



May 16, 2013

NRC 2013-0048  
GL 2004-02

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

Resolution Option and Implementation Schedule for GSI-191 Closure

- References:
- (1) Nuclear Energy Institute letter to NRC, dated May 4, 2012, GSI-191 - Current Status and Recommended Actions for Closure (ML12142A316)
  - (2) U.S. Nuclear Regulatory Commission, Closure Options for Generic Safety Issue – 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance, Commission Paper SECY-12-0093, dated July 9, 2012 (ML121320270)

Via Reference (1), Nuclear Energy Institute (NEI) recognized, on behalf of the industry, the need to provide the Nuclear Regulatory Commission (NRC) with a clearly defined action plan for resolution of Generic Safety Issue (GSI) - 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance. As part of the action plan, pressurized water reactor (PWR) licensees agreed to provide a docketed submittal that outlines a GSI-191 resolution path and schedule.

NextEra Energy Point Beach, LLC (NextEra), has determined that to resolve GSI-191 for Point Beach Nuclear Plant (PBNP), Units 1 and 2, defense-in-depth is maintained through deterministic evaluation of strainer performance coupled with a realistic assessment of in-vessel downstream effects. This resolution path is described in Reference (2) as Option 3, Different Regulatory Treatment for Suction Strainer and In-Vessel Effects.

Enclosure 1 provides a preliminary resolution schedule, a summary of margins and conservatisms for completed actions to support resolution of the issue and defense-in-depth measures which justify continuation of operation for the period of time necessary to complete analysis, testing and insulation mitigation, as applicable.

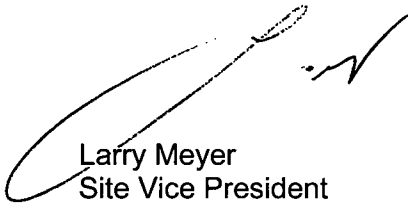
Regulatory Commitments are provided in Enclosure 2.

If you have any questions, please contact Mr. Michael Millen, Licensing Manager, at 920/755-7845.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on May 16, 2013.

Very truly yours,

NextEra Energy Point Beach, LLC



Larry Meyer  
Site Vice President

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

## **ENCLOSURE 1**

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

#### **RESOLUTION OPTION AND IMPLEMENTATION SCHEDULE FOR GSI-191 CLOSURE**

Generic Safety Issue – 191, “Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance” (GSI-191) remains a long-standing open issue. GSI-191 concluded that debris could clog the containment sump strainers in pressurized water reactors (PWRs), leading to the loss of net positive suction head for the emergency core cooling system (ECCS) and containment spray system (CSS) pumps. The Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2004-02, “Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors” (ML042360586), dated September 13, 2004, requesting that licensees address the issues raised by GSI-191. GL 2004-02 was focused on demonstrating compliance with 10 CFR 50.46, Acceptance Criteria for Emergency Core Cooling Systems for Light-Water Nuclear Power Reactors.

In accordance with the May 4, 2012 Nuclear Energy Institute (NEI) letter to the NRC (ML12142A316), each licensee would submit a resolution option and associated implementation schedule to the NRC, by December 31, 2012. This was modified by the November 21, 2012 letter from the NRC to NEI (ML12326A497) that provided for submittal of the resolution option and associated implementation schedule by January 31, 2013, or 30 days following the NRC making publicly available the final safety evaluation (SE) associated with the review of WCAP-16793, Revision 2, “Evaluation of Long-Term Cooling Considering Particulate, Fibrous and Chemical Debris in the Recirculating Fluid,” and the Staff Requirements Memorandum (SRM) associated with SECY-12-0093, “Closure Options for Generic Safety Issue – 191, Assessment of Debris Accumulation on Pressurized-Water Reactor Sump Performance.” SRM-SECY-12-0093 (ML12349A378) was issued on December 14, 2012, and became publicly available on December 17, 2012. This document endorsed the proposed resolution options in SECY-12-0093. The SE for WCAP-16793, Revision 2, became publicly available on April 16, 2012 (ML13084A161).

