letter corrects administrative omissions in the original submittal and replaces Reference 1 in its entirety.

The enclosure to this letter provides FPL's evaluation of the proposed changes. Attachment 1 to the enclosure provides the existing St. Lucie Unit 1 and St. Lucie Unit 2 TS pages marked up to show the proposed changes. Attachment 2 provides the St. Lucie Unit 1 and St. Lucie Unit 2 TS retyped (clean copy) TS pages with revision bars to identify the proposed changes. There are no changes proposed to the St. Lucie Unit 1 and St. Lucie Unit 2 TS Bases.

FPL has determined that the proposed changes do 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 St. Lucie Plant Onsite Review Group (ORG) has reviewed the proposed license amendments. In accordance with 10 CFR 50.91(b)(1), copies of the proposed license amendments are being forwarded to the state designee for the State of Florida.

Based on the administrative nature of the proposed TS changes, FPL requests that the proposed license amendments be approved within six months of the submittal date. Once approved, the amendments shall be implemented within 30 days.

This letter contains no new regulatory commitments.

If you have any questions or require additional information, please contact Mr. Michael Snyder, St. Lucie Licensing Manager, at (772) 467-7036.

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

Executed on Aug. 2, 2018

Sincerely,

Daniel DeBoer

Site Director - St. Lucie Nuclear Plant, Units 1 and 2

Florida Power & Light Company

Enclosure

cc: USNRC Regional Administrator, Region II

USNRC Project Manager, St. Lucie Nuclear Plant, Units 1 and 2

USNRC Senior Resident Inspector, St. Lucie Nuclear Plant, Units 1 and 2

Ms. Cindy Becker, Florida Department of Health

ENCLOSURE

Evaluation of the Proposed Changes

St. Lucie Nuclear Plant, Units 1 and 2 License Amendment Request to Remove Site Area Map from the Technical Specifications

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1.0 <u>SUMMARY DESCRIPTION</u>

Florida Power & Light Company (FPL) requests amendments to Renewed Facility Operating Licenses DPR-67 for St. Lucie Nuclear Plant Unit 1 and NPF-16 for St. Lucie Nuclear Plant Unit 2. The proposed license amendments modify the St. Lucie Unit 1 and St. Lucie Unit 2 (St. Lucie) Technical Specifications (TS) by removing Figure 5.1-1, Site Area Map, removing TS references to Figure 5.1-1, and adding a site description.

2.0 <u>DETAILED DESCRIPTION</u>

2.1 <u>System Design and Operation</u>

The St. Lucie nuclear units are located on Hutchinson Island in St. Lucie County, about halfway between the cities of Fort Pierce and Stuart on the east coast of Florida. The site for St. Lucie Units 1 and 2 consists of approximately 1,132 acres owned by FPL. The minimum site exclusion radius is 5,100 feet. The area preempted by the St. Lucie plants is about 300 acres, or approximately 27 percent of the total land owned by FPL. There are no industrial, commercial, institutional, or residential structures within the plant area.

The radius of the exclusion area is 0.97 miles from the center of the St. Lucie Plant. The low population zone (LPZ) includes that area within one mile of the center of the St. Lucie Plant. No residents reside within the LPZ. However, access to the Walton Rocks public beach lies within the LPZ. Recreational facilities for limited use by FPL employees and their families are also located within the LPZ.

Maps of FPL's St. Lucie site are provided in the St. Lucie Unit 1 and St. Lucie Unit 2 Updated Final Safety Analysis Report (UFSAR). The maps detail site property lines, perimeter, principal plant structures, and boundary lines of the exclusion area and LPZ.

2.2 <u>Current Requirements / Description of the Proposed Changes</u>

Figure 5.1-1, Site Area Map, is provided in Section 5.0, Design Features, of the St. Lucie Unit 1 and the St. Lucie Unit 2 TS. The proposed change is facilitated by:

- Deleting Figure 5.1-1, Site Area Map.
- Replacing TS 5.1.1, Exclusion Area, and TS 5.1.2, Low Population Zone, with a description of the St. Lucie site location.
- Deleting TS 5.8, Meteorological Tower Location.

2.3 Reason for the Proposed Change

Inclusion of the maps and MET tower location in the TS adds excessive detail and precludes any changes to the property outside regulatory requirements. Additionally, the NRC Standard TS, NUREG 1432, does not contain this level of detail. The proposed change would more appropriately place the disposition of the site under licensee control.

