



December 20, 2013

SBK-L-13224
Docket No. 50-443

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

Seabrook Station

Request for Review and Approval of License Amendment Request (LAR) 11-04, Changes to Technical Specifications for New and Spent Fuel Storage, in Two Parts

References:

1. NextEra Energy Seabrook, LLC letter SBK-L-11245, "License Amendment Request 11-04, Changes to the Technical Specifications for New and Spent Fuel Storage," January 30, 2012
2. NRC letter "Seabrook Station, Unit No. 1 – Supplemental Information Needed for Acceptance of Requested Licensing Action Regarding License Amendment Request 11-04, Changes to the Technical Specifications for New and Spent Fuel Storage (TAC No. ME7946)," March 30, 2012
3. NextEra Energy Seabrook, LLC letter SBK-L-12099, "Supplement to LAR 11-04, Changes to the Technical Specifications for New and Spent Fuel Storage," May 10, 2012
4. NRC Letter "Seabrook Station, Unit No. 1 – Request for Additional Information Regarding License Amendment Request 11-04, Changes to Technical Specifications for New and Spent Fuel Storage (TAC No. ME8688)," July 24, 2012
5. NextEra Energy Seabrook, LLC letter SBK-L-12199, "Response to Request for Additional Information Regarding License Amendment Request 11-04, Changes to Technical Specifications for New and Spent Fuel Storage," September 20, 2012
6. NRC Letter "Seabrook Station, Unit No. 1 – Request for Additional Information Regarding License Amendment Request 11-04, Changes to Technical Specifications for New and Spent Fuel Storage (TAC No. ME8688)," December 5, 2012
7. NextEra Energy Seabrook, LLC letter SBK-L-13061, "Response to December 2012 Request for Additional Information Regarding License Amendment Request 11-04, Changes to Technical Specifications for New and Spent Fuel Storage," March 27, 2013

A00
NRK

In Reference 1 and supplemented by References 3, 5, and 7, NextEra Energy Seabrook, LLC (NextEra) submitted a request for an amendment to the Technical Specifications (TS) for Seabrook Station. The proposed change would revise the TS for new and spent fuel storage as the result of new criticality analyses for the new fuel vault and the spent fuel pool.

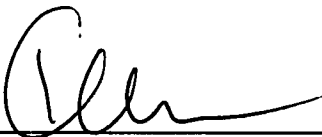
As discussed in a conference call with the NRC on December 4, 2013, the staff has completed its review of the criticality analysis related to the spent fuel pool storage portion of the LAR; however, review of the analysis related to the new fuel vault storage will continue well into 2014. As a result, NextEra proposes that the NRC review and approve the proposed changes in LAR 11-04 in two segments. The first segment would include approval and issuance of an amendment with the TS changes involving only spent fuel pool storage. Review of the criticality analysis and associated TS changes related to new fuel vault storage would continue, and a separate amendment for the changes related to new fuel vault storage would be issued following the NRC staff's review and approval of the proposed changes. The suggested approach would allow the NRC staff to close its review of the spent fuel pool storage portion of the LAR and provide NextEra with updated TS for spent fuel pool storage.

To support separating the LAR review and approval into two parts, Attachments 1 and 2 provide separate markups of the proposed TS changes for each segment. Attachment 1 provides markups of the TS for proposed changes related only to the spent fuel pool storage portion of the LAR. Attachment 2 contains markups for TS changes related to new fuel vault storage. The Attachments only separate the proposed changes into two parts and do not materially alter the proposed changes from those originally submitted in References 1, 3, 5, and 7. This proposed change does not alter the conclusion in Reference 1 that the proposed change does not involve a significant hazards consideration pursuant to 10 CFR 50.92. Provided for information only in Attachments 3 and 4 are markups of the proposed TS Bases changes for the spent fuel pool storage portion and the new fuel vault storage portion of the LAR, respectively.

Reference 1 included a markup of changes to the TS index. However, on June 17, 2013, the NRC issued Amendment 137, which removed the index from the TS. Therefore, a TS index is not included in the TS markups in Attachments 1 and 2 to this letter.

Should you have any questions regarding this letter, please contact Mr. Michael Ossing, Licensing Manager, at (603) 773-7512.