On July 9, 2012 the NRC staff issued SECY-12-0093 (ML121320270) presenting three options to the Commission, all of which are considered to be viable paths for resolving GSI-191. These options are: Option 1 - Deterministic, Option 2 - Deterministic or Risk-informed, and Option 3 - Deterministic/Risk-informed. SECY-12-0093 considered and expanded upon the options provided in the May 4, 2012 NEI letter. The options identified in the SECY provide approaches that can be used to address plants with minimal fibrous insulation, low to medium fibrous insulation, and substantial amounts of fibrous insulation.

NextEra Energy Point Beach, LLC (NextEra), has selected Option 3 based on the determination that completing the previously initiated deterministic resolution strategies will meet the resolution expectations for all aspects of GSI-191, except for in-vessel

downstream effects, as identified in SECY-12-0093, for Point Beach Nuclear Plant (PBNP), Units 1 and 2. For in-vessel downstream effects, NextEra intends to follow a fully risk-informed, or graded resolution path.

To support use of this resolution strategy, and continued operation for the period required to complete the necessary analysis and testing, NextEra has evaluated the design and procedural capabilities that exist to identify and mitigate sump strainer and in-vessel blockage. A description of these detection and mitigative measures are provided later in this document. Additionally, a summary of the existing margins and conservatisms that exist for PBNP, Units 1 and 2, are also included in this document.

The following provides the key components for the chosen resolution path option for PBNP, Units 1 and 2.

### **Characterization of Strainer Head Loss Status**

NextEra had previously provided the results of strainer head loss testing, including the impact of chemical effects, in References 1, 2, and 3. The results of this testing did not demonstrate acceptable results with regard to allowable head loss. NextEra intends to re-perform strainer head loss testing based on lessons learned with regard to strainer testing methodology including determination of chemical effects impact (production, time-dependency, etc.) to address this aspect of GL 2004-02.

### **Characterization of In-Vessel Effects**

NextEra intends to discuss with the NRC those actions necessary to establish an acceptable basis and methodology for addressing in-vessel effects. This approach may include treatment of excessive blockage as a beyond design basis event for a specified range of pipe breaks, with identification of those measures that have or will be implemented to provide reasonable assurance that the core cooling required to prevent a significant release of fission products to containment is maintained, thus ensuring the health and safety of individuals, both onsite and offsite. Another option is to establish a risk-informed approach for the in-vessel portion either similar to the approach currently being taken by South Texas Project (STP) or through a yet to be determined approach.

### **Licensing Basis Commitments**

NextEra has a Regulatory Commitment to provide the NRC with a GSI-191 resolution path and schedule for PBNP Units 1 and 2, consistent with industry guidance, by January 31, 2013, or 30 days following the NRC making the final safety evaluation associated with the review of WCAP-16793, Revision 2, and the Staff Requirements Memorandum associated with SECY-12-0093, publicly available, to align itself with the schedule proposed by NEI (Reference 4). As a result of the remaining open questions associated with GL 2004-02 for PBNP, and the information contained within this submittal, the previously established Regulatory Commitment is considered to be closed based on the intended direction to be taken as described in this submittal. New Regulatory Commitments as a result of this submittal are provided in Enclosure 2 of this submittal.

## **Resolution Schedule**

PBNP will achieve closure of GSI-191 and address GL 2004-02 per the following schedule.

- NextEra will schedule a meeting with the NRC after June 1, 2013, to establish an acceptable resolution strategy for both in-vessel effects and recirculation strainer performance.
- Measurements for insulation replacement at PBNP were completed in the Spring 2013 outage for Unit 1, and will be completed during the Spring 2014 outage for Unit 2.
- NextEra will provide a preliminary schedule for the completion of the risk-informed resolution path activities by September 30, 2013, that provides for submittal of a risk-informed licensing action. The specific submittal schedule will be coordinated with the NRC.
- NextEra will provide a preliminary schedule for the completion of the deterministic resolution path activities by September 30, 2013, which may include use of the NEI 04-07, Section 6, Alternate Analysis Approach.
- The key milestones, as currently expected, are provided in the table below for the deterministic sump strainer resolution approach.

