



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

August 5, 2016

The Honorable Stephen G. Burns
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: SUMMARY REPORT – 635th MEETING OF THE ADVISORY COMMITTEE ON
REACTOR SAFEGUARDS, JULY 6-8, 2016

Dear Chairman Burns:

During its 635th meeting, July 6-8, 2016, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following report, letters, and memoranda:

REPORT

Report to Stephen G. Burns, Chairman, NRC, from Dennis C. Bley, Chairman, ACRS:

- “Report on the Safety Aspects of the License Renewal Application of the LaSalle County Station, Units 1 and 2,” dated July 18, 2016

LETTERS

Letters to Victor M. McCree, Executive Director for Operations, NRC, from Dennis C. Bley, Chairman, ACRS:

- “Draft Final Regulatory Guide 1.230, ‘Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule,’ and Draft Final Report NUREG- 2163, ‘Technical Basis for Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule,’” dated July 18, 2016
- “Topical Report WCAP-16996-P, Volumes I, II and III, Revision 1, ‘Realistic Loss-of-Coolant Accident Evaluation Methodology Applied to the Full Spectrum of Break Sizes,’” dated July 19, 2016

MEMORANDA

Memoranda to Victor M. McCree, Executive Director for Operations, NRC, from Andrea D. Valentin, Executive Director, ACRS:

- “Draft Regulatory Guide (DG-1334),” dated July 19, 2016
 - Draft Regulatory Guide 1334, “Guidance for Implementation of 10 CFR 50.59, ‘Changes, Test, and Experiments’”
- “Draft Regulatory Guides,” dated July 19, 2016
 - Draft Final Regulatory Guide 1.140, Revision 3, “Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Normal Atmosphere Cleanup Systems in Light Water Cooled Nuclear Power Plants”
 - Draft Final Regulatory Guide 1.219, Revision 1, “Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors”
 - Draft Final Regulatory Guide 1.29, Revision 5, “Seismic Design Classification for Nuclear Power Plants”
 - Draft Final Regulatory Guide 4.24, “Aquatic Environmental Studies for Nuclear Power Stations”
 - Draft Final Regulatory Guide 8.10, Revision 2, “Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as is Reasonably Achievable”
- “Withdrawal of Regulatory Guide,” dated July 19, 2016
 - Regulatory Guide 1.86, “Termination of Operating Licenses for Nuclear Reactors”
- “Documentation of Receipt of Applicable Official NRC Notices to the Advisory Committee on Reactor Safeguards for July 2016,” dated July 19, 2016

HIGHLIGHTS OF KEY ISSUES

1. License Renewal Application of the LaSalle County Station, Units 1 and 2

The Committee met with representatives of the NRC staff and Exelon Generation Company (Exelon) to discuss the LaSalle County Station, Units 1 and 2 (LaSalle) license renewal application and the associated final safety evaluation report (SER). Exelon’s presentation provided an overview of the plant, and described their aging management programs and license

renewal commitments. The staff's presentation described closure of two open items identified in the draft SER: 1) the EVT-1 Examination Coverage for Boiling Water Reactor Vessel Identification Attachment Welds Aging Management Program and 2) the Limited Volumetric Examination Coverage for Boiling Water Reactor Stress Corrosion Cracking Aging Management Program. The staff concluded that Exelon had adequately addressed their concerns and closed the open items. The staff also concluded that the requirements of 10 CFR 54.29(a)(1) and (a)(2) were met for license renewal of LaSalle.

Committee Action

The Committee issued a letter report to the NRC Chairman on this matter, dated July 18, 2016, with the following conclusion and recommendation: 1) The programs established and committed to by Exelon to manage age-related degradation provide reasonable assurance that LaSalle can be operated in accordance with their current licensing bases for the period of extended operation without undue risk to the health and safety of the public and 2) Exelon's application for renewal of the operating license for La Salle should be approved.

2. Draft Final Regulatory Guide 1.230, "Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule," and Draft Final Report NUREG-2163, "Technical Basis for Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule"

The Committee met with representatives of the NRC staff to discuss Draft Final Regulatory Guide 1.230, "Regulatory Guidance on the Alternate Pressurized Thermal Shock Rule," and the supporting technical basis report Draft Final NUREG-2163, "Technical Basis for Regulatory Guidance on the Alternative Pressurized Thermal Shock Rule." The staff discussed the revisions to the regulatory guide and NUREG as a result of resolving public comments submitted on the draft versions of the two documents.

