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10 CFR 50.59 Summary Report for 2009

NextEra Energy Point Beach (NextEra), LLC, is submitting this 10 CFR 50.59 Summary Report for the Point Beach Nuclear Plant (PBNP), Units 1 and 2, for calendar year 2009.

Enclosure 1 contains descriptions of facility changes, tests, and experiments evaluated in accordance with 10 CFR 50.59 during 2009. Enclosure 2 contains commitment change evaluations completed in 2009.

This letter contains no new commitments and no revisions to existing commitments.

Very truly yours,

NextEra Energy Point Beach, LLC

A handwritten signature in black ink that reads "James Costedio".

James Costedio *ow*
Licensing Manager

Enclosures (2)

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

ENCLOSURE 1

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

10 CFR 50.59 SUMMARY REPORT FOR 2009 MODIFICATIONS, FSAR CHANGES AND OTHER EVALUATIONS

Modification, Unit 1 Residual Heat Removal (RHR) System Flow Control

Activity Description: Engineering Change (EC) 11682 modified the Unit 1 RHR and containment spray (CS) systems to allow the total RHR pump flow to be limited when the CS pumps are aligned during the emergency core cooling system (ECCS) recirculation phase of a design basis loss-of-coolant accident (LOCA). This modification added a fixed resistance in one of the parallel flow paths at the discharge of the CS pumps and created an intermediate throttle position for low head safety injection (SI) core deluge motor-operated valves (1SI-852A and 1SI-852B). The modification also switched the power supplies for CS pump 1P-14A discharge motor-operated valve (1SI-860B) and CS pump 1P-14B discharge motor-operated valve (1SI-860C) so their power supply train was consistent with that of the associated pump.

Summary of 10 CFR 50.59 Evaluation: The CS and RHR systems are not identified as initiators of accidents evaluated in the current licensing bases (CLB). CS pump 1P-14A discharge valves (1SI-860A and 1SI-860B) are in parallel downstream of CS pump 1P-14A, and CS pump 1P-14B discharge valves (1SI-860C and 1SI-860D) are in parallel downstream of CS pump 1P-14B. A different train powers each of the two valves at each CS pump discharge.

FSAR Table 6.4-7 states that two valves are provided and operation of one valve per header is required. This is consistent with the single failure analysis documented in the original FFDSAR. The concept of duplicate functions for the CS pump discharge valves was revised in the Technical Specification (TS) Bases in conjunction with License Amendment Request 169, dated September 12, 1994, which states, "The Basis section is being changed to clarify the requirement for valves that "provide duplicate function" for the specific case of the containment spray pump discharge valve".

The NRC safety evaluation (SE) dated December 21, 1994, states, "The staff agrees with the licensee, that the proposed changes to the Bases are consistent with and support the above changes." This TS Bases change stated that valves SI-860A and SI-860D provide duplicate functions and that valves SI-860B and SI-860C are not required for system operability. Therefore, the two CS pump discharge valves were no longer CLB credited redundant equipment. Requiring that CS pump 1P-14A discharge valve (1SI-860A) or CS pump 1P-14B discharge valve (1SI-860C) be closed to enter a future recirculation spray alignment does not introduce a common mode failure nor impact train independence.

Consistent with FSAR Section 7.3.1.1, administrative controls are used to prevent inadvertent bypass because of mis-positioning of control switches for CS pump 1P-14A discharge valve (1SI-860A) and CS pump 1P-14B discharge valve (1SI-860C), and indication on the main

control board is provided to alarm when the valves have been administratively bypassed or taken out of service. From discussion in TS Bases, TS B 3.6.6, it can be concluded that only one of the two parallel flow paths at the discharge of the CS pumps is required for system to perform the design basis functions.