### **Sump Strainer Deterministic Resolution**

| MILESTONE                                                       | EXPECTED COMPLETION DATE     |
|-----------------------------------------------------------------|------------------------------|
| Conduct Meeting with NRC                                        | 3 <sup>rd</sup> Quarter 2013 |
| Develop CAD Models of Unit 1 and Unit 2 Containments            | 4 <sup>th</sup> Quarter 2013 |
| Perform Refined Debris Generation Analysis                      | 2 <sup>nd</sup> Quarter 2014 |
| Perform Strainer Head Loss Testing                              | 3 <sup>rd</sup> Quarter 2014 |
| Perform Strainer Bypass Testing                                 | 3 <sup>rd</sup> Quarter 2014 |
| Analyze Test Results                                            | 4 <sup>th</sup> Quarter 2014 |
| Re-perform Strainer Head Loss Testing, if necessary             | 1 <sup>st</sup> Quarter 2015 |
| Submit Exemption Request for NEI 04-07, Section 6, if necessary | 3 <sup>rd</sup> Quarter 2015 |
| Receive SE from NRC for Exemption Request, if submitted         | 2 <sup>nd</sup> Quarter 2017 |

- NextEra will complete any necessary insulation replacements, remediation, or other identified plant changes in two phases. The first phase is to perform plant changes determined to be required by the analyses supporting submittal of the licensing action for NRC review and approval for the in-vessel risk-informed approach. These plant changes will be completed by the fourth quarter of 2017 for PBNP Unit 1 and by the fourth quarter of 2018 for PBNP Unit 2. The second phase is to perform plant changes determined to be necessary through any re-analysis associated with the NRC review of the licensing action leading up to issuance of a SE for PBNP. These plant changes will be completed by the

second quarter of 2019 for PBNP Unit 1 and by the second quarter of 2020 for PBNP Unit 2.

- Any plant changes determined to be necessary for the deterministic resolution of the sump strainer will be completed within two refueling outages following approval by NRC. This schedule provides sufficient time to perform the engineering and planning necessary to implement any changes.
- NextEra will submit a final updated supplemental response to support closure of the in-vessel portion of GL 2004-02 for PBNP, Units 1 and 2, within six months of receipt of the PBNP SE for the in-vessel, risk-informed approach.
- NextEra will update the PBNP current licensing basis following receipt of the NRC SE for PBNP that approves the in-vessel risk-informed or graded resolution approach, and receipt of the NRC document that accepts the sump strainer deterministic resolution results, and completion of any identified removal or modification of insulation debris sources in containment per plant modification procedures and processes in accordance with 10 CFR 50.71(e).

### **Summary of Actions Completed For GL 2004-02**

To support closure of GSI-191 and to address GL 2004-02, NextEra has completed the following actions for PBNP, Units 1 and 2:

- Replaced the original strainers that had a simple geometry and a filtering surface area of approximately 21 ft<sup>2</sup>, with nominal 1/8" diameter openings, with complex geometry strainers having a filtering surface area of approximately 1900 ft<sup>2</sup> per train having 1/16" diameter circular openings.
- The mineral wool insulation on each of the two pressurizers has been replaced with reflective metal insulation (RMI).
- The fibrous insulation on three of the four RCPs has been replaced with RMI.
- The fibrous insulation on the Unit 2 main reactor coolant system (RCS) loop piping has been replaced with RMI. The insulation on Unit 1 main RCS loop piping was already RMI.
- Significant quantities of degraded or unqualified coatings have been remediated by removal, replacement, or qualification by a combination of testing and analysis.
- A 16" diameter opening has been bored to connect the normal containment operating sump with the accident sump on each unit. This ensures that in the event of a break at a reactor vessel nozzle there will be an adequate flow path (that is not subject to debris blockage) for break flow to return to the strainers.
- The cavity drain line on Unit 1 has been relocated to prevent direct impingement on, and ingestion of air, into one of the strainer trains.
- Latent debris sampling has been conducted, and is periodically re-verified to be conservatively bounded by the debris generation analyses.
- Other potential debris sources (e.g. labels, fire wrap, etc.) have been inventoried, quantified, characterized, and where a transport concern exists, tested to determine transportability.
- Debris generation analysis for the current containment inventory has been completed. Containment transport analyses consisting of three dimensional computational fluid dynamics have been completed for each containment. The analyses evaluate several bounding breaks with flows to each of the redundant

strainers to ensure that the worst case potential sump recirculation velocity and turbulence (total kinetic energy) profiles are bounded.