Sincerely,



Kevin T. Walsh
Site Vice President
NextEra Energy Seabrook, LLC

United States Nuclear Regulatory Commission
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Attachment 1 - Markup of the TS for Spent Fuel Storage Portion of LAR 11-04
Attachment 2 - Markup of the TS for New Fuel Storage Portion of LAR 11-04
Attachment 3 - Markup of the TS Bases for Spent Fuel Storage Portion of LAR 11-04
Attachment 4 - Markup of the TS Bases for New Fuel Storage Portion of LAR 11-04

cc: NRC Region I Administrator
J. G. Lamb, NRC Project Manager
NRC Senior Resident Inspector

ATTACHMENT 1

Markup of the TS for Spent Fuel Storage Portion of LAR 11-04

REFUELING OPERATIONS

3/4.9.13 SPENT FUEL ASSEMBLY STORAGE

LIMITING CONDITION FOR OPERATION

3.9.13 Fuel assemblies stored in the Spent Fuel Pool shall be placed in the spent fuel storage racks according to the criteria shown in Figure 3.9-1 ← Specification 5.6.1.3

APPLICABILITY: Whenever fuel is in the Spent Fuel Pool.

ACTION:

- a. With the requirements of the above specification not ^{met} immediately satisfied, suspend all other fuel movement within the Spent Fuel Pool and move the non-complying fuel assemblies to allowable locations in the Spent Fuel Pool in accordance with Figure 3.9-1 ← Specification 5.6.1.3.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

REMOVE

4.9.13.1 The burnup of each fuel assembly to be stored in the Spent Fuel Pool shall be determined from its measured burnup history prior to storage in the Spent Fuel Pool. A complete record of each assembly shall be maintained as long as that fuel assembly is retained on-site.

4.9.13.2 After fuel assembly(ies) movement into or within the Spent Fuel Pool, the position of the fuel assembly(ies) that was (were) moved shall be checked and independently verified to be in accordance with the criteria in Figure 3.9-1

Add

4.9.13.1 Prior to fuel assembly movement into or within the Spent Fuel Pool, verify by administrative means that the requirements of Specification 5.6.1.3 are satisfied.

