

September 23, 2008

Vice President, Operations
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - RE: 3-MONTH RESPONSE TO GENERIC LETTER 2008-01, "MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS," PROPOSED ALTERNATIVE COURSE OF ACTION (TAC NO. MD7870)

Dear Sir or Madam:

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

By letter dated May 15, 2008 (ADAMS Accession No. ML081410456), Entergy Operations, Inc. (Entergy), the licensee, submitted its 3-month response to GL 2008-01 for River Bend Station, Unit 1 (RBS).

Enclosed is the NRC staff's assessment of the response for RBS. The NRC staff reviewed the licensee's proposed alternative course of action and the associated basis for acceptance and concluded that for RBS, with the exception of the clarifications and associated requests discussed in the enclosure, they are acceptable. This letter requests the licensee to implement its proposed alternative course of action consistent with the clarifications and associated requests discussed in the enclosure.

Instead of requesting that you submit a 3-month supplemental response for River Bend Station, Unit 1, to revise the licensee's proposed alternative course of action related to the content and schedule for your 9-month responses as described in the enclosure, we discussed the 9-month response to the GL with Mr. David Lorfing, Manager of Licensing. By email dated September 23, 2008, he stated that a 9-month response to the GL is scheduled to be submitted by October 11, 2008, and, although the current response is not complete and a few issues are still being evaluated, it is not expected that these issues will impact the response to be submitted. This commitment to meet the 9-month response date of October 11, 2008, addresses our concern with the above letter dated May 15, 2008. Therefore, nothing further is requested except the 9-month initial submittal and the 9-month supplemental submittal described in the enclosure.

If you have any questions regarding this letter, contact me at (301) 415-1307 or via the internet at jack.donohew@nrc.gov.

Sincerely,

/RA/

Jack N. Donohew, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosure:
As stated

cc w/encl: See next page

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Jack N. Donohew, Senior Project Manager
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* See previous concurrence

ADAMS Accession No. ML081960684

NRR-106

OFFICE	DORL/LPL4/PM	DORL/LPL4/LA	DPR/PGCB/BC	DSS/DD	DORL/LPL4/BC	DORL/LPL4/PM
NAME	JDonohew	JBurkhardt(*)	MMurphy(*)	JWermiel(*)	MMarkleyi	JDonohew
DATE	9/23/08	07/21/08	09/19/2008	07/25/2008	9/23/08	9/23/08

OFFICIAL AGENCY RECORD

River Bend Station

(7/2/2008)

cc:

Senior Vice President
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

Attorney General
State of Louisiana
P.O. Box 94095
Baton Rouge, LA 70804-9095

Vice President, Oversight
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

President of West Feliciana
Police Jury
P.O. Box 1921
St. Francisville, LA 70775

Senior Manager, Nuclear Safety
& Licensing
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

Mr. Brian Almon
Public Utility Commission
William B. Travis Building
P.O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

Senior Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

Mr. Jim Calloway
Public Utility
Commission of Texas
1701 N. Congress Avenue
Austin, TX 78711-3326

Associate General Counsel
Entergy Nuclear Operations
P.O. Box 31995
Jackson, MS 39286-1995

Ms. H. Anne Plettinger
3456 Villa Rose Drive
Baton Rouge, LA 70806

Manager, Licensing
Entergy Operations, Inc.
River Bend Station
5485 US Highway 61N
St. Francisville, LA 70775

Mr. Richard Penrod, Senior Environmental
Scientist/State Liaison Officer
Office of Environmental Services
Northwestern State University
Russell Hall, Room 201
Natchitoches, LA 71497

Louisiana Dept. of Environmental Quality
Radiological Emergency Planning and
Response Division
P.O. Box 4312
Baton Rouge, LA 70821-4312

Senior Resident Inspector
P.O. Box 1050
St. Francisville, LA 70775

Louisiana Dept. of Environmental Quality
Office of Environmental Compliance
P.O. Box 4312
Baton Rouge, LA 70821-4312

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
612 E. Lamar Blvd., Suite 400
Arlington, TX 76011-4125

NRC STAFF ASSESSMENT OF 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

1.0 INTRODUCTION

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2.0 BACKGROUND

One of the purposes of GL 2008-01 "is to request [licensees] to submit information to demonstrate that the subject systems are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance." Requested actions are "that each [licensee] evaluate its ECCS, DHR 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." Requested information is "that each [licensee] provide the following information: (a) A description of the results of evaluations that were performed pursuant to the above requested actions. This description should provide sufficient information to demonstrate that you are or will be in compliance with the quality assurance

ENCLOSURE

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; (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.” The 10 CFR 50.54(f) requirement is, in part, that “each addressee is requested to submit a written response consistent with the requested actions and information.”

The 10 CFR 50.54(f) response can be broadly separated into two categories, one that requires systems walkdowns and everything else. Systems walkdowns can be further separated into two subcategories, those that can be conducted during power operation and those that require the plant to be in a shutdown condition. With the exception of long-term items described in Section 4.0 of this NRC staff assessment, everything should have been completed in time to be included in the 9-month (October 11, 2008) response report except for walkdown results where the plant must be in a shutdown condition. Items that are completed after the October 11 date should be described in a supplemental report that, in effect, completes the October 11, 2008, response report. It is further expected that the information provided in the 9-month initial report submittal on October 11, 2008, will be sufficient to establish compliance as described in Item (a) of the above requested information. The NRC staff is not willing to wait beyond October 11 to have licensees submit sufficient information to show this compliance. Any follow-up information to the October 11, 2008, submittal should only be confirmatory.

