August 28, 2009

NRC 2009-0074
10 CFR 50.55a

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

10 CFR 50.55a Request, Relief Request RR-22
System Leakage Test – Boundaries
Fourth Ten-Year Inservice Inspection Program Interval

Pursuant to 10 CFR 50.55a(a)(3)(ii), NextEra Energy Point Beach, LLC (NextEra) requests NRC approval of an alternative to the plant conditions specified in the American Society of Mechanical Engineers, Boiler and Pressure Vessel Code, Section XI, 1998 Edition through 2000 Addenda (ASME Code), for system leakage test examinations conducted on selected Class 1 component pressure boundaries at Point Beach Nuclear Plant (PBNP) Units 1 and 2.

Relief is requested on the basis that hardship and unusual difficulty exists, without a compensating increase in quality or safety, in establishing plant conditions that subject Class 1 components extending to the second normally closed valve to Reactor Coolant System operating pressure and temperature, as required for system pressure tests conducted at or near the end of an Inservice Inspection (ISI) Program interval in accordance with ASME Code Article IWB-5222(b), System Leakage Test – Boundaries.

Enclosure 1 contains Relief Request RR-22. NextEra requests approval of the relief request by September 3, 2010. NextEra proposes to implement the relief request during the remainder of the fourth ten-year ISI Program interval, which ends June 30, 2012, for PBNP Units 1 and 2.

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

In accordance with 10 CFR 50.91, a copy of this letter is being provided to the designated Wisconsin Official.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on August 28, 2009.

Very truly yours,

NextEra Energy Point Beach, LLC

Larry Meyer
Site Vice President

Enclosure

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

ENCLOSURE 1

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

10 CFR 50.55a REQUEST, RELIEF REQUEST RR-22
SYSTEM LEAKAGE TEST – BOUNDARIES
FOURTH TEN-YEAR INSERVICE INSPECTION PROGRAM INTERVAL

1. Applicable Code Components Affected

The Class 1 pressure boundary segments affected by this relief request are categorized in ASME Section XI Code, 1998 Edition and 2000 Addenda (ASME Code), Table IWB-2500-1, as follows:

Examination Category B-P, All Pressure Retaining Components

Item No.	Parts Examined	Test Requirements	Examination Method
B15.50	Piping - Pressure retaining boundary	System leakage test (IWB-5220)	Visual, VT-2
B15.70	Valves - Pressure retaining boundary	System leakage test (IWB-5220)	Visual, VT-2

Refer to Attachment 1 for the listing of applicable Class 1 pressure boundary valves and piping segments at Point Beach Nuclear Plant (PBNP) Units 1 and 2. The listing identifies the applicable double valve isolation segments including vent, drain, instrument and test connection double isolation segments. These are explained as follows:

Group A - RCS Loop and Pressurizer Sample Double Valve Isolation Segments

This section identifies the inboard reactor coolant system (RCS) loop or inboard pressurizer sample isolation valve(s), the outboard isolation closure device(s) and the interlaying piping segment as the system boundary that provides double isolation of the RCS. During normal plant operating conditions, the interlaying pipe segment is subject to full RCS temperature and pressure only if leakage through the inboard isolation valve occurs.

Group B - Vent, Drain, Instrumentation and Test Connection Double Valve Isolation Segments

This section identifies the inboard vent, drain, instrumentation or test connection isolation valve(s), the outboard isolation closure device(s) and the interlaying piping segment as the system boundary that provides double isolation of the RCS. During normal plant operating conditions, the interlaying pipe segment is subject to full RCS temperature and pressure only if leakage through the inboard isolation valve occurs.

2. Applicable Code Edition and Addenda

The applicable Code edition for the fourth ten-year Inservice Inspection (ISI) Program interval at PBNP Units 1 and 2, is the 1998 Edition with 2000 Addenda of the ASME Code, Section XI.

3. Applicable Code Requirement

NextEra Energy Point Beach, LLC, (NextEra), requests relief from Article IWB-5222(b) of the ASME Code, which states:

> *The pressure retaining boundary during the system leakage test conducted at or near the end of each inspection interval shall extend to all Class 1 pressure retaining components within the system boundary.*

4. Reason for Request

Pursuant to 10 CFR 50.55a(a)(3)(ii), NextEra requests relief from the ASME Code requirement to extend the pressure retaining boundary to all Class 1 pressure retaining components within the system boundary for system leakage tests conducted during the remainder of the fourth ten-year ISI Program interval at PBNP Units 1 and 2. NextEra has determined that subjecting Class 1 components and piping beyond the first isolation valve to normal RCS temperature and pressure imposes significant hardship and unusual difficulty, without a compensating increase in quality or safety. Hardship and unusual difficulty associated with system leakage testing performed in accordance with Article IWB-5222(b) of the ASME Code include:

- Valve manipulations which add unnecessary challenges to maintaining the plant in a safe configuration. In some cases, the impracticality of manually opening inboard isolation valves (e.g. check valves) mandates alternative lineups that challenge system integrity.

- System preparations and restorations required inside containment, including radiological restricted areas, that increase radiological exposure to plant personnel, contaminate test equipment and create avoidable radiological waste.