Even with the flow restriction orifice in the second branch, CS flows during a LOCA will be higher in the configuration created by this EC than in the current configuration with a loss of one train of power. For the main steam line break (MSLB) containment integrity analyses where two trains of containment spray are credited, calculated flows meet or exceed the flow inputs used for the MSLB containment integrity analyses. No new or revised method of evaluation is involved in this change activity. {EVAL 2009-009}

Modification, Unit 2 Residual Heat Removal (RHR) System Flow Control

Activity Description: Engineering Change (EC) 11683 modified the Unit 2 RHR and containment spray (CS) systems to allow the total RHR pump flow to be limited when the CS pumps are aligned during the emergency core cooling system (ECCS) recirculation phase of a design basis loss-of-coolant accident (LOCA). This modification added a fixed resistance in one of the parallel flow paths at the discharge of the CS pumps and created an intermediate throttle position for low head safety injection (SI) core deluge motor-operated valves (2SI-852A and 2SI-852B).

The modification also switched the power supplies for CS pump 2P-14A discharge motor-operated valve (2SI-860B) and CS pump 2P-14B discharge motor-operated valve (2SI-860C) so their power supply train was consistent with that of the associated pump.

Summary of 10 CFR 50.59 Evaluation: The CS and RHR systems are not identified as an initiator of accidents evaluated in the currently licensing basis (CLB). CS pump 2P-14A discharge valves (2SI-860A and 2SI-860B) are in parallel downstream of CS pump 2P-14A, and CS pump 2P-14B discharge valves (2SI-860C and 2SI-860D) are in parallel downstream of CS pump 2P-14B. A different train powers each of the two valves at each CS pump discharge.

Final Safety Analysis Report (FSAR) Table 6.4-7 states that two valves are provided and operation of one valve per header is required. This is consistent with the single failure analysis documented in the original FFDSAR. The concept of duplicate functions for the CS pump discharge valves was revised in the Technical Specification (TS) Bases in conjunction with License Amendment Request 169, dated September 12, 1994, which states, "The Basis section is being changed to clarify the requirement for valves that "provide duplicate function" for the specific case of the containment spray pump discharge valve."

The NRC safety evaluation (SE) dated December 21, 1994, states, "The staff agrees with the licensee, that the proposed changes to the bases are consistent with and support the above changes." This TS Bases change stated that valves SI-860A and SI-860D provide duplicate functions and that valves SI-860B and SI-860C are not required for system operability. Therefore, the two CS pump discharge valves were no longer CLB credited redundant equipment. Requiring that CS pump 2P-14A discharge valve (2SI-860A) or CS pump 2P-14B discharge valve (2SI-860C) be closed to enter a future recirculation spray alignment does not introduce a common mode failure nor impact train independence.

Consistent with FSAR Section 7.3.1.1, administrative controls are used to prevent inadvertent bypass because of mis-positioning of control switches for CS pump 2P-14A discharge valve (2SI-860A) and CS pump 2P-14B discharge valve (2SI-860C) and indication on the main control board is provided to alarm when the valves have been administratively bypassed or taken out of service. From discussion in TS Bases B 3.6.6, it can be concluded that only one of the two parallel flow paths at the discharge of the CS pumps is required for the system to perform the design basis functions.

Even with the flow restriction orifice in the second branch, CS flows during a LOCA will be higher in the configuration created by this EC than in the current configuration with a loss of one train of power. For the main steam line break (MSLB) containment integrity analyses, where two trains of containment spray are credited, calculated flows meet or exceed the flow inputs used for the MSLB containment integrity analyses. No new or revised method of evaluation is involved in this change activity. {EVAL 2008-010}

Modification, Temporary Cross Connect Supporting SW Piping Replacement

Activity Description: Engineering Change (EC) 13282 replaced the two-inch service water (SW) return piping from heat exchanger (HX) HX-105A and HX-105B. EC 13819 supports EC 13282 while common SW return piping is being modified; assuring SW flow is maintained to one of the battery and inverter (VNBI) room heat exchangers for VNBI room cooling.

