POLICY ISSUE
(Information)

August 27, 2004 SECY-04-0156

FOR: The Commissioners

FROM: Luis A. Reyes
Executive Director for Operations /RA/

SUBJECT: SUMMARY OF ACTIVITIES RELATED TO GENERIC SAFETY ISSUES

PURPOSE:

To present the annual summary of activities related to Generic Safety Issues (GSIs).

BACKGROUND:

Since 1983, the staff of the U.S. Nuclear Regulatory Commission (NRC) has adhered to the practice of providing the Commission with an annual update of the progress made in resolving GSIs. The Commission reinforced this practice in a staff requirements memorandum (SRM) dated May 8, 1998, in response to SECY-98-030, "Implementation of [Direction-Setting Issue] DSI-22 Research," in which the Commission directed the staff to provide an annual summary of activities related to open reactor and non-reactor GSIs.

Management Directive (MD) 6.4, "Generic Issues Program," dated December 2001, delineates the NRC's program for addressing reactor and non-reactor generic issues. Specifically, the program described in MD 6.4 comprises seven stages, including (1) identification, (2) initial screening, (3) technical assessment, (4) regulation and guidance development, (5) regulation and guidance issuance, (6) implementation, and (7) verification. Candidate generic issues may be identified by organizations or individuals either within or external to the NRC.

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Generally, safety concerns associated with operating events, research results, or risk assessments form the basis for the identification of generic issues (GI) by the staff, the Advisory Committee on Reactor Safeguards (ACRS), the nuclear industry, or the public. After an issue is identified, the staff conducts an initial screening exercise to determine whether it should be processed as a generic safety issue (GSI), excluded from further analysis, or sent to another NRC program for review. In the technical assessment stage, the staff renders a determination as to whether the issue involves adequate protection, safety enhancement, or burden reduction. In addition, the staff's related technical findings become the basis for developing or revising agency rules, guidance, and programs. In the final three stages, the agency issues new or revised regulations or guidance, which are then implemented by licensees and/or certificate holders, and verified by the NRC. GSIs identified after March 1999 have been processed in accordance with MD 6.4.

The NRC's Office of Nuclear Regulatory Research (RES) tracks the status of all generic issues in the agencywide Generic Issue Management Control System (GIMCS) and documents the technical assessments and dispositions of all issues in NUREG-0933, "A Prioritization of Generic Safety Issues."

DISCUSSION:

Reactor GSIs

For generic issues associated with nuclear reactor power plants, the RES staff is responsible for screening all new generic issues and performing the technical assessments of GSIs. In addition, the Office of Nuclear Reactor Regulation (NRR) is responsible for developing and issuing regulations or guidance that may be recommended in the technical assessments, and subsequently verifies the implementation of the resultant regulation or guidance by licensees and/or certificate holders. The staff also conducts an "adequate protection evaluation" for each newly identified GSI to determine whether plants should continue operating while the issue is being resolved. Since the inception of the generic issues program in 1976, the staff has closed 836 of the 847 identified reactor generic issues. A description of the 11 reactor GSIs that remain open at this time as well as a summary of the status of their various stages of initial screening, technical assessment, or regulation and guidance development are attached. The following is a summary of the activities related to reactor GSIs since the staff issued its last report to the Commission in SECY-03-0124 on July 24, 2003.

Identification

The staff identified two new GIs for initial screening:

196 Boral Degradation
197 Iodine Spiking Phenomena

Initial Screening

The staff completed the initial screening of the following four GIs:

186 Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants

193 Boiling-Water Reactor (BWR) Emergency Core Cooling System (ECCS) Suction Concerns

194 Implications of Updated Probabilistic Seismic Hazard Estimates
195 Hydrogen Combustion in Foreign BWR Piping

Technical Assessment

The following seven GSIs are undergoing technical assessment:

80 Pipe Break Effects on Control Rod Drive (CRD) Hydraulic Lines in the Drywells of BWR MARK I and II Containments
156.6.1 Pipe Break Effects on Systems and Components
163 Multiple Steam Generator Tube Leakage
185 Control of Recriticality Following Small-Break LOCAs in Pressurized-Water Reactors (PWRs)
186 Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants
188 Steam Generator Tube Leaks/Ruptures Concurrent with Containment Bypass
193 Boiling-Water Reactor (BWR) Emergency Core Cooling System (ECCS) Suction Concerns

Regulation and Guidance Development

Regulation and guidance development continued on the following three GSIs:

186 Potential Risk and Consequences of Heavy Load Drops
189 Susceptibility of Ice Condenser and MARK III Containments to Early Failure from Hydrogen Combustion During a Severe Accident
191 Assessment of Debris Accumulation on PWR Sump Performance

Closed

The staff closed the following GSI during this reporting period:

168 Environmental Qualification of Electrical Equipment

<u>Non-Reactor GSIs</u>

The NRC's Office of Nuclear Material Safety and Safeguards (NMSS) has the primary responsibility for processing non-reactor GSIs through all stages of MD 6.4, and RES tracks the status of the unresolved non-reactor GSIs in the quarterly updates of GIMCS. A description of the 3 non-reactor GSIs that remain open at this time as well as a summary of the status of their various stages of technical assessment or regulation and guidance development are attached. The following is a summary of the activities related to non-reactor GSIs since the staff issued its last report to the Commission in SECY-03-0124 on July 24, 2003.

Identification

The staff did not identify any new GSI for screening.

Initial Screening

No initial screening activities were warranted during this reporting period.

Technical Assessment

The following is the status of the ongoing technical assessment of two GSIs:

NMSS-7 Criticality Benchmarks Greater than 5% Enrichment
NMSS-14 Surety Estimates for Groundwater Restoration at In Situ Leach Facilities

Regulation and Guidance Development

Regulation and guidance development continued on the following GSI:

NMSS-16 Adequacy of 0.05 Weight Percent Limit in 10 CFR Part 40

CONCLUSION:

Since the staff issued its last report to the Commission on July 24, 2003, two GSIs were dropped from further pursuit, one GSI was closed, and another 14 GSIs remain to be resolved as the staff continued to implement the MD 6.4 process of identifying and resolving reactor and non-reactor GSIs. The staff will continue to provide annual updates to the Commission on GSI-related activities and will inform the Commission of any significant developments.

/RA/

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Executive Director
for Operations

Attachment: Description and Status of Open
GSIs as of August 16, 2004

Initial Screening

No initial screening activities were warranted during this reporting period.

Technical Assessment

The following is the status of the ongoing technical assessment of two GSIs:

NMSS-7 Criticality Benchmarks Greater than 5% Enrichment
NMSS-14 Surety Estimates for Groundwater Restoration at In Situ Leach Facilities

Regulation and Guidance Development

Regulation and guidance development continued on the following GSI:

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Attachment: Description and Status of Open
GSIs as of August 16, 2004

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