

August 8, 2007

MEMORANDUM TO: Farouk Eltawila, Director  
Division of Risk Assessment & Special Projects  
Office of Nuclear Regulatory Research

THRU: Patrick W. Baranowsky, Deputy Director */RA/*  
Operating Experience and Risk Analysis  
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SUBJECT: GENERIC ISSUE MANAGEMENT CONTROL SYSTEM (GIMCS)  
REPORT – THIRD QUARTER FY 2007

The enclosed Third Quarter FY 2007 GIMCS Report reflects results from continued implementation of generic issues program (GIP) improvements described in SECY-07-0022, "Status Report on Proposed Improvements to the Generic Issues Program" (ML063460239).

The GIP staff continued working with the responsible offices to ensure accurate and complete information updates for open Generic Issues (GIs). This interaction improved office understanding of the expectations for consistency in GIMCS updates and their associated roles and responsibilities. The results include detailed GIMCS update information from the responsible offices verified through the management level for these GIs.

The GIP staff also continued to make minor additional improvements to the process for obtaining routine GIMCS and for streamlining the process, as appropriate. For example, the staff developed an 8-step guideline for performing the quarterly GIMCS update and associated reporting and documenting management review of the update information (ML071910420).

As with the 2<sup>nd</sup> Quarter GIMCS Report, this report excludes the GIMCS Accounting Status Tables (count of 18 tables). You may access these GIMCS Accounting Status Tables in ADAMS (ML071910429).

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The table below presents the summary status of the open GIs and GIs closed during the third quarter FY 2007. The paragraphs following this summary table provide a narrative summary of the current status of these GIs. Finally, the enclosure provides the GIMCS report details for these GIs.

Status Summary of GIs Active During 3 <sup>rd</sup> Quarter FY 2007						
GI No.	Title	Current Stage	Status	Planned Closure	Months Open	Regulatory Impacts
156.6.1	Pipe Break Effects on Systems and Components	Technical Assess.	Active	12/2007	197	None
163	Multiple Steam Generator tube Leakage	Regulatory Office Implementation		04/2009	180	NUREG 1430 - 1432, GL 2006-01, PWR T/S
186	Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants	Implement & Verify	Active	10/2007	98	NUREG-1774, NUREG-0800, Sec. 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		06/2010	73	10CFR50.44, 10CFR50.34
191	Assessment of Debris Accumulation on PWR Sump	Regulatory Office Implementation		10/2008	129	RG 1.82 Rev. 3, NUREG-0800, GL 1985-22, Bulletin 2003-01, GL 2004-02
193	BWR ECCS Suction Concerns	Technical Assess.	Active	03/2008	61	To Be Determined
199	Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States	Screening	Active	2/2008	25	To Be Determined
202	Spent Fuel Pool Leakage Impacts	Screening	Closed	05/2007	10	None
NMSS-0007	Criticality Benchmarks Greater Than 5% Enrichment	Implement & Verify	Active	08/2007	109	ISG-10
NMSS-0014	Surety Estimates for Groundwater Restoration at In-Situ Leach Facilities	Implement & Verify	Closed	04/2007	108	NUREG-1569, BTP

## **Narrative Summary of Active GIs**

### REACTOR GIs

**GI-156.6.1 TECHNICAL ASSESSMENT, Pipe Break Effects on Systems and Components** (pages 1-3 of GIMCS report): The staff completed review of licensee piping configurations in October 2006 and identified one site for which additional information is needed to determine if there might be a vulnerability. Staff from the Office of Nuclear Regulatory Research (RES) and the Office of Nuclear Reactor Regulation (NRR) met on 06/01/2007 and decided NRR will interface with the licensee for this site to help identify and assess options for further assessment of this potential vulnerability. Based on information provided by the licensee on June 29, 2007, the issue was resolved for this plant site.

**GI-163 REGULATORY OFFICE IMPLEMENTATION, Multiple Steam Generator Tube Leakage** (pages 4-7 of GIMCS report): All pressurized water reactor (PWR) licensees submitted license amendment applications to change their technical specifications in accordance with technical specifications task force (TSTF)-449 as part of their response to NRC Generic Letter 2006-01, "Steam Generator Tube Integrity and Associated Technical Specifications." The staff has approved and issued amendments for 48 PWRs and has targeted December 31, 2007, for issuing amendments for the remaining PWRs. The Steam Generator (SG) Action Plan tasks relevant to resolution of this GI have been completed with the exception of task 3.1.k, which involves evaluation of the conditional probabilities of multiple tube failures for risk assessment pertaining to SG alternate repair criteria. The staff's actions for this task are performed following applicable regulatory office processes and will assess the condition from the broad standpoint of the integrity of the overall tube, rather than focusing only on tube locations with alternate repair criteria. The staff targets completion by January 31, 2008. The current target date to close this GI is by April 30, 2009.

**GI-186 IMPLEMENTATION AND VERIFICATION, Potential Risk and Consequences of Heavy Load Drops in Nuclear Power** (pages 8-10 of GIMCS report): The staff issued Supplement 1 to Regulatory Issue Summary (RIS) 2005-25 to notify industry of the changes to SRP Section 9.1.5 and further clarify existing regulatory expectations associated with 10 CFR 50.59 and 50.71(e), as these requirements relate to the safe handling of heavy loads and load drop analyses. The current target date to close this GI is by October 31, 2007.

