

October 22, 2009

MEMORANDUM TO: Mirela Gavrilas, Chief
SG Tube Integrity and Chemical Engineering Branch
Division of Component Integrity
Office of Nuclear Reactor Regulation

Greg A. Casto, Chief
Balance of Plant Branch
Division of Safety Systems
Office of Nuclear Reactor Regulation

Stewart N. Bailey, Acting Chief
Safety Issue Resolution Branch
Division of Safety Systems
Office of Nuclear Reactor Regulation

FROM: Benjamin G. Beasley, Chief */RA/*
Operating Experience and Generic Issues Branch
Division of Risk Assessment
Office of Nuclear Regulatory Research

SUBJECT: GENERIC ISSUE MANAGEMENT CONTROL SYSTEM
REPORT (FY 2009, Q4)

Enclosed please find the Generic Issue Management Control System (GIMCS) report for the fourth quarter of FY 2009. For your convenience, the following table summarizes the status of the Generic Issues (GIs), and the subsequent paragraphs provide a narrative summary of the current status of these GIs. Both this memorandum and the enclosed GIMCS report contain data that is current as of August 31, 2009.

CONTACTS: Richard Perkins, RES/DRA
301-251-7479

Status Summary of Active Generic Issues During Q4 of FY 2009						
GI No.	Title	Current Stage	Status	Planned Closure	Months Open	Regulatory Impacts
163	Multiple Steam Generator Tube Leakage	Completed		Closed	204	Resolved without requirements*
186	Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants	Verification	Active	3/2010	125	NUREG-1774; Standard Review Plan (NUREG-0800), Section 9.1.5
189	Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident	Regulatory Office Implementation		3/2010	100	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		11/2010	156	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	3/2011**	88	To Be Determined
199	Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States for Existing Plants	Safety/Risk Assessment	Active	4/2010**	52	To Be Determined

* The GI-163 effort was related to substantial industry changes, voluntarily adopted during the conduct of GI-163. While those changes facilitated the resolution of GI-163, those changes were not requirements of GI-163.

** Proceed to regulatory assessment stage or close the GI.

GI-189 and GI-191 have exited the Generic Issues Program. The responsibility for their implementation and verification was transferred to the Office of Nuclear Reactor Regulation (NRR) in accordance with SECY-07-0022, "Status Report on Proposed Improvements to the Generic Issues Program," dated January 30, 2007, (ADAMS Accession No. ML063460239). Their status will continue to be tracked and reported in GIMCS until completion by the program office. Actions related to GI-163 were completed on July 16, 2009.

Reactor Generic Issues

GI-163, Regulatory Office Implementation, Multiple Steam Generator Tube Leakage (pages 1-3 of the GIMCS report). Actions relating to GI-163 were completed on July 16, 2009 with the issuance of a memorandum to the Executive Director of Operations, including the supporting technical basis. The technical work conducted to address this issue supports its closure with no changes to existing regulations or guidance beyond new technical specification requirements that all U.S. pressurized-water reactor (PWR) licensees voluntarily adopted. As of September 30, 2007, new performance-based technical specification requirements were in place at all U.S. PWRs in response to NRC Generic Letter 2006-01, "Steam Generator Tube Integrity and Associated Technical Specifications." These requirements are the culmination of work between NRC staff and the industry to develop a generic template for new technical specification requirements incorporating a programmatic, performance-based approach for ensuring steam generator tube integrity. Each PWR licensee adopted the new technical specification requirements voluntarily, consistent with the generic template, and not as the result of an NRC backfit. The NRC staff completed its review of the GI and determined that no additional regulatory actions are necessary.

GI-186, Implementation and Verification, Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants (pages 4-6 of the GIMCS report). In April 2008, the Nuclear Energy Institute (NEI) submitted preliminary guidelines to address reactor vessel head drop consequence analyses and to establish a highly reliable handling system for reactor vessel head lifts. In July 2008, NEI submitted final industry-developed guidelines for the above specified applications and other related applications. On September 5, 2008, the NRC staff issued a safety evaluation endorsing these guidelines, with one exception regarding acceptance criteria for the consequence analysis. The staff also issued supplementary inspection guidance for refueling and other outage activities that addresses implementation of the industry initiative on control of heavy loads. This inspection guidance was posted for inspector use and public review on September 18, 2008. The NRC issued Regulatory Issue Summary 2008-28, "Endorsement of Nuclear Energy Institute Guidance for Reactor Vessel Head Heavy Load Lifts," to notify stakeholders of NRC endorsement of the guidelines in NEI 08-05. Through December 2009, the NRC staff is conducting sampling inspections to validate initial implementation of the guidelines. The staff will submit a closeout memorandum for review through the ACRS by January 2010. The closeout schedule has been adjusted in order to address inspection issues arising during the initial implementation of the industry initiative on heavy loads.

