



FPL Energy

Point Beach Nuclear Plant

May 12, 2008

NRC 2008-0019
10 CFR 50.54(f)

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

Three Month Response to NRC Generic Letter 2008-01,
"Managing Gas Accumulation in Emergency Core Cooling,
Decay Heat Removal, and Containment Spray Systems"

- References:
- (1) NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" dated January 11, 2008 (ML072910759)
 - (2) Point Beach Nuclear Plant Technical Specification Amendments 209/214, "Point Beach Nuclear Plant, Units 1 and 2 - Issuance Of Amendments Re: Technical Specifications LCO 3.5.2, ECCS-Operating, and LCO 3.5.3, ECCS-Shutdown (TAC Nos. MB6349 and MB6350)," dated September 5, 2003 (ML032110528)
 - (3) Point Beach Nuclear Plant Licensee Event Report (LER) 2002-01-00, "Completion of Nuclear Plant Shutdown Required By LCO 3.5.2 Required Action B.1," dated April 18, 2002 (ML021210438)
 - (4) FPLE Letter L-2008-076 to NRC "Extension Request Regarding the Three Month Response to Generic Letter 2008-01 Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated April 9, 2008 (ML081050251)

The NRC issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008 (Reference 1), to request that each licensee evaluate its Emergency Core Cooling System (ECCS), [Decay Heat Removal (DHR) system or Residual Heat Removal (RHR) system], and Containment Spray System licensing basis, design, testing, and corrective actions to ensure that gas accumulation is maintained less than the amount that challenges operability of these systems, and that appropriate action is taken when conditions adverse to quality are identified.

The NRC, in GL 2008-01, requested each licensee to submit a written response in accordance with 10 CFR 50.54(f) within 9 months of the date of the GL to provide the following information:

“(a) A description of the results of evaluations that were performed pursuant to the requested actions of the GL. This description should provide sufficient information to demonstrate that you are or will be in compliance with the quality assurance criteria in Sections III, V, XI, XVI, and XVII of Appendix B to 10 CFR Part 50 and the licensing basis and operating license as those requirements apply to the subject systems of the GL;

(b) A description of all corrective actions, including plant, programmatic, procedure, and licensing basis modifications that you determined were necessary to assure compliance with these regulations; and, (c) A statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.”

Additionally, the NRC requested that if a licensee cannot meet the requested response date, the licensee “shall provide a response within 3 months of the date of the GL.” In the 3-month response, the licensee was requested to describe the alternative course of action that it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

In Reference (4), FPL Energy requested a 30-day extension of the 90-day response on behalf of each of their nuclear generating facilities, including FPL Energy Point Beach, LLC.

The enclosure of this letter provides the FPL Energy Point Beach 3-month response to the requested information in GL 2008-01.

Summary of Commitments

This letter contains the following new commitments:

- FPL Energy Point Beach will provide an initial GL 2008-01 submittal by October 11, 2008, that includes the evaluation results for the completed licensing and design basis reviews, the operating and test procedure reviews, evaluations of accessible piping for Unit 2, as well as the schedule for corrective actions that may be required based on these evaluations.
- FPL Energy Point Beach will provide a complete Unit 1 GL 2008-01 submittal 90 days after the end of the fall 2008 refueling outage. This submittal will include the complete design evaluation reviews based on detailed walk downs of both accessible and inaccessible GL piping sections performed during the Unit 1 refueling outage.
- FPL Energy Point Beach will provide a complete Unit 2 GL 2008-01 submittal 90 days after the end of the fall 2009 refueling outage. This submittal will complete the design evaluation review based on detailed walk downs of inaccessible GL piping sections performed during the Unit 2 refueling outage.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on May 12, 2008.

Very truly yours,

FPL Energy Point Beach, LLC



for J. H. MCCARTHY

Daniel Tomaszewski
for
James H. McCarthy
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

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

THREE MONTH RESPONSE TO NRC GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS"

This response to Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008, addresses the 3-month response requested in the GL. This response discusses: 1) the required evaluations that will not be complete by October 11, 2008, 2) the alternative course of action planned, and 3) the basis for the acceptability of the alternative course of action.