3.0 TECHNICAL EVALUATION

The proposed license amendments modify the St. Lucie Unit 1 and St. Lucie Unit 2 TS by removing Figure 5.1-1, Site Area Map, and TS references to Figure 5.1-1. Specifically, the proposed change (1) deletes Figure 5.1-1, Site Area Map, (2) replaces TS 5.1.1, Exclusion Area, and TS 5.1.2, Low Population Zone, with a brief description of the St. Lucie site location, exclusion area and low population zone (LPZ), and (3) deletes TS 5.8, Meteorological Tower Location. Deletion of Figure 5.1-1 is acceptable since the site maps cannot affect plant safety, do not meet any other 10 CFR 50.36 criteria, and as such, do not satisfy the 10 CFR 50.36(c)(4) conditions for TS inclusion as a design feature. Moreover, the Figure 5.1-1 maps are redundant to the site maps maintained in the St. Lucie Unit 1 and St. Lucie Unit 2 UFSARs, hence rendering Figure 5.1-1 unnecessary. Replacing TS 5.1.1, Exclusion Area, and TS 5.1.2, Low Population Zone, with a brief description of the St. Lucie site location, exclusion area and LPZ is acceptable since neither section provided relevant information other than referencing Figure 5.1-1. Likewise, deleting TS 5.8, Meteorological Tower Location, is acceptable since the section provided no relevant information other than referencing Figure 5.1-1. The proposed change removes the site maps and associated references from the TS, but otherwise proposes no changes to the site boundary or the activities within as currently licensed. The proposed changes are administrative in nature and thereby will not impact plant operations, safety analyses or applicable regulations, codes and standards. The proposed change is consistent with the regulatory guidance provided in the Improved Standard Technical specifications of NUREG-1432 (Reference 6.1), which does not specify a site map in Section 4.1, Site Location, and is thereby reasonable.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/ Criteria

10 CFR 50.36(c)(4) states that Design features to be included are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (c) (1), (2), and (3) of this [10 CFR 50.36(c)(2)(i)] section.

The proposed license amendments do not alter the manner in which St. Lucie Unit and St. Lucie Unit 2 will be operated or maintained, consistent with 10 CFR 50.36(c)(4) and all other applicable regulatory requirements.

4.2 No Significant Hazards Consideration

The proposed license amendments modify the St. Lucie Unit 1 and St. Lucie Unit 2 (St. Lucie) Technical Specifications (TS) by removing Figure 5.1-1, Site Area Map, to facilitate changes to the FPL owner controlled area.

As required by 10 CFR 50.91(a), FPL has evaluated the proposed changes using the criteria in 10 CFR 50.92 and has determined that the proposed changes do 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 change does not modify any plant equipment or affect plant operation. The proposed change neither impacts any structures, systems, or components (SSCs), nor alters any plant processes or procedures. The proposed change is administrative in nature and cannot adversely impact safety.

Therefore, the proposed changes do 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 change has no impact on the design, function or operation of the plants. The proposed change is administrative in nature, and thereby cannot introduce new failure modes or unanticipated outcomes.

Therefore, the proposed changes do 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 change does not affect plant safety margins or the reliability of the equipment assumed to operate in the safety analyses. The proposed change is administrative in nature, and thereby cannot affect any safety analysis assumptions, safety limits or limiting safety system settings.

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

4.3 <u>Conclusion</u>

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 change would change the format of the license or permit or otherwise makes editorial, corrective or other minor revisions, including the updating of NRC approved references. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(10). 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 NUREG-1432, Standard Technical Specifications - Combustion Engineering Plants, Revision 4.0, Volume 1, Specifications (Accession No. ML12102A165)

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)

(7 pages follow)

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)

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5.0 DESIGN FEATURES

5.1 SITE & LOCATION -

EXCLUSION AREA

5.1.1 The exclusion area is shown on Figure 5.1.1.

LOW POPULATION ZONE

5.1.2 The low population zone is shown on Figure 5.1-1.

5.2 CONTAINMENT

CONFIGURATION

5.2.1 The containment structure is comprised of a steel containment vessel, having the shape of a right circular cylinder with a hemispherical dome and ellipsoidal bottom, surrounded by a reinforced concrete shield building. The radius of the shield building is at least 4 feet greater than the radius of circular cylinder portion of the containment vessel at any point.

