

July 1, 2008

Mr. James McCarthy  
Site Vice President  
FPL Energy Point Beach, LLC  
6610 Nuclear Road  
Two Rivers, WI 54241

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 – GENERIC SAFETY  
ISSUE 191/GENERIC LETTER 2004-02 ADDITIONAL EXTENSION REQUEST  
APPROVAL (TAC NOS. MC4705 AND MC4706)

Dear Mr. McCarthy:

By letter dated November 16, 2007, Florida Power and Light Energy Point Beach, LLC (FPLE-PB) requested an extension of the December 31, 2007, due date to the corrective action, stated in Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design-Basis Accidents at Pressurized-Water Reactors" (GL 2004-02) for Point Beach Nuclear Plant (PBNP), Units 1 and 2. By letter dated December 20, 2007, the NRC granted an extension until June 30, 2008.

By letter dated June 9, 2008, as supplemented by letter dated June 23, 2008, FPLE-PB requested to move the previously granted due date of June 30, 2008, until September 30, 2008. The stated intent of this extension was to allow FPLE-PB additional time to complete chemical effects head loss testing, analysis of potential chemical precipitants, and evaluation of both in-vessel and ex-vessel downstream effects. FPLE-PB requested an extension to September 30, 2008, for completion of these activities and the submittal of the final results to the NRC.

The NRC has determined that for PBNP Units 1 and 2, it is acceptable to extend the due date for completion of strainer chemical effects testing and in-vessel and ex-vessel downstream effects evaluations as described in the enclosed NRC staff evaluation of the extension request, until September 30, 2008. If you have any questions, please contact me at (301) 415-1424.

Sincerely,

**/RA/ JPoole for**

Jack Cushing, Senior Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-266 and 50-301

Enclosure:  
As stated

cc w/encl: See next page

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\*Per memo dated June 27, 2008

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OFFICIAL RECORD COPY

Point Beach Nuclear Plant, Units 1 and 2

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EVALUATION OF EXTENSION REQUEST TO COMPLETE CORRECTIVE ACTIONS  
GENERIC SAFETY ISSUE -191 "ASSESSMENT OF DEBRIS ACCUMULATION ON PWR  
SUMP PUMP PERFORMANCE" (GSI-191)/GENERIC LETTER 2004-02, "POTENTIAL IMPACT  
OF DEBRIS BLOCKAGE ON EMERGENCY RECIRCULATION DURING DESIGN BASIS  
ACCIDENTS AT PRESSURIZED WATER REACTORS" (GL-2004-02)  
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2  
DOCKET NOS. 50-266 AND 50-301

By letter dated June 9, 2008, (Agencywide Documents Access and Management System (Adams) Accession No. ML081620337), as supplemented by letter dated June 23, 2008 (ML081760129), Florida Power and Light Energy Point Beach, LLC (FPLE-PB), the licensee, requested an extension to the Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design-Basis Accidents at Pressurized-Water Reactors," corrective action due date for Point Beach Nuclear Plant (PBNP) Units 1 and 2. The stated intent of this extension was to allow FPLE-PB additional time to complete chemical effects head loss testing, analysis of potential chemical precipitants, and evaluation of both in-vessel and ex-vessel downstream effects. FPLE-PB requested an extension to September 30, 2008, for completion of these activities and the submittal of the final results to the NRC.

In its letter dated November 16, 2007 (ML073230345), FPLE-PB requested an extension to allow FPLE-PB additional time to complete chemical effects testing, reevaluate ex-vessel downstream effects to address Westinghouse WCAP-16406-P, "Evaluation of Downstream Sump Debris Effects in Support of GSI 191", Revision 1, and complete an evaluation of in-vessel downstream effects. FPLE-PB requested an extension to June 30, 2008. The NRC approved an extension for completion of PBNP Units 1 and 2 sump clogging corrective actions from the GL 2004-02 due date of December 31, 2007, until June 30, 2008 (NRC letter dated December 20, 2007, ML073511698).

FPLE-PB stated in its June 9, 2008, letter, that it has not been able to conduct the confirmatory head loss testing of the replacement emergency core cooling system (ECCS) sump screens as a result of limited test facility availability. The request for an additional extension is due to demonstration by industry testing that actual zone-of-influence (ZOI) values, specifically the ZOI for NUKON insulation, are substantially smaller than the default values in NEI 04-07. Therefore, FPLE-PB is revising, for PBNP Units 1 and 2, the debris generation analyses to reflect these later test results and reduce the total quantity of fibrous debris from NUKON. As a result of these supporting analytical changes, the scheduled large flume testing for FPLE-PB at Alden Laboratories has been delayed to the week of July 7, 2008.

FPLE-PB also stated in its June 9, 2008, letter, that the testing contractors have indicated that the preparation, review and approval of the final test reports and supporting calculations will require 6 weeks following completion of testing. FPLE-PB stated that it intends to develop the final submittal to the NRC in parallel, and to provide that submittal by September 30, 2008.

The June 9, 2008, letter, revises the following FPLE-PB regulatory commitment stated in Point Beach's supplemental response to GL 2004-02 dated February 29, 2008 (ML080630613), as follows:

The final submittal of the testing and analyses demonstrating acceptable long-term ECCS performance in the areas of downstream and chemical effects will be made by September 30, 2008.

