



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
ADVISORY COMMITTEE ON NUCLEAR WASTE  
WASHINGTON, D.C. 20555

March 12, 2002

The Honorable Richard A. Meserve  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

Dear Chairman Meserve:

SUBJECT: SUMMARY REPORT - 489th MEETING OF THE ADVISORY  
COMMITTEE ON REACTOR SAFEGUARDS, FEBRUARY 7-8,  
2002, AND OTHER RELATED ACTIVITIES OF THE COMMITTEE

During its 489th meeting, February 7-8, 2002, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following report and letters. In addition, the Committee authorized Dr. John T. Larkins, Executive Director, ACRS, to transmit the memorandum noted below:

REPORT

- Review and Evaluation of the Nuclear Regulatory Commission's Safety Research Program (Report to Chairman Meserve, NRC, from George E. Apostolakis, Chairman, ACRS, dated February 14, 2002)

LETTERS

- The Revised Reactor Oversight Process (Letter to William D. Travers, Executive Director for Operations, NRC, from George E. Apostolakis, Chairman, ACRS, dated February 13, 2002)
- Reevaluation of the Technical Basis for the Pressurized Thermal Shock Rule (Letter to William D. Travers, Executive Director for Operations, NRC, from George E. Apostolakis, Chairman, ACRS, dated February 14, 2002)

MEMORANDUM

- Proposed Amendment to 10 CFR 50.55a to Incorporate by Reference ASME Boiler and Pressure Vessel and OM Code Cases (Memorandum to William D. Travers, Executive Director for Operations, NRC, from John T. Larkins, Executive Director, ACRS, dated February 12, 2002)

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

1. Risk-Informed Regulation Implementation Plan

The Committee heard presentations by and held discussions with representatives of the NRC staff concerning SECY-01-0218, "Update of the Risk-Informed Regulation Implementation Plan." The staff discussed the status of selected risk-informed activities and the relationship between the Implementation Plan and "Performance Goals" of the NRC Strategic Plan in the Strategic Arenas for nuclear reactor safety, nuclear materials safety, and nuclear waste safety. The staff presented its prioritization process and discussed efforts to identify additional activities to be risk-informed. The staff also discussed efforts to apply planning, budgeting, and performance management (PBPM) to establish priority rankings for the various arena activities.

Committee Action

This briefing was for information only. No Committee action was required.

2. Meeting with the EDO and the Office Directors of NRR, NMSS, and RES

The ACRS and ACNW members met with the NRC Executive Director for Operations (EDO), Directors of the Office of Nuclear Reactor Regulation (NRR), Office of Nuclear Material Safety and Safeguards (NMSS), and Office of Nuclear Regulatory Research (RES) to discuss several items of mutual interest, including: initiatives associated with risk-informing NMSS activities; issues associated with core power uprates; risk-informed and performance-based regulatory approach; activities associated with future plant designs; and ongoing and proposed research activities.

Committee Action

Since this meeting was beneficial to all parties involved, the ACRS and ACNW plan to schedule such meetings periodically in coordination with the EDO and the Directors of NRR, NMSS, and RES.

3. Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19

The Committee heard presentations by and held discussions with representatives of the NRC staff concerning status of staff efforts to address probabilistic risk assessment (PRA) quality in regulatory activities. The staff presented its updated approach to

The Honorable Richard A. Meserve

revising Regulatory Guide 1.174 for the use of risk-information in license amendment reviews. The staff plans to develop a new regulatory guide, separate from Regulatory Guide 1.174, to collectively address matters related to PRA quality. The staff plans to endorse industrial standards under development by the American Society of Mechanical Engineers (ASME) and American Nuclear Society (ANS) with exceptions and clarifications, as appropriate. The staff also discussed plans to consider the results of industry PRA peer reviews conducted in accordance with NEI 00-02. The staff proposes to incorporate and/or reference information from other related documents on PRA quality (SECY-00-0162), to develop a PRA data handbook, and to revise NUREG/CR-6595 on large early release frequency.

#### Committee Action

This briefing was for information only. The Committee plans to continue its review of this matter during future meetings.

#### 4. PTS Technical Bases Reevaluation Project

The Committee heard presentations by and held discussions with the NRC staff regarding the Pressurized Thermal Shock (PTS) Technical Basis Reevaluation Project. The staff provided the status of the Project and presented the initial results of the analysis of the failure frequency of the Oconee Unit 1 reactor pressure vessel. The ACRS members and the staff discussed the treatment of uncertainties, validation of the RELAP5 code for PTS events, elimination of main steamline break scenarios, verification of human reliability analysis results, and variance narrowing associated with histogram sampling.

#### Committee Action

The Committee provided a letter to the Executive Director of Operations on this matter, dated February 14, 2002.

#### 5. Thermal-Hydraulic Phenomena Subcommittee Report

The Committee heard a report by the Chairman of the Thermal-Hydraulic Phenomena Subcommittee regarding issues discussed at its January 16-18, 2002 meeting. The Subcommittee heard presentations from the GE Nuclear Energy and the NRC staff regarding the staff's review of the GE Licensing Topical Report, "Constant Pressure Power Uprate" (CPPU), and heard presentations from Framatome ANP Richland and the NRC staff relative to the staff's review of the Framatome S-RELAP5 realistic

The Honorable Richard A. Meserve

thermal-hydraulic code version and its application to PWR large-break LOCA analysis.

### Committee Action

The Committee has scheduled review of the GE CPPU Topical Report during its April Meeting, subsequent to issuance of the NRC staff's Safety Evaluation on this matter. Committee review of the Framatome S-RELAP5 code is expected to occur later this year, following issuance of the NRC staff's Safety Evaluation.

### RECONCILIATION OF ACRS COMMENTS AND RECOMMENDATIONS

- The Committee discussed the response from the Executive Director for Operations (EDO) dated December 18, 2001, to the ACRS comments and recommendations included in the ACRS report dated November 16, 2001, concerning the safety aspects of the license renewal application for the Edwin I. Hatch Nuclear Plant, Units 1 and 2.

The Committee decided that it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated January 24, 2002, to the ACRS comments and recommendations included in the ACRS letter December 14, 2001, concerning the proposed steam generator program guidelines and associated generic license change package.

The Committee decided that it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated January 18, 2002, to the ACRS comments and recommendations included in the ACRS report dated November 18, 2001, concerning the NRC Action Plan to address the differing professional opinion issues on steam generator tube integrity.

The Committee plans to review the resolution of the NRC Action Plan items when they become available.

- The Committee considered the response from the EDO, dated February 1, 2002, to comments and recommendations included in the ACRS reports dated October 17 and December 12, 2001, concerning applications for core power uprates for the Duane Arnold Energy Center and the Dresden and Quad Cities Nuclear Power Plants, respectively.

The Committee decided that it was satisfied with the EDO response.

- The Committee considered the response from the EDO, dated January 25, 2002, to comments and recommendations included in the ACRS report dated December 12, 2001, concerning the proposed rulemaking for risk-informed revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors."

The Committee decided that it was satisfied with the EDO's response.

- The Committee considered the response from the EDO, dated January 10, 2002, to the comments and recommendations included in the ACRS letter dated October 12, 2001, concerning the revised Reactor Oversight Process (ROP).

The Committee decided to write a letter regarding the EDO's response reaffirming the ACRS comments regarding threshold values, concurrent findings, and, in accordance with the SRM dated December 20, 2001, the need to discuss risk-informed and performance-based elements of the ROP.

