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

November 6, 2008

LICENSEE: FPL Energy Point Beach, LLC

FACILITY: Point Beach Nuclear Plant Units 1 and 2

SUBJECT: SUMMARY OF THE OCTOBER 14, 2008, PRE-APPLICATION MEETING WITH FPL ENERGY POINT BEACH, LLC, ON THE PROPOSED ALTERNATE SOURCE TERM AMENDMENT REQUEST (TAC NO. MD9529 AND MD9530)

On October 14, 2008, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of FPL Energy Point Beach, LLC (the licensee) at NRC Headquarters, Two White Flint North, 11545 Rockville Pike, and Rockville, Maryland. A list of attendees is provided as Enclosure 1.

The purpose of the meeting was for the licensee to inform the staff of its plans to submit an alternate source term (AST) license amendment request (LAR) and to solicit feedback from the staff. The AST amendment is needed to remove the reliance on potassium iodine (KI) for control room habitability and will be reference in a planned extended power uprate (EPU).

The licensee's slides are available in the Agencywide Documents Access and Management System (ADAMS) Accession No. ML082890527. The licensee's presentation focused on the following areas:

- Previous AST submittal issues
- Actions to ensure quality submittal
- Key assumptions in the analyses
- Modification summary
- Relationship to EPU
- Schedule
- Approach to requests for additional information (RAIs)

In addition the licensee raised the following discussion points:

- The control room filtration system is classified as non safety-related consisting of one filter train with two fans and emergency power is not automatically available.

- A portion of the emergency core cooling system leakage pathway is the primary auxiliary building (PAB). The PAB ventilation system consists of one filter train with two fans and emergency power is not automatically available.

- New operator actions are required to piggy-back containment spray pumps on residual heat removal (RHR) pumps during the recirculation phase of the accident.

- For a fuel-handling accident the fuel exceeds RG 1.183, "Alternative Radiological Source Terms for Evaluating Design-Basis Accidents at Nuclear Power Plants," footnote 11 criteria.

Previous AST Submittal Issues

The licensee had previously submitted and withdrew two AST amendments. The first amendment was withdrawn due to the control room ventilations system design and continued reliance on KI. The second amendment was withdrawn due to modifications associated with the amendment needing additional review and evaluation by the licensee.

Actions to Ensure a Quality Submittal

The licensee stated that they had taken the following actions to ensure a quality submittal:

- the LAR was reviewed by senior experienced engineers
- the LAR was benchmarked against other successful AST submittals
- the calculations were reviewed by Westinghouse
- the LAR was reviewed by technical challenge boards and by independent industry experts.

Key Assumptions in Analysis

The key assumptions are listed on slide 5 of the licensee's handouts (ML082890527)

Modification Summary

The licensee plans to modify the containment spray and RHR systems to provide containment spray during the recirculation mode of a loss-of-coolant accident. This modification requires aligning a portion of RHR flow to the suction of the containment spray pumps, closing the RHR discharge valves to a preset throttle position (manual action from Control room) and adding a flow restricting orifice in each containment spray line. Total RHR flow will stay within Generic Safety Issue 191 limits.

Additional shielding will be added to the control room. The control room ventilation system will be modified to include a new mode of operation. The control room ventilation system modifications will take place outside the control room envelope. In addition, the licensee proposed technical specification changes to reduce the dose equivalent iodine and allowable containment leak rate values.

Point Beach Nuclear Plant (PBNP) is a pre-general design criteria plant. The licensee stated that the current licensing basis for control room dose does not assume a loss of offsite power (LOOP). The control room ventilation system is not safety-related. The system is seismic and the radiation monitors are safety related. The licensee stated that in the current design, the control room ventilation fans do not automatically load on a LOOP, and that the systems are not currently designed to meet the failure of a single active or passive component. The licensee stated that the control room ventilation system could be designed to handle a LOOP and a single active failure, but there is not sufficient room to install additional duct work for it to withstand a single passive failure.

The staff referred the licensee to Section 5.1.4 of Regulatory Guide (RG) 1.183 which states:

> **5.1.4 Applicability of Prior Licensing Basis**
>
> The NRC staff considers the implementation of an AST to be a significant change to the design basis of the facility that is voluntarily initiated by the licensee. In order to issue a license amendment authorizing the use of an AST and the TEDE dose criteria, the NRC staff must make a current finding of compliance with regulations applicable to the amendment. The characteristics of the ASTs and the revised dose calculational methodology may be incompatible with many of the analysis assumptions and methods currently reflected in the facility's design basis analyses. The NRC staff may find that new or unreviewed issues are created by a particular site-specific implementation of the AST, warranting review of staff positions approved subsequent to the initial issuance of the license. This is not considered a backfit as defined by 10 CFR 50.109, "Backfitting." However, prior design bases that are unrelated to the use of the AST, or are unaffected by the AST, may continue as the facility's design basis. Licensees should ensure that analysis assumptions and methods are compatible with the ASTs and the TEDE criteria

The staff told the licensee that regulatory guides are one way, but not necessarily the only way of meeting the regulations. The clearest path with the least regulatory risk is to follow the RG. However, if the RG is not followed, then the licensee needs to justify how they meet the regulation. The staff also stated that the control room ventilation system has to meet the single active failure criterion. All automatic actuations and or manual actuations must be completed in time to support the AST analysis.

