



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

January 23, 2003

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

Dear Chairman Meserve:

SUBJECT: SUMMARY REPORT - 498th MEETING OF THE ADVISORY
COMMITTEE ON REACTOR SAFEGUARDS, DECEMBER 5-7,
2002, AND OTHER RELATED ACTIVITIES OF THE COMMITTEE

During its 498th meeting, December 5-7, 2002, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports and letter.

REPORTS:

The following reports were issued to Richard A. Meserve, Chairman, NRC, from George E. Apostolakis, Chairman, ACRS:

- Draft Commission Paper on Policy Issues Related to Non-Light-Water Reactor Designs, dated December 13, 2002
- Report on the Safety Aspects of the License Renewal Applications for the North Anna Power Station Units 1 and 2 and the Surry Power Station Units 1 and 2, dated December 18, 2002
- Framatome ANP S-RELAP5 Realistic Large-Break Loss-of-Coolant Accident Code, dated December 20, 2002

LETTER:

The following letter was issued to William D. Travers, Executive Director for Operations, from George E. Apostolakis, Chairman, ACRS:

- Draft Final American Nuclear Society External Events Probabilistic Risk Assessment Methodology Standard, dated December 20, 2002

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HIGHLIGHTS OF KEY ISSUES

1. Davis-Besse Lessons Learned Task Force Report and Status of NRC Oversight (0350) Panel's Investigation of the Davis-Besse Event

The Committee heard presentations by and held discussions with representatives of the NRC staff regarding the findings and recommendations of the Davis-Besse Lessons Learned Task Force (LLTF) and the status of the NRC 0350 Panel Oversight of the Davis-Besse Nuclear Power Station activities.

An update of the activities of the Panel, a summary of the results of recent inspection activities, and a description of some significant plant equipment issues were discussed. The Panel stated that First Energy's actions appear adequate and safety focused.

The objectives and scope of the LLTF and the review methods used to conduct the study were discussed. Some of the more significant conclusions arrived at during the study, results related to Davis-Besse's assessment of plant safety, and the NRC staff's integration of information into assessments of Davis-Besse safety performance were discussed. Areas of LLTF recommendations included: inspection guidance, operating experience assessment, code inspection requirements, NRC programs and capabilities, technical information and guidance, leakage monitoring requirement and guidance, NRC licensing processes, and previous NRC lessons-learned reviews.

Committee Action

This was an information briefing and no Committee action was taken.

2. Framatome ANP S-RELAP5 Realistic Large-Break LOCA Code

The Committee heard presentations by and held discussions with representatives of Framatome ANP and the NRC staff regarding Framatome's development of the S-RELAP5 realistic code and its application to PWR large-break LOCA accident analyses. S-RELAP5 is based on the MOD2 and MOD3 versions of the NRC RELAP5 code. A realistic version of the code employs analytical models that more accurately describe the physics and reduce the need for conservative assumptions. The NRC staff has reviewed and approved use of the Framatome ANP S-RELAP5 code for application to PWR LOCA analyses for 3- and 4-loop Westinghouse and CE-designed nuclear steam supply systems.

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Committee Action

The Committee issued a report to Chairman Meserve on this matter, dated December 20, 2002, recommending that: S-RELAP5 code be approved for application to realistic large break LOCA analyses; Framatome ANP take actions to ensure that documentation of future code versions is improved; and nodalization and momentum modeling be enhanced.

3. Meeting with Mr. Laurence Williams, HM Chief Inspector, Nuclear Installations Inspectorate (NII), United Kingdom (U.K.)

The Committee held discussions with Mr. Williams, NII, UK, regarding several items of mutual interest, including pre-decisional plans to expand the nuclear program in the UK.

This session was closed to discuss information provided in confidence by a foreign source.

4. North Anna and Surry License Renewal Application

The Committee heard presentations by, and held discussions with, representatives of the NRC staff and Virginia Electric and Power Company regarding the staff's final Safety Evaluation Report (SER) for the North Anna Power Station and Surry Power Station license renewal applications. The staff addressed the Committee's concern associated with the time limited aging analyses and discussed resolution of open items that were identified in the draft SER.

Committee Action

The Committee issued a report to Chairman Meserve on this matter, dated December 18, 2002. The Committee recommended that the application be approved. The Committee also noted that time-limited aging analyses (e.g., evaluations of the reactor vessel margins for pressurized thermal shock and upper shelf energy) should be independently verified by the staff in future license renewal applications.

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5. Status of the Development of the Review Standard for Power Upgrades

The Committee heard presentations by and held discussions with representatives of the NRC staff regarding the current status of development of a Review Standard for plant power upgrade reviews. The Review Standard is being developed pursuant to Commission direction and the ACRS recommendation that the Office of Nuclear Reactor Regulation (NRR) develop a Standard Review Plan Section for guiding future power upgrade reviews. The Committee provided informal feedback on the staff's approach to develop such a Review Standard. The staff plans to issue its draft Review Standard for public comment.

Committee Action:

This briefing was for information only. No Committee action was taken at this time. The Committee plans to review the draft final standard subsequent to reconciliation of public comments by the staff.

6. Safeguards and Security Activities

The Committee discussed a proposed ACRS plan for its involvement in safeguards and security activities. The proposed plan had been coordinated with cognizant staff in the Office of Nuclear Safety and Incident Response (NSIR), Office of Nuclear Regulatory Research (RES), and the Office of Nuclear Material Safety and Safeguards (NMSS) and reflects their input and current schedules. The ACRS approved the plan and the relevant milestones that were incorporated into the December 2002 update of the ACRS/ACNW Operating Plan.

7. Proposed Options for Resolving Policy Issues for Future Non-Light Water Reactors

The Committee heard presentations by and held discussions with representatives of RES regarding the draft Commission paper on policy issues for non-light water reactor designs. RES staff has identified seven technical issues with policy implications. The Committee agreed with the proposed options.

Committee Action

The Committee issued a report to NRC Chairman Meserve on this matter dated December 13, 2002, agreeing with the staff's recommendation for each of the seven

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policy issues. The Committee also commended the staff on its efforts and looks forward to further interactions on this subject.

8. Draft Final ANS External Events Methodology Standard

The Committee heard presentations by and held discussions with Dr. Robert J. Budnitz, Chairman of the American Nuclear Society (ANS) External Events Working Group, regarding the Draft Final External Events Probabilistic Risk Assessment (PRA) Methodology Standard, BSR/ANS 58.21.

Committee Action

The Committee issued a letter to the Executive Director for Operations on this matter, dated December 20, 2002. The Committee acknowledged that the ANS Standard: adds to the standards available to assist in preparing PRAs for nuclear power plants; provides guidance rather than a prescriptive analytical method; and does not address the issue of seismically induced fires. The Committee also commented that the interface between the fire PRA and external events PRA will need further attention.

9. Election of ACRS Officers

The Committee elected Dr. Mario V. Bonaca as ACRS Chairman, Dr. Graham B. Wallis as ACRS Vice-Chairman, and Mr. Stephen L. Rosen as Member-at-Large for the Planning and Procedures Subcommittee for calendar year 2003.

RECONCILIATION OF ACRS COMMENTS AND RECOMMENDATIONS

- The Committee considered the EDO's response of November 26, 2002 to comments and recommendations included in the ACRS report dated October 17, 2002, concerning publication of the NUREG/BR report, "Guidance For Performance-Based Regulation".

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

OTHER RELATED ACTIVITIES OF THE COMMITTEE

During the period from November 7, 2002 through December 4, 2002, the following Subcommittee meetings were held:

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- Thermal-Hydraulic Phenomena - November 12-14, 2002

The Subcommittee reviewed the Framatome S-RELAP5 realistic code and its application to large-break LOCA analyses, and discussed the status of RES's Rod Bundle Heat Transfer Program under way at The Pennsylvania State University.

- Safety Research Program - December 4, 2002

The Subcommittee discussed the ACRS 2003 report on the NRC-sponsored research programs.

- Planning and Procedures - December 4, 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 EDO

- The Committee plans to review the draft final Review Standard for plant power uprate reviews subsequent to reconciliation of public comments.
- The Committee plans to review changes made to the NUREG/BR report, "Guidance for Performance-Based Regulation," upon its receipt. The changes were made to address the Committee's recommendations which were described in its report of October 17, 2002.
- The Committee plans to have further interactions with the staff on the options for resolving policy issues for future non-light water reactors.

PROPOSED SCHEDULE FOR THE 499th ACRS MEETING

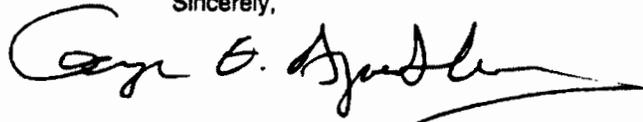
The Committee agreed to consider the following topics during the 499th ACRS meeting, to be held on February 6-8, 2003:

- Catawba and McGuire License Renewal Application
- Draft Regulatory Guide DG-1107, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident" and Draft Generic Letter 2003-xx, related to the Resolution of GSI-191, "Assessment of Debris Accumulation on

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- PWR Sump Performance”
- PTS Reevaluation Project: Technical Bases for Potential Revision to PTS Screening Criterion
- Draft Final Version of Regulatory Guide DG-1077, “Guidelines for Environmental Qualification of Microprocessor-Based Equipment Important to Safety in Nuclear Power Plants”
- Annual ACRS Report on the NRC Safety Research Program

Sincerely,



George E. Apostolakis
Chairman

CERTIFIED
CERTIFIED

Date Issued: 1/29/2003
Date Certified: 2/10/2003

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APPENDICES

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MINUTES OF THE 498th MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
DECEMBER 5-7, 2002
ROCKVILLE, MARYLAND

The 498th meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on December 5-7, 2002. Notice of this meeting was published in the *Federal Register* on November 27, 2002 (65 FR 70983) (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 is available in the NRC's Public Document Room at One White Flint North, Room 1F-19, 11555 Rockville Pike, Rockville, Maryland. Copies of the transcript are available for purchase from Neal R. Gross and Co., Inc. 1323 Rhode Island Avenue, NW, Washington, DC 20005. Transcripts are also available at no cost to download from, or review on, the Internet at <http://www.nrc.gov/ACRS/ACNW>.