- Chemical effects analyses that include fuel pin fouling (LOCADM) and precipitate formation in the recirculating sump water have been completed.
- Ex-vessel downstream effects analysis have been completed and demonstrate acceptable long term ex-vessel effects.
- Limits for screen differential pressure (dP) based on emergency core cooling system (ECCS) pump requirements have been established, and take into consideration NPSH, air entrainment, and de-aeration phenomena.
- Programmatic and procedural measures have been established to maintain a configuration within the analyzed limits. This includes controls on containment aluminum inventory, containment coatings material condition, latent dirt and dust inventories, controls on containment insulation replacements, and containment close-out inspections for conditions that might jeopardize proper containment sump functioning.
- Established procedural guidance for Operators to monitor for inadequate recirculation sump performance, and to maintain or restore core injection in the unlikely event that sump recirculation is lost.

#### **Summary of Margins and Conservatism for Completed Actions For GL 2004-02**

The following provides a summary description of the margins and conservatism associated with the resolution actions taken to date. These margins and conservatism provide support for the extension of time required to address GL 2004-02 for PBNP, Units 1 and 2.

- The chemical effects analysis assumes both long duration spray operation, (implying small break loss-of-coolant-accident (LOCA)) and worst-case high temperature (implying a large break LOCA). The two conditions are mutually exclusive, but both lead to maximizing the predicted quantity of chemical precipitant.
- The chemical effects analysis assumes that the sump cool down is unconstrained and continues to maximize the amount of chemical precipitant generated.
- The chemical effects analysis projects a worst-case aluminum ion concentration of less than 9 ppm.
- The ECCS suction screens have been sized for 2200 gpm each. This is slightly more than the rated ECCS pump "run-out" flow of approximately 2150 gpm. Pump flow can be reduced by throttling or routing through higher resistance flow paths (e.g. High Head Safety Injection (HHSI) pumps). The high flow rates are needed for reflooding the core immediately following a LOCA. However, during long term sump recirculation (more than 1 hour), core decay heat removal requirements by boil-off are less than 200 gpm, and continue to drop significantly over the duration of the accident.
- The analyses and testing to date (including chemical effects in previous head loss tests) have been conducted under the assumption that containment water level is constant at the minimum required to initiate sump recirculation (38"), providing a 2" cover over the 36" tall screen assemblies. However, containment injection spray operation will continue to transfer refueling water storage tank (RWST) inventory beyond this point to add approximately 48,000 more

- gallons to the containment sump (approximately 12 more inches of submergence). As upper elevation areas of the containment drain, and steam in the containment atmosphere is condensed, additional inventory will transfer to the sumps, providing additional non-credited margin.
- PBNP, being a two loop Westinghouse plant, has "Upper Plenum Injection" (UPI). This configuration injects the flow from the low head safety injection pumps into the upper (or "outlet") plenum of the reactor vessel instead of the inlet (cold legs). The HHSI pumps discharge to the cold legs. At the start of containment sump recirculation, the operating HHSI pump is stopped so that the low head safety injection pump can supply flow to the operating containment spray pump. When containment recirculation spray has been secured (three hours or less following the start of sump recirculation), a HHSI pump is re-started to reestablish cold leg injection while the low head pump continues to supply outlet plenum (i.e. hot leg) injection. This simultaneous injection ensures that, regardless of break location, the core will be flushed of concentrating chemical species. Additionally, if the core is not sub-cooled, turbulent two phase flow through the upper core plate and upper internals will serve to break up and re-suspend debris that may have settled or matted out on the fuel top nozzles, rather than permit it to continually build up.
  - When sub-cooled decay heat removal is eventually established in the vessel, settling of debris on the top of the fuel may occur. If this deposition proceeds to the point of reducing cooling flow, then two phase decay heat removal will again occur, and again result in the break-up and re-suspension of debris deposits. Debris deposition on the top of the reactor fuel is therefore self-limiting, and will not result in a loss of effective core decay heat removal.
  - Latent debris surveys have been conducted and demonstrate that actual quantities are a small fraction of the assumed 150 lbs of latent debris. The average latent debris survey over six previous operating cycles have shown an average sampled load of 34 lbs, with a maximum of 62 lbs.