#### OTHER RELATED ACTIVITIES OF THE COMMITTEE

During the period from December 5, 2001, through February 6, 2002, the following Subcommittee meetings were held:

- Materials and Metallurgy - January 15-16, 2002

The Subcommittee reviewed the preliminary results of the Fracture Analysis of Vessels: Oak Ridge (FAVOR) code calculation associated with the Reevaluation of the Technical Basis for the Pressurized Thermal Shock Rule Screening Criterion Project.

- Thermal-Hydraulic Phenomena - January 16-18, 2002

The Subcommittee reviewed (1) The GE Nuclear Energy Licensing Topical Report NEDC-33004P, "Constant Pressure Power Uprate," Revision 2, and (2) the Framatome ANP Richland S-RELAP5 realistic thermal-hydraulic code version and its application to large-break LOCA analyses.

- Planning and Procedures (ACRS Retreat) - January 24-26, 2002

The Subcommittee discussed several matters, including: regulatory challenges

The Honorable Richard A. Meserve

associated with the licensing of future plant designs; NRC safety research program report to the Commission; use of formal decision analysis in the regulatory decisionmaking process; SAPHIRE code; issues associated with power uprates; matters related to the reactor oversight process; and the effectiveness of the ACRS process for conducting Committee business.

- Planning and Procedures - February 6, 2002

The Subcommittee discussed proposed ACRS activities, practices, and procedures for conducting Committee business and organizational and personnel matters relating to ACRS and its staff.

LIST OF MATTERS FOR THE ATTENTION OF THE EXECUTIVE DIRECTOR FOR OPERATIONS

- The Committee would like the opportunity to review the draft final amendment to 10 CFR 50.55a to incorporate by reference ASME Boiler and Pressure Vessel and OM code cases after reconciliation of public comments.
- In coordination with the EDO and Directors of NRR, RES, and NMSS, the ACRS and ACNW plan to schedule periodic meetings with the EDO and the Office Directors to discuss items of mutual interest in the future.
- The Committee decided to review the resolution of the NRC Steam Generator Action Plan items as they become available.
- The Thermal-Hydraulic Phenomena Subcommittee plans to review the validation of the RELAP5 code for pressurized thermal shock scenarios.
- The Materials and Metallurgy Subcommittee plans to review the staff's proposed risk acceptance criteria for the reactor pressure vessel failure frequency due to pressurized thermal shock events.
- The Committee plans to continue its review of matters related to PRA quality during future meetings. The ACRS Subcommittee on Reliability and PRA plans to meet in August 2002 to discuss the staff's proposed regulatory guide and associated industry guidance.

The Honorable Richard A. Meserve

PROPOSED SCHEDULE FOR THE 490TH ACRS MEETING, MARCH 7-9, 2002

The Committee agreed to consider the following topics during the 490th ACRS meeting, March 7-9, 2002:

- Clinton Nuclear Power Station Core Power Uprate
- Proposed NEI 00-04, "Option 2 Implementation Guideline," for Risk-Informing the Special Treatment Requirements of 10 CFR Part 50
- Arkansas Nuclear One, Unit 2 Core Power Uprate
- Phase 2 Pre-Application Review of the AP1000 Design

Sincerely,

A handwritten signature in black ink, appearing to read "George E. Apostolakis". The signature is fluid and cursive, with a long horizontal stroke at the end.

George E. Apostolakis  
Chairman

**CERTIFIED**

Date Issued: 3/20/2002  
Date Certified: 3/27/2002

TABLE OF CONTENTS  
MINUTES OF THE 489th ACRS MEETING

FEBRUARY 7-8, 2002

- I. Chairman's Report (Open)
- II. Risk-Informed Regulation Implementation Plan (Open)
- III. Meeting with the EDO and the Office Directors of NRR, NMSS, and RES (Open)
- IV. Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19 (Open)
- V. PTS Technical Bases Reevaluation Project (Open)
- VI. Thermal-Hydraulic Phenomena Subcommittee Report (Open)
- VII. Executive Session (Open)
  - A. Reconciliation of ACRS Comments and Recommendations
  - B. Report on the Meeting of the Planning and Procedures Subcommittee Held on February 6, 2002 (Open)
  - C. Future Meeting Agenda

REPORT

- Review and Evaluation of the Nuclear Regulatory Commission's Safety Research Program (Report to Chairman Meserve, NRC, from George E. Apostolakis, Chairman, ACRS, dated February 14, 2002)

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## LETTERS

- The Revised Reactor Oversight Process (Letter to William D. Travers, Executive Director for Operations, NRC, from George E. Apostolakis, Chairman, ACRS, dated February 13, 2002)
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## APPENDICES

- I. *Federal Register Notice*
- II. Meeting Schedule and Outline
- III. Attendees
- IV. Future Agenda and Subcommittee Activities
- V. List of Documents Provided to the Committee

**CERTIFIED**

MINUTES OF THE 489th MEETING OF THE  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
February 7-8, 2002  
ROCKVILLE, MARYLAND

The 489th meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on February 7-8, 2002. Notice of this meeting was published in the *Federal Register* on January 22, 2002 (65 FR 2916 ) (Appendix I). The purpose of this meeting was to discuss and take appropriate action on the items listed in the meeting schedule and outline (Appendix II). The meeting was open to public attendance. There were no written statements or requests for time to make oral statements from members of the public regarding the meeting.

A transcript of selected portions of the meeting was kept and is available in the NRC Public Document Room at the One White Flint North Building, Mail Stop 1F-15, Rockville, MD, 20852-2738. [Copies of the transcript are available for purchase from Neal R. Gross and Co., Inc., 1323 Rhode Island Avenue, NW, Washington, DC 20005-3701, and on the ACRS/ACNW Web page at ([www.NRC.gov/ACRS/ACNW](http://www.NRC.gov/ACRS/ACNW)).]

ATTENDEES

ACRS Members: ACRS Members: Dr. George Apostolakis (Chairman), Dr. Mario V. Bonaca (Vice Chairman), Dr. F. Peter Ford, Dr. Thomas S. Kress, Dr. Dana A. Powers, Mr. Stephen L. Rosen, Dr. William J. Shack, Mr. John D. Sieber, and Dr. Graham B. Wallis. Mr. Graham M. Leitch did not attend this meeting. For a list of other attendees, see Appendix III.

I. Chairman's Report (Open)

[Note: Dr. John T. Larkins was the Designated Federal Official for this portion of the meeting.]

Dr. George E. Apostolakis, Committee Chairman, convened the meeting at 8:30 a.m. and reviewed the schedule for the meeting. He summarized the agenda topics for this meeting and discussed the administrative items for consideration by the full Committee.

## II. Risk-Informed Regulation Implementation Plan (Open)

[Note: Mr. Michael T. Markley was the Designated Federal Official for this portion of the meeting.]

Dr. William J. Shack, cognizant ACRS member for this briefing introduced the topic to the Committee. He stated that the purpose of this meeting was to review SECY-01-0218, "Update of the Risk-Informed Regulation Implementation Plan." He noted that the Committee has reviewed many of the individual issues in the Implementation Plan during past meetings.