This temporary modification (T-mod) ran hose between the heat exchanger discharge and SW discharge header, SW-811. EC 13282 isolated the HX-105B cooling coils. While flow to HX-105B was isolated, SW continued to flow through the HX-105A coils supporting VNBI room cooling.

With HX-105B isolated, EC 13282 required removal of the piping upstream of SW-392 to the upstream flange, and T-Mod EC 13819 installed a temporary spool piece and hose to the existing HX-105B common discharge flange. The other end of the hose connected to the SW discharge header at SW-811, approximately 130 feet to the south of the battery rooms. SW-811 also had a short spool piece attached. Once the temporary hose was connected, flow was then restored to HX-105B. Sufficient flow to HX-105B was verified, and then flow to HX-105A was isolated. This allowed EC 13282 to replace the HX-105A discharge piping from the cooling coils to the common discharge header. Once the SW return piping was replaced under EC 13282, SW flow to HX-105A was restored and HX-105B was isolated allowing termination of the T-mod.

Summary of 10 CFR 50.59 Evaluation: The operability of the affected electrical equipment was assessed. Because of the T-mod, the battery and inverter ventilation room coolers continued to have sufficient flow and therefore, remained operable. This activity supported maintenance by replacing degraded carbon steel piping with stainless steel piping. {EVAL 2009-008}

Modification, Addition of 13.8 kV Capacitor Bank

Activity Description: The scope of this modification was to add a capacitor bank and associated controls to the 13.8 kV system on bus H-01, breaker H52-15. The new capacitor bank is a 15 MVAR three-phase unit, with five separate, three MVAR capacitor stages. The purpose of the capacitor bank is to provide voltage support under certain grid conditions to

help maintain the operability of offsite power, and minimize the potential for actuation of the degraded grid relays.

Summary of 10 CFR 50.59 Evaluation: The only effect of the addition and operation of the capacitor bank, including failure modes, is upon the voltage on the 13.8 kV system and the 4160 V and 480 V buses supplied from the 13.8 kV system. The capacitor bank would be relied upon to support voltage only in rare circumstances when the 345 kV system voltage would otherwise be inadequate. The addition of the capacitor bank does not result in more than a minimal increase in the frequency of occurrence of any accident or malfunction of an SSC important to safety previously evaluated in the CLB. It does not introduce the possibility of a change in the consequences of an accident or malfunction of an SSC important to safety previously evaluated in the FSAR. It does not introduce the possibility of an accident of a different type or of a malfunction with a different result than is already analyzed in the FSAR. It does not result in a design basis limit for a fission product barrier as described in the FSAR being exceeded or altered. It does not depart from a method of evaluation described in the CLB. {EVAL 2009-013-01}

Modification, Emergency Core Cooling System Vent Valve Installations

Activity Description: This modification installed vent valves in Units 1 and 2 common suction line from the refueling water storage tank (RWST) to the emergency core cooling system (ECCS) and containment spray (CS) to permit their use during all modes of operation when the pumps and the RWST are required to be OPERABLE. The opening of a vent path will be controlled such that only a single vent path is opened at any one time.

Summary of 10 CFR 50.59 Evaluation: The potential effects and consequences of the activity were reviewed and it was determined that they did not pose a new, different, or increased risk of an accident, or increase in the consequences of accidents that have previously been analyzed. Loss of inventory through an open vent path would be minimal, even over the entire course of injection for a postulated LOCA. The inventory requirements of the containment sump remain satisfied, and the proposed vent paths do not introduce a new release path to the environment. {EVAL 2009-014-01}

Modification, Installation to Replace Portions of Power Cables from 2X-04 to 2A-03 and 2A-04

Activity Description: This modification replaced portions of the 4.16 kV power cables from the Unit 2 low voltage station auxiliary transformer (LVSAT) 2X-04 to the 4.16 kV Buses 2A-03 and 2A-04. The modification addressed the 1X-04 lockout and the Unit 1 loss of offsite power event that occurred on January 15, 2008 in order to mitigate a similar type of event from happening on Unit 2 by replacing power cables from 2X-04 and buses 2A-03 and 2A-04 that could be susceptible to degradation and eventual failure. The modification involved designing and building foundations for two new towers and an overhead bridge. None of the work, including supports, for the new cable trays attached to safety-related structures.