DELETE

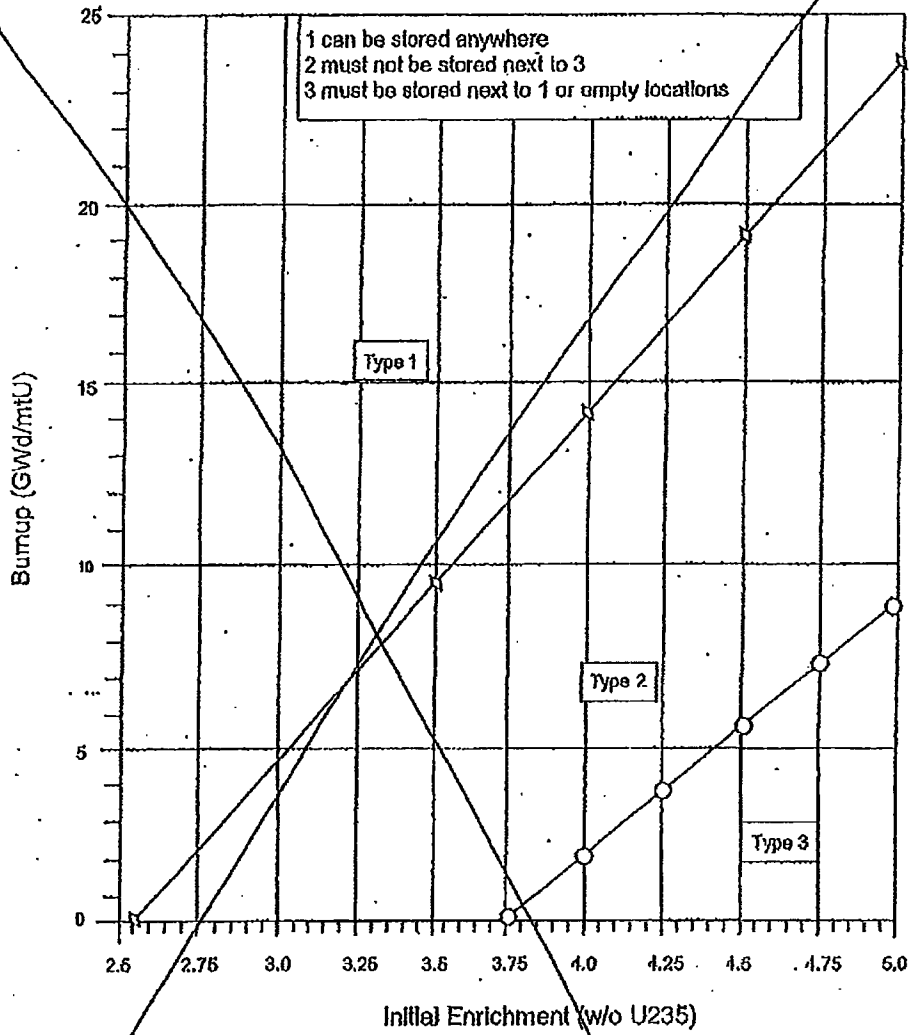


Figure 3.9-1
Fuel Assembly Burnup vs. Initial Enrichment
For Spent Fuel Assembly Storage

INSERT
→

REFUELING OPERATIONS

3/4.9.15 SPENT FUEL POOL BORON CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.9.15 The boron concentration in the Spent Fuel Pool shall be greater than or equal to 2000 ppm.

APPLICABILITY: Whenever fuel is in the Spent Fuel Pool

ACTION:

- a. With boron concentration in the Spent Fuel Pool, less than 2000 ppm, immediately suspend movement of fuel in the Spent Fuel Pool and immediately initiate action to restore boron concentration to 2000 ppm or greater.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.15.1 The boron concentration of the Spent Fuel Pool shall be verified to be 2000 ppm or greater at least once per 7 days.

DESIGN FEATURES

5.6 FUEL STORAGE

INSERT 5.6.1.1

CRITICALITY

5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. A k_{eff} equivalent to less than or equal to 0.96 when flooded with unborated water, which includes margin for uncertainty in calculation methods and mechanical tolerances with a 95% probability at a 95% confidence level.
- b. A nominal 10.35 inch center-to-center distance between fuel assemblies placed in the storage racks.

5.6.1.2 The new fuel storage racks are designed and shall be maintained with:

- a. A k_{eff} equivalent to less than or equal to 0.96 when flooded with unborated water, which includes margin for uncertainty in calculational methods and mechanical tolerances with a 95% probability at a 95% confidence level.
- b. A k_{eff} equivalent to less than or equal to 0.98 when aqueous foam moderation is assumed, which includes margin for uncertainty in calculational methods and mechanical tolerances with a 95% probability at a 95% confidence level.
- c. A nominal 21 inch center-to-center distance between fuel assemblies placed in the storage racks.

INSERT 5.6.1.3

DRAINAGE

5.6.2 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 14 feet 6 inches.

CAPACITY

5.6.3 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1236 fuel assemblies.

5.7 COMPONENT CYCLIC OR TRANSIENT LIMIT

5.7.1 The components identified in Table 5.7-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.7-1.

INSERT ATTACHED
Table 5.6-1
Table 5.6-2
Figure 5.6-1
Figure 5.6-2

INSERT 5.6.1.1

The spent fuel storage racks are designed and shall be maintained with:

- a. A k_{eff} less than 1.0 when flooded with unborated water, which includes an allowance for biases and uncertainties as described in UFSAR Chapter 9.
- b. A k_{eff} less than or equal to 0.95 when flooded with water borated to 500 ppm, which includes an allowance for biases and uncertainties as described in UFSAR Chapter 9.
- c. A nominal 10.35 inch center-to-center distance between fuel assemblies placed in the storage racks.

INSERT 5.6.1.3

5.6.1.3 Fresh or irradiated fuel assemblies shall be stored in the spent fuel pool in compliance with the following:

- a. Any 2x2 array of Region 1 storage cells containing fuel shall comply with the storage pattern in Figure 5.6-1 and the requirements of Table 5.6-1. The reactivity ranks of fuel assemblies in the 2x2 array (rank determined using Table 5.6-1) shall be equal to or less than defined for the 2x2 array.
- b. Any 2x2 array of Region 2 storage cells containing fuel shall comply with the storage requirements defined in Figure 5.6-2 and the requirements of Table 5.6-1 or with the allowable exception of evaluated assemblies stored on the periphery of Region 2 as defined in 5.6.1.3.c. The evaluated assemblies are listed in Table 5.6-2.
- c. 2x2 arrays fully within the first two rows closest to the West Wall composed only of fuel assemblies documented in Table 5.6.2 or empty locations, are allowed without having to meet the storage requirements defined in Figure 5.6-2 and the requirements of Table 5.6-1.
- d. In addition to meeting the requirements defined in 5.6.1.3.a, fuel assemblies placed in Region 1 in the row adjacent to Region 2 shall continue the Region 2 patterns as defined in Figure 5.6-2 and shall meet the associated Region 2 reactivity class requirements.
- e. Any fuel assembly (with or without an RCCA) may be replaced by an empty water cell, non-fuel hardware or a fuel rod storage basket.