### NRC Staff Presentation

Messrs. Mark Cunningham, Office of Nuclear Regulatory Research (RES), Frank Gillespie, Office of Nuclear Reactor Regulation (NRR), and Lawrence Kokajko, Office of Nuclear Materials Safety and Safeguards (NMSS), led the discussion for the NRC staff. Mr. Stewart Magruder, NRR, also participated. The staff reported on the status of risk-informed initiatives and progress in establishing a linkage between the Implementation Plan and "Performance Goals" of the NRC Strategic Plan in the Strategic Arenas for nuclear reactor safety, nuclear materials safety, and nuclear waste safety. The staff discussed efforts to identify additional activities to be risk-informed and to apply planning, budgeting, and performance management (PBPM) to establish priority rankings for the various arena activities. Significant points made during the presentation include:

- Major initiatives in the reactor safety arena include risk-informed technical specifications, the reactor oversight process, risk-informing 10 CFR Part 50, and guidance development related to the quality of probabilistic risk assessment (PRA). Key challenges include the development of 10 CFR 50.69 (Option 2), risk-informing 10 CFR 50.46 (Option 3) for emergency core cooling systems, and risk-informing the rulemaking program and regulatory structure.
- The staff is pursuing a three-phase approach to risk-informing the nuclear materials and waste arenas. Phase 1 involves the development of screening criteria for risk applications, development of risk case studies and safety goals, and staff training. Phase 2 will involve screening of candidate risk applications using a matrix approach for comparison across program areas. Phase 3 will entail the implementation of prioritized risk activities using PBPM. Challenges in the materials and waste arenas include the development of safety goals, identification of cross-cutting issues, and development of advanced training on risk methods.

Dr. Wallis requested the staff to elaborate on the goals and objectives of the Implementation Plan. He also questioned what measures of success the staff might use in implementing various activities. The staff reiterated that the goals and objectives were derived from the NRC Strategic Plan and stated that the measures of success would be the more efficient and effective allocation of resources. Dr. Wallis questioned whether these metrics might be too general or vague to effectively measure success.

Dr. Apostolakis questioned the methods for deciding what activities need to be risk-informed. The staff acknowledged that there are some problems in picking parts of the regulatory process to risk-inform but noted that stakeholder participation does, in part, drive the agenda and the prioritization of activities in the Implementation Plan (e.g., petitions for rulemaking, pilot applications, etc.).

Dr. Shack questioned the resource allocation estimates and that appeared to be a disparity between the importance expressed in the written descriptions and that reflected in staff resource projections. The staff noted that NRC resource allocation is limited for certain activities because industry organizations are doing a large portion of the guidance development (e.g., industry consensus standards for PRA quality).

Mr. Rosen questioned what the staff means by the term, "risk-informed environment." The staff stated that it is a function of staff participation and support for risk-informed initiatives. They stated that the general nature of the environment is most evident in the level of staff participation in risk-informed decision making and in training.

Drs. Apostolakis and Kress questioned what is meant by the term, "risk information." They expressed the view that it means doing uncertainty analysis and questioned the apparent emphasis on the use of parameter uncertainty. Dr. Apostolakis stated that sensitivity analysis is often misused. He noted, however, that sensitivity analysis uses a lot of statistics that can be very complex. Dr. Apostolakis also noted that sensitivity analysis is used extensively in performance assessment. The staff acknowledged these differences.

At the conclusion of the meeting, the staff suggested that the next briefing be held in June 2002 following the issuance of the next update of the Implementation Plan.

Committee Action

This briefing was for information only. No Committee action was required.

III. Meeting with the EDO and the Office Directors of NRR, NMSS, and RES (Open)

[Note: Dr. John T. Larkins was the Designated Federal Official for this portion of the meeting.]

The ACRS and ACNW members met with the NRC Executive Director for Operations (EDO), Directors of the Office of Nuclear Reactor Regulation (NRR), Office of Nuclear Material Safety and Safeguards (NMSS), and Office of Nuclear Regulatory Research (RES) to discuss several items of mutual interest, including: initiatives associated with risk-informing NMSS activities; issues associated with core power uprates; risk-informed and performance-based regulatory approach; activities associated with future plant designs; and ongoing and proposed research activities.

Committee Action

Since this meeting was beneficial to all parties involved, the ACRS and ACNW plan to schedule such meetings periodically in coordination with the EDO and the Directors of NRR, NMSS, and RES.

IV. Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19 (Open)

[Note: Mr. Michael T. Markley was the Designated Federal Official for this portion of the meeting.]

Dr. George Apostolakis, Chairman of Subcommittee on Reliability and Probabilistic Risk Assessment (PRA) introduced the topic to the Committee. He stated that the purpose of this meeting was to discuss the status of staff efforts to address PRA quality in regulatory activities including their updated approach to revising Regulatory Guide (RG) 1.174 for the use of risk-information in license amendment reviews.

### NRC Staff Presentation

Mr. Mark Cunningham and Ms. Mary Drouin, RES, led the discussion for the NRC staff. Mr. Gareth Parry, NRR, provided supporting discussion. Significant points made during the presentation include:

- The staff plans to develop a new regulatory guide, separate from Regulatory Guide 1.174, to collectively address matters related to PRA quality. The staff plans to endorse industrial standards under development by the American Society of Mechanical Engineers (ASME) and American Nuclear Society (ANS) with exceptions and clarifications, as appropriate.
- The staff plans to address the results of industry PRA peer reviews conducted in accordance with NEI 00-02 and to incorporate and/or reference information from other related documents on PRA quality (SECY-00-0162), to develop a PRA data handbook, and to revise NUREG/CR-6595 on large early release frequency for low-power and shutdown operations.
- The main body of the regulatory guide will provide guidance to licensees on how to use the industrial standards for PRA quality and peer review process. The appendices will codify the NRC endorsement.
- The proposed data handbook will provide guidance on sources of information and methods for performing data analysis. It is expected to include guidance for plant-specific and generic estimates of initiating event frequencies, component failure rates and unavailabilities, and equipment non-recovery probabilities. Common-cause failure data is addressed in other studies and will not be included in the proposed handbook.
- The staff plans to hold a public workshop in August 2002 to discuss the proposed new regulatory guide and integration of industry initiatives related to PRA quality. The staff requested to meet with the Subcommittee on Reliability and PRA subsequent to the workshop to discuss the draft regulatory guide.

Dr. Apostolakis questioned whether the staff was prepared to request the industry to do uncertainty analysis. Dr. Apostolakis noted that language and guidance related to "model uncertainty" appears to be uniquely missing in the staff's approach. The staff stated that RG 1.174 requests uncertainty analysis be performed as a "best practice" and that the new regulatory guide would be consistent with RG 1.174.

Mr. Rosen questioned the extent to which the staff expects to take exception to the ASME and ANS standards for PRA quality and industry guidance for certifying PRAs via the peer review process described in NEI 00-02. He noted that the Office of Management and Budget Circular A-119 directs federal agencies to use industry consensus standards, where practicable. The staff stated that exceptions and clarifications would be appropriately documented in the new regulatory guide and suggested that the Committee would have an opportunity to consider these documents during future meetings.

Dr. Powers noted that most of the work on RG 1.174 appears to have been done by PRA analysts and questioned the extent to which the technical work of the fire analysis community was considered. The staff stated that they plan to incorporate guidance on fire analysis methods in the data handbook

At the conclusion of the meeting, Dr. Kress requested to review a copy of earlier versions of NUREG-6595. The staff agreed to provide copies subsequent to the meeting. Dr. Powers suggested that cognizant ACRS members attend the staff's public workshop in August 2002.

### Conclusion

This briefing was for information only. The Committee plans to continue its review of this matter during future meetings.

### V. PTS Technical Bases Reevaluation Project (Open)

[Note: Mr. Noel F. Dudley was the Designated Federal Official for this portion of the meeting.]

Dr. Peter Ford, Chairman of the Materials and Metallurgy Subcommittee, stated that members should restrict their comments to the methodology used in the Pressurized Thermal Shock (PTS) Technical Basis Reevaluation Project. He noted that the proposed changes to the risk acceptance criteria would be discussed at a future meeting.