Summary of 10 CFR 50.59 Evaluation: The overhead cable structure consisting of foundations for two new towers and an overhead bridge to support new cable routing from 2X-04 to the Unit 2 façade cable trays that house the 2A-03 and 2A-04 supply cables, was evaluated. NUREG-0800, Section 8.2, "Offsite Power System," Revision 3, states, "The routing of transmission lines should be examined...to assure that at least two independent circuits from the offsite grid to the onsite distribution buses are physically separate and independent. No other lines should cross above these two circuits. Attention should be directed towards assuring

that no single event such as a tower falling or a line breaking can simultaneously affect both circuits..." The power cables from the secondary side of 2X-04 to the Unit 2 façade are routed above ground via the overhead bridge instead of in underground duct banks." The evaluation found that no credible, non-weather related single failure, such as the collapse of a transmission tower or a transmission line break, should cause the simultaneous loss of both sources of offsite safety related power. Simultaneous loss of both offsite power sources due to a weather related event is acceptable, if it does not result in a simultaneous loss of the safety related alternate AC power supplies. Postulated simultaneous losses of offsite power to both units due to "grid condition" are not postulated to occur simultaneously with accidents having offsite radiological consequences. {EVAL 2008-003-01}

FSAR Change, Incorporate the Analysis in Westinghouse Calculation Note (CN-CRA-08-64) for Case D, Steam Generator Level Uncertainty Increase and Case E, Reactivity Change

Activity Description: This evaluation reviewed the last two cases analyzed in Westinghouse calculation note CN-CRA-08-064. Those cases are Case D, steam generator (SG) level uncertainty increase and Case E, reactivity change to address ANC CAP 08-158-M003. The Case D SG level uncertainty increase was included in the calculation because of the need to provide more operational margin. The Case E change in the calculation addressed the impact of Westinghouse CAP Issue Report (IR) 08-158-M003 for the analysis. The IR is a Westinghouse internal calculation problem that was discovered and resolved by Westinghouse. The purpose of this review was to support the FSAR changes being made as a result of the calculation note.

Summary of 10 CFR 50.59 Evaluation: The evaluation focused on Question 2, occurrence of a malfunction to system, structure, or component (SSC) important to safety, and Question 8, method of evaluation. The evaluation reviewed each of these questions for both of the proposed changes. The effects of the changes on components in containment and their ability to perform their functions under the new conditions did not increase the occurrence of a malfunction to SSC important to safety. It was determined that the changes were inputs to the calculation and not changes to the methods of evaluation. {EVAL 2009-002}

FSAR Change, Removal of Unnecessary FSAR External Flooding Information

Activity Description: The activity removed references to mitigating features that go beyond the acceptance criterion for external flooding licensing basis. The features identified were storm drains outside each closed door on the circulating water pump house (CWPH), CWPH sandbags, concrete jersey barriers, or equivalent, placed on the north and south side of the CWPH storm sewer system in the plant yard and an interceptor ditch outside the yard on the north, south and west sides. The identified acceptance criterion is that the relevant installed equipment be higher than the flood height.

Summary of 10 CFR 50.59 Evaluation: The acceptance criterion for an acceptable external flood design is that the elevation of the potentially vulnerable equipment exceeds that of the design basis flood level. This is documented in an NRC SE dated July 15, 1970, and NUREG-0800, Section 2.4.10. {EVAL 2009-012}

Calculation Revision, Evaluation of the Impact of Revised Containment Heat Sink Paint Thicknesses on Containment Integrity Analyses (MSLB and LOCA) for Units 1 and 2

Activity Description: The "Containment Integrity Evaluation for Increased Paint Thickness on Containment Structures," addressed the discovery of thicker paint coatings on surfaces of some of the containment heat sinks than had been previously assumed in the accident analysis. The evaluation was applicable to the LOCA and steam line break (SLB) containment analysis. The licensing basis for the LOCA containment integrity evaluation, as discussed in the FSAR, was Westinghouse letter WEP-97-522, "Containment Analysis Assuming Reduced Fan Cooler Performance," dated May 29, 1997. Westinghouse evaluation WEP-06-64 modifies the CLB analysis to include the effects of the thicker coatings. This review was used to incorporate the results of WEP-06-64 into the TS Bases.