Table 5.6-1

BURNUP REQUIREMENTS FOR EACH REACTIVITY CLASS

Bounding Polynomial Fits for Minimum Burnup Requirements

See Notes 1, 2 and 3 for use of Table 5.6-1

Reactivity Class ⁽¹⁾	Cooling Time	Coefficient A ⁽²⁾		Coefficient B	Coefficient C		
RC 1 ⁽³⁾	N/A	N/A		N/A	N/A		
RC 2	N/A	-23.9486		7.4857	0.0000		
		Enrichment < 3.6 w/o Coefficients			Enrichment ≥ 3.6 w/o Coefficients		
		A	B	C	A	B	C
RC 3	0 years	-46.4893	24.2342	-1.4689	-46.9639	23.9883	-1.4535
	2.5 years	-45.3671	23.6083	-1.4430	-44.6422	22.7925	-1.3592
	5 years	-43.3626	22.3467	-1.2912	-42.8691	21.5892	-1.2031
	10 years	-41.2729	21.3176	-1.2238	-40.4786	20.4229	-1.1214
	15 years	-37.5450	19.2208	-0.9792	-36.5543	18.2164	-0.8607
	20 years	-37.1511	19.1067	-0.9965	-35.8945	17.9317	-0.8518
RC 4	0 years	-39.4986	24.8329	-1.4714	-35.5129	22.5425	-1.2508
	2.5 years	-42.0614	26.2021	-1.7536	-31.0986	20.3032	-1.0635
	5 years	-43.5036	26.7220	-1.8423	-28.4171	18.8863	-0.9270
	10 years	-40.2450	24.8908	-1.6792	-32.5900	20.6289	-1.1778
	15 years	-39.4193	24.3389	-1.6482	-35.7271	22.0541	-1.3825
	20 years	-38.0193	23.4289	-1.5482	-33.6429	20.7970	-1.2397
RC 5	0 years	-18.6729	17.1776	-0.3238	15.4943	0.4484	1.5317
	2.5 years	-22.0079	18.6718	-0.6196	27.0014	-5.0979	2.0587
	5 years	-24.5664	19.9913	-0.8744	20.9571	-2.1108	1.6159
	10 years	-25.9493	20.7089	-1.0982	-0.9900	8.4067	0.2667
	15 years	-26.8021	21.1165	-1.2220	-13.6314	14.4202	-0.5032
	20 years	-26.3500	20.8067	-1.2333	-20.7757	17.7162	-0.9238

Table 5.6-1 (continued)

BURNUP REQUIREMENTS FOR EACH REACTIVITY CLASS
Bounding Polynomial Fits for Minimum Burnup Requirements
See Notes 1, 2 and 3 for use of Table 5.6-1

Notes

1. Reactivity Classes are presented from High to Low, e.g., RC 1 is most reactive fuel, RC 5 is least reactive fuel.

2. The specific minimum burnup (Bu) required for each fuel assembly for Reactivity Classes 2-5 are calculated from the following equation:

$$Bu = A + B \times En + C \times En^2$$

where the coefficients A, B and C are defined above for each Reactivity Class and cooling time (if applicable) and En is defined as the nominal initial central zone enrichment. Actual cooling time is rounded down to the nearest value, e.g., an assembly with an actual cooling time of 12 years would utilize the 10 year coefficients. No uncertainties should be applied when determining the minimum burnup requirement; all appropriate uncertainties have been included during the coefficient generation.

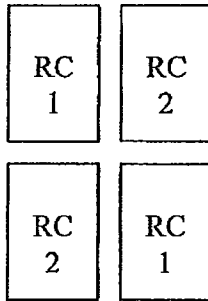
3. Fresh or irradiated fuel with an initial enrichment of ≤ 5.0 w/o U-235.