GI-189, Regulatory Office Implementation, Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion during a Severe Accident (pages 7-10 of the GIMCS report). The NRC staff has reviewed industry proposals from licensees affected by GI-189 and has concluded that those proposed modifications will resolve GI-189 and provide benefit for some separate security scenarios which were identified during the course of the investigation. On June 15, 2007, the NRC staff issued letters to affected licensees accepting the commitments. 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 8 of 9 affected sites. Implementation and verification activities at the final affected site are expected to be complete, and this issue is expected to be closed, by early 2010.

GI-191, Regulatory Office Implementation, Assessment of Debris Accumulation on PWR Sump Performance (pages 11-16 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/or the related generic letter, 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. The testing resulted in submittal of a topical report to the NRC in April 2009. The NRC staff determined that additional testing is still needed and the PWR Owners group expects to complete the testing by the end of 2009. The NRC expects to issue a safety evaluation on the topical report in mid 2010. The safety evaluation will provide guidance to licensees regarding use of the industry-developed test results and topical report. During 2009, the NRC will review licensee responses to NRC requests for additional information to resolve plant-specific testing and evaluation issues. Review and resolution of the remaining technical issues should support industry-wide resolution of this issue in 2010.

GI-193, Technical Assessment, Boiling Water Reactor (BWR) Emergency Core Cooling System (ECCS) Suction Concerns (pages 17-19 of the GIMCS report). The task action plan to resolve this GI involves an evaluation of suppression pool designs, the dynamics of air entrainment in the suppression pool, and the impact of air entrainment on ECCS pump performance. The BWR owners group has agreed to provide input which would provide insights into 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. This input is expected late in 2009. Staff efforts are under way to estimate the maximum potential void fraction through scale experiments being planned at Purdue University. These experiments are expected to characterize the behavior of the BWR Mark I design with regard to the potential transport of air bubbles resulting from a LOCA blowdown. Actual model testing is expected to begin by January 2010.

GI-199, Safety/Risk Assessment, Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States for Existing Plants (pages 20-22 of the GIMCS report). While reviewing new reactor applications and updating seismic hazard information from the U.S. Geological Survey, the staff identified that the estimated seismic hazard levels at some current central and eastern U.S. (CEUS) nuclear sites may be higher than seismic hazard values used in design and previous evaluations. GI-199 was opened to assess the implications of updated seismic data and methods on operating nuclear plants. A comparison of the new seismic hazard data and methods with the earlier evaluations conducted by the NRC staff as part of the Individual Plant Examination of External Events (IPEEE) Program showed that seismic designs of operating plants in the CEUS still provide adequate safety margins. At the same time, the staff recognized that the new seismic data and models could reduce available safety margins. The Electric Power Research Institute (EPRI) is also evaluating the effects of new seismic hazard data and methods on U.S. nuclear plants. The NRC Office of Nuclear Regulatory Research is collaborating with EPRI to assure that the complex seismic hazard assessments make use of available expertise for a sound technical approach. The assessment is expected to be completed by the end of 2009.

M. Gavrilas, et al.

- 5 -

Thus, five reactor GIs remain to be resolved.

Nonreactor Generic Issues

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

I will continue to keep you informed of the staff's progress in resolving the remaining reactor GIs and any future GIs as well as any major problems that may surface during their resolution.

Enclosure:
As stated

Thus, five reactor GIs remain to be resolved.

Nonreactor Generic Issues

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

I will continue to keep you informed of the staff's progress in resolving the remaining reactor GIs and any future GIs as well as any major problems that may surface during their resolution.

Enclosure:
As stated

DISTRIBUTION:

E. Hackett, ACRS	S. Duraiswamy, ACRS	B. Mallett, DEDR	M. Virgilio, DEDMRT
C. Miller, FSME	A. McIntosh, FSME	M. Weber, NMSS	Y. Chen, NMSS
B. White, NMSS	B. Doolittle, NMSS	M. Johnson, NRO	C. Jackson, NRO
J. O'Driscoll, NRO	E. Leeds, NRR	J. Grobe, NRR	B. Ruland, NRR
M. Evans, NRR	S. Bahadur, NRR	M. Murphy, NRR	E. Murphy, NRR
M. Ross-Lee, NRR	S. Jones, NRR	J. Golla, NRR	M. Scott, NRR
R. Zimmerman, NSIR	L. Harris, NSIR	B. Sheron, RES	J. Lyons, RES
M. Case, RES	J. Uhle, RES	C. Lui, RES	D. Coe, RES
J. Lane, RES	A. Velazquez-Lozada, RES	J. Kauffman, RES	S. Collins, RGN-I
L. Reyes, RGN-II	J. Caldwell, RGN-III	E. Collins, RGN-IV	OEGIB RF
DRA RF	EDO RF		

ADAMS Accession No.: ML092800202

OFFICE	OEGIB	BC:OEGIB
NAME	RPerkins	BBeasley
DATE	10/8/09	10/ /09