NEXTera ENERGY POINT BEACH

June 17, 2009

NRC 2009-0068
10 CFR 50.90

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Point Beach Nuclear Plant, Units 1 and 2
Dockets 50-266 and 50-301
Renewed License Nos. DPR-24 and DPR-27

License Amendment Request 261 Supplement 2
Extended Power Uprate

References: (1) FPL Energy Point Beach, LLC, Letter to NRC, dated April 7, 2009, License Amendment Request 261, Extended Power Uprate (ML091250564)
(2) NextEra Energy Point Beach, LLC, Letter to NRC, dated June 17, 2009, License Amendment Request 261 Supplement 1, Extended Power Uprate
(3) NRC to NextEra Energy Point Beach, LLC, Draft Acceptance Review Questions on AFW Modification dated June 2, 2009 (ML091530604)

Pursuant to 10 CFR 50.90, NextEra Energy Point Beach, LLC (NextEra) hereby submits a supplement to License Amendment Request (LAR) 261 (Reference 1) for Point Beach Nuclear Plant (PBNP) Units 1 and 2. This supplement provides proposed Technical Specifications (TS) for the testing of emergency diesel generators at PBNP as described in the response (Reference 2) to NRC Question 4 of Reference (3).

NextEra requests approval of this supplement on the same schedule as LAR 261. The supplement will be implemented on the same schedule as LAR 261.

Enclosure 1 contains NextEra's evaluation of the proposed TS changes, including a determination that the proposed TS changes involve no significant hazards as defined in 10 CFR 50.92 and an evaluation that concludes that this change satisfies the criteria of 10 CFR 51.22 for categorical exclusion from the requirements for an environmental assessment. The determination that the proposed TS changes involve no significant hazards does not negatively impact the determination presented in LAR 261 (Reference 1).

Enclosure 2 provides a markup of proposed TS changes. Enclosure 3 provides a markup of proposed TS Bases changes. The Bases changes are provided for information only. NRC staff approval is not being requested.

In accordance with 10 CFR 50.91, a copy of this license amendment request has been provided to the designated State of Wisconsin Official. The proposed TS changes have been reviewed by the Plant Operations Review Committee.

Summary of Commitments

There are no new commitments or changes to existing commitments as a result of this LAR supplement.

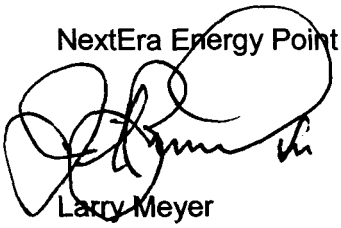
Questions regarding the information in this submittal should be directed to Mr. Steve Hale, Point Beach Extended Power Uprate Licensing Manager, at 561 / 904-3205.

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

Executed on June 17, 2009

Very truly yours,

NextEra Energy Point Beach, LLC



Larry Meyer
Site Vice President

Enclosures

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE 1

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

LICENSE AMENDMENT REQUEST 261, SUPPLEMENT 2
EXTENDED POWER UPRATE

EVALUATION OF PROPOSED CHANGE

9 pages follow

1.0 SUMMARY DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," NextEra Energy Point Beach, LLC, (NextEra) proposes changes to the Technical Specifications (TS) for Point Beach Nuclear Plant (PBNP) Units 1 and 2, in support of License Amendment Request (LAR) 261 (Reference 1).

This supplement proposes to add a new surveillance requirement (SR) 3.8.1.7 to TS 3.8.1, AC Sources - Operating, to perform a 24 hour surveillance test of each emergency diesel generator (DG) at a frequency of 18 months.

2.0 DETAILED DESCRIPTION

In the Draft Acceptance Review Questions on AFW Modification (NRC to NextEra Energy Point Beach, LLC (NextEra) dated June 2, 2009 (ML091530604), Question 4 stated, "Describe the changes required for Section 3.8 of the Technical Specifications (TS) to verify the capability of the DGs as a result of the design change. Explain why an DG endurance and load margin test (24 – hr) is not performed to demonstrate the capability of the DGs to carry the emergency loads above the continuous rating."