**GI-189 REGULATORY OFFICE IMPLEMENTATION, Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident** (pages 11-15 of GIMCS report): The staff received industry proposals for modifications that incorporate security insights in late February and early March 2007. The staff reviewed the industry proposals and concluded that the proposed modifications would resolve GSI-189 and provide benefit for some security scenarios. On April 23, 2007, the Executive Director for Operations (EDO) issued a memo informing the Commission of the staff's intent to accept the commitments and perform verification inspections at the affected sites. On June 15, 2007, the NRC staff issued letters to affected licensees accepting the commitments. The NRC staff also notified licensees of the intent to perform verification inspections at the affected sites and clarified the scope of the inspection relative to the commitments. Based on industry proposals, the staff expects full implementation of the modifications to be completed by June 2008 at nearly all affected units, with two units delayed as late as early 2010 for more complex modifications. The staff expects to ultimately close out this GI by June 30, 2010.

**GI-191 REGULATORY OFFICE IMPLEMENTATION**, Assessment of Debris Accumulation on PWR Sump Performance (pages 16-21 of GIMCS report): The staff will use inputs from review of licensee responses to Generic Letter (GL) 2004-02, plant audits, and items identified from Regional inspections using Temporary Instruction TI-2515/166 to support closure of GI-191. As of June 2007, the NRC has approved 15 extension requests for completing modifications identified in licensee responses to GL 2004-02. The staff continues to hold public meetings with Nuclear Energy Institute (NEI) and industry representatives (approximately 2 per quarter) and to brief Advisory Committee on Reactor Safeguards (ACRS) periodically (approximately 2 per year). The current target date to complete assessment of licensee modifications is June 30, 2008, and to complete evaluation of licensee GL responses is July 24, 2008, in support of issue closure by October 28, 2008.

**GI-193 TECHNICAL ASSESSMENT**, BWR ECCS Suction Concerns (pages 22-24 of GIMCS report): In March 2007, the Offices of RES and NRR (the Generic Communication and Power Uprate Branch) decided to seek Boiling Water Reactor (BWR) Owners Group (BWROG) cooperation to support the ongoing assessment of this GI, consistent with the principles described in SECY-07-0022. During a conference call between NRC staff and the BWROG on June 6, 2007 (ML071640257), the BWROG informed the staff that no plant specific studies have been performed relative to GI-193 issues. The BWROG does not have any information regarding operability of ECCS pumps when air ingress might lead to void fractions greater than 20 percent nor on the period of time over which blow-down gas clears the suppression pool. However, the BWROG did provide references to two research reports from the Nordic Regulatory Authority in Europe (ML071640273 and ML071640280). The staff will evaluate the significance of the information provided by the BWROG. The current target date to close out this GI is by March 31, 2008.

**GI-199 SCREENING**, Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States for Existing Plants (pages 25-27 of GIMCS report): In April 2007, RES decided to complete the United States Geologic Survey (USGS) update of seismic hazard assessment of CEUS plants and then use this information to perform the screening analysis for this GI. In May 2007, the NRC developed a plan to complete the screening analysis for GI-199 by February 2008, and began work on initial tasks described in this plan.

**GI-202 CLOSED**, Spent Fuel Pool Leakage Impacts (pages 28-29 of GIMCS report): The staff completed initial screening analysis in January 2007. In April 2007, screening panel members completed their review in accordance with MD 6.4, and provided comments to the staff. In May 2007, the staff refined the screening analysis in response to the panel members' comments and to incorporate recent information from NRC inspection reports. The panel recommended that this issue be removed from the GIP because the necessary regulatory requirements and processes are already in place to address it. The staff provided the panel's closure memorandum to the RES office director in May 2007 and the RES office director signed the closure memorandum on May 31, 2007, bringing formal closure to GI-202 (ML071450130).

At the end of the reporting period, seven reactor GIs remained to be resolved: four GIs have been transferred from RES to NRR for regulation and guidance development or for implementation and verification, two GIs are undergoing technical assessment in RES, and one GI is in initial screening in RES.

## NON-REACTOR GIs

**GI-NMSS-0007 IMPLEMENTATION, Criticality Benchmarks Greater Than 5% Enrichment** (pages 30-32 of GIMCS report): The staff prepared Interim Staff Guidance (ISG)-10, "Justification for Minimum Margin of Subcriticality for Safety," which was finalized in June 2006, to communicate the acceptability of using the TSUNAMI code as one method for determining subcriticality margins. The TSUNAMI code can be used to apply adequately large margins to ensure the application is properly validated by SCALE 5.0. Additional benchmarks would be needed for lower margins in certain applications. However, development and funding of additional benchmarks are not in the scope of this GI. The current activities include preparing a closure memorandum and obtaining management approval to support GI closure by August 31, 2007.

**GI-NMSS-0014 CLOSED, Surety Estimates for Groundwater Restoration at In-Situ Leach Facilities** (pages 33-35 of GIMCS report): The staff issued draft NUREG/CR-6870, "Consideration of Geochemical Issues in Groundwater Restoration at Uranium In Situ Leach Mining Facilities" for public comment in June 2005 and finalized and published NUREG/CR-6870 in January 2007. The NRC office of Federal and State Materials and Environmental Management Programs closed Generic Issue GI-NMSS-0014 as described in memorandum to the NRC Executive Director for Operations, dated May 25, 2007 (ML070790303).

At the end of the reporting period, one non-reactor GIs remained to be resolved.

I will continue to keep you informed of progress in resolving the remaining unresolved reactor and non-reactor GIs as well as any major problems that might surface during the course of their resolution.

Enclosure:  
GIMCS Report, July 2007

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GIMCS Report, July 2007

Distribution:

OEGIB RF	WBateman, NRR	SCollins, RGN-I
EDO	JGrobe, NRR	WTravers, RGN-II
MJohnson/BSheron, RES	JDyer, NRR	JCaldwell, RGN-III
JUhle, RES	EMurphy, NRR	BMallett, RGN-IV
HVandermolen, RES	SJones, NRR	JLarkins, ACRS
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 NAGEMENT CONTROL SYSTEM: ML072130434  
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