Dr. Edwin Hackett, RES, summarized the status of the Project and presented the results of the analysis of the Oconee Unit 1 reactor vessel. He outlined the work remaining. The ACRS Members and the staff discussed how the results of the reevaluation project would be used to support a possible revision to the PTS screening criterion

Dr. Mark Kirk, RES, presented the calculational process and inputs used to calculate the reactor pressure vessel failure frequency for Oconee Unit 1. He summarized the changes between the reevaluation analysis and a similar analysis performed in the 1980s. Dr. Kirk explained the contribution of different classes of thermal-hydraulic events to the vessel failure frequency and presented the preliminary results for Oconee Unit 1. He made the following observations:

- dominant scenarios are all primary system loss-of-coolant accidents,
- crediting operation action mitigated the influence of secondary system events on the total failure probability, and
- the time of safety relief valve closure has significant influence on the event severity.

Mr. Alan Kolaczowski, Sandia National Laboratory, explained how PRA and human reliability analysis (HRA) were used to model plant scenarios and to estimate the frequency of each scenario. He described how uncertainties were treated and compared the process to similar 1980 PTS analyses. Mr. Kolaczowski presented the PRA/HRA results for Oconee Unit 1.

Mr. David Bessette, RES, explained how the RELAP5 code was used to develop inputs to the FAVOR probabilistic fracture mechanics code. He described how uncertainties were treated and how sensitivity analyses were used.

The Committee Members and the staff discussed the treatment of uncertainties by the reevaluation process, validation of the RELAP5 code for PTS events, elimination of main steamline break scenarios, verification of human reliability analysis results, and variance narrowing associated with histogram sampling.

#### Committee Action

The Committee provided a letter to the Executive Director for Operations on this matter dated February 14, 2002.

VI. Thermal-Hydraulic Phenomena Subcommittee (Open)

The Committee heard a report by the Chairman of the Thermal-Hydraulic Phenomena Subcommittee regarding issues discussed at its January 16-18, 2002 meeting. The Subcommittee heard presentations from GE Nuclear Energy and the NRC staff regarding the staff's review of the GE Licensing Topical Report, "Constant Pressure Power Uprate" (CPPU), and heard presentations from Framatome ANP Richland and the NRC staff relative to the staff's review of the Framatome S-RELAP5 realistic thermal-hydraulic code version and its application to PWR large-break LOCA analysis.

Committee Action

The Committee has scheduled a review of the GE CPPU Topical Report during its April meeting, subsequent to the issuance of the NRC staff's Safety Evaluation on this matter. Committee review of the Framatome S-RELAP5 code is expected to occur later this year, following issuance of the NRC staff's safety evaluation.

X. Executive Session (Open)

[Note: Dr. John T. Larkins was the Designated Federal Official for this portion of the meeting.]

**A. Reconciliation of ACRS Comments and Recommendations**

[Note: Mr. Sam Duraiswamy was the Designated Federal Official for this portion of the meeting.]

The Committee discussed the response from the NRC Executive Director for Operations (EDO) to ACRS comments and recommendations included in recent ACRS reports:

- The Committee discussed the response from the Executive Director for Operations (EDO) dated December 18, 2001, to the ACRS comments and recommendations included in the ACRS report dated November 16, 2001, concerning the safety aspects of the license renewal application for the Edwin I. Hatch Nuclear Plant, Units 1 and 2.

The Committee decided that it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated January 24, 2002, to the ACRS comments and recommendations included in the ACRS letter

December 14, 2001, concerning the proposed steam generator program guidelines and associated generic license change package.

The Committee decided that it was satisfied with the EDO's response.

- The Committee discussed the response from the EDO dated January 18, 2002, to the ACRS comments and recommendations included in the ACRS report dated November 18, 2001, concerning the NRC Action Plan to address the differing professional opinion issues on steam generator tube integrity.

The Committee plans to review the resolution of the NRC Action Plan items when they become available.

- The Committee considered the response from the EDO, dated February 1, 2002, to comments and recommendations included in the ACRS reports dated October 17 and December 12, 2001, concerning applications for core power uprates for the Duane Arnold Energy Center and the Dresden and Quad Cities Nuclear Power Plants, respectively.

The Committee decided that it was satisfied with the EDO response.

- The Committee considered the response from the EDO, dated January 25, 2002, to comments and recommendations included in the ACRS report dated December 12, 2001, concerning the proposed rulemaking for risk-informed revisions to 10 CFR 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors."

The Committee decided that it was satisfied with the EDO's response.

- The Committee considered the response from the EDO, dated January 10, 2002, to the comments and recommendations included in the ACRS letter dated October 12, 2001, concerning the revised Reactor Oversight Process (ROP).

The Committee decided to write a letter regarding the EDO's response reaffirming the ACRS comments regarding threshold values, concurrent findings, and, in accordance with the SRM dated December 20, 2001, the need to discuss risk-informed and performance-based elements of the ROP.

**B. Report on the Meeting of the Planning and Procedures Subcommittee (Open)**

The Committee heard a report from Dr. Apostolakis, ACRS Chairman, and the Executive Director, ACRS, regarding the Planning and Procedures Subcommittee meeting held on February 6, 2002. The following items were discussed:

Review of the Member Assignments and Priorities for ACRS Reports and Letters for the February ACRS meeting

Member assignments and priorities for ACRS reports and letters for the February ACRS meeting were discussed. Reports and letters that would benefit from additional consideration at a future ACRS meeting were also discussed.

Anticipated Workload for ACRS Members

The anticipated workload for ACRS members through April 2002 was discussed. The objectives were:

- Review the reasons for the scheduling of each activity and the expected work product and to make changes, as appropriate
- Manage the members' workload for these meetings
- Plan and schedule items for ACRS discussion of topical and emerging issues

During this session, the Subcommittee discussed and developed recommendations on the items that require Committee decision.

Quadripartite Meeting Update

During the December 2001 meeting, the Committee agreed with the dates (October 23-25, 2002) proposed by RSK for the Quadripartite meeting to be held in Berlin, Germany. Also, the Committee proposed priorities for the proposed topics, as shown below, which were sent to RSK by Dr. Larkins subsequent to the December ACRS meeting.

- Risk-Informed Regulation
- High-Burnup Fuel
- Safeguards (subject to the NRC Chairman's approval)
- Philosophy and approach to deal with Stress Corrosion Cracks in Pressure Retaining Components in Nuclear Power Plants
- Risk Analysis of Spent Fuel Storage, including Dry Cask Storage

489th ACRS Meeting  
February 7-8, 2002

- Safety Culture and Safety Management
- Transportation and Management of Radioactive Waste

An agenda proposed by RSK was discussed. The proposed agenda does not include the following topics proposed by the ACRS:

- High-Burnup Fuel
- Philosophy and Approach to Deal with Stress Corrosion Cracks

In a letter dated January 14, 2002, which transmits the proposed agenda, RSK seeks the following from the ACRS:

- Comments on the proposed agenda
- Proposals for Chairmanship and co-Chairmanship for the sessions
- Total number of members, including ACNW, expected to attend the meeting

#### Staff Requirements Memorandum

In a Staff Requirements Memorandum dated December 20, 2001, resulting from the ACRS meeting with the Commission on December 5, 2001, the Commission requests the following:

- The ACRS should continue to review staff efforts on risk-based Pis and improvements to the significance determination process.
- The ACRS should continue its efforts to ascertain regulatory challenges for future reactor designs. The Committee should also ensure that it is prepared to review NRC staff efforts on advanced reactors in the near term, including issues related to Westinghouse's AP1000, General Atomics' gas turbine modular helium reactor, and Exelon's pebble bed modular reactor.

#### Celebration of the 500<sup>th</sup> ACRS Meeting (JTL)

During the November meeting, the Committee established a Panel consisting of Drs. Kress and Ford to develop a Program Plan for Committee consideration for celebrating the 500<sup>th</sup> ACRS meeting (now planned for March 2003, which is also coincidental with the Committee's 50<sup>th</sup> birthday). Sam Duraiswamy and Sherry Meador will assist the Panel. It is important to finalize plans now, because of budget considerations, travel plans for inviting guests, and stakeholder interest.