### **Summary of Defense-In-Depth (DID) Measures**

The following describes the plant specific design features and procedural capabilities that exist for detecting and mitigating a strainer blockage or fuel blockage condition. Although these measures are not expected to be required based on the very low probability of an event that would challenge either the capability of the strainer to provide the necessary flow to the ECC and CS systems, or result in significant quantities of debris being transported to the reactor vessel that would inhibit the necessary cooling of the fuel, they do provide additional assurance that the health and safety of the public would be maintained. These measures provide support for the extension of time required to address GL 2004-02 for PBNP, Units 1 and 2.

#### **Strainer Blockage:**

- PBNP has within its emergency operating procedure (EOP) framework, specific steps for monitoring for indications of sump strainer blockage and actions to be taken if this condition occurs. These actions are described in the PBNP responses to NRC Bulletin 2003-01, dated August 8, 2003 (ML032310423), May 14, 2004 (ML041410459), August 19, 2005 (ML052360304), October 18, 2005 (ML052990284), December 19, 2005 (ML053630279),



January 17, 2006 (ML060190602), and February 24, 2006 (ML060740619). The actions taken in response to the Bulletin are still in effect at PBNP.

- PBNP has the ability to arrest containment sump temperature cool down to keep chemicals in solution. This can be achieved by controlling cooling water flow to the containment fan coolers, stopping fan coolers, and controlling cooling water to the residual heat removal (RHR) heat exchangers. These actions can be implemented from the control room and/or accessible locations outside of containment. NextEra is continuing to evaluate the need to establish these actions in procedures at PBNP, and if established, ensuring the necessary station personnel have been trained on them.
- Early in the accident, after verifying an intact and operating train of ECCS, the redundant train is secured. This prolongs the available RWST inventory for the injection phase, minimizes sump transport velocities, and maintains one train in a clean, un-fouled condition should it be needed later.
- Once an RWST has been at least partially refilled, the strainers may be back-washed by gravity draining the RWST inventory through the strainer. NextEra is continuing to evaluate the need to establish this action in procedures at PBNP, and if established, ensuring the necessary station personnel have been trained on them.

#### Fuel (Core) Blockage:

- Detection:

Multiple methods exist for detection of a core blockage condition as manifested by an inadequate reactor coolant system (RCS) inventory or RCS and core heat removal condition. The primary methods include core exit thermocouples (CET) and reactor vessel level indication system (RVLIS). This monitoring is initiated early in the event in the EOPs through the "Critical Safety Function Status Trees", and is repeated frequently throughout the event by personnel in the control room. An additional method for detection of a core blockage condition includes monitoring of containment radiation levels by the control room and technical support center (TSC) staff, and/or if an alarm setpoint is reached resulting in an alarm in the control room.

- Mitigation:

Upon identification of an inadequate RCS inventory or core heat removal condition, the EOPs direct the operators to take actions to restore cooling flow to the RCS including:

- Reducing low and high head safety injection pump flow rate.
- Refill the RWST.
- Attempt to provide core cooling by steaming through the steam generators.
- Makeup to the RWST from various plant water sources. These water sources are; blending from boric acid storage tanks (BASTs) and reactor makeup water storage tank, spent fuel pool transfer canal, chemical and volume control system waste hold up tanks, the opposite unit's RWST, and the BASTs. If these sources are depleted or not available, then the

Operator is directed in the extensive damage mitigation guideline (EDMG) to refill the RWST using the installed fire protection system or the portable diesel driven pump staged on site.

- Restart reactor coolant pumps (RCP).
- Flood containment using the portable diesel driven pump (PDDP)
- As a requirement of the station license, PBNP ensures that simultaneous UPI and cold leg injection is initiated within three and a half hours from initiation of a large break LOCA event. The flow via either path is sufficient to ensure adequate core decay heat removal by boiling.
- PBNP has the ability to arrest containment sump temperature cool down to keep chemicals in solution. This can be achieved by controlling cooling water flow to the containment fan coolers, stopping fan coolers, and controlling cooling water to the residual heat removal (RHR) heat exchangers. These actions can be implemented from the control room and/or accessible locations outside of containment. NextEra is continuing to evaluate the need to establish these actions in procedures at PBNP, and if established, ensuring the necessary station personnel have been trained on them.

The Pressurized Water Reactor Owners Group (PWROG) Procedures Subcommittee has developed guidance for updating the EOP framework for Westinghouse plants (DW-12-013). This guidance would provide additional information to the operators and technical staff for a symptom based condition of lower plenum blockage in the core. NextEra will evaluate the recommended changes to the EOP framework and implement any necessary changes, along with the requisite operator training by March 15, 2014, for PBNP Units 1 and 2.