ATTENDEES

ACRS Members: ACRS Members: Dr. George E. Apostolakis (Chairman), Dr. Mario V. Bonaca (Vice Chairman), and Mr. Thomas S. Kress, Member-at-Large, Dr. F. Peter Ford, Mr. Graham M. Leitch, Dr. Dana A. Powers, Dr. Victor H. Ransom, Mr. Stephen L. Rosen, Dr. William J. Shack, Mr. John D. Sieber, and Dr. Graham B. Wallis. 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. Davis-Besse Lessons Learned Task Force Report and Status of NRC Oversight (0350) Panel's Investigation of the Davis-Besse Event (Open)

[Note: Mrs. Maggalean W. Weston was the Designated Federal Official for this portion of the meeting.]

Dr. F. Peter Ford, Chairman of the Materials and Metallurgy Subcommittee introduced this topic to the Committee. The Committee heard presentations by representatives of the NRC staff on matters related to the Davis-Besse Nuclear Power Station which is owned by FirstEnergy, Inc. The purpose of this meeting was to hear an update of the NRC 0350 Panel Oversight of the Davis-Besse Nuclear Power Station activities and to hear information regarding the Davis-Besse Reactor Vessel Head Degradation Lessons-Learned Task Force (LLTF) Report.

NRC Staff Presentation

The staff presentation on the 0350 Panel was made by Mr. Jack Grobe, Chairman of the 0350 Oversight Panel, and the Lessons Learned Task Force (LLTF) presentation by Mr. Art Howell, Chairman of the LLTF.

Mr. Grobe provided an update of the activities of the Panel, gave a summary of the results of their recent inspection activities, and described some significant plant equipment issues. Some items of discussion were the restart checklist, inspection accomplishments, and plant equipment issues. The panel concluded that FirstEnergy's actions appear adequate and safety focused. The panel will provide other updates in the future.

Mr. Howell discussed the objectives and scope of the LLTF and the review methods they used to conduct the study. He summarized some of the more significant conclusions arrived at during the study, results related to Davis-Besse's assurance of plant safety, and the NRC integration of information into assessments of Davis-Besse safety performance. Mr. Howell also discussed the areas of recommendations, which included inspection guidance, operating experience assessment, code inspection requirements, NRC programs and capabilities, technical information and guidance, leakage monitoring requirements and guidance, NRC licensing processes, and previous NRC lessons-learned reviews. He indicated that senior NRC managers have reviewed the report and recommendations and provided further recommendations to NRC executives regarding the LLTF recommendations. An action plan will be developed to implement the senior management recommendations.

Committee Action

This was an information briefing and no Committee action was taken.

III. Framatome ANP, Inc., S-RELAP5 Realistic Large-Break LOCA Code (Open)

[Note: Mr. Paul E. Boehnert was the Designated Federal Official for this portion of the meeting.]

Dr. Graham B. Wallis, Chairman of the Thermal-Hydraulic (T/H) Phenomena Subcommittee, introduced this topic to the Committee and noted that the Committee was familiar with this topic.

Framatome-ANP Presentation

Mr. L. O'Dell, Framatome ANP, provided an overview presentation of the Framatome realistic large-break (LB) loss-of-coolant accident (LOCA) methodology. Framatome's realistic methodology conforms to the Code Scaling, Applicability, and Uncertainty (CSAU) method. Mr. O'Dell detailed the specifics of the Framatome methodology, pursuant to the three-Element, 14-step CSAU approach. Specifically:

- Requirements and Capabilities
 - CSAU Element 1, Steps 1-6
- Assessment and Ranging of Parameters
 - CSAU Element 2, Steps 7-10
- Sensitivity and Uncertainty Analysis
 - CSAU Element 3, Steps 11-14

To determine the combined bias and uncertainty as required by the ECCS Rule for use of a realistic code, Framatome used non-parametric statistics to determine the "95/95" value for peak cladding temperature (PCT). For the 3- and 4-loop plant cases shown, the calculated PCTs were 1853°F and 1686°F, respectively.

Comments noted by the Committee Members during the above discussion included:

- In response to Dr. Wallis, Framatome noted that they are restricted to a specific computer system, pursuant to the quality assurance requirements of Appendix B to 10 CFR Part 50. These requirements prevent use of the most modern computer platforms.

- Dr. Powers noted that S-RELAP5 does not account for the phenomenon of clad oxide spallation. He said that he is aware of a paper from France that discusses this phenomenon. He also said that code developers should acknowledge that such phenomena do occur, not ignore them, and address them in their Phenomena Identification and Ranking Table (PIRT) analysis.
- Dr. Wallis asked how Framatome handled the issue of noding selection. Framatome said that they were able to demonstrate noding convergence. Mr. O'Dell said that similarity in node size was maintained between the reactor model and the experiments for the comparisons run.

Mr. J. Mallay, Framatome, made comments relative to the status of the Framatome S-RELAP5 code documentation. He said that based on the comments of the T/H Phenomena Subcommittee, Framatome has come to realize that the terminology and methods in its reports are not clear to knowledgeable individuals and that they need to provide a more comprehensive explanation of the equations and models used in the code. To this end, Framatome will revise the Theory Manual to address these concerns. This revision will be performed in concert with Framatome's next S-RELAP5 code application submittal (BWR non-LOCA analyses). Dr. Wallis said that Framatome's code documentation must stand on its own. Further, he said that Framatome's future presentations to the T/H Phenomena Subcommittee need to provide more rigorous explanations of the code models and its applications.

NRR Presentation

Mr. R. Landry, Office of Nuclear Reactor Regulation (NRR), summarized the results of its review of the Framatome ANP realistic large-break LOCA methodology. Issues discussed included: review milestones, review team members, review results and conclusions. NRR noted that as a part of their review a number of parametric studies were conducted, using Framatome's S-RELAP5 code. The staff concluded that the S-RELAP5 realistic LB LOCA methodology meets the NRC's licensing requirements, pursuant to the ECCS Rule. The code is applicable to 3- and 4-loop Westinghouse and Combustion Engineering designs.

The following points were noted during the above discussion:

- The staff does not object to Framatome's approach of treating the break type and size statistically, since no bias was applied to the analysis. NRR had

Framatome perform a statistical analysis for the worse-case break size, only two points were slightly above the predicted peak cladding temperature and the staff found this acceptable.

- In response to Dr. Wallis, Dr. Landry said that the staff plans to investigate the issues associated with modeling of momentum phenomena.
- The staff is not yet running its own code in support of vendor code reviews. This matter will be evaluated in the near future.
- Dr. Powers questioned the appropriateness of modeling phenomena on a conservative basis for a realistic code, citing the example of the clad oxide spallation phenomenon noted above. NRR said that the Office of Nuclear Regulatory Research (RES) is evaluating the issue of the effects of different cladding composition with regard to a LOCA event. Dr. Landry said that he would inquire if RES is evaluating the oxide spallation as a part of this study.

Committee Action

The Committee issued a report to Chairman Meserve on this matter, dated December 20, 2002. The Committee recommended approval of S-RELAP5 for application to realistic LB LOCA analyses. The Committee also recommended that: Framatome ANP take actions to ensure that documentation of future code versions is improved, and that nodalization and momentum modeling are enhanced. The NRC staff was advised to: (1) determine if such a potentially significant phenomenon as zirconium oxide spallation significantly impacts realistic code modeling, (2) facilitate upgrading of computer platforms, and (3) perform audit calculations with its TRAC-M code.

IV. Meeting with Mr. Laurence Williams, Her Majesty's Chief Inspector, Nuclear Installations Inspectorate (NII), United Kingdom (U.K.) (Closed)

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

The Committee held discussions with Mr. Williams, NII, UK, regarding several items of mutual interest including pre-decisional plans to expand the nuclear program in the UK.

This session was closed to discuss information provided in confidence by a foreign source.

V. North Anna and Surry License Renewal Application (Open)

[Note: Tim Kobetz was the Designated Federal Official for this portion of the meeting.]

Mr. Leitch, the cognizant ACRS Member for this issue, introduced the topic to the Committee noting that on July 9, 2002, the License Renewal Subcommittee met to discuss the license renewal applications (LRAs) for North Anna Power Station and Surry Power Station. The subcommittee reviewed an safety evaluation report (SER) with open items and confirmatory action items. Since that time, a final SER has been issued by the staff which resolved the open and confirmatory items. Chapter 4, Time-limited Aging Analyses (TLAA) was substantially rewritten since the subcommittee meeting. Therefore, TLAA was reviewed closely during this full Committee Meeting.

P. T. Kuo, Program Director for the License Renewal and Environmental Impacts Program, NRR, reported to the Committee that the staff completed development of the post-license renewal inspection procedure and will issue it shortly. Currently for North Anna and Surry, the staff are working with the applicant on a commitment list that will be used for the post-license renewal inspection.

Applicant Overview of Application

Bill Corbin, Director of Nuclear Projects, Dominion, stated that the LRAs were submitted on May 29, 2001. The format is consistent with Nuclear Energy Institute (NEI) 95-10, Rev. 3, "Industry Guidance for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule" and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants.

With regard to the scoping and screening methodology for mechanical, civil, and structural systems and components, Dominion reviewed the in-house documentation sources to identify intended functions. These included the equipment database system, Updated Final Safety Analysis Report, and the maintenance rule scoping. Dominion's component database was used to identify specific components that supported each of those intended functions, and developed license rule boundary drawings.

For electrical, and instrumentation and control (I&C) systems a different scoping and screening approach was used. The passive electrical and I&C components were screened on a plant-level basis. This is similar to what some previous applicants have done and is sometimes referred to as the spaces approach. Initially those components

that were specifically associated with the station blackout diesel and associated switchyard components were not included. However, based on interactions with the staff, Dominion now considers the station blackout portions of the off-site power supply, including components and the switchyard, within the scope of license renewal.

With regard to TLAA, the generic TLAA's included reactor vessel neutron embrittlement, metal fatigue, and environmental control (EQ). Other plant-specific TLAA's, include the crane load cycle limit, reactor coolant pump flywheel, leak-before-breaks, spent fuel pool liner, piping subsurface indications, and Code Case N-481 for the reactor coolant pumps.

It is Dominion's intention that, by the end of the current 40-year license period, it will deliberately inspect each of the types of buried pipe that are within scope. However, the inspections will be performed only when the opportunity arises up to approximately one year before that time. With one year to go, if an inspection of some type of pipe has not been accomplished, selected piping will be uncovered and inspections will be performed.

To minimize the effects of moisture on cables in manholes, and other areas where water can collect, Dominion's first line of defense is to inhibit the intrusion of water into those areas. Activities are performed to keep the water out of manholes and other places where groundwater may leak in. However, if there is a persistent issue with groundwater, then those cables will be evaluated for water treeing or other types of degradation. Mr. Leitch questioned whether the exact nature of that testing had been established or is that something that needs to be completed before the end of the current license period. Mr. Corbin responded that, like much of the industry, Dominion is waiting to identify a set of tests or a test that will be able to be performed that can explicitly show the type of degradation from water treeing or other mechanisms. Dominion will follow the industry in terms of trying to identify a type of test that could be performed. Currently, there is nothing out there that explicitly tries to identify that kind of degradation mechanism.

