



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, DC 20555 - 0001**

November 7, 2011

The Honorable Gregory B. Jaczko  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

SUBJECT: SUMMARY REPORT – 587<sup>th</sup> MEETING OF THE ADVISORY COMMITTEE ON  
REACTOR SAFEGUARDS, OCTOBER 6-8, 2011

Dear Chairman Jaczko:

During its 587<sup>th</sup> meeting, October 6-8, 2011, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports, letter, and memorandum:

**REPORTS**

Reports to Gregory B. Jaczko, Chairman, NRC, from Said Abdel-Khalik, Chairman, ACRS:

- Initial ACRS Review of: (1) the NRC Near-Term Task Force Report on Fukushima and (2) Staff's Recommended Actions to be Taken Without Delay, dated October 13, 2011
- Enhancing the Fuel Cycle Oversight Process, dated October 17, 2011

**LETTER**

Letter to R. W. Borchardt, Executive Director for Operations, NRC, from Said Abdel-Khalik, Chairman, ACRS:

- Draft Final Regulatory Guide (RG) 1.82, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," Revision 4, dated October 17, 2011

**MEMORANDUM**

Memorandum to R. W. Borchardt, Executive Director for Operations, NRC, from Edwin M. Hackett, Executive Director, ACRS:

- Proposed Closeout – Generic Issue 186, "Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants," dated October 12, 2011

## HIGHLIGHTS OF KEY ISSUES

### 1. Draft Final Regulatory Guide (RG) 1.82, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," Revision 4

The Committee met with representatives of the NRC staff to discuss the Draft Final RG 1.82, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident," Revision 4. The objectives of this revision were to improve readability and to include updated staff guidance based on information from research conducted by both the NRC and industry related to Generic Safety Issue (GSI) – 191, "Assessment of Debris Accumulation on PWR Sump Performance," in the last several years. The updated guidance included in this revision was related to determination of strainer head loss, chemical effects, downstream effects, protective coatings, latent debris, vortexing, and air ingestion. Development of guidance on other issues was deferred to a future revision of the Guide, and included containment accident pressure impacts on net positive suction head, downstream in-vessel effects, and GSI-191 resolution closure options that were recently approved by the Commission. The staff also discussed some of the public comments that were received.

#### Committee Action

The Committee issued a letter to the Executive Director for Operations on this matter dated October 12, 2011, recommending that Revision 4 to RG 1.82 not be issued until revisions are made to address comments from the Committee.

### 2. Fuel Cycle Oversight Process (FCOP)

The Committee met with representatives of the NRC staff to discuss the Fuel Cycle Oversight Process. The staff presented proposed enhancements to the process including a revised risk-informed and performance-based framework, cornerstones to monitor licensee performance, a significance determination process (SDP) to assess inspection findings, and incentives to establish effective licensee corrective action programs. The staff's proposed fuel cycle facility cornerstones aligned well with those used in the reactor oversight process, except for the barrier performance cornerstone which was integrated into a cornerstone on "safety controls." The staff also presented three types of significance determination processes: (1) qualitative, (2) case-by-case, and (3) PRA-based. The staff recommended the qualitative type for significance determination. In closing, the staff recommended further development of the hazards analysis-based cornerstones, a qualitative type SDP, an action matrix with consideration of cross-cutting issues, and a supplemental inspection program based on licensee performance.

### Committee Action

The Committee issued a letter to the NRC Chairman on this matter dated October 17, 2011, concluding that the proposed FCOP framework is a substantial improvement over the traditional process and that it is ready to go to the next stage of development. The Committee recommended that during the pilot process, the staff consider a separate cornerstone that explicitly reflects barrier performance. The Committee also recommended that the development of a quantitative SDP process be pursued for the evaluation of more significant events.

### 3. NRC Staff Recommendations on the Near-Term Task Force Report Regarding the Events at the Fukushima Dai-ichi Site in Japan

The Committee met with representatives of the NRC's Senior Management to discuss the Notation Vote Paper prepared by the staff of the prioritization of actions to be taken in response to Fukushima lessons learned, as requested in the SRM to SECY-11-0093, dated August 19, 2011. The Notation Vote Paper, issued on October 3, 2011, provides the staff's proposed prioritization of the Fukushima Near-Term Task Force (NTTF) recommendations to (1) reflect regulatory actions to be taken by the staff in response to the Fukushima lessons learned; (2) identify implementation challenges; (3) include the technical and regulatory bases for the prioritization; (4) identify additional recommendations, if any; and (5) include a schedule and milestones with recommendations for appropriate stakeholder engagement and involvement of the ACRS.

### Committee Action

The Committee issued a letter to the NRC Chairman on October 13, 2011 regarding two previous documents related to the Fukushima event: the NRC Near-Term Task Force Report on Fukushima and the Notation Vote Paper with the Staff's Recommended Actions to be Taken Without Delay. In general the Committee agreed with the two documents prepared by the staff; however, several recommendations were offered beyond those proposed by the staff. The Committee also recommended that licensing actions requiring the granting of containment accident pressure credit be suspended until the implications of post-Fukushima containment pressure control measures are understood.

### 4. Draft Report on the Biennial ACRS Review of the NRC Safety Research Program

The Committee discussed the draft 2012 ACRS biennial report to the Commission on its review and evaluation of the NRC safety research program.

### Committee Action

The Committee will continue its discussion of this report during its November 3-5, 2011, meeting.

5. Proposed Closeout of Generic Issue -186, "Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants"

The Committee considered the proposed closeout of Generic Issue -186, "Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants," and decided not to review it. The Committee has no objection to the staff's proposal to close this generic issue.

SCHEDULED TOPICS FOR THE 588<sup>th</sup> ACRS MEETING

The following topics are scheduled for the 588<sup>th</sup> ACRS meeting, to be held on November 3-5, 2011:

- Prioritization of the Near-Term Task Force Recommendations for Agency Actions Following the Events in Japan
- Nine Mile Point Unit 2 Extended Power Uprate
- Branch Technical Position 7-19, "Guidance for Evaluation of Diversity and Defense-in-Depth in Digital Computer-Based Instrumentation and Control Systems"
- Draft Report on the Biennial ACRS Review of the NRC Safety Research Program
- Preparation for Meeting with the Commission

Sincerely,

**/RA/**

Said Abdel-Khalik  
Chairman

6. Proposed Closeout of Generic Issue -186, "Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants"

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Sincerely,

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Said Abdel-Khalik  
Chairman

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OFFICE	ACRS	SUNSI Review	ACRS	ACRS	ACRS
NAME	YDiazSanabria	YDiazSanabria	CSantos	EMHackett	EMH for SAK
DATE	11/1/2011	11/1/2011	11/1/2011	11/02/2011	11/02/2011

OFFICIAL RECORD COPY

Letter to the Honorable Gregory B Jaczko, Chairman, NRC, from Said Abdel-Khalik, Chairman, ACRS, dated

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