- Routing temporary hoses/piping containing high pressure RCS fluid throughout containment, thereby creating significant personnel safety and radiological exposure hazards. The risks are further compounded by the tripping hazard plant workers inside containment must endure as a result of the hoses being routed throughout.

- Reliance upon a single closure device past the first isolation valve to contain RCS pressure from lower design pressure components and piping. This creates a significant personnel safety hazard and could lead to permanent damage to plant equipment. In addition, maintaining the requisite boron concentration in the RCS could be challenged.

5. Proposed Alternative and Basis for Use

NextEra proposes an alternative from the ASME Code required pressure boundary conditions for system leakage tests on select Class 1 components and piping conducted during the remainder of the fourth ten-year ISI Program interval at PBNP Units 1 and 2. NextEra proposes to visually examine (VT-2) the segments of Class 1 piping between the inboard isolation valve and outboard isolation valve/closure device for leakage and evidence of past leakage, including the valves/closure devices and components in the system boundary, with the isolation valves/closure devices configured in their normal reactor start-up position.

The basis for the proposed alternative derives from the ASME Code requirement that the system leakage test be performed at a test pressure not less than the nominal operating pressure of the RCS corresponding to 100% rated reactor power, and include all Class 1 components within the RCS boundary. The applicable piping configurations, as specified in Attachment 1, provide double-isolation of the RCS from lower design pressure piping and components. Under normal plant operating conditions, the subject pipe segments are exposed to RCS temperature and pressure only if leakage through the inboard isolation valve occurs. With the inboard isolation valve fully closed, the segment of piping between an inboard and an outboard isolation valves are not subject to RCS pressure and temperature. To perform the ASME Code required test, each inboard isolation valve must be manually opened in order to pressurize the corresponding pipe segment or the piping segment must be pressurized using temporary high pressure hoses. Pressurization of the piping segment by either method compromises double valve isolation of the RCS from lower design pressure piping and components, thereby creating a safety concern. In some cases, the impracticality of manually opening inboard isolation valves (e.g. check valves) mandates alternative system lineups, including the use of temporary high pressure hoses, etc, that challenge system integrity.

NextEra believes that subjecting the applicable pipe segments to RCS pressure is not necessary to adequately conduct ASME Code required VT-2 visual examinations for the detection of leakage or evidence of past leakage. The proposed alternative method maintains RCS barriers intact during the VT-2 visual examinations, rather than opening or bypassing the first isolation barrier prior to the examination. Class 1 piping between the inboard isolation valve and the outboard isolation valve/closure device is normally pressurized, albeit at a lower pressure, by stabilized pressure from normal seat leakage originating at the first isolation valve. NextEra believes that this pressure is sufficient for detecting leakage and/or evidence of past leakage during system pressure tests. NextEra proposes to validate and document the pressure boundary integrity of these piping segments and components using identical VT-2 visual examination requirements during reactor start-up following each refueling outage. This modified approach results in significant personnel exposure savings as well as minimizing the risk of personnel injury or contamination associated with opening or bypassing normally closed isolation devices. Since these system pressure tests are performed at the end of a refueling outage, elimination of the requirement to open or bypass these isolation devices will also minimize the impact on outage duration.

NextEra continues to monitor Class 1 components and pipe segments for potential leakage via RCS water inventory balances, containment sump level and containment atmosphere radioactivity level monitoring, pressure isolation valve testing, local leak rate testing and integrated leak rate testing. Boric acid inspections performed during refueling outages also identify potential leakage from Class 1 components and piping.

Based upon the foregoing, NextEra proposes that during the remainder of the fourth ten-year ISI Program interval, system leakage tests on Class 1 pressure retaining components within the system boundary be performed with the inboard and outboard isolation valves configured in their normal reactor start-up position. The VT-2 visual examination for leakage will extend to and include the second closed isolation valve or closure device at the boundary extremity.

6. Duration of Proposed Alternative

NextEra requests permission to implement the proposed alternative system leakage test during the remainder of the fourth ten-year ISI Program Interval, which ends June 30, 2012, for PBNP Units 1 and 2.

7. Precedents

(1) NRC letter to R.E. Ginna Nuclear Power Plant, LLC, Relief Request No. 23 RE: Fourth Interval ISI Program Category B-P Exams – 10 Year Class 1 Leakage Exam – R.E. Ginna Nuclear Power Plant (TAC No. ME0456), dated May 5, 2009 (ML091270259)

(2) NRC letter to STP Nuclear Operating Company, South Texas Project (STP) Units 1 and 2 - Authorization of Relief Request No. RR-ENG-2-51 on System Pressure Test of Class 1, 2, and 3 Systems (TAC Nos. MD8951 and MD8952), dated November 12, 2008 (ML082770785)

ATTACHMENT 1

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

CLASS 1 PRESSURE BOUNDARY VALVES AND PIPE SEGMENTS SUBJECT TO ASME CODE SECTION XI, IWB-5222(b), SYSTEM LEAKAGE TEST – BOUNDARIES FOURTH TEN-YEAR INSERVICE INSPECTION PROGRAM INTERVAL