As a result of the Extended Power Uprate (EPU) and the auxiliary feedwater (AFW) system upgrade with installation of new, larger motor-driven auxiliary feedwater (MDAFW) pumps, the worst case loading on the A and B Train DGs has been re-evaluated, as documented in the response to Question 2 in NextEra's letter dated June 17, 2009, License Amendment Request 261, Supplement 1, Extended Power Uprate.

NextEra has determined that in response to Question 4, a 24-hour capability test should be performed of the A and B Train emergency diesel generators (DGs) to demonstrate the capability of the DGs for these revised worst case loadings. This supplement proposes to add a new 18-month surveillance for the DGs.

The TS surveillance SR 3.8.1.7 is proposed to be added as follows:

SURVEILLANCE		FREQUENCY
SR 3.8.1.7	----------NOTES---------- 1. Momentary transients outside the load and power factor ranges do not invalidate this test. 2. This Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR. 3. If performed with DG synchronized with offsite power, it shall be performed at a power factor $\leq$ 0.87. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable. --- Verify each DG operates for $\geq$ 24 hours: a. For $\geq$ 2 hours loaded to $\geq$ 2800 kW and $\leq$ 2875 kW (G01/G02), $\geq$ 2875 kW and $\leq$ 2950 kW (G03/G04) b. For the remaining hours of the test, loaded $\geq$ 2565 kW and $\leq$ 2850 kW.	18 months

The proposed change to Technical Specification 3.8.1, AC Sources – Operating, adds new Surveillance Requirement (SR) 3.8.1.7 to "Verify each DG operates for $\geq$ 24 hours" with a FREQUENCY of "18 months."

The test protocol requirements for this surveillance are added as SR 3.8.1.7 that "a. For $\geq$ 2 hours loaded to $\geq$ 2800 kW and $\leq$ 2875 kW (G01/G02), $\geq$ 2875 kW and $\leq$ 2950 kW (G03/G04)" and "b. For the remaining hours of the test loaded $\geq$ 2565 kW and $\leq$ 2850 kW."

This new SR 3.8.1.7 contains the following NOTES:

1. "Momentary transients outside the load and power factor ranges do not invalidate this test.

2. This Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR.

3. If performed with DG synchronized with offsite power, it shall be performed at a power factor $\leq$ 0.87. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable."

Basis for the Proposed Change:

The performance of a 24-hour endurance and load margin test of each DG at 18-month intervals is consistent with industry practice for plants such as PBNP with 18-month refueling intervals. This is also consistent with NUREG-1431, Standard Technical Specifications (STS), Westinghouse Plants, (Reference 2). The proposed new surveillance is consistent with SR 3.8.1.14 of the Westinghouse STS.

The NOTES for new surveillance SR 3.8.1.7 are also consistent with NUREG-1431, except that the first sentence of NOTE 2, which has been deleted in the proposed PBNP SR 3.8.1.7 NOTES. The first sentence of NUREG-1431 SR 3.8.1.14, NOTE 2 states that this surveillance is normally not performed in MODES 1 or 2. At PBNP, however, the DGs are train-specific rather than unit specific. As a result, each DG is available to be lined up to either or both units. At least one reactor unit at PBNP is normally operating in MODE 1, although the other reactor unit may be in a shutdown MODE. Therefore, it is not practical to perform this surveillance on each DG on an18-month interval with both units in shutdown MODES. In addition, PBNP has been performing 24-hour DG load testing on a 24-month frequency safely with both units typically operating in MODE 1.