Dominion plans to replace the reactor vessel heads on all four plants during the next outage for each unit. All four heads will be replaced before the end of 2003. The heads are being replaced based on the inspections of the head penetration J-groove welds that identified cracking. Dominion made a decision that, rather than spend the dose, time, and money to make the repairs, it was more effective to replace the heads.

Dr. Shack noted that to replace the vessel head a hole would need to be cut in the containment. He questioned, when the containment is repaired will it still meets design requirements. Mr. Corbin responded that there are two elements to the repair. One is to replace the concrete and the other is to replace the liner plate. Dominion will perform local leak rate testing, as well as other forms of non-structured examinations, to assure that the plate has been correctly welded. Structurally, when the concrete and rebar is replaced a structural integrity test is performed. Dominion is currently working with the NRC to ensure that the correct test to validate the structural integrity of the containment is performed.

NRC License Renewal Inspections

Mr. Caudle, NRC lead inspector for the North Anna and Surry License Renewal Inspections, stated that the inspections were performed in accordance with NRC Manual Chapter 2516, "Policy and Guidance For The License Renewal Inspection Program" and Inspection Procedure 71002, "License Renewal Inspection." Resources include a five-member inspection team. For consistency in the inspections, NRC Region II uses the same team members as much as possible.

The scoping and screening inspection was performed first. The inspection's objective was to confirm that the applicant included all appropriate systems, structures, and components in the scope of license renewal as required by the rule. The inspection was one week in length, conducted February 4-8, 2002, at the corporate engineering offices. The inspectors found that the applicant had significantly expanded the scope of components to be considered for aging management considerations based on NRC staff concerns with non-safety-related to safety-related interactions. It is a concern that non-safety-related piping might fail due to aging and damage safety-related components. The inspectors found that the applicant conservatively expanded its original scope of components.

The aging management inspection was performed second. The objective of the inspection was to conform to the existing aging management programs that are working well; and, to examine the applicant's plans for establishing new aging management programs and enhancing existing ones. That was two weeks in length in April and May 2002. The inspection team spent one week at each site. Two observations of interest there were at Surry. Prior to the inspection, the applicant found water in some of the manholes containing electrical cables in the switchyard. The current solution to the problem has been to perform periodic inspections twice per week. The applicant is currently evaluating an engineering solution such as redesigning the manholes to install

automatic sump pumps. The inspection also identified that, in the past, both plants had identified containment concrete anomalies and repaired them.

The inspectors performed walk-down inspections of equipment and systems in the containment during a refueling outage. The only significant finding was that the Surry component cooling water (CCW) piping inside containment had a lot of corrosion. The applicant had known this for a long time and periodically had documented the corroded piping in its corrective action program. However, the applicant did not have an aggressive program monitoring the problem. During the inspection, the applicant made some ultrasonic measurements to confirm that the piping is not corroded to below minimum wall. Since then, the applicant has improved its corrosion monitoring program. Mr. Rosen questioned whether the CCW piping corrosion extended outside containment as well and, if so, what actions are being taken. Mr. Julian responded that CCW pipe, both inside and outside containment, are included in their general condition monitoring program. This piping corrosion is caused by condensation. The CCW is chilled water and the heated atmosphere of the containment results in condensation on the outside of the pipe. Mr. Corbin added that the significant difference between Surry and North Anna in regard to CCW pipe corrosion is that North Anna has a better coating system on their CCW piping.

The last inspection was conducted in September 2002 to close open items from the first two inspections. This inspection concluded that the applicant had made progress in making plant changes to programs for enhancing aging management programs. Most importantly, the applicant had established a tracking system for future actions that it had committed to perform.

Staff's Analysis of Pressurized Thermal Shock

Barry Elliot, Senior Materials Engineer, Materials and Chemical Engineering Branch, NRR, discussed the applicant's pressurized thermal shock (PTS) evaluation. The evaluation was performed in accordance with 10 CFR 50.61 which requires all licensees to determine whether the reactor pressure vessel beltline materials exceed the RT_{PTS} screening criteria of 270°F and to evaluate surveillance data to determine the impact of the data on the PTS evaluations.

An evaluation was performed by both the staff and the applicant using the Surry Unit 1 data because it has an RT_{PTS} value of 268.5°F. The other three reactors are significantly below that value (North Anna Unit 1 is 191°F, North Anna Unit 2 is 228°F, and Surry Unit 2 is 219°F).

The staff confirmed the RT_{PTS} value of 268.5°F. The staff concluded that all materials will remain below the PTS screening criteria to the end of the period of extended operation.

Dr. Ford questioned whether the staff would require the applicant to implement some type of remediation program if the RT_{PTS} value was calculated to be 270.1°F. Mr. Elliot responded that the applicant would have two alternatives: 1) the applicant could perform flux reduction so that the value would be below the screening criteria, or 2) it could perform an analysis to demonstrate that operating above the RT_{PTS} value would be acceptable.

Dr. Kress and Dr. Ford expressed concern with the RT_{PTS} limit of 270°F noting that it appeared to be arbitrary. Mr. Elliot noted that Surry Unit 1 has nine data points which the staff carefully evaluated. Because the Surry Unit 2 value was so close to the screening criteria, the staff performed a statistical evaluation which they normally do not perform. The staff compared the measured value for the actual surveillance data points to the predicted value for that surveillance data point. Then using the z-test method and the standard deviation for the model, which is 28°F. The staff determined that it was within the limits of the 95 percent confidence limit and a five percent significance level.

Reactor Vessel Upper-Shelf Energy

Prior to the presentation, Dr. Shack questioned whether the applicant operated a low leakage core. John Harrell, Supervisor for Nuclear Safety Analysis, Dominion, stated that Dominion did operate its plants with a low leakage cores.

Mr. Mitchell, Senior Materials Engineer, lead the discussion on the upper-shelf energy (USE) describing the requirements of Appendix G to 10 CFR Part 50. The accepted technology for performing equivalent margin analyses uses an approach based upon elastic and plastic fracture mechanics, J-integral tearing modulus evaluations as described in Regulatory Guide 1.161, "Evaluation of Reactor Pressure Vessels with Charpy Upper-Shelf Energy Less Than 50 Ft-Lb" and in Appendix K to Section XI of the ASME code.

Dr. Shack questioned what projected Charpy energies will be. Mr. Mitchell responded that Surry Unit 1 reactor vessel has both the limiting axial and limiting circumferential weld material when compared to Surry Unit 2. On the circumferential weld, it is

projected to be approximately 42 foot-pounds and the axial weld is projected to be approximately 43.6 foot-pounds.

Dr. Ford expressed concern that this was below the required 50 foot-pounds. Mr. Mitchell stated that the limit in Appendix G to 10 CFR Part 50, is 50 foot-pounds. If a licensee desires to go below that limit it is required to perform an equivalent margin analysis. This analysis was performed by Dominion for the Surry Unit 1 and Unit 2 vessels.

V.C. Summer Hot-Leg Nozzle Cracking as Applicable to the LRAs

Simon Sheng, Materials Engineer, Materials and Chemical Engineering Branch, NRR, stated that reactor vessel nozzle cracking that was identified at V. C. Summer is reviewed as a leak-before-break (LBB) issue. The problem at V. C. Summer was associated with Alloy 82/182 welds on the vessel nozzles. There are no Alloy 82/182 welds on either the North Anna or Surry vessel nozzles. In addition, Dominion has committed to perform the state-of-the-art inspection program of these areas and will continue to use improved inspection methods as they become available. North Anna Unit 2 is replacing its reactor vessel head because the head penetrations do contain Alloy 82/182 welds and are considered a high-susceptible to cracking. The staff does not consider reactor vessel nozzle cracking, similar to what occurred at V. C. Summer, to be an issue at either North Anna or Surry.

Flow-Accelerated Corrosion Program

Mr. Parczewski, Senior Chemical Engineer, Materials and Chemical Engineering Branch, NRR. Stated that North Anna and Surry each have six plant systems (auxiliary steam, blowdown, feedwater, steam drains, and main steam) that contain carbon steel piping and components and are susceptible to erosion/corrosion. Mr. Tabatabai added that Dominion has instituted a pH control program. By increasing the pH, Dominion has decreased the flow-accelerated corrosion.

Mr. Breedlove, Flow-Accelerated Corrosion (FAC) Coordinator, Dominion, stated that CHECKWORKS was used at North Anna and Surry to predict wall thinning. Dr. Wallis was concerned that CHECKWORKS is not a very precise predictive tool. Mr. Breedlove responded that Dominion confirms CHECKWORKS predictions with extensive in-service inspections. Mr. Parczewski concluded by stating that the staff believes the Dominion corrosion program predictions are sufficiently accurate and conservative and found to be acceptable for license

Committee Action

The Committee issued a report to the Chairman on this matter, dated December 18, 2002. The Committee recommended that the applications be approved. The Committee also noted that time-limited aging analyses (e.g., evaluations of the reactor vessel margins for pressurized thermal shock and upper shelf energy), should be independently verified by the staff in future license renewal applications.

VI. Status of the Development of the Review for Power Uprates (Open)

[Note: Mr. Paul A. Boehnert was the Designated Federal Official for this portion of the meeting; and, Mr. Michael R. Snodderly was the Cognizant Staff Engineer.]

Dr. Graham Wallis, Chairman of the Thermal-Hydraulic Phenomena Subcommittee, stated that Mr. Mohammed Shuaibi of the NRR staff would discuss their efforts to develop a review standard for plant power uprate requests. Dr. Wallis noted that the staff has decided to develop a review standard in response to the Committee's recommendation to the Commission that the staff develop a standard review plan Section to guide the course and content of NRR's review of such requests. The recommendation resulted from the Committee's review of several initial applications for core power increases.

Mr. Tad Marsh, Deputy Director, Division of Licensing Project Management, provided an introductory statement. Mr. Marsh stated that the Extended Power Uprate Review Standard would serve several purposes: (1) as a mechanism for retention of institutional knowledge, (2) comprehensive guidance for less experienced reviewers (3) as a mechanism for updating the standard review plan, and (4) assist the Centralized Work Planning Center in budgeting and planning needed resources for future power uprates. Mr. Marsh further stated that the staff expects at least 20 additional power uprate applications based on a semi-annual survey of the nuclear industry conducted in July 2002. Mr. Marsh went on to say that the review standard was with NRR management for concurrence and that a management briefing on the review standard was scheduled for the week of December 9, 2002. Mr. Marsh said it was NRR's goal to have final concurrence on the draft standard by the end of December. Mr. Marsh then summarized by saying that NRR was not seeking a letter from the Committee today but they did want feedback on the staff's approach to address the Committee's recommendation.