The NRC has based its reviews for granting extensions to the due date for completion of GL 2004-02 corrective actions on the criteria stated in SECY-06-0078 "Status of Resolution of GSI-191, 'Assessment of [Effect of] Debris Accumulation on PWR Sump Performance'." Specifically, an extension may be granted if:

- the licensee has a plant-specific technical/experimental plan with milestones and schedule to address outstanding technical issues with enough margin to account for uncertainties, and
- the licensee identifies mitigative measures to be put in place prior to December 31, 2007, and adequately describes how these mitigative measures will minimize the risk of degraded ECCS and containment spray system functions during the extension period.

The SECY also states that for proposed extensions beyond several months, a licensee's request will more likely be accepted if the proposed mitigative measures include temporary physical improvements to the ECCS sump or materials inside containment to better ensure a high level of ECCS sump performance.

With regard to the first extension criterion, FPLE-PB has previously provided, as described in the previous extension request letter cited above, a plant-specific technical/experimental plan, with milestones and schedules, to complete the GL 2004-02 corrective actions. FPLE-PB's letter dated June 9, 2008, stated that the scheduled large flume testing for Point Beach at Alden Laboratories has been delayed to the week of July 7, 2008, and that final test reports and supporting calculations will require 6 weeks following completion of testing. FPLE-PB intends to develop the final submittal to the NRC in parallel, and to provide that submittal by September 30, 2008.

FPLE-PB's letter also stated that the replacement screens have been installed, the affected procedures have been revised to reflect the operating requirements of the screens, and there are no remaining modifications or changes planned.

In its letter dated June 23, 2008, FPLE-PB stated that the recent industry experience had prompted FPLE-PB to develop contingency plans in the event that the plant-specific large flume testing scheduled in July 2008, produces unacceptable results. FPLE-PB stated in this letter that contingencies considered included:

- Further steam jet testing to reduce the asbestos, CalSil, and generic fiberglass insulation destruction pressures from the conservative default values endorsed in NEI 04-07.
- Alternative test protocols that attempt to more closely and realistically simulate the settling of debris on the floor of containment prior to the start of containment sump recirculation.
- Reduction of fibrous insulation debris sources.
- Enhancing the existing metallic insulation jacketing with additional banding to reduce the debris that could be generated.
- Installation of additional debris interceptors.

FPLE-PB stated in its June 23, 2008, letter, that based on the demonstrated efficacy of debris interceptors tested for other facilities, the installation of additional debris interceptors is anticipated to be the most appropriate modification to obtain near-term closure of GL 2004-02 at PBNP Units 1 and 2. FPLE-PB also stated in its letter that the July 2008, test window scheduled for PBNP Units 1 and 2 at Alden Laboratories includes sufficient time to complete two full tests, in addition to the baseline clean strainer test.

Therefore, FPLE-PB anticipates the following contingency testing:

1. A design-basis debris load test, with the debris introduction sequenced to demonstrate both thin bed performance and full design loading performance.
2. In the event of an unsatisfactory result during the first test, the second test run will include a debris interceptor located upstream of the test strainer. This test should be sufficient to demonstrate the effectiveness of a debris interceptor with the PBNP Units 1 and 2 specific debris loading and flow velocities.

FPLE-PB stated that, if needed, the design and installation of debris interceptors would proceed expeditiously for PBNP Units 1 and 2. Specifically, FPLE-PB stated in its June 23, 2008, letter, that it anticipates that the PBNP Unit 1 installation could be expedited to occur during the fall 2008 refueling outage, and that the PBNP Unit 2 installation could occur during the fall 2009 refueling outage.

With regard to the second extension criterion, the licensee stated in its letter dated June 9, 2008, that the bases for a reasonable assurance of operability with the installed replacement strainers is unchanged from that detailed in its letter dated November 16, 2007, and that further bases are provided in FPLE-PB's supplemental response to GL 2004-02, dated February 29, 2008. In addition, the licensee stated that mitigative measures that were described in the November 16, 2007, letter, remain in effect.

The NRC staff evaluation of the previous extension request concluded that FPLE-PB had put mitigation measures in place to adequately reduce risk for the previous requested extension period (June 30, 2008), as stated in the NRC extension approval letter cited above. The installation of larger surface area sump strainers on both units is the most significant of these

mitigative measures. Redundant 1500 ft<sup>2</sup> strainers replaced the 21 ft<sup>2</sup> sump screens. In addition, the licensee stated in its letter dated November 16, 2007, that preliminary testing of the strainers indicates that there is significant margin to accommodate potential chemical precipitate effects.

The NRC staff believes that FPLE-PB has a reasonable plan for PBNP Units 1 and 2 that should result in the completion of final GL 2004-02 corrective actions that provide acceptable strainer function with adequate margin for uncertainties. The additional time requested in the June 9, 2008, letter, is considered to be of low safety concern given the mitigation measures and plant improvements already in place. Based on the licensee having satisfactorily addressed the NRC GL 2004-02 due date extension criteria as discussed above, the NRC staff finds it is acceptable to extend the completion date for GL 2004-02 corrective actions associated with strainer performance testing, final analysis and related licensing activities, as described in this enclosure, for PBNP Units 1 and 2, from June 30, 2008, to September 30, 2008. The NRC expects PBNP Units 1 and 2 to place a high priority on completing remaining actions and updating the plants' licensing bases as soon as possible.

Additionally, the NRC has reviewed FPLE-PB's contingency plan as described in this extension approval. The NRC finds the contingency actions described in this plan to be acceptable, and, if needed, expects FPLE-PB to expeditiously perform the contingency actions as described above. This extension approval does not represent approval of an additional extension period for corrective actions after September 30, 2008. If further corrective actions are determined by FPLE-PB to be necessary for PBNP Units 1 and 2, FPLE-PB would need to submit an additional extension for NRC approval.