At FPL Energy Point Beach, the GL subject functions correspond to the following plant systems and operating modes:

Emergency Core Cooling System (ECCS): High Pressure Safety Injection (HPSI) and Low Pressure Safety Injection (LPSI) when operating in post-accident injection and sump recirculation modes.

Shutdown Cooling: Residual Heat Removal (RHR) – normal closed loop shutdown cooling mode.

Containment Spray: Containment Spray (CS) system during post-accident operation to reduce containment pressure and scrub fission products from the containment atmosphere.

Requested Evaluations that Will Not be Complete by October 11, 2008

The evaluations requested by GL 2008-01 require physical walk downs of the subject systems to confirm pertinent design details (locations of high point vents) and as-built configurations (pipe locations, elevations, and slope). Performance of non-intrusive examinations such as ultrasonic testing (UT) is also suggested to monitor the presence and quantification of suspected gas in subject piping.

Alternative Actions

The requested evaluations are not anticipated to be completed within the requested 9-month period. FPL Energy Point Beach proposes the following alternative schedule and supporting justifications of adequacy.

FPL Energy Point Beach has performed preliminary walk downs during the current Unit 2 refueling outage. These preliminary walk downs support the FPL Energy Point Beach approach to project implementation to ensure personnel and nuclear safety by allowing the plant to pre-plan scaffolding and insulation removal required for a full walk down. The spring 2008 outage was the first opportunity to identify obvious issues with normally inaccessible piping, and to determine the necessary support for more detailed walk downs during subsequent periods of accessibility.

The next refueling outages for each unit are fall 2008 for Unit 1 (currently scheduled to start in early October, 2008), and fall of 2009 for Unit 2 (start date to be determined).

Detailed walk downs to confirm the acceptability of the installed piping, and to implement corrective actions, if necessary (i.e., install additional vent valves), will be performed during these next outages.

FPL Energy Point Beach will provide an initial GL 2008-01 submittal by October 11, 2008, that includes the evaluation results for the completed licensing and design basis reviews, the operating and test procedure reviews, evaluations of accessible piping for Unit 2, as well as the schedule for corrective actions that may be required based on these evaluations.

FPL Energy Point Beach will provide a complete Unit 1 GL 2008-01 submittal 90 days after the end of the fall 2008 refueling outage. This submittal will include the complete design evaluation reviews based on detailed walk downs of both accessible and inaccessible GL piping sections performed during the Unit 1 refueling outage.

FPL Energy Point Beach will provide a complete Unit 2 GL 2008-01 submittal 90 days after the end of the fall 2009 refueling outage. This submittal will complete the design evaluation review based on detailed walk downs of inaccessible GL piping sections performed during the unit 2 refueling outage.

Basis for Alternative Actions

Portions of the subject piping systems are inaccessible during power operation due to radiation environments; some are insulated (including asbestos insulation); and some may require the erection of scaffolding to obtain adequate access for the requested detailed inspections.

For example, the preliminary walk-downs performed inside of the Unit 2 containment identified 36 nominally horizontal runs in the ECCS and RHR piping. Of these, 26 (72%) are not accessible when Unit 2 is on line; 21 (58%) are insulated; and of the insulated lines, 8 (38%) require scaffolding in order to gain access.

In some cases, while the piping may be accessible as described above, the inspections and general work would not be prudent during power operation due to risks to other nearby equipment during scaffolding erection and disassembly, (e.g., instrument racks containing sensitive equipment). Other piping sections may be in close proximity to other hot system piping (burn hazard) or electrical distribution cabinets (electrical hazard) that could constitute a personnel safety concern during power plant operation.

Based on reviews of existing drawings, areas that appear to be accessible have been found to be inaccessible during certain periods of refueling outages because of elevated contamination levels (e.g., in the vicinity of steam generators while eddy current testing is in progress), or in locked high radiation areas (adjacent to fuel transfer paths during fuel movement).