489th ACRS Meeting  
February 7-8, 2002

As requested by Dr. Kress, a list of ACRS members who served on the Committee since its inception was provided to him in December 2001.

#### ACRS Senior Fellow Position

Jack Sorensen's appointment as an ACRS Senior Fellow ended on December 31, 2001. The vacancy announcement for the ACRS Senior Fellow position has closed and the Rating Panel (Jocelyn Mitchell, Jim Johnson, and Dick Savio) reviewed the applications. There are approximately 27 external and 4 internal candidates. The Rating Panel met to determine the best qualified list.

#### Follow-up Items Resulting from the ACRS Retreat

On January 24-26, 2002, the Committee held its annual retreat to discuss various topics, including the following:

- Future plant designs
- Use of formal decision analysis
- SAPHIRE Code
- NRC Safety Research Program
- Power Uprates
- ACRS Process

#### Visit to Watts Bar Nuclear Plant and Region II

Each year the Committee visits a plant and a regional office. This year, arrangements have been made to visit Watts Bar on June 18, 2002 and Region II on June 19, 2002. Details of these visits will be discussed at a later date.

#### Status of Appointment of a New Member

The Commission has approved the appointment of Dr. Victor H. Ransom to the ACRS as recommended by the ACRS Member Candidate Screening Panel and the ACRS members. Subsequent to completion of all paper work, he will be formally appointed to the ACRS.

#### Reappointment of ACRS Members

The Commission has reappointed Dr. Powers for a third term. Graham Wallis was also reappointed for a second term.

489th ACRS Meeting  
February 7-8, 2002

ACRS/ACNW Operations Plan and Letter Matrices for FY 2002

An update to the ACRS/ACNW Operating Plan and the Summary matrices of the 2001 ACRS/ACNW letters and reports were sent to the Commission on January 31, 2002.

**C. Future Meeting Agenda**

Appendix IV summarizes the proposed items endorsed by the Committee for the 490th ACRS Meeting, March 7-9, 2002.

The 489th ACRS meeting was adjourned at 7:30 p.m. on Friday, February 8, 2002.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

March 27, 2001

MEMORANDUM TO: Sherry Meador, Technical Secretary  
Advisory Committee on Reactor Safeguards

FROM: George E. Apostolakis, Chairman  
Advisory Committee on Reactor Safeguards

SUBJECT: CERTIFIED MINUTES OF THE 489th MEETING OF THE  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
(ACRS), FEBRUARY 7-8, 2001

I certify that based on my review of the minutes from the 489th ACRS full Committee meeting, and to the best of my knowledge and belief, I have observed no substantive errors or omissions in the record of this proceeding subject to the comments noted below.

A handwritten signature in black ink, appearing to read "George E. Apostolakis", written over a horizontal line.

George E. Apostolakis, Chairman

March 27, 2001

Date



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

March 20, 2002

MEMORANDUM TO:       ACRS Members

FROM:                   Sherry Meador  
                            Technical Secretary

SUBJECT:                PROPOSED MINUTES OF THE 489th MEETING OF THE  
                            ADVISORY COMMITTEE ON REACTOR SAFEGUARDS -  
                            FEBRUARY 7-8, 2001

Enclosed are the proposed minutes of the 489th meeting of the ACRS. This draft is being provided to give you an opportunity to review the record of this meeting and provide comments. Your comments will be incorporated into the final certified set of minutes as appropriate.

Attachment:  
As stated

should notify Mr. Howard J. Larson as to their particular needs.

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefore can be obtained by contacting Mr. Howard J. Larson.

ACNW meeting notices, meeting transcripts, and letter reports are now available for downloading or viewing on the internet at <http://www.nrc.gov/ACRSACNW>.

Videoteleconferencing service is available for observing open sessions of ACNW meetings. Those wishing to use this service for observing ACNW meetings should contact Mr. Theron Brown, ACNW Audiovisual Technician (301/415-8066), between 7:30 a.m. and 3:45 p.m. EST at least 10 days before the meeting to ensure the availability of this service. Individuals or organizations requesting this service will be responsible for telephone line charges and for providing the equipment and facilities that they use to establish the videoteleconferencing link. The availability of videoteleconferencing services is not guaranteed.

Dated: January 15, 2002.

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. 02-1488 Filed 1-18-02; 8:45 am]

BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

### Advisory Committee on Reactor Safeguards; Meeting Notice

In accordance with the purposes of Sections 29 and 182b. of the Atomic Energy Act (42 U.S.C. 2039, 2232b), the Advisory Committee on Reactor Safeguards (ACRS) will hold a meeting on February 7-9, 2002, in Conference Room T-2B3, 11545 Rockville Pike, Rockville, Maryland. The date of this meeting was previously published in the *Federal Register* on Monday, November 26, 2001 (66 FR 59034).

#### Thursday, February 7, 2002

**8:30 A.M.-8:35 A.M.: Opening Remarks by the ACRS Chairman (Open)**—The ACRS Chairman will make opening remarks regarding the conduct of the meeting.

**8:35 A.M.-9:45 A.M.: Risk-Informed Regulation Implementation Plan (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff

regarding update to risk-informed regulation implementation plan.

**10:00 A.M.-12:00 Noon: Meeting with the EDO and the Office Directors of NRR, NMSS, and RES (Open)**—The Committee will hold discussions with the NRC Executive Director for Operations (EDO), and Directors of the Office of Nuclear Reactor Regulation (NRR), Office of Nuclear Regulatory Research (RES), and Office of Nuclear Material Safety and Safeguards (NMSS) on items of mutual interest. Members of the ACNW will participate in this discussion.

**1:00 P.M.-2:30 P.M.: Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19 (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the proposed final revision to Regulatory Guide 1.174 and associated Standard Review Plan (SRP) Chapter 19 to address the use of probabilistic risk assessment (PRA) in license amendment reviews and plans to develop guidance related to PRA quality, including possible endorsement of industrial standards proposed by the American Society of Mechanical Engineers and American Nuclear Society.

**2:50 P.M.-4:50 P.M.: PTS Technical Bases Reevaluation Project (Open)**—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the status of the Pressurized Thermal Shock (PTS) Technical Bases Reevaluation Project, including initial results of the Oconee Unit 1 reactor pressure vessel failure frequency calculated by using the Fatigue Assessment of Vessels—Oak Ridge (FAVOR) code, and the associated models, inputs, and assumptions used in this code.

**5:10 P.M.-7:00 P.M.: Discussion of Proposed ACRS Reports (Open)**—The Committee will discuss proposed ACRS reports on matters considered during this meeting, as well as a proposed ACRS report on the NRC Safety Research Program.

#### Friday, February 8, 2002

**8:30 A.M.-8:35 A.M.: Opening Remarks by the ACRS Chairman (Open)**—The ACRS Chairman will make opening remarks regarding the conduct of the meeting.

**8:35 A.M.-9:00 A.M.: Subcommittee Report (Open)**—The Committee will hear a report by the Chairman of the Thermal-Hydraulic Phenomena Subcommittee on matters discussed at the January 16-18, 2002 meeting.

**9:00 A.M.-10:00 A.M.: Future ACRS Activities/Report of the Planning and**

**Procedures Subcommittee (Open)**—The Committee will discuss the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future meetings. Also, it will hear a report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS.

**10:00 A.M.-10:15 A.M.: Reconciliation of ACRS Comments and Recommendations (Open)**—The Committee will discuss the responses from the NRC Executive Director for Operations (EDO) to comments and recommendations included in recent ACRS reports and letters. The EDO responses are expected to be made available to the Committee prior to the meeting.