5.2.1.1 CONTAINMENT VESSEL

- a. Nominal inside diameter = 140 feet.
- b. Nominal inside height = 232 feet.
- c. Net free volume = 2.5×10^6 cubic feet.
- d. Nominal thickness of vessel walls = 2 inches.
- e. Nominal thickness of vessel dome = 1 inch.
- f. Nominal thickness of vessel bottom = 2 inches.

The St. Lucie nuclear units are located on Hutchinson Island in St. Lucie County, about halfway between the cities of Fort Pierce and Stuart on the east coast of Florida. The radius of the exclusion area is 0.97 miles from the center of the St. Lucie Plant. The low population zone (LPZ) includes that area within one mile of the center of the St. Lucie Plant.

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)

DESIGN FEATURES

DRAINAGE

5.6.2 The fuel pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 56 feet.

CAPACITY

5.6.3 The spent fuel pool storage racks are designed and shall be maintained with a storage capacity limited to no more than 1706 fuel assemblies, and the cask pit storage rack is designed and shall be maintained with a storage capacity limited to no more than 143 fuel assemblies. The total Unit 1 spent fuel pool and cask pit storage capacity is limited to no more than 1849 fuel assemblies.

5.7 SEISMIC CLASSIFICATION

5.7.1 Those structures, systems and components identified as seismic Class I in Section 3.2.1 of the FSAR shall be designed and maintained to the original design provisions contained in Section 3.7 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirement.

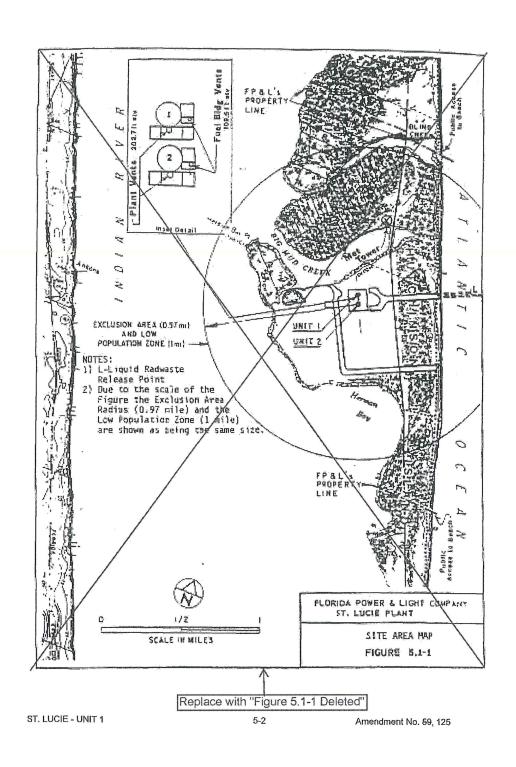
5.8 METEOROLOGICAL TOWER LOCATION



5.8.1 The meteorological tower location shall be as shown on Figure 5.1.1.

5.9 DELETED

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)



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ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)

DESIGN FEATURES The St. Lucie nuclear units are located on Hutchinson SITE Island in St. Lucie County, about halfway between the **EXCLUSION AREA** cities of Fort Pierce and The exclusion area shall be as shown in Figure 5.1.1. Stuart on the east coast of Florida. The radius of the **LOW POPULATION ZONE** exclusion area is 0.97 miles from the center of the St. 5.1.2 The low population zone shall be as shown on Figure 5.1-1. Lucie Plant. The low population zone (LPZ) 5.2 CONTAINMENT includes that area within one CONFIGURATION mile of the center of the St. Lucie Plant. 5.2.1 The reactor containment building is a steel building of cylindrical.

- shape, with a dome roof and having the following design features:
 - Nominal inside diameter = 140 feet.
 - Nominal inside height = 232 feet. b.
 - Net free volume = 2.506×10^6 cubic feet.
 - Nominal thickness of vessel walls = 2 inches. d.
 - Nominal thickness of vessel dome = 1 inch. e.
 - Nominal thickness of vessel bottom = 2 inches.

5.2.1.2 SHIELD BUILDING

- Minimum annular space = 4 feet. a.
- b. Annulus nominal volume = 543,000 cubic feet.
- Nominal outside height (measured from top of foundation mat to the top of the dome) = 228.5 feet.
- Nominal inside diameter = 148 feet. d.
- Cylinder wall minimum thickness = 3 feet. e.
- f. Dome minimum thickness = 2.5 feet.
- Dome inside radius = 112 feet.