At the end of the summary, Mr. Graham Leitch asked who was the intended audience of the review standard. Mr. Marsh said that the audience was the staff but that it is being issued for public comment to assist licensees' with improving the quality of their applications and improving the effectiveness and efficiency of the staff's review.

Mr. M. Shuaibi, NRR, began his presentation by discussing the Extended Power Uprate Review Standard. Mr. Shuaibi noted that the review of past requests for additional information and previous power uprate approvals were considered in the development of the review standard. Mr. Shuaibi then discussed the details of the review standard, noting that it is divided into the following four sections: (1) procedural guidance, (2) technical review guidance, (3) documentation of review, and (4) inspection guidance. Mr. Leitch asked how an applicant who had inferior housekeeping would be considered pursuant to review of a power uprate. Mr. Marsh said it would be handled as part of the licensee's corrective action program and would probably not affect the application for extended power uprate. Mr. Stephen Rosen then asked how an applicant with greater than normal main steam line vibration would be handled. Mr. Marsh said it would be handled in a matter similar to the housekeeping example. Mr. Jack Sieber suggested that the main steam line vibration example could be addressed by a request for additional information. Mr. Marsh agreed that the staff would ask for a request for additional information if they were aware of the problem. Mr. Leitch then asked how an applicant with yellow findings would be considered. Mr. Marsh said it was a good question but that he didn't have an answer.

Dr. Mario Bonaca asked how the effects of aging are considered in power uprate reviews. He was concerned that most analyses in support of power uprates assume the structures, systems, and components are new. Mr. Marsh responded that certain aging effects are discussed in generic communications which are considered in the review standard. Dr. Victor Ransom interjected that he believed that the review should begin with an engineering inspection of the plant. Mr. Marsh said that the review begins with the licensee's request for amendment. Mr. Marsh said there is post-inspection activity but there is not a pre-inspection. Inspection guidance for the staff is covered by Section 4 of the Review Standard.

Mr. Shuaibi described the technical review guidance. He explained that the review guidance is summarized in matrices for each technical review branch. Mr. Shuaibi then provided a handout of Matrix 1 for the Materials and Chemical Engineering Branch. The matrix includes the following: areas of review, responsible review branches, guidance documents, boilerplate safety evaluation section number, and acceptance review. Mr. Shuaibi explained that the acceptance review column was added in

response to ACRS comments. Mr. Rosen and Dr. Shack asked where technical review of testing and flow induced vibration were covered, respectively. Mr. Shuaibi replied that both issues are covered by other matrices.

Mr. Leitch asked about the possibility of power uprate occurring simultaneously with an application for license renewal. Mr. Marsh said that it is a possibility and in fact it is the case for the Browns Ferry plant. Mr. Marsh explained that these are major applications which require significant resources and would be closely coordinated. Mr. Shuaibi then elaborated that the project manager would be aware of the plant history, including changes to the plant's technical specifications. In addition, the project manager is responsible for taking the technical reviewers input and developing the final amendment. Mr. Sieber interjected that concerns about vessel aging and power uprate would be governed by the PTS rule which considers reactor power and vessel embrittlement. Mr. Shuaibi agreed that the PTS limit is governing and that if a licensee chose to operate at a higher power level it may limit a previously approved extension to 60 years. Dr. Bonaca then asked if applicants were being asked for a plant operating history. Mr. Shuaibi replied that the applicant is not required to supply a plant operating history but the applicant is required to demonstrate that the plant can meet the applicable regulations at the requested power level.

Mr. Shuaibi summarized the purpose of Section 3, "Documentation of Review," of the review standard. Mr. Shuaibi said that Section 3 would aid in standardizing the format and content of the evaluations, provide regulatory evaluation and a conclusion for each area of review, and would ensure consistency with NRR guidance. As an example, he then provided the ACRS with a draft of Insert 1 for Section 3.2, "BWR Boilerplate Safety Evaluation," of the review standard. The boilerplate contained the following three parts: regulatory evaluation, technical evaluation, and conclusion. Mr. Shuaibi explained that the technical evaluation was left blank to emphasize to the technical reviewer that this is where the reviewer explains why they reached the following conclusion. Several members commented that this would be a great improvement over some of the earlier evaluations. Section 4, "Inspection Guidance," of the review standard was presented. Mr. Shuaibi pointed out to the Committee that this is where recommended areas for inspection are highlighted.

Mr. Shuaibi presented the upcoming schedule for the review standard. He explained that NRR management is to be briefed on the review standard during the week of December 9, 2002, and that it is scheduled to be issued for interim use and public comment by the end of the month. NRR would then brief the ACRS on the public comments and request review of the standard. NRR would then resolve any additional

ACRS comments and issue the final review standard in early 2004. The discussion then turned to what types of plant specific power uprates the Committee would review. NRR proposed that ACRS cease review of all stretch power uprates which are typically on the order of 6-8% of nominal power. The Committee acknowledged that they now have a level of comfort with power uprates of 5% or less and that uprates of this magnitude no longer had to be reviewed by the Committee. ACRS Staff Engineer Paul Boehnert suggested that all stretch power uprates still be sent to the Committee but that the Committee would decide which ones it would review. Mr. Marsh took as an action item to provide a written rationale as to why Committee review of stretch uprates is not necessary.

Mr. Marsh thanked the Committee for its time and comments. He stated his belief that the comments would help the staff come up with a better product. Mr. Marsh then expressed the thought that in the future NRR will have to weigh whether it is more or less work to develop a review standard to achieve the staff's effectiveness and efficiency goals.

VII. Safeguards and Security Activities (Open)

[Note: Dr. Richard P. Savio was the Designated Federal Official for this portion of the meeting.]

The Committee discussed a proposed ACRS plan for its involvement in safeguards and security. The proposed plan had been coordinated with cognizant staff from the Office of Nuclear Security and Incident Response, the Office of Nuclear Regulatory Research, and the Office of Nuclear Materials Safety and Safeguards and it reflects their input and current schedules. The ACRS has approved the plan and it will be incorporated into the December 2002 update of the ACRS/ACNW Operating Plan. The ACRS will implement this plan, making adjustments as necessary to reflect changes in Commission and NRC staff priorities.

VIII. Proposed Options for Resolving Policy Issues for Future Non-Light Water Reactors (Open)

[Note: Dr. Medhat El-Zeftawy was the Designated Federal Official for this portion of the meeting.]

Dr. Thomas S. Kress, Chairman of the ACRS Future Plant Designs Subcommittee, stated that the Committee will hear presentations by representatives of the RES

regarding the draft Commission paper on policy issues for future non-light water reactor designs.

Dr. Thomas King, RES, stated that seven technical issues with policy implications have been identified by RES. They are:

- How should the Commission's expectations for enhanced safety be implemented for future non-LWRs?
- Should specific defense-in-depth (DID) attributes be defined for non-LWRs?
- How should NRC requirements for future non-LWR plants relate to international safety standards and requirements?
- To what extent should a probabilistic approach be used to establish the plant licensing basis?
- Under what conditions, if any, should scenario-specific accident source terms be used for licensing decisions regarding containment and site suitability?
- Under what conditions, if any, can a plant be licensed without a pressure-retaining containment building?
- Under what conditions, if any, can emergency planning zones be reduced, including a reduction to the site exclusion area boundary?

RES has developed options for resolving these issues. RES is recommending the following for the above seven issues, respectively:

- Use a process similar to that used on ALWR design certification; modular designs should account for integrated risk of multiple reactors; and incremental risk from additional plants that are expected to be small due to safer designs.
- Develop a description or policy statement for DID with the details to be developed as a follow-up action.
- Proactively identify, participate in the development, and endorse international standards, whenever practical (e.g., fill gaps in NRC infrastructure, improve NRC efficiency, needed to review an application).

- Use a probabilistic approach, supplemented by engineering judgement for event selection, safety classification and to replace the single failure criterion.
- Retain the 1993 Commission guidance (conservative assessment of accident scenarios and fission product release).
- Supplement the 1993 Commission guidance; utilize the results of event selection to determine containment challenge; and add an additional criterion (addition of pressure retaining building does not substantially improve safety).
- Retain the 1993 Commission guidance.

The Committee agreed with the proposed options and the above recommendations.

Committee Action

The Committee issued a report to NRC Chairman Meserve on this matter dated December 13, 2002, agreeing with the staff's recommendation for each of the seven policy issues. The Committee also commended the staff on its efforts and will look forward to further interactions

IX. Draft Final ANS External Events Methodology Standard (Open)

[Note: Mr. Howard J. Larson was the Designated Federal Official for this portion of meeting; and, Mr. Ramin Assa was the Cognizant Staff Engineer.]

Dr. Dana A. Powers, cognizant member, stated that the Committee would hear a presentation by Mr. Robert J. Budnitz, representative of the American Nuclear Society (ANS), regarding the Proposed Final External Events Probabilistic Risk Assessment Methodology Standard, BSR/ANS 58.21. Mr. Powers noted that this standard focuses primarily on seismic events, external flooding, high winds, tornados and hurricanes. The standard does not include fires resulting from external events.

Mr. Budnitz provided a brief history of the probabilistic risk assessment (PRA) (both internal and external) standards development. He stated that ANS had appointed him as the Chairman of the working group responsible for development of the External Events Standard. He noted that the working group sought comments by other reviewers, the public, and the ACRS and incorporated these comments in the final

product. Mr. Budnitz informed the Committee that the standard will be published by the American National Standards Institute, (ANSI) before being finalized. He expected the approval process to take another two months after the ACRS (498th) meeting.

Mr. Budnitz stated that the last version of the standard was changed to include three capability categories to make it consistent with the ASME internal PRA Standard. Mr. Budnitz added that the External Events Standard contained uncertainty issues but not earthquake caused by fires. He informed the Committee that another ANS Committee has been engaged in developing a fire PRA, which is expected to be completed in about one and half years later. He also provided some discussions related to high confidence of low probability failure (HCLPF).

Mr. Rosen noted that PRA standards are useful tools and acknowledged that the peer reviews and certifications process are effective in improving these standards. Dr. Apostolakis noted that applicants who rely on a standard may inadvertently omit significant issues or fail to do a thorough evaluation. Mr. Powers questioned the effectiveness of peer reviews and added that occasionally the results of peer reviews may not be reproducible.