The preliminary walk downs of Unit 2 found no issues that would raise a question as to the operability of the subject systems.

Basis for Acceptability of Alternate Schedule

The ECCS, RHR and CS systems are routinely tested in accordance with Technical Specification (TS) and in-service testing (IST) programs. Full flow is achieved within the delays assumed by the accident analyses, and equipment issues associated with accumulated gas voiding (insufficient pump head or flow, etc.) have not been noted during these tests. These on-line tests and the routine evolutions during plant shutdowns (decay heat removal operation) involve most of the design basis piping alignments of these systems for both the suction and the discharge piping and have consistently demonstrated their operability.

The decay heat removal system (RHR) includes significant portions of the low pressure safety injection system. RHR is maintained in operation during reactor coolant system (RCS) filling, venting, initial RCS pressurization, and initial RCS heat-up. Proper system operation at the time of shutdown is confirmed by direct observation. Maintenance that would cause these systems to be opened is typically not performed on line. Therefore, adequate performance and lack of gas voids which may challenge the functionality of RHR are verified prior to shutting down the system and placing it in standby when exiting an outage.

Additionally, the high pressure injection lines and safety injection accumulator dump lines (which join before entering the RCS) are maintained at safety injection (SI) accumulator pressure throughout operation. Since the RCS gas concentrations are limited by the much lower pressure volume control tank (VCT), leakage from the RCS into these pressurized lines cannot lead to gas evolution and accumulation.

The high pressure safety injection system discharge lines have had a history of gas accumulation due to backleakage from the safety injection accumulators into the low pressure regions of the HHSI discharge piping. This history culminated in an event that damaged a high head safety injection pump in 2002 (Reference 3). Corrective actions resulting from those experiences included installation of additional vent valves in the subject piping, a revision to the station Operating License to perform periodic venting of the piping (Reference 2), maintenance of leaking SI system isolation valves, removal of valves that no longer served a useful function and were potential backleakage paths, and tracking of SI accumulator level trends. If an adverse trend is indicated, station processes drive increased frequency venting to preclude evolved gas from adversely affecting SI system performance. Since these measures have been implemented, adverse trends in accumulator levels indicative of backleakage into the SI system have been effectively eliminated.

One area of piping that is of potential concern is the common suction header for all ECCS and containment spray pumps. Under normal testing and operation, this larger diameter header does not experience the higher flow velocities that could exist during a dual train activation of all safeguards equipment (i.e., during a large break loss-of-coolant accident (LOCA) or main steam line break (MSLB)).

However, this line runs below the elevation of the bottom of the RWST to the ECCS pumps and CS pumps. The HHSI and CS pumps are located at the same elevation as the bottom of the RWST, while the RHR (LPSI) pumps are located well below the RWST. The suction lines of the pumps have been verified to be free of "inverted U" sections where significant quantities of gas could accumulate. Accessible ECCS piping

is periodically vented to ensure that gas that may have accumulated from backleakage on the discharge side of the pumps does not jeopardize the operability of the pumps. Therefore, there is reasonable assurance that this section of piping is free from significant gas accumulation, and that the suction supply piping is and will remain functionally full of water.

In light of the recent FPL Energy Point Beach license amendment that contains a more rigorous functional definition of "full of water" (Section 3.3 of Reference (2)), additional refinements of the FPL Energy Point Beach TS are not anticipated at this time. If it is found that further refinement would be appropriate, the solution is best left to the Technical Specification Task Force (TSTF) to provide an approved template (TSTF traveler) that reflects the industry consensus. The development of a TSTF traveler hinges on the results of the evaluations of a large number of licensees to address the various plant designs. FPL Energy Point Beach would evaluate the traveler for implementation via the license amendment process.

Based upon the above, FPL Energy Point Beach concludes that completing performance of the preliminary and final walkdowns, and subsequent complete evaluations of the subject piping, outside of the requested 9-month period, is an acceptable alternative course of action.