The test protocol requirements in proposed SR 3.8.1.7 were developed to demonstrate the capability of the DGs to carry worst case loads for the EPU and AFW system upgrades without causing unnecessary wear and reduction of long-term reliability of engine components due to over-testing. The specific test requirements are generally consistent with the requirements of NUREG-1431 (Reference 2) SR 3.8.1.14, but reflect that the worst case loads determined for the A and B Train DGs are close to the 2000-hour rating and into the 200-hour rating of the A and B Train DGs, respectively. See the Technical Evaluation below for a more detailed discussion of the test requirements, which are different for the A and B Train DGs.

3.0 TECHNICAL EVALUATION

PBNP does not currently have a TS SR for demonstration once per shutdown/refueling interval that the diesel generators (DGs) can start and run continuously at full load capability for an interval of not less than 24 hours.

The DG system at PBNP is composed of four shared diesel generators that directly supply the safety related 4.16 kV electrical distribution system. The DGs are divided into two trains, "A" and "B." The two Train A DGs are located in separate rooms in the seismic Class I section of the turbine building and are connected to the Train A 4160 V auxiliary system buses of both units. The two Train B DGs are located in separate rooms in the seismic Class I Emergency Diesel Generator Building and are connected to both Train B 4160 V auxiliary system buses of both units. All four emergency diesel generators are normally available. The target reliability for each DG is 97.5%.

The two Train A DGs are G-01 and G-02. The two Train A DGs are normally aligned as standby emergency power, G-01 to the Unit 1 Train A 4160 V bus (1A-05) and G-02 to the Unit 2 Train A 4160 V bus (2A-05). G-01 will automatically provide power to 1A-05 if power is lost on 1A-05, G-02 will automatically provide power to 2A-05 if power is lost on 2A-05.

G-01 may be manually connected to provide power to 2A-05, and G-02 may be manually connected to provide power to 1A-05. Additionally, G-02 may be placed in a mode that will allow it to automatically provide power to 1A-05 or 2A-05 or both, if either or both buses lose power. G-01 can be aligned in the same manner as G-02, described above.

The two Train B DGs are normally aligned as standby emergency power, G-03 to the Unit 1 Train B 4160 V bus (1A-06) and G-04 to the Unit 2 Train B 4160 V bus (2A-06). Emergency diesel generators G-03 and G-04 have similar capabilities for the B Train, as the A train DGs described above.

Unintentional paralleling of two DGs is controlled by the use of key switches for the DG output breakers to the opposite units' same train 4160 V bus and with interlocks which prevent the automatic closure of two DGs to the same 4160 V bus. Offsite power is not locked out upon emergency generator operation.

The DG system has several auxiliary support systems that must function in order to perform its safety-related function, including; Diesel Starting Air (DA) system, engine fuel oil system (FO), engine cooling system, engine lubricating system, and room ventilation system (VNDG). Each diesel engine is independently supported by its own dedicated auxiliary systems for maintaining start readiness, starting, and continued operation to preclude any single failure from preventing the DG system from performing the intended safety function.

Each emergency diesel generator (DG) is capable of supplying the power to one complete set of safeguards equipment for one reactor unit and providing sufficient power to allow the second reactor unit to be placed in a safe shutdown condition. Each DG is automatically started upon initiation of safety injection (SI) in either unit or loss of voltage on either of the two 4.16 kV buses on the train with which the DG is associated.

The G-01 and G-02 DGs have a 2000-hour rating of 2850 kW, a 200-hour rating of 2963 kW, and a 4-hour rating of 3000 kW. The G-03 and G-04 DGs have a 2000-hour rating of 2848 kW, a 200-hour rating of 2951 kW and a 4-hour rating of 2987 kW. All four DGs are powered by General Motors Electro-Motive Division 20-645E4 engines. The maximum emergency loads for G-01 and G-02 are 2801 kW and the maximum emergency loads for G-03 and G-04 are 2877 kW.