Table 5.6-2
EVALUATED ASSEMBLIES ON PERIPHERY OF REGION 2

C01	C17	C33	C49
C02	C18	C34	C50
C03	C19	C36	C51
C04	C20	C37	C52
C05	C21	C38	C53
C06	C22	C39	C55
C07	C23	C40	C56
C09	C24	C41	C57
C10	C26	C42	C58
C11	C27	C43	C59
C12	C28	C44	C60
C13	C29	C45	C61
C14	C30	C46	C62
C15	C31	C47	C63
C16	C32	C48	C64

ALLOWABLE STORAGE PATTERN REGION 1
(See Notes 1 and 2)

Pattern "A"
See Definition 1



DEFINITIONS:

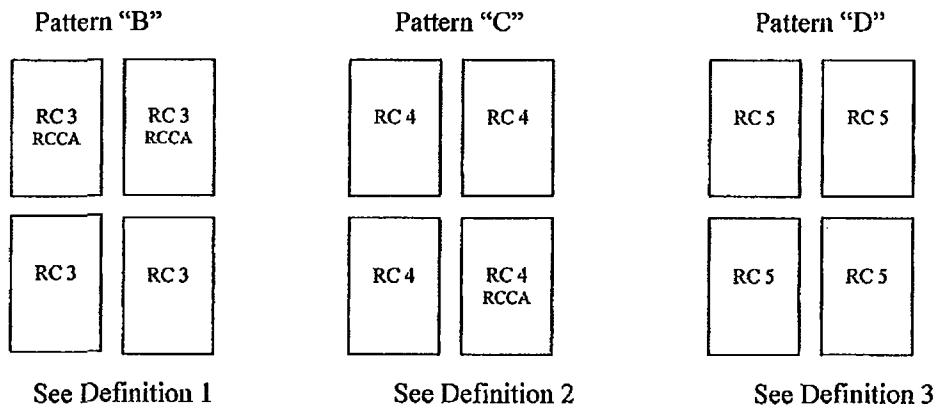
1. Allowable pattern is fuel assemblies that meet Reactivity Class (RC) 1, 2, 3, 4, or 5 checkerboarded with fuel assemblies that meet RC 2, 3, 4, 5. Requirements for all RC are defined in Table 5.6-1. Diagram is for illustration only.

NOTES

1. There are no interface limitations within Region 1 between rack modules or within racks. Each cell is a part of up to four 2x2 arrays, and each cell must simultaneously meet the requirements of all those arrays of which it is a part.
2. Replacement of any fuel assembly by an empty water hole, non-fuel hardware or fuel rod storage basket is acceptable.

Figure 5.6-1

ALLOWABLE STORAGE PATTERNS REGION 2 (See Notes 1, 2)



DEFINITIONS

1. Allowable pattern is fuel assemblies that meet Reactivity Class (RC) 3, 4, or 5 in each of the 2x2 array locations combined with two RCCAs placed in any two locations within the 2x2 array. Requirements for all RC are defined in Table 5.6-1. Replacement of any fuel assembly (with or without an RCCA) by an empty water hole, non-fuel hardware or fuel rod storage basket is acceptable. Diagram is for illustration only.
2. Allowable pattern is fuel assemblies that meet Reactivity Class (RC) 4 or 5 in each of the 2x2 array locations with one RCCA placed anywhere in the 2x2 array. Requirements for all RC are defined in Table 5.6-1. Replacement of any fuel assembly (with or without an RCCA) by an empty water hole, non-fuel hardware or fuel rod storage basket is acceptable. Diagram is for illustration only.
3. Allowable pattern is Reactivity Class (RC) 5 in each of the 2x2 array locations. Minimum burnup for RC 5 is defined in Table 5.6-1 as a function of nominal initial central zone enrichment and cooling time. Replacement of any fuel assembly by an empty water hole, non-fuel hardware or fuel rod storage basket is acceptable. Diagram is for illustration only.

NOTES

1. The storage arrangements of fuel within a rack module may contain more than one pattern. There are no interface limitations within Region 2 between rack modules or within racks. Each cell is a part of up to four 2x2 arrays, and each cell must simultaneously meet the requirements of all those arrays of which it is a part.
2. All permanent and transient configurations for fuel placed within Region 2 must meet the requirements of Figure 5.6-2 and Table 5.6-1.

