UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

June 25, 2009

Mr. Larry Meyer
Site Vice President
NextEra Energy Point Beach, LLC
6610 Nuclear Road
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION FROM HUMAN PERFORMANCE BRANCH RELATED TO LICENSE AMENDMENT REQUEST NO. 241 ALTERNATE SOURCE TERM (TAC NOS. ME0219 AND ME0220)

Dear Mr. Meyer:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated December 8, 2008, as supplemented by letters dated January 16 and 27, February 20, two letters on April 17, May 15, and June 1, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML083450683, ML090160571, ML090280348, ML090540860, ML091100182, ML091100215, ML091380113, and ML091560413, respectively), FPL Energy Point Beach, LLC, submitted a request to revise the current licensing basis to implement the alternate source term (AST) through reanalysis of the radiological consequences of the Final Safety Analysis Report Chapter 14 accidents.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure to this letter. During a discussion with your staff on June 11, 2009, it was agreed that you would provide the additional information within 30 days of the date of this letter.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-2048.

Sincerely,

Justin C. Poole, 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:
Request for Additional Information

cc w/encl: Distribution via ListServ

REQUEST FOR ADDITIONAL INFORMATION

POINT BEACH NUCLEAR POWER PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

The NRC staff has performed an initial review of the license amendment request in the area of human performance. The licensee's responses to the following request for additional information with regard to the human performance aspects of the license amendment are needed for the NRC staff to complete its review.

1. The licensee stated in its submittal, "Credit is taken for manual operator action to restore the [Primary Auxiliary Building Ventilation System] VNPAB within 30 minutes following the alignment of [residual heat removal] RHR to containment sump recirculation mode of operation. If a [loss of coolant accident] LOCA occurs coincident with a [loss of off-site power] LOOP, the VNPAB will be manually restarted to ensure that the auxiliary building vent stack is the source of the release associated with the [emergency core cooling system] ECCS leakage phase of the event."

   a. What are the cues that alert the operator to initiate these actions, e.g., how will the operator know that action is required? Annunciator? Procedure step sequencing? Parameter monitoring?

   b. Will operators need to know that there is a time-constraint of 30 minutes associated with these actions? If so, how will the time-constraint be communicated to the operator and how will the start time be determined and documented?

   c. How have these actions been validated to be feasible and reliable? Who was, or will be, involved in the validation?

   d. Describe the changes, if any, to the plant-reference simulator and training that are planned to support these actions.

   e. Describe the changes, if any, to the plant procedures that are planned to support these actions. Copies of marked-up procedure pages or procedure change requests should be included if available.

2. Regarding the control room emergency filtration system (CREFS) and Control Room Ventilation (VNCR), the licensee stated in its submittal, "A new operational mode for CREFS, known as Mode 5 will be established. The mode is referred to as VNCR accident mode to avoid confusion with plant operating MODES in the TS. This change will provide for a combination of filtered outside air and filtered recirculation. The VNCR accident mode will provide a total flow rate of 4950 cfm ±10 percent with a minimum of 1955 cfm of filtered return air."

   a. What effect does the new CREFS Mode 5 have on the control room environment when compared to normal control room ventilation? For example, is the noted flowrate of 4950 cfm more, less, or equal to normal flowrate?

b. Is there any effect on control room humidity or temperature?

Elsewhere in the submittal, the licensee stated,

> The modifications will include redundancy for all CREFS active components and auto-start capability on loss of offsite power from a diesel generator supplied source for the CREFS fans required for the new system alignment.... FPL Energy Point Beach will revise [Point Beach Nuclear Plant] PBNP [Emergency Operating Procedures] EOPs to address starting the VNPAB fans....

c. Please clarify. For example, what is the functional relationship between the CREFS fans and the VNPAB fans? For a LOCA with concurrent LOOP, describe how the CREFS is put into the accident mode. Which components are auto-started or auto-aligned, and which require manual actions?

3. Regarding modifications to Containment Spray (CS) and RHR, the licensee stated, "FPL Energy Point Beach will modify the CS and RHR systems to provide throttling capability of CS and RHR during the ECCS recirculation phase." What instrumentation will be provided to support the operators' capability to throttle CS and RHR?

   a. What cues alert operators to the need to throttle CS and RHR?

   b. What feedback is provided to operators?

   c. What kind of controls are used and are they consistent with other throttling controls in the CR?

   d. What aids are provided to help the operator quickly find the appropriate throttling point, e.g. are appropriate settings pre-determined and labeled?

   e. How have these actions been validated to be feasible and reliable? Who was, or will be, involved in the validation?

   f. Describe the changes, if any, to the plant-reference simulator and training that are planned to support these actions.

   g. Describe the changes, if any, to the plant procedures that are planned to support these actions. Copies of marked-up procedure pages or procedure change requests should be included if available.

   h. What methods have been used to minimize the probability of human error?

   i. What methods have been used to optimize the probability of recovery from likely human errors?

j. Is there a time-constraint associated with establishing the appropriate flow in the CS and RHR systems? If yes, how will the time-constraint be communicated to the operator(s) and how will the start time be determined and documented?