**10:35 A.M.-12:00 Noon: Follow-up Items Resulting from the January 24-26, 2002, ACRS Retreat (Open)**—The Committee will discuss the follow-up items resulting from the ACRS retreat on January 24-26, 2002, assignments, and schedule for closure of these items.

**3:00 P.M.-7:00 P.M.: Discussion of Proposed ACRS Reports (Open)**—The Committee will discuss proposed ACRS reports.

#### Saturday, February 9, 2002

**8:30 A.M.-12:30 P.M.: Discussion of Proposed ACRS Reports (Open)**—The Committee will continue its discussion of proposed ACRS reports.

**12:30 P.M.-1:00 P.M.: Miscellaneous (Open)**—The Committee will discuss matters related to the conduct of Committee activities and matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

Procedures for the conduct of and participation in ACRS meetings were published in the *Federal Register* on October 3, 2001 (66 FR 50462). In accordance with those procedures, oral or written views may be presented by members of the public, including representatives of the nuclear industry. Electronic recordings will be permitted only during the open portions of the meeting and questions may be asked only by members of the Committee, its consultants, and staff. Persons desiring to make oral statements should notify Dr. Sher Bahadur, ACRS, five days before the meeting, if possible, so that appropriate arrangements can be made to allow necessary time during the meeting for such statements. Use of still, motion picture, and television cameras during the meeting may be limited to selected portions of the meeting as determined by the Chairman.

Information regarding the time to be set aside for this purpose may be obtained by contacting Dr. Sher Bahadur prior to the meeting. In view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with Dr. Sher Bahadur if such rescheduling would result in major inconvenience.

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements, and the time allotted therefor can be obtained by contacting Dr. Sher Bahadur (telephone 301-415-0138), between 7:30 a.m. and 4:15 p.m., EST.

ACRS meeting agenda, meeting transcripts, and letter reports are available for downloading or viewing on the Internet at <http://www.nrc.gov/ACRSACNW>.

Videoteleconferencing service is available for observing open sessions of ACRS meetings. Those wishing to use this service for observing ACRS meetings should contact Mr. Theron Brown, ACRS Audio Visual Technician (301-415-8066), between 7:30 a.m. and 3:45 p.m., EST, at least 10 days before the meeting to ensure the availability of this service. Individuals or organizations requesting this service will be responsible for telephone line charges and for providing the equipment and facilities that they use to establish the videoteleconferencing link. The availability of videoteleconferencing services is not guaranteed.

Dated: January 15, 2002.

**Andrew L. Bates,**  
Advisory Committee Management Officer.  
[FR Doc. 02-1489 Filed 1-18-02; 8:45 am]  
BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

### Advisory Committee on Reactor Safeguards, Subcommittee Meeting on Planning and Procedures; Notice of Meeting

The ACRS Subcommittee on Planning and Procedures will hold a meeting on February 6, 2002, Room T-2B1, 11545 Rockville Pike, Rockville, Maryland.

The entire meeting will be open to public attendance, with the exception of a portion that may be closed pursuant to 5 U.S.C. 552(b)(2) and (6) to discuss organizational and personnel matters that relate solely to internal personnel rules and practices of ACRS, and

information the release of which would constitute a clearly unwarranted invasion of personal privacy.

The agenda for the subject meeting shall be as follows: Wednesday, February 6, 2002—1:30 p.m. until the conclusion of business.

The Subcommittee will discuss proposed ACRS activities and related matters. The purpose of this meeting is to gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Oral statements may be presented by members of the public with the concurrence of the Subcommittee Chairman; written statements will be accepted and made available to the Committee. Electronic recordings will be permitted only during those portions of the meeting that are open to the public, and questions may be asked only by members of the Subcommittee, its consultants, and staff. Persons desiring to make oral statements should notify the cognizant ACRS staff person named below five days prior to the meeting, if possible, so that appropriate arrangements can be made.

Further information regarding topics to be discussed, the scheduling of sessions open to the public, whether the meeting has been canceled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements, and the time allotted therefor can be obtained by contacting the cognizant ACRS staff person, Sam Duraiswamy (telephone: 301/415-7364) between 7:30 a.m. and 4:15 p.m. (EST). Persons planning to attend this meeting are urged to contact the above named individual one or two working days prior to the meeting to be advised of any changes in schedule, etc., that may have occurred.

Dated: January 14, 2002.

**Sher Bahadur,**  
Associate Director for Technical, Support,  
ACRS/ACNW.  
[FR Doc. 02-1490 Filed 1-18-02; 8:45 am]  
BILLING CODE 7590-01-P

## NUCLEAR REGULATORY COMMISSION

### Biweekly Notice; Applications and Amendments to Facility Operating Licenses Involving No Significant Hazards Considerations

#### I. Background

Pursuant to Public Law 97-415, the U.S. Nuclear Regulatory Commission (the Commission or NRC staff) is

publishing this regular biweekly notice. Public Law 97-415 revised section 189 of the Atomic Energy Act of 1954, as amended (the Act), to require the Commission to publish notice of any amendments issued, or proposed to be issued, under a new provision of section 189 of the Act. This provision grants the Commission the authority to issue and make immediately effective any amendment to an operating license upon a determination by the Commission that such amendment involves no significant hazards consideration, notwithstanding the pendency before the Commission of a request for a hearing from any person.

This biweekly notice includes all notices of amendments issued, or proposed to be issued from December 28, 2001 through January 10, 2002. The last biweekly notice was published on January 8, 2002 (67 FR 924).

#### Notice of Consideration of Issuance of Amendments to Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing

The Commission has made a proposed determination that the following amendment requests involve no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The basis for this proposed determination for each amendment request is shown below.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D.C. 20555-0001

January 14, 2002

SCHEDULE AND OUTLINE FOR DISCUSSION  
489<sup>th</sup> ACRS MEETING  
FEBRUARY 7-9, 2002

THURSDAY, FEBRUARY 7, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH,  
ROCKVILLE, MARYLAND

- 1) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open)  
1.1) Opening statement (GEA/JTL/SD)  
1.2) Items of current interest (GEA/NFD/SD)  
1.3) Priorities for preparation of ACRS reports (GEA/JTL/SD)
- 2) 8:35 - <sup>9:50</sup>9:45 A.M. Risk-Informed Regulation Implementation Plan (Open) (WJS/MTM)  
2.1) Remarks by the Subcommittee Chairman  
2.2) Briefing by and discussions with representatives of the NRC staff regarding update to risk-informed regulation implementation plan.
- <sup>9:50-10:05</sup>  
~~9:45 - 10:00~~ A.M. \*\*\*BREAK\*\*\*
- 3) <sup>10:05-12:25</sup>~~10:00 - 12:00~~ Noon Meeting with the EDO and the Office Directors of NRR, NMSS, and RES (GEA/GMH/JTL)  
3.1) Remarks by the ACRS Chairman  
3.2) Discussions with the NRC Executive Director for Operations (EDO), Directors of the Office of Nuclear Reactor Regulation (NRR), Office of Nuclear Regulatory Research (RES), and Office of Nuclear Material Safety and Safeguards (NMSS) on items of mutual interest.
- Members of the ACNW will participate in this discussion.
- <sup>12:25-1:30</sup>  
~~12:00 - 1:00~~ P.M. \*\*\*LUNCH\*\*\*
- 4) <sup>1:30-2:50</sup>~~1:00 - 2:30~~ P.M. Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19 (Open) (GEA/MTM)  
4.1) Remarks by the Subcommittee Chairman  
4.2) Briefing by and discussions with representatives of the NRC staff regarding the proposed final revision to Regulatory Guide 1.174 and associated Standard Review Plan (SRP) Chapter 19 to address the use of probabilistic risk assessment (PRA) in license amendment reviews and plans to develop guidance related to PRA quality, including possible endorsement of industrial standards proposed by the American Society of Mechanical Engineers and American Nuclear Society.