It is recognized that some flexibility may be necessary in addressing the GL issues. For example, suppose an unexpected need for a hardware modification is discovered during a walkdown conducted after submitting the October 11 report and the modification cannot be accomplished until the next refueling outage. It is acceptable to the NRC staff for the licensee to describe this in the post-walkdown report provided any measures that are necessary to ensure compliance (including operability) are in place and are also described in the report. It should be noted that compliance (including operability) must be ensured or the hardware modification must be made earlier unless other acceptable requirements, such as an exemption or notice of enforcement discretion (NOED) is granted since deliberate operation without meeting the applicable criteria is not permitted. Further clarification is provided in the NRC letter dated July 8, 2008, to the Nuclear Energy Institute (ADAMS Accession No. ML081830557).

3.0 LICENSEE'S PROPOSED ALTERNATIVE COURSE OF ACTION

By letter dated May 15, 2008 (ADAMS Accession No. ML081410456), Entergy Operations, Inc. (the licensee) submitted the 3-month response to GL 2008-01 for River Bend Station, Unit 1 (RBS). The licensee stated that the following systems are considered to be within the scope of GL 2008-01: the residual heat removal (RHR) system, high-pressure core spray (HPCS) system, low-pressure core spray (LPCS) system, and the RHR system in the low-pressure coolant injection mode of operation. The licensee stated that RBS does not have a containment spray system. The licensee also stated that portions of the piping of these systems requiring inspections may not be fully inspected prior to October 11, 2008, the 9-month submittal date requested in the GL.

The licensee indicated that RBS would complete detailed evaluations of the as-built piping drawings prior to the requested 9-month response date, including detailed reviews of the

drawings for piping segments requiring in-field verifications. RBS would also complete the evaluation of site procedures prior to the 9-month response date, which ensure the piping of the subject systems are sufficiently full of water to perform their function. However, the licensee indicated that the necessary walkdowns of some segments of piping of the subject systems, including the RHR, HPCS, LPCS, and RHR in the low-pressure coolant injection mode of operation, will not be completed within the 9-month response time requested by GL 2008-01. The licensee cannot complete the walkdowns within the requested time because portions of the subject systems are inaccessible during power operation for one or more of the following reasons: (1) entry into the drywell, which is an exclusion area during power operations; (2) scaffolding in safety sensitive area; (3) prolonged containment entries during power; or (4) the need for removal of insulation from piping. The licensee stated RBS does not have planned outage prior to October 11, 2008, and thus, there is no opportunity for performing refueling outage walkdowns or documenting the results prior to 9-month response date.

As an alternative course of action for the GL, the licensee proposed to perform walkdowns of any piping segments that are determined to need in-field verification that have not been completed prior to October 11, 2008, and complete the final documentation of any necessary walkdowns within one month after the restart from refueling outage no. 15.

The licensee letter dated May 15, 2008, listed the following regulatory commitment:

Walkdowns of any piping segments that are determined to need in-field verification that have not been completed prior to October 11, 2008, will be tracked to completion. The due date for the final documentation of any necessary walkdowns will be no later than one month after the restart from refueling outage no. 15.

The licensee stated that it will complete detailed evaluations of the as-built piping drawings prior to 9-month response, including detailed reviews of the drawings for the piping segments requiring in-field verifications. The verifications to be performed are expected to confirm the conclusions of the completed drawing evaluations. In addition, the evaluation of site procedures, which ensure the piping systems are sufficiently full of water to perform their design function, is expected to be complete prior to the 9-month response. Based on the above considerations, the licensee concluded that completion of any required in-field verifications and associated evaluation after the 9-month response to GL is acceptable.

4.0 NRC STAFF ASSESSMENT

After review of the licensee's letter dated May 15, 2008, the NRC staff finds that, with the exception of the clarifications and associated requests discussed below, the licensee's proposed alternative course of action discussed in Section 2 of this assessment is acceptable. This is based on the above-described plan for detailed evaluations of the as-built piping drawings and in-field verifications associated with managing gas accumulation at RBS.

The NRC staff notes the following examples where the licensee's 3-month submittal letter dated May 15, 2008, does not clearly describe the content and/or schedule for the 9-month submittals:

- (1) While the licensee commits to provide a 9-month supplemental response, it does not clearly specify the information to be provided in the response.
- (2) Although the licensee commits to provide its 9-month supplemental response within 1 month following completion of refueling outage no. 15 for RBS, the submittal does not specifically state that this is the first refueling outage after the 9-month submittal date of October 11, 2008.

Therefore, the NRC staff finds that the commitment, to submit the complete 9-month response to GL 2008-01 for RBS is not consistent with the purpose of the GL discussed in Section 2.0 of this assessment. Because one purpose of the GL 2008-01 is for the licensee to demonstrate by October 11, 2008, that the subject systems of the GL 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, the NRC staff requests that the licensee submit the 9-month information requested in the GL as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to refueling outage no. 15 for RBS, provide all GL-requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL-requested information for the subject systems to the NRC within 90 days following completion of refueling outage no. 15 for RBS.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensees should provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated May 15, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction piping, as well as, whether analysis development is needed to assess gas transport in the subject system piping as a function of system flow. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow-up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.