

July 26, 2012

MEMORANDUM TO: William H. Ruland, Director  
Division of Safety Systems  
Office of Nuclear Reactor Regulation

Patrick L. Hiland, Director  
Division of Engineering  
Office of Nuclear Reactor Regulation

Scott C. Flanders, Director  
Division of Site Safety and the Environment  
Office of New Reactors

FROM: Richard P. Correia, Director */RA/*  
Division of Risk Analysis  
Office of Nuclear Regulatory Research

SUBJECT: GENERIC ISSUE MANAGEMENT CONTROL SYSTEM REPORT  
(FY 2012, Q3)

Enclosed is the third Generic Issue Management Control System report of FY 2012. This report is sent to the Division Directors responsible for one or more of the Generic Issues (GIs). The following table summarizes the status of GIs, and the subsequent paragraphs provide a narrative summary of the current status of these GIs. This memorandum and the enclosed report cover the period of March 1, 2012 through May 31, 2012.

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Status Summary of Active Generic Issues During Q3 of FY 2012						
GI No.	Title	Current Stage	Status	Planned Closure	Months Open	Regulatory Impacts
189	Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident	Regulatory Office Implementation		12/2012	133	Title 10, Sections 50.34 and 50.44, of the <i>Code of Federal Regulations</i> (10 CFR 50.34 and 50.44)
191	Assessment of Debris Accumulation on PWR Sump Performance	Regulatory Office Implementation		To Be Determined	189	Regulatory Guide 1.82, Rev. 3; NUREG-0800; GL 1985-22; Bulletin 2003-01; GL 2004-02
193	BWR ECCS Suction Concerns	Technical Assessment	Active	To Be Determined	121	To Be Determined
199	Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States for Existing Plants	Regulatory Office Implementation  Activities covered by 50.54(f) letters on items 2.1 & 2.3 of the Japan NTTF recommendations		To Be Determined	85	IN 2010-018
204	Flooding of Nuclear Power Plant Sites Following Upstream Dam Failures	Regulatory Office Implementation		To Be Determined	5	To Be Determined

In accordance with Management Directive 6.4, "Generic Issues Program" (ML083181192), the responsibility for the implementation and verification of GI-189, GI-191, GI-199, and GI-204 have been transferred to the Office of Nuclear Reactor Regulation (NRR). Additional coordination with the Office of New Reactors (NRO) on GI-199 and GI-204 will be further explored by NRR. The status of these Generic Issues will continue to be tracked and reported by the Generic Issues Program until completion by the program office.

**Reactor Generic Issues**

**GI-189, Regulatory Office Implementation, Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion during a Severe Accident** (pages 1 - 4 of the GIMCS report). In early 2007, the NRC staff reviewed industry proposals from licensees affected by GI-189 and concluded that those proposed modifications will resolve GI-189 and provide benefit for some separate security scenarios that were identified during the course of the GI-189 review. On June 15, 2007, the NRC staff issued letters to affected licensees accepting the commitments to changes that enhance plant capabilities to mitigate the potential for early containment failure from hydrogen combustion. Since that time, licensee implementation and NRC verification inspections performed pursuant to NRC Temporary Instruction (TI) 2515/174, "Hydrogen Igniter Backup Power Verification," have been completed at all 9 affected sites. In November 2010, the staff received a commitment from the Tennessee Valley Authority to implement measures at Watts Bar Unit 2 equivalent to those measures verified to have been implemented at Watts Bar Unit 1. Final closeout is planned for December 2012.