Summary of 10 CFR 50.59 Evaluation: The evaluation focused on Question 2, occurrence of a malfunction to system, structure, or component (SSC) important to safety, and Question 8, method of evaluation. The evaluation reviewed each of these questions for both of the proposed changes. The effects of the changes on components in containment and their ability to perform their functions under the new conditions did not increase the occurrence of a malfunction to SSC important to safety. It was determined that the changes were inputs to the calculation and not changes to the methods of evaluation. {EVAL 2009-010}

Procedure Revision, 2-SOP-480-001, Revision 10, 480 V System Normal Operations

Activity Description: The activity changed procedure 2-SOP-480-001 to specify the conditions needed to ensure that cross ties may be used during refueling outage U2R29 in a manner that prevents adverse impacts on safety-related electrical buses or on the safe shutdown analysis. The evaluation addressed the potential for short circuit current to exceed the rating of non-safety related breakers and non-safety related buses (B-01 and B-02) while Unit 2 was in MODES 5 or 6 or defueled. Non-safety related buses (2B-01 and 2B-02) are cross-tied to Safety related Buses (2B-03 and 2B-04 respectively) during refueling outages to facilitate breaker, transformer and cable maintenance. Bolted 3-phase faults at the load side of a breaker on the 2B-01 or 2B-02 non-safety related buses during cross tie operations could potentially result in failure of that breaker and possibly the non-safety related bus itself. An engineering evaluation was prepared to analyze the potential fault currents and determine initial conditions required for establishing 480 V cross ties. Procedure 2-SOP-480-001 was revised to ensure that operation with 480 V bus cross ties in place does not create the potential for overloading safety-related SSCs, including an electrical fault event, and ensures that the safe shutdown analysis is not adversely impacted.

Summary of 10 CFR 50.59 Evaluation: The revision to 2-SOP-480-001 establishes the necessary restrictions needed to ensure that there would be no adverse impacts to equipment important to safety in the unlikely event of an electrical fault during the period that the cross ties are in place. Electrical loads are limited as needed to ensure that no safety related equipment is exposed to current above its rating during a short circuit condition. The only equipment with potential for being exposed to current above its overcurrent rating is non-safety related buses 2B-01 and 2B-02 and associated cables located in the Unit 2 electrical equipment room. Evaluation concluded that use of the cross ties did not create the potential for causing accidents or malfunctions of a different type than already analyzed in the FSAR. {EVAL 2008-005}

ENCLOSURE 2

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

10 CFR 50.59 SUMMARY REPORT FOR 2009 COMMITMENT CHANGE EVALUATIONS

CAL 3-04-001, OR-004.10: The original commitment utilized the "Picture of Excellence" to communicate with PBNP employees and to brief the workforce on the application and expectations of the program. CCE 2009-002 revised the commitment to utilize the "Nuclear Excellence Model" to communicate to employees and to brief the workforce on the application and expectations of the program.

Justification for Change: With the sale of PBNP, the site adopted the NextEra Energy (formerly known as FPL Energy) excellence model, "Nuclear Excellence Model." The model was rolled out to all individuals at PBNP. This model is used consistently throughout the plant.

The "Nuclear Excellence Model", Nuclear News, leadership forum sharing, periodic news flashes, periodic safety bulletins and periodic leadership alerts, has replaced the "Picture of Excellence" D-15's. {CCE 2009-002}