DESIGN PRESSURE AND TEMPERATURE

The steel reactor containment building is designed and shall be maintained for a maximum internal pressure of 44 psig and a temperature of 264°F.

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)

DESIGN FEATURES

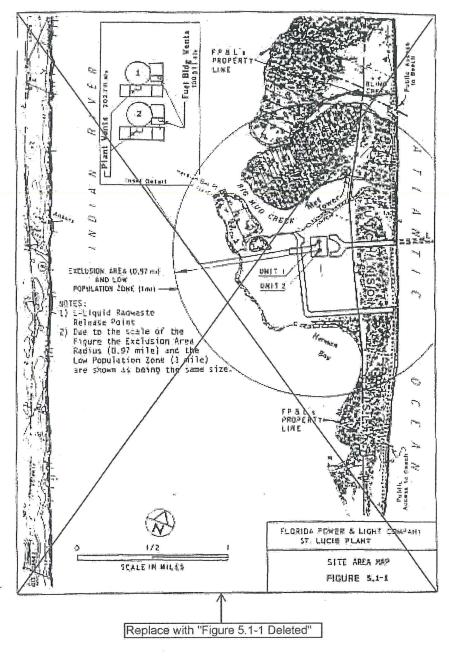
- 5.5 METEOROLOGICAL TOWER LOCATION ← DELETED
- 5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.

5.6 FUEL STORAGE

CRITICALITY

- 5.6.1 a. The spent fuel storage racks are designed and shall be maintained with:
 - A k_{eff} equivalent to less than 1.0 when flooded with unborated water, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.
 - A k_{eff} equivalent to less than or equal to 0.95 when flooded with water containing 500 ppm boron, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.
 - A nominal 8.965 inch center-to-center distance between fuel assemblies
 placed in the spent fuel pool storage racks and a nominal 8.80 inch centerto-center distance between fuel assemblies placed in the cask pit storage
 rack.
 - 4. For storage of enriched fuel assemblies, requirements of Specification 5.6.1.a.1 and 5.6.1.a.2 shall be met by positioning fuel in the spent fuel pool storage racks consistent with the requirements of Specification 5.6.1.c.
 - Fissile material, not contained in a fuel assembly lattice, shall be stored in accordance with the requirements of Specifications 5.6.1.a.1 and 5.6.1.a.2.
 - The Metamic neutron absorber inserts shall have a ¹⁰B areal density greater than or equal to 0.015 grams ¹⁰B/cm².
 - b. The cask pit storage rack shall contain neutron absorbing material (Boral) between stored fuel assemblies when installed in the spent fuel pool.
 - c. Loading of spent fuel pool storage racks shall be controlled as described below.
 - The maximum initial planar average U-235 enrichment of any fuel assembly inserted in a spent fuel pool storage rack shall be less than or equal to 4.6 weight percent.
 - Fuel placed in Region 1 of the spent fuel pool storage racks shall comply with the storage pattern definitions of Figure 5.6-1 and the minimum burnup requirements as defined in Table 5.6-1. (See Specification 5.6.1.c.7 for exceptions)
 - Fuel placed in Region 2 of the spent fuel pool storage racks shall comply with the storage pattern definitions or allowed special arrangement definitions of Figure 5.6-2 and the minimum burnup requirements as defined in Table 5.6-1. (See Specification 5.6.1.c.7 for exceptions)

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (MARKUP)



ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (CLEAN COPIES)

(7 pages follow)

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5.0 DESIGN FEATURES

5.1 SITE LOCATION

The St. Lucie nuclear units are located on Hutchinson Island in St. Lucie County, about halfway between the cities of Fort Pierce and Stuart on the east coast of Florida. The radius of the exclusion area is 0.97 miles from the center of the St. Lucie Plant. The low population zone (LPZ) includes that area within one mile of the center of the St. Lucie Plant.

5.2 CONTAINMENT

CONFIGURATION

5.2.1 The containment structure is comprised of a steel containment vessel, having the shape of a right circular cylinder with a hemispherical dome and ellipsoidal bottom, surrounded by a reinforced concrete shield building. The radius of the shield building is at least 4 feet greater than the radius of circular cylinder portion of the containment vessel at any point.