Committee Action

The Committee issued a letter to the Executive Director for Operations on this matter, dated July 18, 2016, with the recommendation that Regulatory Guide 1.230 and NUREG-2163 provide thorough guidance and a strong technical basis for licensees to use the Alternate Pressurized Thermal Shock Rule, 10 CFR 50.61a, and should be issued.

3. Review of WCAP-16996-P, "Realistic LOCA Evaluation Methodology Applied for the Full Spectrum of Break Sizes (FULL SPECTRUM LOCA METHODOLOGY)"

The Committee met with representatives of the NRC staff and Westinghouse Electric Corporation (Westinghouse) to discuss the Westinghouse licensing topical report WCAP-16996-P, Volumes I, II, and III, Revision 1, "Realistic Loss-of-Coolant Accident Evaluation Methodology Applied to the Full Spectrum of Break Sizes" and the associated staff final SER. Westinghouse described the WCAP-16996-P methodology to perform best estimate loss of coolant accident (LOCA) analyses for the full spectrum of LOCA break sizes (large-break, intermediate-break, and small-break). Previously, Westinghouse's Evaluation Model was approved only for large-break LOCAs. The staff discussed its review and the limitations and conditions stipulated in the SER.

Committee Action

The Committee issued a letter to the Executive Director for Operations on this matter, dated July 19, 2016, with the following conclusion and recommendations: 1) The Westinghouse methodology described in WCAP-16996-P is acceptable for meeting the regulatory requirements of 10 CFR 50.46, provided the methodology adheres to the staff's limitations and conditions in the draft final SER and the additional constraint discussed below, and 2) The draft final SER limitations and conditions need to be updated to identify clearly all the parameters and assumptions that need to be reviewed in future submittals. These limitations and conditions need to be referenced to the appropriate sections of WCAP-16996-P, Volumes I, II, and III, Revision 1 and the corresponding Westinghouse licensing letters.

RECONCILIATION OF ACRS COMMENTS AND RECOMMENDATIONS

- The Committee considered the Executive Director for Operations' response of March 16, 2016, to the February 23, 2016 ACRS letter, "Draft Final Rule 10 CFR 50.46c, 'Emergency Core Cooling System Performance during Loss-of-Coolant Accidents (LOCA)' and Associated Regulatory Guides." The Committee was satisfied with the Executive Director for Operations' response.
- The Committee considered the Executive Director for Operations' response of May 27, 2016, to the April 20, 2016 ACRS letter, "NUREG- 1927, Rev. 1, 'Standard Review Plan for Renewal of Specific Licenses and Certificates of Compliance for Dry Storage of Spent Nuclear Fuel'." The Committee was satisfied with the Executive Director for Operations' response.
- The Committee considered the Executive Director for Operations' response of May 22, 2016, to the April 18, 2016 ACRS letter, "Exemptions to the AP1000 Certified Design Included in the Levy Nuclear Power Plant Units 1 and 2 Combined License Application." The Committee was satisfied with the Executive Director for Operations' response.
- The Committee considered the Executive Director for Operations' response of June 3, 2016, to the April 19, 2016 ACRS letter, "Regulatory Guide 1.229, 'Risk-Informed Approach for Addressing the Effects of Debris on Post-Accident Long-Term Core Cooling'." The Committee was generally satisfied with the response and noted that the staff intends to add clarifications to address ACRS recommendations in the next revision planned for the near future. The Committee plans to review the next revision of this regulatory guide.
- The Committee considered the Executive Director for Operations' response of April 21, 2016, to the March 15, 2016 ACRS letter, "Closure of Fukushima Tier 3 Recommendations Related to Containment Vents, Hydrogen Control, and Enhanced Instrumentation." The Committee was satisfied with the Executive Director for Operations' response.

SCHEDULED TOPICS FOR THE 636th ACRS MEETING

The following topics are scheduled for the 636th ACRS meeting, to be held on September 8-10, 2016:

- Preparation for October Commission Meeting
- Review of Safety Evaluation Associated with Diablo Canyon Power Plant Units 1 and 2 Digital Replacement of Process Protection System
- Turkey Point Units 6 and 7 COLA Review
- Fermi Unit 2 License Renewal Application
- Review of Guidance for Closure Plan for Reevaluation of Flooding and Seismic Hazards for Operating Nuclear Power Plants (COMSECY-15-0019)

Sincerely,

/RA/

Dennis C. Bley
Chairman

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Sincerely,

/RA/

Dennis C. Bley
Chairman

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