Figure 5.6-2

TABLE 5.7-1

COMPONENT CYCLIC OR TRANSIENT LIMITS

<u>COMPONENT</u>	<u>CYCLIC OR TRANSIENT LIMIT</u>	<u>DESIGN CYCLE OR TRANSIENT</u>
Reactor Coolant System	200 heatup cycles at $\leq 100^\circ\text{F/h}$ and 200 cooldown cycles at $\leq 100^\circ\text{F/h}$	Heatup cycle - T_{avg} from $\leq 200^\circ\text{F}$ to $\geq 550^\circ\text{F}$. Cooldown cycle - T_{avg} from $\geq 550^\circ\text{F}$ to $\leq 200^\circ\text{F}$.
	200 pressurizer cooldown cycles at $\leq 200^\circ\text{F/h}$.	Pressurizer cooldown cycle temperatures from $\geq 650^\circ\text{F}$ to $\leq 200^\circ\text{F}$.
	80 loss of load cycles, without immediate Reactor trip.	$\geq 15\%$ of RATED THERMAL POWER to 0% of RATED THERMAL POWER.
	40 cycles of loss-of-offsite A.C. electrical power.	Loss-of-offsite A.C. electrical ESF Electrical System.
	80 cycles of loss of flow in one reactor coolant loop.	Loss of only one reactor coolant pump.
	400 Reactor trip cycles.	100% to 0% of RATED THERMAL POWER.
	10 auxiliary spray actuation cycles.	Spray water temperature differential $> 320^\circ\text{F}$.
	200 leak tests.	Pressurized to ≥ 2250 psig.
	10 hydrostatic pressure tests.	Pressurized to ≥ 3106 psig.
	Secondary Coolant System	1 steam line break.
10 hydrostatic pressure tests.		Pressurized to ≥ 1481 psig.

SEABROOK - UNIT 1

5-17

ATTACHMENT 2

Markup of the TS for New Fuel Storage Portion of LAR 11-04

REFUELING OPERATIONS

3/4.9.14 NEW FUEL ASSEMBLY STORAGE

REPLACE
(THIS SPECIFICATION NUMBER IS NOT USED)

LIMITING CONDITION FOR OPERATION

DELETE

DELETE

3.9.14 The New Fuel Storage Vault may be maintained with a full loading of 90 assemblies with fuel enrichment up to 3.675 w/o ²³⁵U. The loading must be reduced to 81 assemblies for enrichments from 3.675 to 5.0 w/o ²³⁵U by limiting the fuel assembly placement in the central column of the New Fuel Storage Vault to every other location.

APPLICABILITY: Whenever fuel is in the New Fuel Storage Vault.

ACTION:

- a. With the requirements of the above specification not satisfied, suspend all other fuel movement within the New Fuel Storage Vault and move the non-complying fuel assemblies to allowable locations in the New Fuel Storage Vault in accordance with the requirements of the above specification.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.14.1 After fuel assembly(ies) movement into or within the New Fuel Storage Vault, the position of the new fuel assembly(ies) that was (were) moved shall be checked and independently verified to be in accordance with the requirements of the above specification.

DESIGN FEATURES

5.6 FUEL STORAGE

CRITICALITY

5.6.1.1 The spent fuel storage racks are designed and shall be maintained with:

- a. A k_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes margin for uncertainty in calculation methods and mechanical tolerances with a 95% probability at a 95% confidence level.
- b. A nominal 10.35 inch center-to-center distance between fuel assemblies placed in the storage racks.



INSERT 5.6.1.2

5.6.1.2 The new fuel storage racks are designed and shall be maintained with:

- a. A k_{eff} equivalent to less than or equal to 0.95 when flooded with unborated water, which includes margin for uncertainty in calculational methods and mechanical tolerances with a 95% probability at a 95% confidence level.
- b. A k_{eff} equivalent to less than or equal to 0.98 when aqueous foam moderation is assumed, which includes margin for uncertainty in calculational methods and mechanical tolerances with a 95% probability at a 95% confidence level.
- c. A nominal 21 inch center-to-center distance between fuel assemblies placed in the storage racks.

DRAINAGE

5.6.2 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 14 feet 6 inches.

CAPACITY

5.6.3 The spent fuel storage pool is designed and shall be maintained with a storage capacity limited to no more than 1236 fuel assemblies.

5.7 COMPONENT CYCLIC OR TRANSIENT LIMIT

5.7.1 The components identified in Table 5.7-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.7-1.

INSERT 5.6.1.2

- a. A k_{eff} equivalent to less than or equal to 0.95 when fully flooded with unborated water, which includes an allowance for biases and uncertainties as described in UFSAR Chapter 9.
- b. A k_{eff} equivalent to less than or equal to 0.98 if moderated by aqueous foam, which includes an allowance for biases and uncertainties as described in USFAR Chapter 9.
- c. At least a nominal 21 inch center-to-center distance between fuel assemblies placed in the storage racks with a nominal 33 inches center-to-center distance (east to west) between fuel assemblies in the center column and adjacent columns.