Group A - RCS Loop and Pressurizer Sample
Double Valve Isolation Segments

Inboard Isolation Valve(s)	Outboard Closure Device(s)	Pipe Size / System
1(2)RH-00700 (Gate)	1(2)RH-00701 (Gate) 1(2)RH-V-08 (Vent) 1(2)RH-V-09 (Vent) 1(2)RH-D-09 (Drain)	10" RHR 3/4" RHR 3/4" RHR 3/4" RHR
1(2)SI-00867A (Check)	1(2)SI-00842A (Check) 1(2)SI-00845A (Check) 1(2)SI-00845E (Check) 1(2)SI-V-06 (Vent)	10" SI 2" SI 2" SI 3/4" SI
1(2)SI-00867B (Check)	1(2)SI-00842B (Check) 1(2)RH-00720 (Gate) 1(2)SI-00845B (Check) 1(2)SI-00845F (Check) 1(2)SI-V-07 (Vent)	10" SI 10" SI 2" SI 2" SI 3/4" SI
1(2)SI-00853C (Check)	1(2)SI-00853A (Check) 1(2)SI-00845C (Check) 1RH-V-03 (Vent) 2SI-V-08 (Vent)	6" SI 2" SI 1/2" SI 1/2" SI
1(2)SI-00853D (Check)	1(2)SI-00853B (Check) 1(2)SI-00845D (Check) 1(2)SI-V-09 (Vent)	6" SI 2" SI 3/4" SI
1(2)SC-00951 (Globe)	1(2)SC-00966A (Globe) 1(2)SC-01424A (Test connection)	3/8" SC 3/8" SC
1(2)SC-00953 (Globe)	1(2)SC-00966B (Globe) 1(2)SC-01424B (Test connection) 1(2)SC-00991 (Thermal relief)	3/8" SC 3/8" SC 3/8" SC

Group B – Vent, Drain, Instrumentation, and Test Connection
Double Valve Isolation Segments

Inboard Isolation Valve(s)	Outboard Closure Device(s)	Pipe Size / System
1(2)RC-00548A (Vent)	1(2)RC-00548B (Vent) 1(2)RC-00548C (Vent) 1(2)RC-00548D (Relief)	3/4" RC 3/4" RC 3/4" RC
1RC-526A (Drain)	Cap	3/8" RC
1RC-526B (Drain)	Cap	3/8" RC
1(2)RC-00546A (Vent)	1(2)RC-00546B (Vent) 1(2) RC-00546C (Vent) 1(2)RC-00546D (Relief)	3/4" RC 3/4" RC 3/4" RC
1(2)RC-00545A (Vent)	1(2)RC-00545B (Vent) 1(2)RC-00545C (Vent) 1(2)RC-00545D (Relief)	3/4" RC 3/4" RC 3/4" RC
1(2)RC-00547A (Vent)	1(2)RC-00547B (Vent) 1(2)RC-00547C (Vent) 1(2)RC-00547D (Relief)	3/4" RC 3/4" RC 3/4" RC
1(2)RC-00524 (Instrument)	1(2)RC-00523 (Instrument) 1(2)RC-00523A (Relief)	3/4" RC 3/8" RC
1(2)RC-00500J (Instrument)	1(2)RC-00500K (Instrument) 1RC-00500H (Vent) 1(2)RC-00537 (Relief)	3/8" RC 3/8" RC 3/8" RC
1(2)RC-00500H (Vent)	Cap	3/8" RC
1(2)RC-00500F (Drain)	Cap	3/8" RC
1(2)RC-00500G (Drain)	Cap	3/8" RC
1(2)RC-00500V (Vent)	Cap	3/8" RC
1(2)RC-00571 (Orifice Bypass)	1(2)RC-00572 (Orifice Bypass) Blind flanged connection	1" RC 1" RC
1(2)RC-00574 (Drain)	Cap	1" RC

Group B – Vent, Drain, Instrumentation, and Test Connection
Double Valve Isolation Segments (con't)

Inboard Isolation Valve(s)	Outboard Closure Device(s)	Pipe Size / System
1(2)RC-00570A (Vent) 1(2)RC-00570B (Vent)	1(2)RC-00581 (Drain) 1(2)RC-00575A (Vent) 1(2)RC-00575C (Vent) 1(2)RC-00575B (Vent) 1(2)RC-00580A (Vent) 1(2)RC-00580B (Vent) 1(2)RC-00582A (Vent) 1(2)RC-00582B (Vent)	1" RC 1" RC 1" RC 1" RC 1" RC 1" RC 3/4" RC 3/4" RC
~~1(2)RC-00579 (Instrument)~~	~~1(2)RC-00587A (Instrument)~~	1" RC 1" RC
1(2)RC-00576 (Orifice Bypass)	1(2)RC-00577 (Orifice Bypass) Blind flanged connection	1" RC 1" RC
1(2)RC-00500Q (Instrument)	1(2)RC-00500P (Instrument) 1(2)RC-00500M (Drain)	3/8" RC 3/8" RC