Representatives of the nuclear industry may provide their views, as appropriate.

- 2:50-3:10  
~~2:30 - 2:50 P.M.~~ \*\*\*BREAK\*\*\*
- 5) 3:10 - 5:20  
~~2:50 - 4:50 P.M.~~ PTS Technical Bases Reevaluation Project (Open) (FPF/NFD)  
 5.1) Remarks by the Subcommittee Chairman  
 5.2) Briefing by and discussions with representatives of the NRC staff regarding the status of the Pressurized Thermal Shock (PTS) Technical Bases Reevaluation Project, including initial results of the Oconee Unit 1 reactor pressure vessel failure frequency calculated by using the Fatigue Assessment of Vessels - Oak Ridge (FAVOR) code, and the associated models, inputs, and assumptions used in this code.
- Representatives of the nuclear industry may provide their views, as appropriate.
- 5:20-5:30  
~~4:50 - 5:10 P.M.~~ \*\*\*BREAK\*\*\*
- 6) 5:30 -  
~~5:10 - 7:00 P.M.~~ Proposed ACRS Reports (Open)  
 5:30-7:00  
 6.1) Safety Research Program (MVB/MME)  
 6.2) Proposed Final Revision to Regulatory Guide 1.174 and associated SRP Chapter 19 (GEA/MTM)  
 6.3) PTS Technical Bases Reevaluation Project (FPF/NFD)  
 6.4) Risk-Informed Regulation Implementation Plan (WJS/MTM)

**FRIDAY, FEBRUARY 8, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND**

- 7) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (GEA/JTL/SD)
- 8) 8:35 - ~~9:00~~<sup>8:55</sup> A.M. Subcommittee Report (Open) (GBW/PAB)  
 Report by the Chairman of the Thermal-Hydraulic Phenomena Subcommittee on matters discussed at the January 16-18, 2002 meeting.
- 9) ~~9:00 - 10:00~~<sup>9:20-10:25</sup> A.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open) (GEA/JTL/SD)  
 9.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future ACRS meetings.  
 9.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS.
- 10) ~~10:00 - 10:15~~<sup>8:55-9:20</sup> A.M. Reconciliation of ACRS Comments and Recommendations (Open) (GEA, et al./SD, et al.)  
 Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

*10:25-10:45*  
~~10:15 - 10:35 A.M.~~ **\*\*\*BREAK\*\*\***

- 11) 10:35 - 12:00 Noon ~~Follow-up Items Resulting from the January 24-26, 2002, ACRS Retreat (Open) (GEA/JTL/RPS)~~  
 11.1) Remarks by the ACRS Chairman  
 11.2) Discussion of the follow-up items resulting from the ACRS retreat on January 24-26, 2002, assignments, and schedule for closure of these items.

**12:00 - 3:00 P.M. \*\*\*LUNCH AND EXTENDED BREAK\*\*\***

- 12) 3:00 - ~~7:00~~<sup>7:30</sup> P.M. Proposed ACRS Reports (Open)  
 Discussion of proposed ACRS reports on:  
 12.1) Proposed Final Revision to Regulatory Guide 1.174 and associated SRP Chapter 19 (GEA/MTM)  
*10:45-11:30* 12.2) PTS Technical Bases Reevaluation Project (FPF/NFD)  
*2:50-4:15* 12.3) Safety Research Program (MVB/MME)  
*4:20-7:30* 12.4) Risk-Informed Regulation Implementation Plan (WJS/MTM)

**SATURDAY, FEBRUARY 9, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND**

- 13) 8:30 - 12:30 P.M. ~~Proposed ACRS Reports (Open)~~  
 Continue discussion of proposed ACRS reports listed under Item 12.
- 14) 12:30 - 1:00 P.M. Miscellaneous (Open) (GEA/JTL)  
 Discussion of matters related to the conduct of Committee activities and matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

**NOTE:**

- **Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.**
- **Thirty-Five (35) copies of the presentation materials should be provided to the ACRS.**

## APPENDIX III: MEETING ATTENDEES

### 489TH ACRS MEETING FEBRUARY 7-9, 2002

#### NRC STAFF

|                     |                   |
|---------------------|-------------------|
| C. Carpenter, NRR   | E. Hackett, RES   |
| T. Croote, NRR      | J. Calvo, NRR     |
| E. McKenna, NRR     | J. Lyons, NRR     |
| G. Kelly, NRR       | M. Drouin, RES    |
| S. Magruder, NRR    | B. Ibrahim, NMSS  |
| K. S. West, NRR     | J. Andersen, NMSS |
| G. Parry, NRR       | D. Brozler, NMSS  |
| R. Barrett, NRR     | J. Firth, NMSS    |
| P. Justus, NMSS     | J. Lane, RES      |
| I. Schoenfeld, OEDO | M. Mitchell, NRR  |
| S. Fox, NRR         | L. Lois, RES      |
| M. Virgilio, NMSS   | R. Woods, RES     |
| B. Eid, NMSS        | D. Bessette, RES  |
| H. Tormassian, NRR  | S. Malik, RES     |
| S. Wastler, NMSS    | D. Jackson, RES   |
| L. Scholl, Region I | N. Chokshi, RES   |
| B. Boger, NRR       |                   |
| M. Lee, NMSS        |                   |
| L. Kokajko, NMSS    |                   |
| S. Lee, NRR         |                   |
| B. Bateman, NRR     |                   |
| T. Essig, NMSS      |                   |

#### ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

H. Fontecilla, Dominion  
D. Raleigh, LIS, Scientech  
N. Chapman, SERCH/Bechtel  
M. Knapik, McGraw-Hill  
C. Brinkman, Westinghouse  
N. Henderson, Bechtel-SAIC Company  
G. Stirewalt, MANDEX  
W. Arcieri, ISL, Inc.  
Y. Chang, UMD  
A. Kolaczowski, SAIC



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
 WASHINGTON, D.C. 20555-0001

February 14, 2002

SCHEDULE AND OUTLINE FOR DISCUSSION  
 490<sup>th</sup> ACRS MEETING  
 MARCH 7-9, 2002

**THURSDAY, MARCH 7, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH,  
 ROCKVILLE, MARYLAND**

- 1) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open)
  - 1.1) Opening statement (GEA/JTL/SD)
  - 1.2) Items of current interest (GEA/SD)
  - 1.3) Priorities for preparation of ACRS reports (GEA/JTL/SD)
  
- 2) 8:35 - 10:30 A.M. Clinton Nuclear Power Station Core Power Uprate (Open/Closed)  
 (GBW/DAP/PAB/MWW)
  - 2.1) Remarks by the Subcommittee Chairman
  - 2.2) Briefing by and discussions with representatives of the NRC staff and the AmerGen Energy Company regarding the license amendment request to increase the core thermal power level for the Clinton Nuclear Power Station, Unit 1 and the associated NRC staff's Safety Evaluation Report (SER).

NOTE: A portion of this session may be closed to discuss GE Nuclear Energy proprietary information
  
- 10:30 - 10:50 A.M. **\*\*\*BREAK\*\*\***
  
- 3) 10:50 - 12:15 P.M. Proposed NEI 00-04, "Option 2 Implementation Guideline," for Risk-Informing the Special Treatment Requirements of 10 CFR Part 50 (Open) (GEA/SR/MTM)
  - 3.1) Remarks by the Subcommittee Chairman
  - 3.2) Briefing by and discussions with representatives of the Nuclear Energy Institute (NEI) and the NRC staff regarding proposed industry guidance in NEI 00-04 and related matters.
  