ATTACHMENT 3

Markup of the TS Bases for Spent Fuel Storage Portion of LAR 11-04

3/4.9 REFUELING OPERATIONS (Continued)

BASES

3/4.9.9 (THIS SPECIFICATION NUMBER IS NOT USED.)

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL and STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis. Suspending fuel movement or crane operation does not preclude moving a component to a safe location.

3/4.9.12 FUEL STORAGE BUILDING EMERGENCY AIR CLEANING SYSTEM

The limitations on the Fuel Storage Building Emergency Air Cleaning System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. Suspending fuel movement or crane operation does not preclude moving a component to a safe location.

One train of the Fuel Storage Building Emergency Air Cleaning System must be in operation during fuel movement. This requirement, however, does not apply to movement of a spent fuel cask containing irradiated fuel in preparation for transfer to dry storage. Movement of fuel after it has been inserted into a spent fuel cask and unlatched from the lifting tool is no longer a consideration with regard to this specification.

3/4.9.13 SPENT FUEL ASSEMBLY STORAGE

~~Restrictions on placement of fuel assemblies of certain enrichments within the Spent Fuel Pool is dictated by Figure 3.9-1. These restrictions ensure that the K_{eff} of the Spent Fuel Pool will always remain less than 0.95 assuming the pool to be flooded with unborated water. The restrictions delineated in Figure 3.9-1 and the action statement are consistent with the criticality safety analysis performed for the Spent Fuel Pool as documented in the FSAR.~~

INSERT 1

3/4.9 REFUELING OPERATIONS (Continued)

BASES

3/4.9.14 NEW FUEL ASSEMBLY STORAGE

Restrictions on placement of fuel assemblies of certain enrichments within the New Fuel Storage Vault is dictated by Specification 3/4.9.14. These restrictions ensure that the K_{eff} of the New Fuel Storage Vault will always remain less than 0.95 assuming the area to be flooded with unborated water. In addition, these restrictions ensure that the K_{eff} of the New Fuel Storage Vault will always remain less than 0.98 when aqueous foam moderation is assumed. The restrictions delineated in Specification 3/4.9.14 and the action statement are consistent with the criticality safety analysis performed for the New Fuel Storage Vault as documented in the FSAR.



INSERT 2

INSERT 1

Restrictions on placement of fuel assemblies of certain enrichments within the Spent Fuel Pool is dictated by Specification 5.6.1.3. These restrictions ensure that the keff of the Spent Fuel Pool will always remain less than 1.0 assuming the pool to be flooded with unborated water and less than or equal to 0.95 when flooded with water borated to 500 ppm. The restrictions delineated in Specification 5.6.1.3 and the action statement are consistent with the criticality safety analysis performed for the Spent Fuel Pool as documented in the FSAR.

INSERT 2

3'4.9.15 SPENT FUEL POOL BORON CONCENTRATION

The limitation on the Spent Fuel Pool boron concentration ensures that sufficient boron is present to maintain criticality margin during any potential spent fuel pool accident. The required boron concentration is also sufficient to ensure that no boron dilution event could reduce the spent fuel concentration below 500 ppm. The action statement requires immediately suspending movement of fuel until the boron concentration has been restored. This does not preclude movement of a fuel assembly to a safe position.

ATTACHMENT 4

Markup of the TS Bases for New Fuel Storage Portion of LAR 11-04

3/4.9 REFUELING OPERATIONS (Continued)

BASES

3/4.9.14 NEW FUEL ASSEMBLY STORAGE

This specification number is not used

~~Restrictions on placement of fuel assemblies of certain enrichments within the New Fuel Storage Vault is dictated by Specification 3/4.9.14. These restrictions ensure that the K_{eff} of the New Fuel Storage Vault will always remain less than 0.95 assuming the area to be flooded with unborated water. In addition, these restrictions ensure that the K_{eff} of the New Fuel Storage Vault will always remain less than 0.98 when aqueous foam moderation is assumed. The restrictions delineated in Specification 3/4.9.14 and the action statement are consistent with the criticality safety analysis performed for the New Fuel Storage Vault as documented in the FSAR.~~