5.2.1.1 CONTAINMENT VESSEL

- a. Nominal inside diameter = 140 feet.
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ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (CLEAN COPIES)

DESIGN FEATURES

DRAINAGE

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5.6.3 The spent fuel pool storage racks are designed and shall be maintained with a storage capacity limited to no more than 1706 fuel assemblies, and the cask pit storage rack is designed and shall be maintained with a storage capacity limited to no more than 143 fuel assemblies. The total Unit 1 spent fuel pool and cask pit storage capacity is limited to no more than 1849 fuel assemblies.

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5.7.1 Those structures, systems and components identified as seismic Class I in Section 3.2.1 of the FSAR shall be designed and maintained to the original design provisions contained in Section 3.7 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirement.

5.8 DELETED

5.9 DELETED

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Attachment 2

ST. LUCIE UNIT 1 AND ST. LUCIE UNIT 2 PROPOSED TECHNICAL SPECIFICATIONS PAGE (CLEAN COPIES)

Figure 5.1-1 Deleted

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5.2 CONTAINMENT

CONFIGURATION

- 5.2.1 The reactor containment building is a steel building of cylindrical shape, with a dome roof and having the following design features:
 - a. Nominal inside diameter = 140 feet.
 - b. Nominal inside height = 232 feet.
 - c. Net free volume = 2.506 x 10⁶ cubic feet.
 - d. Nominal thickness of vessel walls = 2 inches.
 - e. Nominal thickness of vessel dome = 1 inch.
 - f. Nominal thickness of vessel bottom = 2 inches.

5.2.1.2 SHIELD BUILDING

- a. Minimum annular space = 4 feet.
- b. Annulus nominal volume = 543,000 cubic feet.
- Nominal outside height (measured from top of foundation mat to the top of the dome) = 228.5 feet.
- d. Nominal inside diameter = 148 feet.
- e. Cylinder wall minimum thickness = 3 feet.
- f. Dome minimum thickness = 2.5 feet.
- g. Dome inside radius = 112 feet.

DESIGN PRESSURE AND TEMPERATURE

5.2.2 The steel reactor containment building is designed and shall be maintained for a maximum internal pressure of 44 psig and a temperature of 264°F.

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DESIGN FEATURES

5.5 DELETED

5.6 FUEL STORAGE

CRITICALITY

- 5.6.1 a. The spent fuel storage racks are designed and shall be maintained with:
 - A k_{eff} equivalent to less than 1.0 when flooded with unborated water, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.
 - A k_{eff} equivalent to less than or equal to 0.95 when flooded with water containing 500 ppm boron, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.
 - A nominal 8.965 inch center-to-center distance between fuel assemblies
 placed in the spent fuel pool storage racks and a nominal 8.80 inch centerto-center distance between fuel assemblies placed in the cask pit storage
 rack.
 - 4. For storage of enriched fuel assemblies, requirements of Specification 5.6.1.a.1 and 5.6.1.a.2 shall be met by positioning fuel in the spent fuel pool storage racks consistent with the requirements of Specification 5.6.1.c.
 - Fissile material, not contained in a fuel assembly lattice, shall be stored in accordance with the requirements of Specifications 5.6.1.a.1 and 5.6.1.a.2.
 - The Metamic neutron absorber inserts shall have a ¹⁰B areal density greater than or equal to 0.015 grams ¹⁰B/cm².
 - b. The cask pit storage rack shall contain neutron absorbing material (Boral) between stored fuel assemblies when installed in the spent fuel pool.
 - c. Loading of spent fuel pool storage racks shall be controlled as described below.
 - The maximum initial planar average U-235 enrichment of any fuel assembly inserted in a spent fuel pool storage rack shall be less than or equal to 4.6 weight percent.
 - Fuel placed in Region 1 of the spent fuel pool storage racks shall comply with the storage pattern definitions of Figure 5.6-1 and the minimum burnup requirements as defined in Table 5.6-1. (See Specification 5.6.1.c.7 for exceptions)
 - Fuel placed in Region 2 of the spent fuel pool storage racks shall comply with the storage pattern definitions or allowed special arrangement definitions of Figure 5.6-2 and the minimum burnup requirements as defined in Table 5.6-1. (See Specification 5.6.1.c.7 for exceptions)

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Attachment 2

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Figure 5.1-1 Deleted

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