### **Conclusion**

NextEra expects that the GSI-191 resolution path for PBNP Units 1 and 2, is acceptable based on the information provided in this document. The execution of the actions identified in this document will result in successful resolution of GSI-191 and closure of GL 2004-02.

## **References**

1. Letter from FPL Energy Point Beach to NRC dated February 29, 2008, Supplemental Response to Generic Letter 2004-02, Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (ML080630613)
2. Letter from FPL Energy Point Beach to NRC dated April 7, 2009, Response to Request for Additional Information GSI-191/GL 2004-02 (TAC NOS. MC4705/4706) Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (ML090980523)
3. Letter from NextEra Energy Point Beach to NRC dated July 31, 2009, Response to Request for Additional Information GSI-191/GL 2004-02 (TAC NOS. MC4705/4706) Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors (ML092150636)
4. Letter from NextEra Energy Point Beach to NRC dated December 11, 2012, Commitment Change for the NextEra Energy Point Beach, LLC Generic Letter 2004-02 Plan for Resolution (ML12346A414)

## **ENCLOSURE 2**

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

#### **LIST OF COMMITMENTS FOR GSI-191 CLOSURE**

1. NextEra Energy Point Beach, LLC (NextEra) will schedule a meeting with the NRC after June 1, 2013, to establish an acceptable resolution strategy for both in-vessel effects and recirculation strainer performance.
2. NextEra will provide a preliminary schedule for the completion of the risk-informed resolution path activities by September 30, 2013, that provides for submittal of a risk-informed licensing action. The specific submittal schedule will be coordinated with the NRC.
3. NextEra will provide a preliminary schedule for the completion of the deterministic resolution path activities by September 30, 2013, which may include use of the NEI 04-07, Section 6, Alternate Analysis Approach.
4. NextEra will submit a final updated supplemental response to support closure of GL 2004-02 for PBNP, Units 1 and 2, within six months of receipt of the SE for the in-vessel risk-informed approach.
5. NextEra will complete any necessary insulation replacements or remediation, or other identified plant changes in two phases. The first phase is to perform plant changes determined to be required by the analyses supporting submittal of the licensing action for NRC review and approval for the in-vessel risk-informed approach. These plant changes will be completed by the fourth quarter of 2017 for PBNP Unit 1. These plant changes will be completed by the fourth quarter of 2018 for PBNP Unit 2. This schedule is based on the expected NRC review and approval schedule consistent with considerations in SRM-SECY-12-0093.
6. The second phase is to perform plant changes determined to be necessary through any re-analysis associated with the NRC review of the licensing action leading up to issuance of the NRC SE for PBNP. These plant changes will be completed by the second quarter of 2019 for PBNP Unit 1. These plant changes will be completed by the second quarter of 2020 for PBNP Unit 2. This schedule is based on the expected NRC review and approval schedule consistent with considerations in SRM-SECY-12-0093.
7. Any plant changes determined to be necessary for the deterministic resolution of the sump strainer will be completed within two refueling outages following approval by the NRC.
8. The Pressurized Water Reactor Owners Group (PWROG) Procedures Subcommittee has developed guidance for updating the EOP framework for Westinghouse plants (DW-12-013). This guidance would provide additional information to the operators and technical staff for a symptom based condition of lower plenum blockage in the core. NextEra will evaluate the recommended changes to the EOP framework and implement any necessary changes, along with the requisite operator training by March 15, 2014, for PBNP Units 1 and 2.

## Clark, Roger

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**From:** Blair, William  
**Sent:** Wednesday, May 08, 2013 1:24 PM  
**To:** Clark, Roger  
**Subject:** RE: PBNP GSI-191 Path Forward Letter

No substantive comments.

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**From:** Clark, Roger  
**Sent:** Tuesday, May 07, 2013 11:35 AM  
**To:** Cross, William; Blair, William  
**Subject:** PBNP GSI-191 Path Forward Letter

Attached is the Point Beach GSI-191 Path Forward Letter. Please review and provide me comments or your approval.

Note that I combined the commitments into one enclosure and added commitment 8. Comm 8 was in the body of Enclosure 1 but had not been listed as a commitment.