In this proposed surveillance, G-01 and G-02 DGs are loaded to 98.2% to 100.9% of the 2000-hour load rating for $\geq$ 2 hours and 90 to 100% of the 2000-hour load rating for the remaining 22 hours; G-03 and G-04 DGs are loaded to 97.4% to 100% of the 200-hour load rating for $\geq$ 2 hours and 90 to 100% of the 2000-hour load rating for the remaining 22 hours. These load ranges were selected to demonstrate the capability of the DGs to carry the emergency loads above the continuous rating of the diesel generators and to prevent routine overloading of the diesel generator. The maximum emergency loads for G-01 and G-02 are no more than 98.3% of the 2000-hour load rating and the maximum emergency loads for G-03 and G-04 are no more than 97.5% of the 200-hour load rating.

The test protocol for this 24-hour test for these DGs also includes a range test. The range test includes holding the DG at the highest end of the 2-hour load range for 5 minutes to ensure the diesel generator generates power in excess of the emergency loads while accounting for instrument inaccuracies. The range test demonstrates that the fuel system, governor controls and the voltage regulator/excitation system have sufficient range to carry loads in excess of the emergency loads. The range test establishes the ability of the diesel generator to meet its original qualification load ratings, as well as verify the capability of the diesel generator to reach the long-term maximum DG managed load limit using the installed safety-related instrumentation. After the maximum required engine power capability is established, operation at these highest power levels for test purposes for extended periods only serves to cause unnecessary wear and reduction of long-term reliability of engine components.

Following the range test, the DG is returned to a nominal load within the 2-hour load range. Since the maximum emergency loads are the lowest end of the 2-hour load range, the nominal surveillance load will be above the maximum emergency loads. The actual emergency loads are expected to be lower than the maximum emergency loads based on the significant conservatisms used to develop the worst case loading.

TS LCO 3.8.1.c requires a minimum of one standby emergency power source capable of supplying each 4.16 kV/480 V Class 1E safeguards bus to be OPERABLE. This LCO is applicable in MODES 1, 2, 3 and 4. With four DGs normally available, the probability of any one DG experiencing the maximum emergency load is reduced.

The remaining 22 hours of the surveillance are conducted at sufficiently high power levels (90 to 100% of the 2000-hour rating) such that all components will reach long-term thermal equilibrium, equivalent to that seen under emergency conditions, sufficient to detect credible forms of degradation. Monitoring of typical engine parameters such as water temperature, oil temperature, fuel pressure and oil pressure provides assurance that support systems and components are functioning correctly for all anticipated operating conditions.

The 18-month frequency is consistent with applicable regulatory guidance and NUREG-1431 (Reference 2), and ensures the surveillance will be performed approximately once per refueling interval consistent with other surveillance requirements.

NOTE 2 from NUREG-1431 (Reference 2) Surveillance SR 3.8.1.14, to not normally perform this surveillance in MODES 1 or 2, is not applicable since this surveillance may be performed in MODES 1, 2, 3, and 4.

The potential outcomes and transients associated with this surveillance at PBNP are the same as those when performing SR 3.8.1.3 (monthly loaded run). Adequate procedure

responses are available to cope with transients and receipt of an auto start signal. Restrictions are in place to prevent parallel operation of the DG when offsite power is threatened due to weather conditions or other factors. Perturbations of offsite and onsite electrical systems are minimized by procedural restrictions associated with 345 kV breaker alignment, system lineups, 13.8 kV and 4.16 kV switching, and coordination with the transmission line operator. Additionally, performance of this surveillance will be restricted to those times when it will not be necessary to enter the Required Action of LCO 3.8.1.c. As a result, there is no reduction in plant safety when this surveillance is performed in MODES 1, 2, 3, or 4.

The surveillance will be performed at a power factor of $\leq$ 0.87. A value of $\leq$ 0.87 envelopes the power factor under emergency load conditions. Under certain conditions when grid voltage is high, DG excitation may result in unacceptably high bus voltages or result in excessive DG excitation levels to maintain a power factor of 0.87. In these cases, the power factor shall be maintained as close to 0.87 without exceeding applicable limits. This is consistent with NUREG-1431 (Reference 2).