Meteorological and the dose calculation methodology

The staff asked that the electronic computer input files used to generate the atmospheric dispersion factors (X/Q values) and output file summaries be submitted in either electronic or hard copy.

The licensee stated and the staff agreed that the meteorological information should be submitted on a compact disk by a separate letter.

The staff asked for a discussion of associated assumptions, including any deviations from NRC regulatory guidance.

The licensee stated the application would identify and justify any deviations from the RG.

The staff asked for a justification of the quality and representativeness of the meteorological data.

The licensee said it would justify the quality and representative of the meteorological data.

The staff asked for drawings, approximately to scale, showing true north with release and receptor locations clearly highlighted and from which a person could confirm reasonableness of the distance, direction, and height inputs.

The licensee stated that the drawings would be provided.

The staff stated that if a joint frequency distribution (JFD) of wind speed, wind direction and atmospheric stability is used, that the relationship of the JFD to hourly data be provided.

The licensee stated that they were staying with the current licensing basis and not using the joint frequency distribution.

The staff asked for justification of X/Q values used in dose assessment for unfiltered inleakage and for limiting cases, including loss of offsite power or any other single failure.

The licensee stated that they would provide the justification.

The staff stated that if the licensee was crediting a combination of mechanisms then it should evaluate the combined credit taken for airborne activity (particulate iodine) removal mechanisms, such as containment sprays, natural deposition, and containment filters. If the combined credit taken does not account for the successive reduction in activity and the particulate size distribution caused by each mechanism, then the licensee will be expected to justify the appropriateness of their activity release mitigation model. For additional guidance, the licensee can examine the Calvert Cliffs AST safety evaluation report (SER), as well as other related correspondence docketed between the NRC staff and Constellation regarding this issue.

The licensee stated that they were not crediting a combination of mechanisms.

The staff stated that the licensee should thoroughly explain the geometric configuration of the proposed shielding to be added to the PBNP control room for shine dose mitigation. In addition, the licensee should justify the use of the chosen shielding code in evaluating those shine doses. Specifically, if a point-kernel code was used, the licensee should ensure that the analyzed geometry lends itself to accurate computation using such a method. For additional guidance, the licensee can again look to the Calvert Cliffs AST SER, or the Nine Mile Point Unit 1 AST SER, as they are good examples of how this concern has been addressed by other licensees.

The licensee stated that they were using a point kernel code and will address the geometry to support the code.

Operator Actions

The staff stated its expectation regarding crediting operator actions. In order to credit operator actions, the licensee must address the following:

- A safety grade alarm with redundant inputs to notify the operator that action is needed.
- The alarm must be in the technical specifications and has to be tested.
- After the alarm is received, the operator must have adequate amount of time to perform the actions. Less than 10 minutes requires additional justification.
- The operator actions need to be in a procedure.
- Operators need to be trained to perform the actions.
- After the action is taken, the operators need to have indication that action was successful.
- Controls (e.g., control switches) should be safety grade.

Relationship to EPU

The AST amendment can be approved without the EPU amendment, but the EPU cannot be approved without the AST amendment being approved. The licensee stated that the AST amendment would be reference in the EPU LAR. The licensee stated that the EPU LAR would not be submitted until the RAIs were asked on the AST LAR.

Schedule

The licensee plans to submit the AST by the end of October 2008, with a requested NRC completion date of January 2010. Installation of the modifications is scheduled for completion in the spring of 2010.

Approach to RAIs

The license stated that they would have a dedicated team to answer RAIs. The licensee offered to have face-to-face meetings to review draft RAI and draft responses.

The staff stated that it appreciated the resources the licensee was making available to the AST LAR review. The staff stated the approach it would take to RAIs would be to provide a draft of the RAIs as they are developed to support a call between the staff and the licensee to discuss the RAIs to ensure that the licensee understood the question.

Members of the public were not in attendance. Public Meeting Feedback forms were not received.

Please direct any inquiries to Jack Cushing at 301-415-1424, or Jack.Cushing@nrc.gov.

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:
List of Attendees

cc w/encl: Distribution via ListServ

ATTENDANCE LIST
PRE-APPLICATION MEETING BETWEEN
THE NRC AND FPL ENERGY POINT BEACH, LLC
ON THE PROPOSED ALTERNATE SOURCE TERM AMENDMENT
OCTOBER 14, 2008

NAME	ORGANIZATION
Jack Cushing	NRR/DORL
Jim Costedio	Licensing Manager FPLE-PBNP
Steve Hale	Engineering Director FPL
Howard Onorato	Principle Engineer FPL
Don Schuelke	AST Project Manager FPLE-PBNP
Krzysztol Parczewski	NRR/Chemical Engineering Branch
Brian Lee	NRR/Reactor Systems Branch
Aleem Boatwright	NRR/Dose Assessment Branch
Dylanne Duvigneaud	NRR/Dose Assessment Branch
Leta Brown	NRR/Dose Assessment Branch
Robert Taylor	NRR/Dose Assessment Branch Chief
Diane Jackson	NRR/Reactor Systems Branch
Emma Wong	NRR/Chemical Engineering Branch
Gush Singh	NRR/Instrumentation and Controls Branch
William Golumbfskie	NRR/CSGB Branch

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Jack Cushing, Senior Project Manager /RA/
Plant Licensing Branch III-1
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Enclosure:
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ADAMS Accession Number: ML082910093 ***Email Concurrence**

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