The Committee noted that the PRA standard provides guidance rather than a prescriptive analytical method. The Committee also noted that the standard defines requirements for three capability categories of external event PRAs that differ in terms of their level of resolution, conservatism, and use of site-specific data.

Committee Action

The Committee issued a letter to the Executive Director for Operations on this matter, dated December 20, 2002. The Committee acknowledged that the ANS standard adds to the standards available to assist in preparing PRAs for nuclear power plants. The Committee also noted that the standard does not address the issue of seismically induced fires, and commented that the interface between the fire PRA and external events PRA will need further attention.

X. Election of ACRS Officers (Open)

The Committee elected Dr. Mario V. Bonaca as ACRS Chairman, Dr. Graham B. Wallis as ACRS Vice-Chairman, and Mr. Stephen L. Rosen as Member-at-Large for the Planning and Procedures Subcommittee for calendar year 2003.

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 considered the EDO's response of November 26, 2002 to comments and recommendations included in the ACRS report dated October 17, 2002, concerning publication of the NUREG/BR report, "Guidance For Performance-Based Regulation".

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

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

The Committee heard a report from the ACRS Chairman and the Executive Director, ACRS, regarding the Planning and Procedures Subcommittee meeting held on December 4, 2002. The following items were discussed:

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

Member assignments and priorities for ACRS reports and letters for the December 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 March 2003 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

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- Plan and schedule items for ACRS discussion of topical and emerging issues

During this session, the Subcommittee also discussed and developed recommendations regarding the Future Activities List.

Celebration of the 500th ACRS Meeting

During the October and November meetings, the Committee discussed sponsoring a buffet lunch and/or an evening reception on the first day. The Executive Director is seeking financial support from the agency for the buffet lunch and recommends that the members sponsor the evening reception. Dr. Larkins discussed the subject of an awards ceremony during the 500th ACRS meeting with Chairman Meserve. He is reasonably comfortable with the idea, subject to specific details being resolved.

ACRS Meeting with the NRC Commissioners

A meeting between the ACRS and the NRC Commissioners is scheduled for March 6, 2003, between 2:00 and 4:00 p.m. to discuss items of mutual interest. Items approved by the Committee for this meeting are as follows:

- (1) Overview by the ACRS Chairman
 - 500th meeting celebration
 - Quadripartite Meeting
 - License Renewal Activities
 - Core power uprates
 - Future ACRS activities
 - Confirmatory Research Program on High-Burnup Fuel
- (2) Advanced Reactor Designs (TSK)
 - Early Site Permit Process
 - Options paper for resolving policy issues
- (3) Reactor Vessel Head Penetration Cracking and Reactor Vessel Degradation/Davis-Besse Insights (FPF/SR)
- (4) Proposed 50.69 Rulemaking (GEA)

These topics will be sent to the Commission for approval.

On December 4, 2002, Dr. Larkins received a call from the Secretary of the Commission to convey a Commission request that the ACRS provide its annual report

on the NRC Safety Research Program on March 13, 2003. The Commission is scheduled to meet with RES on March 27, 2003 and would like to discuss ACRS comments and recommendations with RES at that meeting.

Self-Assessment

The Committee usually reviews the results of the self-assessment during its annual retreat and presents the results to the Commission in a SECY paper, which is due this year by May 31, 2003. Since the Committee has decided not to have a retreat in 2003, it must determine another mechanism for performing the self-assessment and providing the Commission with the results in May of 2003. During the November 2002 meeting, the Committee requested that Dr. Savio develop a plan for performing the self-assessment.

Election of Officers for CY 2003

The Committee will elect Chairman and Vice Chairman to the ACRS and Member-at-Large to the Planning and Procedures Subcommittee for CY 2003 during the December 5-7, 2002 ACRS meeting. In accordance with the ACRS Bylaws, it was requested that those members who would like to withdraw their names from consideration for any or all of the offices notify the ACRS Executive Director in writing by November 20, 2002. Three members have informed Dr. Larkins that they would like to withdraw their names from consideration for all of the offices. One member has withdrawn his name from consideration for ACRS Chairman.

Davis-Besse Insights

During the May 2002 ACRS meeting, the Committee assigned Mr. Rosen with the task of developing a report on the insights gained from the reactor vessel head degradation event at the Davis-Besse nuclear plant. Mr. Rosen is in the process of preparing a report. As suggested by the Committee during the November ACRS meeting, he will provide a status report on the development of the Davis-Besse Insights report.

Role and Use of PRA in the Regulatory Decisionmaking Process

Mr. Fleming, under a contract with the NRC/ACRS, is preparing a report on the Role and Use of PRA in the Regulatory Decisionmaking Process. The report will provide input for the Committee to prepare a White Paper on the subject. A preliminary draft of the report prepared by Mr. Fleming was sent to all members by Dr. Nourbakhsh at the

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end of November 2002 and also distributed on Thursday, December 5, 2002, along with the comments provided by Dr. Kress. Feedback from the members on the preliminary report is being sought by Mr. Fleming.

ACRS Letter Matrix

The ACRS Office is required to submit the Operating Plan and ACRS letter matrix (summary of ACRS letters and reports) to the Commission by December 31, 2002. Each year, the Committee authorizes the ACRS Executive Director to issue the ACRS Letter Matrix. We are in the process of preparing the Letter Matrix, which will be provided to the members for information following the December ACRS meeting. The Committee needs to authorize the Executive Director to issue the Letter Matrix to the Commission.

Mail Distribution List

Based on the discussion of "member issues" at the November 2002 ACRS meeting, each member was provided with a copy of the Mail Distribution List to mark up. This will help to ensure that members receive only the documents of their choice.

NRC Web Page

During the mini-retreat members voiced concern about the NRC internal Web Page. Our office is going to elevate these concerns to the NRC Chief Information Officer (CIO). However, in an effort to do this, we need to provide specific details related to the members' concerns.

The Continuing Resolution

The government is operating under a continuing resolution which may continue into March 2003. As a result, the NRC has instituted some stringent financial management measures. We are required to obtain approval prior to any credit card purchases regardless of the amount of the purchase. In addition, we are operating at a reduced budget and must be frugal about trips beyond the scheduled full and subcommittee meetings.

C. Future Meeting Agenda

Appendix IV summarizes the proposed items endorsed by the Committee for the 499th ACRS Meeting, February 6-8, 2003.

The 498th ACRS meeting was adjourned at 12:10 pm on December 7, 2002.



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

January 29, 2003

MEMORANDUM TO: ACRS Members

FROM: Sherry Meador *Sherry Meador*
Technical Secretary

SUBJECT: PROPOSED MINUTES OF THE 498th MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS -
DECEMBER 5-7, 2002

Enclosed are the proposed minutes of the 498th 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



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

February 10, 2003

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

FROM: George E. Apostolakis
Chairman

SUBJECT: CERTIFIED MINUTES OF THE 498th MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
(ACRS), DECEMBER 5-7, 2002

I certify that based on my review of the minutes from the 498th 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.

Sincerely,

A handwritten signature in black ink, appearing to read "George E. Apostolakis", with a long horizontal flourish extending to the right.

George E. Apostolakis
Chairman

Finding of No Significant Impact

Pursuant to the National Environmental Policy Act of 1969 (NEPA) and the Commission's regulations in 10 CFR part 51, the Commission has determined that there will not be a significant effect on the quality of the environment resulting from the approval of the revised decommissioning plan and release of the two former burial sites for unrestricted use. Accordingly, the preparation of an Environmental Impact Statement is not required for the proposed amendment to Materials License 49-09955-10, which will remove the Quarry and airport sites from the license. This determination is based on the foregoing EA performed in accordance with the procedures and criteria in 10 CFR part 51.

This EA and other documents related to this proposed action are available for public inspection and copying at the NRC Public Document Room in NRC's One White Flint North Headquarters building, located at 11555 Rockville Pike (first floor), Rockville, Maryland. The documents may also be viewed in the Agency-wide Documents Access and Management System (ADAMS) Public Electronic Reading Room at Web address <http://www.nrc.gov/reading-rm/adams.html>.

Dated in Arlington, Texas, this 19th day of November, 2002.

For the Nuclear Regulatory Commission.

D. Blair Spitzberg,

Chief, Fuel Cycle Decommissioning Branch, Division of Nuclear Materials Safety, Region IV.

[FR Doc. 02-30098 Filed 11-26-02; 8:45 am]

BILLING CODE 7590-01-P

NUCLEAR REGULATORY COMMISSION**Advisory Committee on Reactor Safeguards; Revised**

The agenda for the 498th meeting of the Advisory Committee on Reactor Safeguards scheduled to be held on December 5-7, 2002, in Conference Room T-2B3, 11545 Rockville Pike, Rockville, Maryland, has been revised to Close the following session on Thursday, December 5, 2002.

1:30 P.M.—2:15 P.M.: Meeting with Mr. Lawrence Williams, Her Majesty's Chief Inspector, Nuclear Installations Inspectorate (NII), United Kingdom (U.K.) (Closed)—The Committee will hold discussions with Mr. Williams, NII, U.K., regarding several items of mutual interest, including pre-decisional plans to expand the nuclear program in U.K. [Note: This session will

be closed to protect information provided in confidence by a foreign source pursuant to 5 U.S.C. 552b(c)(4).]

The agenda for December 6 and 7, 2002, remains the same as previously published in the *Federal Register* on Wednesday, November 20, 2002 (67 FR 70094).

For further information, contact: Dr. Sher Bahadur, Associate Director for Technical Support, ACRS, (Telephone: 301-415-0138), between 7:30 a.m. and 4:15 p.m., EST.

Dated: November 21, 2002.

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. 02-30100 Filed 11-26-02; 8:45 am]

BILLING CODE 7590-01-P

SECURITIES AND EXCHANGE COMMISSION

[Rel. No. IC-25828; File No. 812-12899]

AIG Life Insurance Company, et al.

November 20, 2002.

AGENCY: Securities and Exchange Commission ("SEC" or "Commission").

ACTION: Notice of an application for an order pursuant to Section 6(c) of the Investment Company Act of 1940 (the "Act") granting exemptions from the provisions of Sections 2(a)(32), 22(c) and 27(i)(2)(A) of the Act and Rule 22c-1 thereunder.