The surveillance as described above challenges the diesel generator with sufficient long-term loading to provide reasonable assurance that the diesel generators are capable of providing the maximum emergency loads above the continuous rating. The surveillance is conducted at a frequency that is consistent with applicable regulatory guidance and NUREG-1431 (Reference 2). The surveillance may be performed in MODES 1, 2, 3 or 4, as plant safety is maintained during this test.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

PBNP was designed and constructed to comply with the intent of the draft AEC General Design Criteria (GDC) for Nuclear Power Plant Construction Permits, as proposed on July 10, 1967 (ML003674718) (Reference 3). PBNP was not licensed to NUREG-0800, "Standard Review Plan (SRP)."

The Final Safety Analysis Report (FSAR) provides in Section 1.3, that the GDC used during the licensing of PBNP predate those provided today in 10 CFR 50, Appendix A. The origin of the PBNP GDC relative to the Atomic Energy Commission proposed GDC is discussed in the FSAR, Section 1.3. The parenthetical number following the criterion description indicates the number of the Atomic Industrial Forum version of the proposed General Design Criterion (PBNP GDC).

The PBNP specific GDC for the AC Onsite Power System is as follows:

Criterion: An emergency power source shall be provided and designed with adequate independency, redundancy, capacity, and testability to permit the functioning of the engineered safety features and protection systems required to avoid undue risk to the health and safety of the public. This power source shall provide this capacity assuming a failure of a single active component (PBNP GDC 39).

As described in FSAR Chapter 8, Introduction of the Electrical Distribution Systems, independent alternate power systems are provided with adequate capacity and testability to supply the required engineered safety features and protection systems.

The normal source of power to safety-related 4.16 kV and 480 V buses is from offsite through the station low voltage auxiliary transformers. If this normal source should fail, the standby source of emergency power is the diesel generating (DG) system. The DG system is comprised of four shared diesel generators that directly supply the safety-related 4.16 kV electrical distribution system. Each diesel engine is supported by its own dedicated auxiliary systems for maintaining the start readiness, starting, and continued operation. The independent design of the diesel generator engine and auxiliary systems precludes any single failure from preventing the DG system from performing its intended safety-related function.

The Train A DGs (G-01 and G-02) are rated at 2850 kW for 2000 hours, 0.8 power factor, 900 rpm, 4160 V, 3-phase, 60 cycle AC. Additional ratings for the Train A DGs include 2963 kW for 200 hours, 3000 kW for 4 hours and 3050 kW for a 30-minute period.

The Train B DGs (G-03 and G-04) are rated at 2848 kW for 2000 hours, 0.8 power factor, 900 rpm, 4160 V, 3 phase, 60 cycle AC. Additional ratings for the Train B DGs include 2951 kW for 200 hours, and 2987 kW for 4 hours.

FSAR Appendix A.1 provides detail on the response of the DGs to a Station Blackout.

The proposed TS changes have been evaluated to determine whether applicable regulations and requirements continue to be met.

NextEra has determined that the proposed changes do not require any exemptions or relief from regulatory requirements and do not affect conformance with any Genera Design Criterion (GDC) differently than described in the FSAR.

4.2 Significant Hazards Consideration

The proposed amendment would add an 18-month surveillance to the PBNP Technical Specifications to conduct a 24-hour capability run of the emergency diesel generators (DG) based upon a plant-specific worst case loading.

NextEra has evaluated whether or not a significant hazard is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

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

   Response: No

   This supplement to LAR 261 proposes to add an 18-month surveillance to conduct a 24-hour capability run of the four emergency diesel generators. The proposed SR establishes loading requirements for a 24-hour operational test. The DGs are used to support mitigation of the consequences of postulated design basis accidents in the event of loss of offsite power. However, the DGs are not initiators of any previously evaluated accidents. The performance of the

proposed DG surveillance will not increase the probability of any accident previously evaluated.

