

Mr. Mark B. Bezilla  
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Perry, OH 44081-0097

September 16, 2008

SUBJECT: PERRY NUCLEAR POWER PLANT – RE: 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. MD7862)

Dear Mr. Bezilla:

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 April 11, 2008 (ADAMS Accession No. ML081080482), FirstEnergy Nuclear Operating Company (the licensee) submitted a 3-month response to GL 2008-01 for Perry Nuclear Power Plant (PNPP). The NRC staff’s assessment of the responses for PNPP is contained in the enclosure to this letter.

The NRC staff reviewed the licensee’s proposed alternative course of action and the associated basis for acceptance and concluded that for PNPP, with the exception of the clarifications and associated requests discussed in the enclosure, they are acceptable. This letter allows the licensee to implement its proposed alternative course of action provided that implementation is consistent with the clarifications and associated requests discussed in the enclosure.

M. Bezilla

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If you have any questions regarding this letter, please feel free to contact me at (301) 415-3719.

Sincerely,

*/RA/*

Cameron S. Goodwin, Project Manager  
Plant Licensing Branch III-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosures:  
As stated

cc w/encl: See next page

M. Bezilla

- 2 -

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Enclosure

U.S. NUCLEAR REGULATORY COMMISSION

ASSESSMENT OF 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

PERRY NUCLEAR POWER PLANT

DOCKET NO. 50-440

1. Background

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. Licensee's Proposed Alternative Course of Action

By letter dated April 11, 2008 (ADAMS Accession No. ML081080482), FirstEnergy Nuclear Operating Company (the licensee) submitted a 3-month response to GL 2008-01 for Perry Nuclear Power Plant (PNPP). The licensee stated that they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns of the GL subject systems cannot be completed. The GL subject systems include the high-pressure core spray, low-pressure core spray, residual heat removal, and automatic depressurization systems. The licensee stated that the walkdowns cannot be completed because portions of the GL subject systems are inaccessible during power operation due to one or more of the following reasons: (1) radiological dose due to entry into high radiation areas; (2) need to erect scaffolding (dose or adjacent equipment operability concerns); (3) inaccessibility of the drywell during power operation; or (4) the need for removal of insulation from piping (dose or environmental qualification restrictions).

Enclosure

The licensee also stated that all other GL actions will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete walkdowns of those areas only accessible during the next refueling outage scheduled for spring 2009. The licensee's letter dated April 11, 2008, listed the following commitments:

1. Any piping segments that are determined to need in-field verification, but have not received it, prior to the 9-month GL 2008-01 response, will be in-field verified no later than restart from the next refueling outage scheduled for spring 2009.

The licensee stated that the alternative course of action is acceptable based on the following:

1. Because of the 2003 gas accumulation experience at PNPP, five additional venting points have been added, and plant procedures have been improved based on lessons learned.
2. Other already identified design improvements are planned to be implemented during the next refueling outage.
3. By the date of the 9-month response, the GL-requested evaluations of the as-built piping drawings are planned to be complete, including reviews of the drawings for the piping segments that will not yet have received in-field verifications. The in-field verifications that will be completed after the 9-month response are intended to confirm the conclusions of those completed drawing evaluations.
4. Finally, by the date of the 9-month response, the GL requested evaluation of site procedures, which ensure the piping systems are sufficiently full of water to perform their function, is also planned to be complete.

Based on the above considerations, the licensee stated that completion of a portion of the in-field verifications after the 9-month response to the GL is considered acceptable.

### 3. NRC Staff Assessment

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, that the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, plant procedures, and corrective actions associated with managing gas accumulation at PNPP.

The NRC staff notes examples where the licensee's 3-month submittal dated April 11, 2008, does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, the licensee does not provide information indicating if it will submit the walkdowns and evaluations of the accessible piping within the GL scope by the timeframe prescribed in the GL (i.e., by October 11, 2008). In addition, the NRC staff finds that the licensee's commitment does not discuss when and if the results of the verification for previously inaccessible portions of the GL systems will be submitted to the NRC.

The NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the PNPP, spring 2009, refueling outage, 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 startup from the spring 2009 refueling outage at PNPP.

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 April 11, 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, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. 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.