Thank you,

Roger Clark  
Point Beach Licensing  
920-755-7464

## Clark, Roger

---

**From:** Wild, Patrick  
**Sent:** Friday, May 10, 2013 10:51 AM  
**To:** Hanneman, Harv; Kendall, Thomas  
**Cc:** Clark, Roger; Millen, Michael  
**Subject:** RE: PBNP GSI-191 Path Forward Letter

I'm ok with the changes

---

**From:** Hanneman, Harv  
**Sent:** Thursday, May 09, 2013 2:04 PM  
**To:** Kendall, Thomas; Wild, Patrick  
**Cc:** Clark, Roger; Millen, Michael; Hanneman, Harv  
**Subject:** FW: PBNP GSI-191 Path Forward Letter

Tom, Pat: Based on an NRC NRR Deputy Director drop-in to Fleet Licensing, they are requesting the attached changes to our GSI-191 letter. The changes are positive in giving us more schedule flexibility. When Roger Clark returns Monday, we will revise the letter and re-verify your Blue Sheet approval, prior to processing the letter through Larry Meyer's approval.

Harv

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**From:** Cross, William  
**Sent:** Thursday, May 09, 2013 1:44 PM  
**To:** Clark, Roger  
**Cc:** Hanneman, Harv; Millen, Michael  
**Subject:** RE: PBNP GSI-191 Path Forward Letter

Please incorporate changes in mark up.

---

**From:** Clark, Roger  
**Sent:** Tuesday, May 07, 2013 11:35 AM  
**To:** Cross, William; Blair, William  
**Subject:** PBNP GSI-191 Path Forward Letter

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Thank you,

Roger Clark  
Point Beach Licensing  
920-755-7464

## Clark, Roger

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**From:** Kendall, Thomas  
**Sent:** Thursday, May 09, 2013 2:57 PM  
**To:** Hanneman, Harv; Wild, Patrick  
**Cc:** Clark, Roger; Millen, Michael  
**Subject:** RE: PBNP GSI-191 Path Forward Letter

I concur with the proposed changes.

TCK

---

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**Sent:** Thursday, May 09, 2013 2:04 PM  
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**Cc:** Clark, Roger; Millen, Michael; Hanneman, Harv  
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Roger Clark  
Point Beach Licensing  
920-755-7464

**Clark, Roger**

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**From:** Kendall, Thomas  
**Sent:** Monday, May 13, 2013 9:41 AM  
**To:** Clark, Roger  
**Subject:** FW: GSI Letter WAB comments

More changes from Juno Beach. I held off forwarding this thread to you until the dust settled. Hopefully this will be the last go-round before we send this thing out. I've highlighted the changes in yellow.

TCK

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**From:** Leonard, Paul  
**Sent:** Monday, May 13, 2013 8:10 AM  
**To:** Berger, Wade; Wisla, Stanley; Kendall, Thomas; Millen, Michael  
**Subject:** RE: GSI Letter WAB comments

Wade,

The only path that truly allows 2 outages is the deterministic path for the strainer. The risk-informed paths allow for two separate installation windows. The first for those changes determined to be necessary to support the submittal, i.e., those changes that have to be made to enable the risk-informed path to work, based on our analyses. The second for those changes determined to be necessary as a result of changes made to the analyses as a result of the NRC reviews following submittal. Both of these are assumed to be a single outage following their predecessor, either the submittal or receipt of the SE. Keep in mind, if the risk-informed path is proven to be successful, the required plant changes should be minimal.

You can see this in the timeline that I developed and sent previously, with the exception of the Unit 2 outage dates which I will be correcting on the timelines.

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**From:** Berger, Wade  
**Sent:** Monday, May 13, 2013 9:00 AM  
**To:** Leonard, Paul; Wisla, Stanley; Kendall, Thomas; Millen, Michael  
**Cc:** Berger, Wade  
**Subject:** RE: GSI Letter WAB comments

Paul,  
Do the new dates allow 2 outages per unit after SER issuance?