This new surveillance demonstrates the capability of the DGs to meet their worst case loading under postulated accident conditions and provides assurance of operability of the required DGs. The DGs are also available to support mitigation of previously evaluated accidents during the 24-hour performance of the new surveillance. The proposed new DG surveillance will not increase the consequences of a previously evaluated accident.

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

2. Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

This supplement to LAR 261 proposes to add an 18-month surveillance to conduct a 24-hour capability run of the four emergency diesel generators. The proposed SR addition sets specific loading requirements for a 24-hour operational test. The proposed Technical Specification change does not physically alter the plant (i.e., no new or different type of equipment will be installed). The proposed change does not change any parameters governing normal plant operation. The new surveillance is similar to 24-hour DG tests currently performed as part of the station's DG reliability program. The DGs will be operated in the same manner as they are currently and no new accident scenarios, failure mechanisms or limiting single failures are introduced as a result of the proposed new surveillance.

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

3. Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

This supplement to LAR 261 proposes to add an 18-month surveillance to conduct a 24-hour capability run of the four emergency diesel generators. The proposed SR addition establishes loading requirements for a 24-hour operational test. This proposed new surveillance does not have any affect on the margin of safety, since it does not affect any regulatory acceptance limits. The periodic surveillance will provide reasonable assurance that the DGs are capable of supplying the worst case design basis accident emergency loads. The new surveillance is similar to a 24-hour DG tests currently performed as part of an DG reliability program.

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

4.3 Conclusions

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

The Plant Operations Review Committee has reviewed the proposed changes and concurs with this conclusion.

5.0 ENVIRONMENTAL CONSIDERATION

NextEra has evaluated the proposed changes and has concluded that the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. FPL Energy Point Beach, LLC, Letter to NRC, dated April 7, 2009, License Amendment Request 261, Extended Power Uprate (ML091250564).

2. NUREG-1431, Revision 3, Standard Technical Specifications, Westinghouse Plants (ML041830612)

3. AEC General Design Criteria (GDC) for Nuclear Power Plant Construction Permits, as proposed on July 10, 1967 (ML003674718)

ENCLOSURE 2

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

LICENSE AMENDMENT REQUEST 261, SUPPLEMENT 2
EXTENDED POWER UPRATE

PROPOSED TECHNICAL SPECIFICATION CHANGES

1 page follows

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.6	Verify each standby emergency power source: a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power; b. Transfers loads to offsite power source; and c. Returns to ready-to-load operation.	18 months
SR 3.8.1.7	----------NOTES---------- 1. Momentary transients outside the load and power factor ranges do not invalidate this test. 2. This Surveillance may be performed to reestablish OPERABILITY provided an assessment determines the safety of the plant is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR. 3. If performed with DG synchronized with offsite power, it shall be performed at a power factor ≤0.87. However, if grid conditions do not permit, the power factor limit is not required to be met. Under this condition the power factor shall be maintained as close to the limit as practicable. ---------- Verify each DG operates for ≥24 hours: a. For ≥2 hours loaded to ≥2800 kW and ≤2875 kW (G01/G02), ≥2875 kW and ≤2950 kW (G03/G04) b. For the remaining hours of the test, loaded ≥2565 kW and ≤2850 kW.	18 months

ENCLOSURE 3

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

LICENSE AMENDMENT REQUEST 261 SUPPLEMENT 2
EXTENDED POWER UPRATE

PROPOSED TECHNICAL SPECIFICATION BASES CHANGES

(FOR INFORMATION ONLY)

3 pages follow

BASES

SURVEILLANCE REQUIREMENTS (continued)

performed for the purpose of reestablishing OPERABILITY (e.g., post work testing following corrective maintenance, corrective modification, deficient or incomplete surveillance testing, and other unanticipated OPERABILITY concerns) provided an assessment determines plant safety is maintained or enhanced. This assessment shall, as a minimum, consider the potential outcomes and transients associated with a failed partial Surveillance, a successful partial Surveillance, and a perturbation of the offsite or onsite system when they are tied together or operated independently for the partial Surveillance; as well as the operator procedures available to cope with these outcomes. These shall be measured against the avoided risk of a plant shutdown and startup to determine that plant safety is maintained or enhanced when portions of the Surveillance are performed in MODE 1, 2, 3 or 4. Risk insights or deterministic methods may be used for this assessment.