APPLICANTS: AIG Life Insurance Company ("AIG Life") and its Variable Account I (the "Variable Account"), American International Life Insurance Company of New York ("AIL"), AIG SunAmerica Life Assurance Company ("AIG SunAmerica") and its separate account Variable Annuity Account Nine ("Variable Account Nine"), First SunAmerica Life Insurance Company ("FSLIC") and its separate account FS Variable Separate Account ("FS Variable Separate Account"), The Variable Annuity Life Insurance Company ("VALIC") and its separate account VALIC Separate Account ("VALIC Separate Account"), and AIG Equity Sales Corp. ("AIGESC") (collectively, the "Applicants").

SUMMARY OF APPLICATION: Applicants seek an order under Section 6(c) of the Act to amend an existing order (Investment Company Act Release No. 24748, dated November 22, 2000, File No. 812-11982) ("Existing Order") to:

a. Extend the Existing Order to AIG SunAmerica, Variable Account Nine, FSLIC, FS Separate Account, VALIC and VALIC Separate Account (collectively "Additional Applicants") (AIG

SunAmerica, FSLIC and VALIC are collectively referred to herein as "Additional Life Company Applicants") (Variable Account Nine, FS Separate Account and VALIC Separate Account are collectively referred to herein as "Accounts");

b. Permit, under specific circumstances, the recapture of certain credits applied to premium payments made under the flexible premium deferred variable annuity contracts ("Contracts") to be issued by Additional Applicants;

c. Extend the relief granted by the Existing Order to any National Association of Securities Dealers, Inc. ("NASD") member broker-dealer controlling or controlled by, or under common control with, any Additional Life Company Applicant, whether existing or created in the future, that serves as a distributor or principal underwriter of the Contracts offered by Additional Applicants (collectively "Affiliated Broker-Dealers");

d. Expand the definition of "Future Contracts" to include contracts to be issued by any Additional Life Company Applicants that are substantially similar in all material respects to the deferred variable annuity contracts covered by the Existing Order; and

e. Expand the definition of "Other Accounts" to include any existing or future separate accounts of Additional Life Company Applicants.

FILING DATE: The application was filed on October 28, 2002.

HEARING OR NOTIFICATION OF HEARING: An order granting the application will be issued unless the SEC orders a hearing. Interested persons may request a hearing by writing to the SEC's Secretary and serving Applicants with a copy of the request, personally or by mail. Hearing requests should be received by the SEC by 5:30 p.m. on December 16, 2002, and should be accompanied by proof of service on Applicants, in the form of an affidavit or, for lawyers, a Certificate of Service. Hearing requests should state the nature of the writer's interest, the reason for the request, and the issues contested. Persons who wish to be notified of a hearing may request notification by writing to the SEC's Secretary.

ADDRESSES: Secretary, SEC, 450 Fifth Street, NW., Washington DC 20549-0609. Applicants: Christine A. Nixon, Esq., AIG SunAmerica Life Assurance Company, 1 SunAmerica Center, Los Angeles, California 90067-6002.

FOR FURTHER INFORMATION CONTACT: Kenneth C. Fang, Attorney, or Zandra Y. Bailes, Branch Chief, Office of Insurance

same two statutory licenses¹ is the fact that several of the parties affected by the outcomes will appear in all three proceedings. This can result in these parties, and their counsel, litigating more than one proceeding at a time. In the past, the Library has attempted to avoid such a scenario by scheduling proceedings sufficiently far apart. However, if the Library were to continue this practice, CARP proceedings would not be concluded until on or after the period in which the rates and terms established in that proceeding have expired. For example, the Library must schedule a proceeding for nonsubscription services for the 2003–2004 period. The parties in the preexisting subscription service/preexisting satellite digital audio service proceeding have petitioned the Library to postpone the start of that proceeding until March 20, 2003. If the Library grants their motion, the Librarian's decision setting forth rates and terms for preexisting subscription services and preexisting satellite digital audio services will not be issued until the end of 2003. Based on past practice, the Library would then have to wait several months after that to permit parties participating in both proceedings to prepare their cases for the nonsubscription service proceeding. The end result would be that a final determination in the nonsubscription service proceeding would not be made until the end of 2004 or the beginning of 2005. And this does not take into account the scheduling of the proceeding for new subscription services.

It is the position of the Library that CARP proceedings to establish or adjust royalty rates for statutory licenses should be, to the extent possible, scheduled so that final rates and terms are announced by the beginning of the time period to which they are applicable. Users of a statutory license should not be forced to use the license without knowing what the royalty obligations will be for the period prescribed by the license. This goal cannot be met if the section 112 and 114 CARPs are scheduled to run *seriatim*; serious consideration must be given to running multiple CARPs concurrently. To that end, the Library is requesting the parties in this proceeding to propose, in written comments on or before December 2, 2002, solutions to the problems identified above in scheduling three CARP proceedings for

¹ This does not consider the CARP proceedings for other statutory licenses in the Copyright Act that must also be scheduled during the same time period.

the section 112 and 114 statutory licenses.

Dated: November 15, 2002.

David O. Carson,
General Counsel.

[FR Doc. 02–29511 Filed 11–19–02; 8:45 am]

BILLING CODE 1410–33–P

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[Notice (02–142)]

NASA Advisory Council; Meeting

AGENCY: National Aeronautics and Space Administration.

ACTION: Notice of meeting.

SUMMARY: In accordance with the Federal Advisory Committee Act, Public Law 92–463, as amended, the National Aeronautics and Space Administration announces a meeting of the NASA Advisory Council (NAC).

DATES: Wednesday, December 11, 2002, 8 a.m. to 6 p.m.; and Thursday, December 12, 2002, 8 a.m. to 3 p.m.

ADDRESSES: National Aeronautics and Space Administration, Room MIC–6H46, overflow room MIC–3H46, 300 E Street, SW., Washington, DC 20546.

FOR FURTHER INFORMATION CONTACT: Ms. Kathy Dakon, Code IC, National Aeronautics and Space Administration, Washington, DC 20546, 202/358–0732.

SUPPLEMENTARY INFORMATION: The meeting will be open to the public up to the seating capacity of the room. Proceedings of the NAC will be shown live via video feed in the overflow room, MIC–3H46. The agenda for the meeting is as follows:

- International Space Station Management and Cost Evaluation (IMCE) Task Force Status Report
- Review of Aerospace Technology
- Strategic Planning and Budget/Performance Integration
- Committee Reports
- Discussion of Findings and Recommendations

It is imperative that the meeting be held on these dates to accommodate the scheduling priorities of the key participants. Visitors will be requested to sign a visitor's register.

June W. Edwards,
Advisory Committee Management Officer,
National Aeronautics and Space Administration.

[FR Doc. 02–29376 Filed 11–19–02; 8:45 am]

BILLING CODE 7510–01–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 December 5–7, 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, December 5, 2002

8:30 a.m.–8:35 a.m.: *Opening Statement by the ACRS Chairman (Open)*—The ACRS Chairman will make opening remarks regarding the conduct of the meeting.

8:35 a.m.–10:15 a.m.: *Davis-Besse Lessons Learned Task Force Report and Status of NRC Oversight (0350) Panel's Investigation of the Davis-Besse Event (Open)*—The Committee will hear a presentation by and hold discussions with the Chairman of the NRC Oversight (0350) Panel regarding the status of investigation of the Panel on the Davis-Besse reactor vessel head degradation. The Committee will also hear presentations by and hold discussions with representatives of the NRC staff and industry regarding the findings, conclusions, and recommendations of the Davis-Besse Task Force on the reactor vessel head degradation event at the Davis-Besse Nuclear Power Station.

10:30 a.m.–12 Noon: *Framatome ANP, INC., S-RELAP5 Realistic Large-Break (LB) LOCA Code (Open/Closed)*—The Committee will hear presentations by and hold discussions with representatives of Framatome ANP, INC., and the NRC staff regarding the S-RELAP5 Realistic large-break LOCA Code and the associated NRC staff's draft Safety Evaluation Report.

[Note: A portion of this session may be closed to discuss Framatome ANP, INC. proprietary information.]

1:30 p.m.–2:15 p.m.: *Meeting with Mr. Lawrence Williams, NII, United Kingdom (Open)*—The Committee will hold discussions with Mr. Williams, NII, United Kingdom on items of mutual interest.

2:15 p.m.–3:45 p.m.: *North Anna and Surry License Renewal Application (Open)*—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and Dominion regarding the license renewal application for the North Anna and Surry Nuclear Power Stations and

the associated NRC staff's final Safety Evaluation Report.

4 p.m.–5:15 p.m.: *Status of the Development of the Review Standard for Power Uprates* (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the status of the development of the review standard for core power uprates.

5:15 p.m.–5:30 p.m.: *Subcommittee Report* (Open)—The Chairman of the Thermal-Hydraulic Phenomena Subcommittee will provide a report to the Committee regarding the Rod Bundle Heat Transfer Experimental Program.

5:45 p.m.–7:15 p.m.: *Proposed ACRS Reports* (Open)—The Committee will discuss proposed ACRS reports on matters considered during this meeting. In addition, the Committee will discuss a draft annual ACRS report to the Commission on the NRC Safety Research Program.

Friday, December 6, 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 a.m.: *Safeguards and Security Activities* (Open)—The Committee will discuss a proposed ACRS plan for reviewing safeguards and security matters.

9 a.m.–9:45 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, including anticipated workload and member assignments.

9:45 a.m.–10 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.

10:15 a.m.–12:30 p.m.: *Proposed Options for Resolving Policy Issues for Future Non-Light Water Reactors* (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the proposed options for

resolving policy issues related to future non-light water reactors.

1:30 p.m.–3:15 p.m.: *Draft Final ANS External Events Methodology Standard* (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and the American Nuclear Society (ANS) regarding the draft final ANS Standard on External Events Methodology.

3:30 p.m.–4 p.m.: *Election of ACRS Officers* (Open)—The Committee will elect Chairman and Vice Chairman for the ACRS and Member-at-Large for the Planning and Procedures Subcommittee for CY 2003.

4 p.m.–7 p.m.: *Proposed ACRS Reports* (Open)—The Committee will discuss proposed ACRS reports.

Saturday, December 7, 2002

8:30 a.m.–12 Noon.: *Proposed ACRS Reports* (Open)—The Committee will continue to discuss proposed ACRS reports.

12–12:30 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 11, 2002 (67 FR 63460). 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. Persons desiring to make oral statements should notify the Associate Director for Technical Support named below 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 the Associate Director 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 the Associate Director if such rescheduling would result in major inconvenience.

In accordance with Subsection 10(d) Pub. L. 92–463, I have determined that it is necessary to close a portion of this

meeting noted above to discuss proprietary information per 5 U.S.C. 552b(c)(4)

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, as well as 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, Associate Director for Technical Support (301–415–0138), between 7:30 a.m. and 4:15 p.m., EST.