Regards,

*Wade A. Berger*

**Project Manager: NFPA-805 LAR**  
**Project Manager: NFPA-805 Modifications**  
**Project Manager: GSI-191**  
**Site Projects - Point Beach**  
**Work:** 920.755.7664  
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**Pager:** 1.920.218.4890  
**E-Mail:** [Wade.Berger@nexteraenergy.com](mailto:Wade.Berger@nexteraenergy.com)

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**From:** Leonard, Paul  
**Sent:** Monday, May 13, 2013 6:39 AM



**To:** Wisla, Stanley; Berger, Wade; Kendall, Thomas; Millen, Michael  
**Subject:** RE: GSI Letter WAB comments

I was going on information available to me. The Unit 2 dates need to be changed to the following:

fourth quarter of 2018 for first phase

second quarter of 2020 for second phase

fourth quarter of 2020 for deterministic

The unit 1 numbers look correct based on the schedule provided.

Paul Leonard  
Cell: 269-240-8385  
Alternate e-mail: [sump1@comcast.net](mailto:sump1@comcast.net)

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**From:** Wisla, Stanley  
**Sent:** Saturday, May 11, 2013 12:27 PM  
**To:** Leonard, Paul  
**Subject:** Fw: GSI Letter WAB comments

Please review Wades comment. Thanks

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**From:** Berger, Wade  
**Sent:** Saturday, May 11, 2013 11:08 AM  
**To:** Kendall, Thomas  
**Cc:** Wisla, Stanley; Berger, Wade  
**Subject:** RE: GSI Letter WAB comments

Tom,  
The following paragraph does not appear to match the outage dates unless we are allowing a period of 12 months after the last implementation outage to provide closure;

- NextEra will complete any necessary insulation replacements or remediation, or other identified plant changes in two phases. The first phase is to perform plant changes determined to be required by the analyses supporting submittal of the licensing action for NRC review and approval for the in-vessel risk-informed approach. These plant changes will be completed by the fourth quarter of 2017 for PBNP Unit 1 and by the second quarter of 2018 for PBNP Unit 2. The second phase is to perform plant changes determined to be necessary through any re-analysis associated with the NRC review of the licensing action leading up to issuance of a SE for PBNP. These plant changes will be completed by the second quarter of 2019 for PBNP Unit 1 and by the fourth quarter of 2019 for PBNP Unit 2. Any plant changes determined to be necessary for the deterministic resolution of the sump strainer will be completed by the second quarter of 2019 for PBNP Unit 1 and by the fourth quarter of 2019 for PBNP Unit 2. This schedule provides sufficient time to perform the engineering and planning necessary to implement any changes.

ROMPS schedule for the station (Document is attached)

| YEAR                   | 2013   | 2014   |       | 2015  | 2016  | 2017  |       | 2018  |
|------------------------|--------|--------|-------|-------|-------|-------|-------|-------|
| UNIT / REFUELING       | U1R34  | U2R33  | U1R35 | U2R34 | U1R36 | U2R35 | U1R37 | U2R36 |
| OUTAGE DURATION (GOAL) | 35     | 35     | 35    | 35    | 25    | 25    | 25    |       |
| START DATE             | 18-Mar | 17-Mar | 1-Oct | 1-Oct | 1-Apr | 5-Apr | 4-Oct | Oct   |
|                        |        |        |       |       |       |       |       | 4th   |

The current project timeline is completion of all physical changes in U1R37 and U2R36.

Are we providing a period of time after the final outage to close each unit?  
If so, where can we capture the post outage period of time?

Everything else looks good with the commitment dates past our current project timeline.  
The scoping statements are as expected. We will have to include the all of this document in our new project plan.  
We do need to commence development of the RFP for CAD modeling soon to meet the end of year commitment in the path forward letter.

Regards,

*Wade A. Berger*

**Project Manager: NFPA-805 LAR**

**Project Manager: NFPA-805 Modifications**

**Project Manager: GSI-191**

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**Pager: 1.920.218.4890**

**E-Mail: Wade.Berger@nexteraenergy.com**

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**From:** Kendall, Thomas

**Sent:** Wednesday, May 08, 2013 10:49 AM

**To:** Berger, Wade

**Subject:** FW: GSI Letter

Here's the current draft of the "Path Forward Letter".

TCK

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**From:** Clark, Roger

**Sent:** Wednesday, May 08, 2013 10:14 AM

**To:** Kendall, Thomas

**Subject:** GSI Letter

Roger Clark  
Point Beach Licensing  
920-755-7464