SR 3.8.1.6

As required by Regulatory Guide 1.9 (Ref. 4), this Surveillance ensures that the manual synchronization and load transfer from the standby emergency power source to the offsite source can be made and the standby emergency power source can be returned to ready to load status when offsite power is restored. It also ensures that the autostart logic is reset to allow the standby emergency power source to reload if a subsequent loss of offsite power occurs. The standby emergency power source is considered to be in ready to load status when the standby emergency power source is at rated speed and voltage, the output breaker is open and can receive an autoclose signal on bus undervoltage, and the load sequence timers are reset.

The Frequency of 18 months is consistent with the recommendations of Regulatory Guide 1.9 (Ref. 4), and takes into consideration unit conditions required to perform the Surveillance.

SR 3.8.1.7

This SR demonstrates once per 18 months that the DGs can start and run continuously at full load capability.

G01/G02 are tested at 90 to 100% of the 2000 hour load rating for 22 hours and 98.2% to 100.9% of the 2000 hour load rating for 2 hours, not including instrument uncertainty.

G03/G04 are tested at 90 to 100% of the 2000 hour load rating for 22 hours and 97.4% to 100% of the 200 hour load rating for 2 hours, not including instrument uncertainty.

The DG starts for this Surveillance can be performed either from standby or hot conditions. The provisions for prelubricating and warmup, discussed in SR 3.8.1.2 and gradual loading, discussed in SR 3.8.1.3, are applicable to this SR.

The load band is provided to avoid routine overloading of the DG. Routine overloading may result in more frequent teardown inspections in accordance with vendor recommendations in order to maintain DG OPERABILITY.

The 18 month Frequency takes into consideration unit conditions required to perform the Surveillance, industry experience and is intended to be consistent with expected fuel cycle lengths.

This Surveillance is modified by three Notes. Note 1 states that momentary transients due to changing bus loads do not invalidate this test. Similarly, momentary power factor transients above the power factor limit will not invalidate the test. Note 2 allows the Surveillance to be performed for the purpose of reestablishing OPERABILITY (e.g., post work testing following corrective maintenance, corrective modification, deficient or incomplete surveillance testing, and other unanticipated OPERABILITY concerns) provided an assessment determines plant safety is maintained or enhanced. Credit may be taken for unplanned events that satisfy this SR. Note 3 ensures that the DG is tested under load conditions that are as close to design basis conditions as possible. When synchronized with offsite power, testing should be performed at a power factor of ≤ 0.87. This power factor is representative of the actual inductive loading a DG would see under design basis accident conditions. Under certain conditions, however, Note 3 allows the Surveillance to be conducted at a power factor other than ≤ 0.87. These conditions occur when grid voltage is high, and the additional field excitation needed to get the power factor to ≤ 0.87 results in voltages on the emergency buses that are too high. Under these conditions, the power factor should be maintained as close as practicable to 0.87 while still maintaining acceptable voltage limits on the emergency buses. In other circumstances, the grid voltage may be such that the DG excitation levels needed to obtain a power factor of 0.87 may not cause unacceptable voltages on the emergency buses, but the excitation levels are in excess of those recommended for the DG. In such cases, the power factor shall be maintained as close as practicable to 0.87 without exceeding the DG excitation limits.

REFERENCES

1. FSAR. Section 1.3.
2. FSAR. Chapter 8.
3. FSAR. Chapter 14.
4. Regulatory Guide 1.9, Rev. 3, July 1993.
5. Regulatory Guide 1.93, Rev. 0, December 1974.
6. Generic Letter 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability," July 2, 1984.
7. Calculation 2005-0054, "Control Building GOTHIC Temperature Calculation"