4. The licensee also stated, "For a LOCA, manual operator actions are required to align the CS and RHR systems for CS on recirculation from the containment sump..." Please list all operator actions involved in aligning CS and RHR for recirculation from the containment sump. Identify any actions that are taken locally and state what the environmental conditions will be at the time and location that the actions are needed.

5. Regarding EOPs the licensee stated,

> Point Beach will revise PBNP EOPs to direct continued CS while on sump recirculation, if containment radiological conditions and/or core damage indicates it is required.... The dose calculations prepared in support of this submittal assume that CS is maintained throughout the injection phase of a LOCA and continued during the early portions of the recirculation phase with no more than a 20-minute interruption. The ability to maintain spray during the early recirculation phase is essential, as this is the period of highest iodine evolution from a postulated damaged core....

a. How do the EOPs address the conditional statement in the quote above,"... if containment radiological conditions and/or core damage indicates it is required."?

b. How will the analytical assumptions that CS is maintained throughout the injection phase of a LOCA and continued during the early portions of the recirculation phase with no more than a 20-minute interruption be assured?

c. How will interruptions be timed? What are the consequences of delays greater than 20 minutes? Are any recovery actions feasible?

d. How have the proposed actions been validated to be feasible and reliable? Who was, or will be, involved in the validation?

e. It is also stated in the submittal, "The AST LOCA dose analysis assumes CS is operated for three hours while in the ECCS recirculation phase." How will this assumption be confirmed before implementation, and how will it be assured during execution of the EOPs?

f. Is there an inherent conflict possible between the EOP direction to continue CS while on sump recirculation, if containment radiological conditions and/or core damage indicates it is required, and the AST assumption that CS is operated for three hours while in the ECCS recirculation phase. Are criteria included in the EOPs for when to stop or reduce CS flow?

g. Is guidance or training provided regarding how to balance CS and RHR flows? For example, if radiation conditions in containment require continued CS flow, but sump level

is at or near minimum and RHR pumps are cavitating due to insufficient [net positive suction head] NPSH, does the operator shut down CS? If so, does the operator count this as part of the 20 minute interruption limit, or does he/she just continue when sump volume returns to greater than minimum and continue until a total of three hours of CS flow is complete?

June 25, 2009

Mr. Larry Meyer
Site Vice President
NextEra Energy Point Beach, LLC
6610 Nuclear Road
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - REQUEST FOR ADDITIONAL INFORMATION FROM HUMAN PERFORMANCE BRANCH RELATED TO LICENSE AMENDMENT REQUEST NO. 241 ALTERNATE SOURCE TERM (TAC NOS. ME0219 AND ME0220)

Dear Mr. Meyer:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated December 8, 2008, as supplemented by letters dated January 16 and 27, February 20, two letters on April 17, May 15, and June 1, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML083450683, ML090160571, ML090280348, ML090540860, ML091100182, ML091100215, ML091380113, and ML091560413, respectively), FPL Energy Point Beach, LLC, submitted a request to revise the current licensing basis to implement the alternate source term (AST) through reanalysis of the radiological consequences of the Final Safety Analysis Report Chapter 14 accidents.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure to this letter. During a discussion with your staff on June 11, 2009, it was agreed that you would provide the additional information within 30 days of the date of this letter.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-2048.

Sincerely,

/RA/
Justin C. Poole, 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:
Request for Additional Information

cc w/encl: Distribution via ListServ

DISTRIBUTION:

PUBLIC	RidsNrrLABTully Resource	LPL3-1 r/f
RidsNrrPMPointBeach Resource	RidsNrrDorlLpl3-1Resource	GLapinsky, NRR
RidsRgn3MailCenter Resource	RidsOgcRp Resource	NSalgado, NRR
RidsAcrsAcnw_MailCTR Resource	RidsNrrDirsItsb Resource	RidsNrrDorlDpr Resource

ADAMS Accession Number: ML091620560 *per memo dated May 21, 2009

OFFICE	LPL3-1/PM	LPL3-1/LA	NRR/IOLB/BC	LPL3-1/BC
NAME	JPoole	BTully	NSalgado*	LJames
DATE	06/22/09	06/22/09	05/21/09	06/25/09

OFFICIAL RECORD COPY