**GI-191, Regulatory Office Implementation, Assessment of Debris Accumulation on Pressurized Water Reactor (PWR) Sump Performance** (pages 5 - 10 of the GIMCS report). This generic issue concerns the possibility that, following a loss of coolant accident in a PWR, debris accumulating on the emergency core cooling system sump screen may result in clogging and restrict water flow to the pumps. As a result of this generic issue and the related generic letter (GL 2004-02), all PWR licensees increased the size of their containment sump strainers, significantly reducing the risk of strainer clogging. An associated issue, which needs to be resolved to close GI-191, regards the potential for debris to bypass the sump strainers and enter the reactor core. In 2008, the NRC staff determined that additional industry-sponsored testing was necessary to support resolution of this issue. Some testing was performed, but testing and NRC evaluation are continuing because of NRC staff concerns about the testing results and related assumptions. The Commission issued a Staff Requirements Memorandum (SRM) in December 2010. The Commission determined that it was prudent to allow the nuclear industry to complete testing on in-vessel effects and zone of influence in 2011, and to develop a path forward by mid 2012. The SRM directed the staff to evaluate alternative approaches, including risk-informed approaches, for resolving GSI-191 and to present them to the Commission by mid 2012. The staff provided the Commission a notation vote paper (SECY-12-0093) in July 2012 with options for the path forward to resolve GSI-191.

**GI-193, Technical Assessment, Boiling Water Reactor (BWR) Emergency Core Cooling System (ECCS) Suction Concerns** (pages 11 - 13 of the GIMCS report). This GI involves an evaluation of BWR suppression pool designs, the dynamics of air entrainment in the suppression pool, and the effects of air entrainment on ECCS pump performance. Based upon a staff request, the BWR owners group provided voluntary data regarding the characteristics of LOCA phenomena at the earliest stages of the postulated accidents plus general information about wetwell geometries in relation to ECCS suction strainers. Scale experiments to estimate the maximum potential void fraction were completed and the final report was received in March 2011. This information will be used in assessing the capability of bubbles to be transported to the suction strainer of ECCS pumps. The staff is attempting to determine if there is ample evidence to propose a potential downcomer exclusion zone, which would be a region where the bubble

formation and transport pose the most significant challenge to the ECCS. The Safety/Risk Assessment is scheduled to be complete in January 2013.

**GI-199, Regulatory Office Implementation, Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States for Existing Plants** (pages 14 - 17 of the GIMCS report). GI-199 was opened to assess the implications of updated seismic data and methods for Central and Eastern U.S. (CEUS) operating plants. The staff's confirmatory analysis concluded that the calculated seismic hazard for some operating plants in the CEUS had increased. Information Notice IN 2010-18 was issued to nuclear power plants and independent spent fuel storage installations (ISFSI); it stated that the NRC will follow the appropriate regulatory process to request operating plants and ISFSIs provide specific information to enable the NRC staff to complete the Regulatory Assessment. Information Notice IN 2010-19 was issued to fuel cycle facilities. NRR developed a draft Generic Letter to request needed data from power reactor licensees. The request was originally intended only for power reactor licensees in the CEUS but, in light of the recent Japanese earthquake, NRR expanded the scope of the request to include all U.S. power reactor licensees. The Japan Near-Term Task Force assessment resulted in 10CFR 50.54 (f) letters that addressed GI-199, in its entirety, in recommendations 2.1 and 2.3 (ML12056A046). The NRR Japan Lessons Learned Project Directorate (JLD) has taken responsibility for all work associated with GI-199.

**GI-204, Regulatory Office Implementation, Flooding of Nuclear Power Plant Sites Following Upstream Dam Failures** (page 18 of the GIMCS report). The Generic Issue pertains to the flooding of U.S. nuclear power plant sites following upstream dam failure. Possible effects on spent fuel pools at nuclear power plant sites are also within the scope of the Generic Issue. The issue was recommended for approval by a review panel on December 7, 2011 (ML113260158) following the completion of a screening analysis. The screening analysis report is available under ADAMS accession number ML113500495. This Generic Issue was publically announced on March 6, 2012 in News Release No. 12-021, which is available in the Agencywide Documents and Management System (ADAMS) under accession number ML120690635. The Generic Issue is being further evaluated as part of implementing recommendations from the NRC's Japan Near-Term Task Force response following the March 2011 major earthquake and tsunami in Japan.

As summarized above, one GI was resolved and one new GI was added to the other four reactor GIs that remain in the process of resolution.

### ***Nonreactor Generic Issues***

At the end of the reporting period, no nonreactor GIs remain to be resolved.

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The GI Program will continue to track the staff's progress in resolving reactor GIs and is available to support any significant challenges that may arise during their resolution.

Enclosure:

As stated

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Enclosure:  
As stated

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