- 12:15 - 1:15 P.M. **\*\*\*LUNCH\*\*\***
  
- 4) 1:15 - 3:15 P.M. Arkansas Nuclear One, Unit 2 Core Power Uprate (Open/Closed)  
 (JDS/PAB)
  - 4.1) Remarks by the Subcommittee Chairman
  - 4.2) Briefing by and discussions with representatives of the NRC staff and Entergy Operations, Inc. regarding the license amendment request to increase the core thermal power level for Arkansas Nuclear One, Unit 2 and the associated NRC staff's SER.

NOTE: A portion of this session may be closed to discuss Westinghouse proprietary information.

**3:15 - 3:35 P.M. \*\*\*BREAK\*\*\***

- 5) 3:35 - 7:00 P.M. Proposed ACRS Reports (Open)
- 5.1) Clinton Nuclear Power Station Core Power Uprate (GBW/DAP/PAB/MWW)
  - 5.2) Arkansas Nuclear One, Unit 2 Core Power Uprate (JDS/PAB)
  - 5.3) NEI 00-04, "Option 2 Implementation Guideline" (GEA/SR/MTM)

**FRIDAY, MARCH 8, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND**

- 6) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (GEA/JTL/SD)
- 7) 8:35 - 10:30 A.M. Phase 2 Pre-Application Review of the AP1000 Design (Open/Closed) (TSK/MME/PAB)
- 7.1) Remarks by the Subcommittee Chairman
  - 7.2) Briefing by and discussions with representatives of the NRC staff and Westinghouse regarding the results of the NRC staff's Phase 2 pre-application review of the AP1000 design.

NOTE: A portion of this session may be closed to discuss Westinghouse proprietary information.

**10:30 - 10:45 A.M. \*\*\*BREAK\*\*\***

- 8) 10:45 - 11:45 A.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open) (GEA/JTL/SD)
- 8.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future ACRS meetings.
  - 8.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS.
- 9) 11:45 - 12:00 Noon Reconciliation of ACRS Comments and Recommendations (Open) (GEA, et al./SD, et al.)
- Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

**12:00 - 1:00 P.M. \*\*\*LUNCH\*\*\***

- 10) 1:00 - 7:00 P.M. Proposed ACRS Reports (Open)
- Discussion of proposed ACRS reports on:
- 10.1) Phase 2 Pre-Application Review of the AP1000 Design (TSK/MME/PAB)
  - 10.2) Clinton Nuclear Power Station Core Power Uprate (GBW/DAP/PAB/MWW)

- 10.3) NEI 00-04, "Option 2 Implementation Guideline"  
(GEA/SR/MTM)
- 10.4) Arkansas Nuclear One, Unit 2 Core Power Uprate (JDS/PAB)

**SATURDAY, MARCH 9, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH,  
ROCKVILLE, MARYLAND**

- 11) 8:30 - 12:30 P.M. Proposed ACRS Reports (Open)  
Continue discussion of proposed ACRS reports listed under Item 10.
- 12) 12:30 - 1:00 P.M. Miscellaneous (Open) (GEA/JTL)  
Discussion of matters related to the conduct of Committee activities and matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

**NOTE:**

- **Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.**
- **Thirty-Five (35) copies of the presentation materials should be provided to the ACRS.**

APPENDIX V  
LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE  
489<sup>th</sup> ACRS MEETING  
FEBRUARY 7-9, 2002

[Note: Some documents listed below may have been provided or prepared for Committee use only. These documents must be reviewed prior to release to the public.]

MEETING HANDOUTS

AGENDA  
ITEM NO.

DOCUMENTS

- |    |   |
|----|---|
| 1  | <u>Opening Remarks by the ACRS Chairman</u><br>1. Items of Interest, dated February 7-9, 2002   |
| 2  | <u>Risk-Informed Regulation Implementation Plan</u><br>2. Overview of Risk-Informed Regulation Implementation Plan presentation by NRR, RES, and NMSS [Viewgraphs]  |
| 3  | <u>Meeting with the EDO and the Office Directors of NRR, NMSS, and RES</u><br>3. Office of Nuclear Material Safety and Safeguards Activities/Issues presentation by M. Virgilio [Viewgraphs]<br>4. Office of Nuclear Reactor Regulation Activities/Issues presentation by S. Collins [Viewgraphs]<br>5. Office of Nuclear Regulatory Research presentation by A. Thadani [Viewgraphs] |
| 4  | <u>Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19</u><br>6. Status of RG 1.174 and Staff Endorsement of PRA Standards and Industry Peer Review Program presentation by M. Drouin [Viewgraphs]   |
| 5  | <u>PTS Technical Bases Reevaluation Project</u><br>7. Pressurized Thermal Shock Rule (10CFR50.61) Re-Evaluation, Model Definition and Uncertainty Treatment presentation [Vuewgraphs]   |
| 9  | <u>Future ACRS Activities/Report of the Planning and Procedures Subcommittee</u><br>8. Future ACRS Activities/Final Draft Minutes of Planning and Procedures Subcommittee Meeting - <b>XX</b> , 1998 [Handout # 9.1]]   |
| 10 | <u>Reconciliation of ACRS Comments and Recommendations</u><br>9. Reconciliation of ACRS Comments and Recommendations [Handout # <b>10.1</b> ]   |



MEETING NOTEBOOK CONTENTS

TAB

DOCUMENTS

- 2     Risk-Informed Regulation Implementation Plan
  - 1.     Table of Contents
  - 2.     Proposed Schedule
  - 3.     Status Report
  - 4.     SECY-01-0218, "Update of the Risk-Informed Regulation Implementation Plan"
  
- 4     Proposed Final Revision to Regulatory Guide 1.174 and SRP Chapter 19
  - 5.     Table of Contents
  - 6.     Proposed Schedule
  - 7.     Status Report
  - 8.     Memorandum dated June 12, 2001, from John T. Larkins, Executive Director, ACRS, to William D. Travers, EDO, NRC, Subject: Proposed Revision to Risk-Informed Regulatory Guide 1.174 and Standard Review Plan Chapter 19.
  - 9.     Memorandum dated October 27, 2000, from Annette Vietti-Cook, Secretary, NRC, to William D. Travers, EDO, NRC, Subject: Staff Requirements - SECY-00-0162 - Addressing PRA Quality in Risk-Informed Activities
  - 10.    Letter dated September 7, 1999, from Dana A. Powers, Chairman, ACRS, to Richard A. Meserve, Chairman, NRC, Subject: Assessment of the Quality of PRAs
  - 11.    Memorandum dated July 20, 2000, from John T. Larkins, Executive Director, ACRS, to William D. Travers, EDO, NRC, Subject: Proposed Final Regulatory Guidance Documents Regarding the Use of Risk-Informed Decisionmaking in License Amendment Reviews
  
- 5     PTS Technical Basis Reevaluation Project
  - 12.    Table of Contents
  - 13.    Proposed Schedule
  - 14.    Status Report
  - 15.    Kirk, M., NRC, and William P., ORNL, "Recommended Method to Account for Uncertainty in the Fracture Characterization Used to ReEvaluate the Pressurized Thermal Shock (PTS) Screening Criteria," revised draft dated October 3, 2001. [Internal Use Only]

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

489<sup>TH</sup> FULL COMMITTEE MEETING  
FEBRUARY 7-9, 2002

FEBRUARY 7, 2002  
Today's Date

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NRC/NRR/DE

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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Nilesh Chokshi

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

489<sup>TH</sup> FULL COMMITTEE MEETING  
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NAME

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