ACRS meeting agenda, meeting transcripts, and letter reports are available through the NRC Public Document Room at pdr@nrc.gov, or by calling the PDR at 1–800–397–4209, or from the Publicly Available Records System (PARS) component of NRC's document system (ADAMS) which is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> or <http://www.nrc.gov/reading-rm/doc-collections/> (ACRS & ACNW Mtg schedules/agendas).

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.

The ACRS meeting dates for Calendar Year 2003 are provided below:

ACRS meeting No.	Meeting dates
499	January 2003—No Meeting.
500	February 6–8, 2003.
501	March 6–8, 2003.
502	April 10–12, 2003.
503	May 8–10, 2003.
504	June 11–13, 2003.
505	July 9–11, 2003.
506	August 2003—No Meeting.
507	September 11–13, 2003.
508	October 2–4, 2003.
509	November 6–8, 2003.
510	December 4–6, 2003.

Dated: November 14, 2002.

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. 02–29488 Filed 11–19–02; 8:45 am]

BILLING CODE 7590–01–P



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

APPENDIX II

December 3, 2002 (REVISED)

SCHEDULE AND OUTLINE FOR DISCUSSION
498th ACRS MEETING
DECEMBER 5-7, 2002

THURSDAY, DECEMBER 5, 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)

- 2) 8:35 - ^{10:45}~~10:15~~ A.M. Davis-Besse Lessons Learned Task Force Report and Status of NRC Oversight (0350) Panel's Investigation of the Davis-Besse Event (Open) (FPF/MWW)
 - 2.1) Remarks by the Subcommittee Chairman
 - 2.2) Briefing by and discussions with the Chairman of the NRC Oversight (0350) Panel regarding the status of investigation of the Panel on the Davis-Besse reactor vessel head degradation.
 - 2.3) Briefing by and discussions with representatives of the NRC staff and industry regarding the findings, conclusions, and recommendations of the Davis-Besse Task Force on the reactor vessel head degradation event at the Davis-Besse Nuclear Power Station.

- 3) ^{10:45-11:05}~~10:15 - 10:30~~ A.M. *****BREAK*****
^{11:05-12:35}~~10:30 - 12:00~~ Noon Framatome ANP, INC., S-RELAP5 Realistic Large-Break LOCA Code (Open/Closed) (GBW/PAB/MRS)
 - 3.1) Remarks by the Subcommittee Chairman
 - 3.2) Briefing by and discussions with representatives of Framatome ANP, INC. and the NRC staff regarding the S-RELAP5 Realistic large-break LOCA Code and the associated NRC staff's draft Safety Evaluation Report.

[NOTE: A portion of this session may be closed to discuss Framatome ANP, INC. proprietary information.]

^{12:35-1:29}
~~12:00 - 1:30~~ P.M.

*****LUNCH*****

- 4) 1:30 - 2:15 P.M. Meeting with Mr. Lawrence Williams, Her Majesty's Chief Inspector, Nuclear Installations Inspectorate (NII), United Kingdom (U.K.) (Closed) (GEA/JTL)
The Committee will hold discussions with Mr. Williams, NII, U.K., regarding several items of mutual interest, including pre-decisional plans to expand the nuclear program in U.K.

[Note: This session will be closed to discuss information provided in confidence by a foreign source.]

^{2:25-2:35} Break

- 5) ^{2:35-4:30}
~~2:15 - 3:45 P.M.~~ North Anna and Surry License Renewal Application (Open)
(GML/MVB/TJK/SD)
5.1) Remarks by the Subcommittee Chairman
5.2) Briefing by and discussions with representatives of the NRC staff and Dominion regarding the license renewal application for the North Anna and Surry Power Stations and the associated NRC staff's final Safety Evaluation Report.
- ~~3:45 - 4:00 P.M. ***BREAK***~~
- 6) 4:00 - 5:15 P.M. Status of the Development of the Review Standard for Power Upgrades
(Open) (GBW/TSK/PAB/MRS)
*MOVED TO FRI.
DEC 6, 2002
DUE TO INCLEMENT
WEATHER*
6.1) Remarks by the Subcommittee Chairman
6.2) Briefing by and discussions with representatives of the NRC staff regarding the status of the development of the review standard for core power upgrades.
Representatives of the nuclear industry may provide their views, as appropriate.
- 7) 5:15 - 5:30 P.M. Subcommittee Report (Open) (GBW/PAB)
The Chairman of the Thermal-Hydraulic Phenomena Subcommittee will provide a report to the Committee regarding the Rod Bundle Heat Transfer Experimental Program.
- 5:30 - 5:45 P.M. ***BREAK***
- 8) 5:45 - ^{6:45}~~7:15~~ P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
8.1) S-RELAP5 Realistic Large-Break LOCA Code (GBW/PAB/MRS)
8.2) North Anna and Surry License Renewal Application (GML/MVB/TJK/SD)
8.3) Draft Annual ACRS Report on the NRC Safety Research Program (FPF/RPS)

FRIDAY, DECEMBER 6, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

- 9) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (GEA/JTL/SD)
- 10) 8:35 - ^{8:40}~~9:00~~ A.M. Safeguards and Security Activities (Open) (GEA/RPS/RKM)
Discussion of a proposed ACRS plan for reviewing safeguards and security matters.

9:10-10:00 STATUS OF THE DEVELOPMENT OF THE REVIEW STANDARD FOR POWER UPDATES

- 11) ~~9:00 - 9:45 A.M.~~ ^{3:13 - 4:15 PM} Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open) (GEA/JTL/SD)
 11.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future ACRS meetings.
 11.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, including anticipated workload and member assignments.
- 12) 9:45 - 10:00 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.
- 10:00 - 10:15 A.M. *****BREAK*****
- 13) 10:15 - ~~12:30~~ ^{12:00} P.M. Proposed Options for Resolving Policy Issues for Future Non-Light Water Reactors (Open) (TSK/MME)
 13.1) Remarks by the Subcommittee Chairman
 13.2) Briefing by and discussions with representatives of the NRC staff regarding the proposed options for resolving policy issues related to future non-light water reactors.
- Representatives of the nuclear industry may provide their views, as appropriate.
- 12:00 - ~~12:30~~ ^{12:00} P.M. *****LUNCH*****
- 14) 1:30 - ~~3:15~~ ^{2:50} P.M. Draft Final ANS External Events Methodology Standard (Open) (DAP/RRA/HJL)
 14.1) Remarks by the Subcommittee Chairman
 14.2) Briefing by and discussions with representatives of the NRC staff and the American Nuclear Society (ANS) regarding the draft final ANS Standard on External Events Methodology.
- 2:50 - 3:13
 3:15 - 3:30 P.M. *****BREAK*****
- 15) ~~3:30 - 4:00 P.M.~~ ^{8:40 - 9:00 AM} Election of ACRS Officers (Open) (GEA/JTL)
 The Committee will elect Chairman and Vice Chairman for the ACRS and Member-at-Large for the Planning and Procedures Subcommittee for CY 2003.

4:40 - 5:20 DISCUSSION OF DAVIS-BESSE

- 16) ^{5:35-}
~~4:00~~ - 7:00 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
- 16.1) Options for Resolving Policy Issues for Future Non-LWRs (TSK/MME)
 - 16.2) North Anna and Surry License Renewal Application (GML/MVB/TJK/SD)
 - 16.3) Draft Final ANS External Events Methodology Standard (DAP/RRR/HJL)
 - 16.4) S-RELAP5 Realistic Large-Break LOCA Code (GBW/PAB/MRS)
 - 16.5) Draft Annual ACRS Report on the NRC Safety Research Program (FPF/RPS)

SATURDAY, DECEMBER 7, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

- 17) 8:30 - 12:00 Noon Preparation of ACRS Reports (Open)
(10:00-10:15 A.M. BREAK) Continue discussion of the proposed ACRS reports listed under Item 16.
- 18) ^{12:10}
12:00 - ~~12:30~~ 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

498th ACRS MEETING
DECEMBER 5-7, 2002

NRC STAFF (December 5, 2002)

A. Howell, Region IV	S. Sheng, NRR
J. Donoghue, NRR	M. Mitchell, NRR
M. Marshall, NRR	L. Abramson, RES
B. Bateman, NRR	A. Henry, NRR
P. Tiippana, NRR	R. Arrighi, NRR
J. Wermiel, NRR	J. Lazevnick, NRR
G. Rhee, RES	J. Golla, NRR
R. Landry, NRR	O. Tabatabai, NRR
S. Arndt, RES	T. Chan, NRR
T. Koshy, NRR	
N. Dudley, NRR	
S. Bailey, NRR	
G. Georgiev, NRR	
P. T. Kuo, NRR	
K. Parczewski, NRR	
G. Galletti, NRR	
B. Weisman, OGC	
S. Lee, NRR	
R. Young, NRR	
C. Li, NRR	

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

M. Woods, Pittsburgh Post Gazette-Washington
J. Mallay, Framatome
D. Brack, GAO
S. T. Ghosh, MIT
J. Holm, Framatome ANP
L. O'Dell, Framatome
P. McCloskey, First Energy
D. Horner, McGraw-Hill
J. Da. Gale, Framatome ANP
B. Corbin, Dominion
P. Aitken, Dominion
J. Harrell, Dominion
I. Breedlove, Dominion
T. Snow, Dominion
M. Henig, Dominion

NRC STAFF (December 6, 2002)

D. Ashley, NSIR
M. Shuarbi, NRR
J. Zimmerman, OCM/JSM
J. Wilson, NRR
M. Honcharik, NRR
E. McKenna, NRR
R. Tripathi, RES
N. Kadambi, RES
C. Ader, RES
T. King, RES
L. Raghavan, NRR
A. Levin, OCM/RAM
G. Parry, NRR

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

J Lehner, BNL



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

January 28, 2003 (REVISED)

SCHEDULE AND OUTLINE FOR DISCUSSION
499th ACRS MEETING
FEBRUARY 6-8, 2003

THURSDAY, FEBRUARY 6, 2003, 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 (MVB/JTL/SD)
 - 1.2) Items of current interest (MVB/SD)

- 2) 8:35 - 10:15 A.M. Catawba and McGuire License Renewal Application (Open)
(MVB/GML/TJK)
 - 2.1) Remarks by the Subcommittee Chairman
 - 2.2) Briefing by and discussions with representatives of the NRC staff and the Duke Energy Corporation regarding the license renewal application for the Catawba and McGuire Nuclear Plants and the associated NRC staff's final Safety Evaluation Report.

