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W3F1-2008-0036

May 12, 2008

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: Three Month Response to Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

- Reference:
1. Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems," dated January 11, 2008.
 2. Entergy letter W3F1-2008-0030 dated April 10, 2008, "One Month Extension Request for Response to Generic Letter 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"

Dear Sir or Madam:

The U.S. Nuclear Regulatory Commission (NRC) issued NRC Generic Letter (GL) 2008-01 (Reference 1) to request that each licensee evaluate its emergency core cooling decay heat removal, and containment spray systems 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 GL requested each licensee to submit a written response in accordance with 10 CFR 50.54(f) within nine months of the date of the GL to provide the following information:

- "a. A description of the results of evaluations that were 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 of Sections III, V, 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;

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- 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 three months of the date of the GL." In the three month response, the licensee was requested to provide the described alternative course of action that it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

In Reference 2, Entergy formally requested an additional 30 days to complete the three-month response for Waterford 3 Steam Electric Station. The basis for this extension was the unanticipated additional actions (i.e., completion of system walkdowns). The NRC verbally accepted a due date by May 11, 2008 for the three month response.

Attachment 1 to this letter contains the three-month response to the requested information in GL 2008-01 for Waterford 3.

New commitments contained in this submittal are summarized in Attachment 2.

Please contact Robert J. Murillo at (504) 739-6715 if you have questions regarding this information.

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

Sincerely,



KSC/GCS/ssf

- Attachment(s):
- 1. Three Month Response to Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"
 - 2. List of Regulatory Commitments

cc: Mr. Elmo E. Collins, Jr.
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Attachment 1

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

This response discusses:

- The required evaluations that will not be completed by October 11, 2008 (nine months from the date of GL 2008-01).
- The alternate course of action planned.
- The basis for the acceptability of the alternative course of action.

For Waterford 3, the following emergency core cooling systems and decay heat removal systems are within the scope of GL 2008-01:

- High Pressure Safety Injection (HPSI) System
- Low Pressure Safety Injection (LPSI) ((Both Injection and Shutdown Cooling (SDC) Modes))
- Containment Spray (CS) System (both Containment Spray and Cooling Modes)

In-field inspection of the system piping, considered to be a necessary part of the Waterford 3 evaluations, will not be completed by October 11, 2008. Since portions of the above systems are inaccessible or high dose areas during power operations, an outage is required to complete the response to the GL.

Waterford 3 is currently in a refueling outage scheduled to be completed by the end of May 2008. Initially, Waterford 3 had not anticipated having to perform walkdowns to respond to the GL. The next refueling outage is scheduled during November 2009 (RF16), and Waterford 3 will perform the necessary walkdowns and inspections during that outage. Therefore, the full scope of the required evaluations and any resultant corrective actions will not be complete prior to the requested nine month GL response date.

Although the GL response will be completed at a later date, Waterford 3 continues to perform monthly surveillances on both the HPSI and LPSI systems to ensure that gas intrusion from the Safety Injection Tanks is effectively controlled.

The Containment Spray system is subject to gas voiding following refueling outages. During Refueling Outages, the containment spray heat exchanger (more commonly referred to as the Shutdown cooling heat exchanger) is utilized with the LPSI system. Following system restoration, voids can accumulate in the CS system. Waterford-3 has established model work orders and frequencies to dynamically flush the CS and LPSI systems following refueling outages to remove the air entrained water from the system. The CS system has low susceptibility to gas voiding during normal operations. The CS system is not connected to a contained water source that is maintained with a pressurized cover gas during normal operations such as HPSI and LPSI. On the suction side of the CS pumps, the water is drawn directly from the Refueling Water Storage Pool (RWSP), or the Safety Injection (SI) sump. The RWSP is directly above the pumps, and is not likely to accumulate gas in the suction side. Issues associated with the SI sump suction and gas accumulation have been addressed by the installation of a keep fill system.

Following previous gas intrusion events at Waterford-3, the ECCS was reviewed and modifications were made to improve the reliability of the system. For example, automatic venting was added to one cold leg injection line on the LPSI A train. Trending indicated that this line was the most susceptible to gas intrusion. Vent valves were installed in LPSI/SDC high points of the shutdown cooling suction lines where gas accumulation was noted to occur due to leakage in the recirculation line.

Waterford 3 will perform the walkdowns and complete the evaluations of the normally accessible portions of the above systems by October 11, 2008. Waterford 3 will complete the walkdown of the inaccessible portions of the systems during the next refueling outage and complete the evaluations of these portions of the systems by January 30, 2010. The GL 2008-01 requested information will be submitted to the NRC by March 31, 2010.

Attachment 2

W3F1-2008-0036

List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE- TIME ACTION	CONTINUING COMPLIANCE	
Waterford 3 will perform the walkdowns and complete the evaluations of the normally accessible portions of the above systems by October 11, 2008.	x		10/11/2008
Waterford 3 will complete the walkdown of the inaccessible portions of the systems during the next refueling outage and complete the evaluations of these portions of the systems by January 30, 2010	x		1/30/2010
The GL 2008-01 requested information will be submitted to the NRC by March 31, 2010.	x		3/31/2010