- 10:15 - 10:30 A.M. ***BREAK***

- 3) 10:30 - 12:00 Noon Draft Regulatory Guide DG-1107, "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident" and Draft Generic Letter 2003-xx, related to the Resolution of GSI-191, "Assessment of Debris Accumulation on PWR Sump Performance" (Open) (GBW/VHR/MRS/HJL)
 - 3.1) Remarks by the Subcommittee Chairman
 - 3.2) Briefing by and discussions with representatives of the NRC staff regarding Draft Regulatory Guide DG-1107 and Draft Generic Letter 2003-xx associated with the resolution of Generic Safety Issue (GSI)-191.

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

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

- 4) 1:00 - 3:00 P.M. PTS Reevaluation Project: Technical Bases for Potential Revision to PTS Screening Criterion (Open) (WJS/TSK/RA/SD)
 - 4.1) Remarks by the Subcommittee Chairman
 - 4.2) Briefing by and discussions with representatives of the NRC staff regarding the technical bases for potential revision to the pressurized thermal shock (PTS) screening criterion.

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

3:00 - 3:15 P.M. ***BREAK***

- 5) 3:15 - 4:45 P.M. Draft Final Version of Regulatory Guide DG-1077, "Guidelines for Environmental Qualification of Microprocessor-Based Equipment Important to Safety in Nuclear Power Plants" (Open) (JDS/TJK)
- 5.1) Remarks by the Subcommittee Chairman
 - 5.2) Briefing by and discussions with representatives of the NRC staff on the draft final version of DG-1077.

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

4:45 - 5:00 P.M. ***BREAK***

- 6) 5:00 - 7:15 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
- 6.1) Catawba and McGuire License Renewal Application (MVB/GML/TJK)
 - 6.2) Draft Final Regulatory Guide DG-1107 and Draft Generic Letter 2003-xx Related to the Resolution of GSI-191 (GBW/VHR/MRS/HJL)
 - 6.3) Technical Bases for Potential Revision to PTS Screening Criterion (WJS/TSK/RA/SD)
 - 6.4) Draft Final Version of DG-1077 on Guidelines for Environmental Qualification of Microprocessor-Based Equipment (JDS/TJK)
 - 6.5) Safety Culture (SR/MWW)

FRIDAY, FEBRUARY 7, 2003, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

- 7) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/JTL/SD)
- 8) 8:35 - 8:50 A.M. Subcommittee Report (Open) (GEA/MRS/SD)
Report by the Chairman of the ACRS Subcommittee on Reliability and Probabilistic Risk Assessment regarding the coherence plan for risk-informed regulatory activities that was discussed at the January 22, 2003 Subcommittee meeting.
- 9) 8:50 - 9:15 A.M. Subcommittee Report (Open) (GEA/MRS/SD)
Report by the Chairman of the ACRS Subcommittee on Reliability and Probabilistic Risk Assessment regarding the Westinghouse AP1000 passive plant design PRA that was discussed at the January 23-24, 2003 Subcommittee meeting.

- 10) 9:15 - 10:15 A.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open) (MVB/JTL/SD)
 10.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future ACRS meetings.
 10.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, including anticipated workload and member assignments.
- 11) 10:15 - 10:30 A.M. Reconciliation of ACRS Comments and Recommendations (Open) (MVB, 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.
- 10:30 - 10:45 A.M. ***BREAK***
- 12) 10:45 - 12:15 P.M. Annual ACRS Report on the NRC Safety Research Program (Open) (FPF/TSK/RPS)
 Discussion of the draft ACRS report on the NRC Safety Research Program.
- 12:15 - 1:15 P.M. ***LUNCH***
- 13) 1:15 - 7:00 P.M. Preparation of ACRS Reports (Open)
 Discussion of proposed ACRS reports on:
 13.1) Catawba and McGuire License Renewal Application (MVB/GML/TJK)
 13.2) Draft Regulatory Guide DG-1107 and Draft Generic Letter 2003-xx Related to the Resolution of GSI-191 (GBW/VHR/MRS/HJL)
 13.3) Technical Bases for Potential Revision to the PTS Screening Criterion (WJS/TSK/RA/SD)
 13.4) Draft Final Version of DG-1077 on Guidelines for Environmental Qualification of Microprocessor-Based Equipment (JDS/TJK)
 13.5) Annual ACRS Report on the NRC Safety Research Program (FPF/RPS)
 13.6) Safety Culture (SR/MWW)

SATURDAY, FEBRUARY 8, 2003, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

- 14) 8:30 - 1:00 P.M. Preparation of ACRS Reports (Open)
 (10:00-10:15 A.M. BREAK) Continue discussion of the proposed ACRS reports listed under Item 13, as well as a draft report prepared by an ACRS consultant on the use of PRA in the regulatory decisionmaking process.

- 15) 1:00 - 1:30 P.M. Miscellaneous (Open) (MVB/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
498th ACRS MEETING
DECEMBER 5-7, 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 Opening Remarks by the ACRS Chairman

- 2 Davis-Besse Lessons Learned Task Force Report and Status of NRC Oversight (0350) Panel's Investigation of the Davis-Besse Event
 1. Davis-Besse Reactor Vessel Head Damage NRC Update, November 2002 [Handout]
 2. Update on USNRC Oversight of the Davis-Besse Nuclear Power Station, presentation by J. Grobe, Chairman, Davis-Besse Oversight Panel [Viewgraphs]
 3. Davis-Besse Reactor Vessel Head Degradation Lessons-Learned Task Force presentation [Viewgraphs]

- 3 Framatome ANP, Inc., S-RELAP5 Realistic Large-Break LOCA Code
 4. Realistic LBLOCA Methodology presentation by L. O'Dell, Framatome ANP [Viewgraphs]
 5. Framatome-ANP RLBLOCA Methodology Staff SER presentation by R. Landry, NRR [Viewgraphs]
 6. Letter to NRC from Framatome ANP regarding Correction of Statements Concerning the Behavior of M5 Cladding dated November 11, 2002 [Handout]
 - 6a. Framatome ANP S-RELAP5 Code Review - Additional Information. Authors G. Wallis, V. Ransom, F. Moody
Presentation schedule, ACRS Review of S-RELAP5 Realistic LBLOCA Code & Application to PWRs
Memo from G. Wallis to ACRS Members & Consultants, Subject: S-RELAP5 Momentum Equation Issue
Comments on the Thermal-Hydraulics Subcommittee Meeting of 11/12-14/02, V. Ransom, Member
Comments on the ACRS Thermal-Hydraulics Phenomena Subcommittee Meeting, November 12-14, 2002, F. Moody, ACRS Consultant

- 5 North Anna and Surry License Renewal Application
 7. Safety Evaluation Report (SER) Related to the North Anna and Surry License Renewal Applications presentation by O. Tabatabai, NRR [Viewgraphs]

- 11 Future ACRS Activities/Report of the Planning and Procedures Subcommittee
 8. Future ACRS Activities/Final Draft Minutes of Planning and Procedures Subcommittee Meeting - December 4, 2002 [Handout #11-1]

- 12 Reconciliation of ACRS Comments and Recommendations
 9. Reconciliation of ACRS Comments and Recommendations [Handout #XX]

- 13 Proposed Options for Resolving Policy Issues for Future Non-Light Water Reactors
 10. Technical Related Policy Issues for Future Non-Light Water Reactors presentation by T. King, RES [Viewgraphs]

MEETING NOTEBOOK CONTENTS

<u>TAB</u>	<u>DOCUMENTS</u>
2	<u>0350 Oversight Panel and Lessons Learned Task Force</u> <ol style="list-style-type: none">1. Table of Contents2. Proposed Agenda3. Status Report4. NRC Inspection Manual Chapter 0350 Charter, Davis-Besse Nuclear Power Station5. Memorandum from Arthur T. Howell, III, Team Leader, Davis-Besse Lessons Learned Task Force, to William F. Kane, Deputy Executive Director for Reactor Programs, Subject: "Degradation of the Davis-Besse Nuclear Power Station Reactor Pressure Vessel Head Lessons-Learned Report6. Executive Summary7. Appendix A, Table of Recommendations8. Appendix E, Primary System Leakage and Boric Acid Corrosion Operating Experience at U.S. Pressurized Water Reactors (1986-2002)
5	<u>Plant License Renewal for North Anna Power Station Units 1 and 2, Surry Power Station Units 1 and 2</u> <ol style="list-style-type: none">9. Table of Contents10. Proposed Schedule11. Status Report
6	<u>Development of NRC Review Standard for Power Uprate Requests</u> <ol style="list-style-type: none">12. Table of Contents13. Presentation Schedule14. Project Status Report15. Development of EPU Review Standard, Figure 1, dated 12/2002 - DRAFT16. Matrix 1 - Scope and Associated Technical Review Criteria, dated December 2002 (Draft)17. Draft NRC Safety Evaluation, Materials & Chemical Engineering Branch Review, dated December 2002 (Draft)18. Memorandum to the Commission from W. Travers, EDO, Subject: Semiannual Status Report on Power Uprates, dated October 28, 2002
7	<u>NRC-RES Rod Bundle Heat Transfer Experimental Program</u> <ol style="list-style-type: none">19. Status Report20. Thermal-Hydraulic Phenomena Subcommittee Meeting Minutes, November

12-14, 2002

13. Proposed Options for Resolving Policy Issues for Future Non-Light Water Reactors
 21. Table of Contents
 22. Proposed Agenda
 23. Status Report
 24. Draft Predecisional SECY Paper
 25. ACRS Report, dated June 17, 2002
 26. NUREG-1226, "Development and Utilization of the NRC Policy Statement on the Regulation of Advanced Nuclear Power Plants"
 27. SECY-02-0139, dated July 22, 2002

14. Proposed ANS Standard on External Events PRA
 28. Table of Contents
 29. Proposed Schedule
 30. Status Report (Inspection Reports)
 31. External Events PRA Methodology Standard, BSR/ANS58.21, Version 5 November 2002
 32. ACRS Letter to Dr. Travers, "Draft ANS External Events PRA Methodology Standards," February 9, 2001

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
498th FULL COMMITTEE MEETING

DECEMBER 5-7, 2002

DECEMBER 5, 2002
Today's Date

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JOE DONOGHUE	NRR
Michael Marshall	NRR
Bill Bateman	"
PETTERI TIIPANA	NRR
Jared Wermiel	NRR/DSSA/SRXB
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
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Mike Woods	Pittsburgh Post Gazette - Wash
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S. Tina Ghosh	MIT
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