



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

January 13, 2011

MEMORANDUM TO: ACRS Members

FROM: Sherry Meador **/RA/**
 Technical Secretary, ACRS

SUBJECT: CERTIFICATION OF THE MEETING MINUTES FROM
 THE ADVISORY COMMITTEE ON REACTOR
 SAFEGUARDS 577th FULL COMMITTEE MEETING
 HELD ON NOVEMBER 4-6, 2010 IN ROCKVILLE, MARYLAND

The minutes of the subject meeting were certified on December 14, 2010 as the official record of the proceedings of that meeting. A copy of the certified minutes is attached.

Attachment:
As stated



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

December 14, 2010

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

FROM: Cayetano Santos, Chief */RA/*
Reactor Safety Branch
Advisory Committee on Reactor Safeguards

SUBJECT: MINUTES OF THE 577th MEETING OF THE ADVISORY
COMMITTEE ON REACTOR SAFEGUARDS (ACRS),
NOVEMBER 4-6, 2010

I certify that based on my review of the minutes from the 577TH 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.

OFFICE	ACRS	ACRS:RSB/Sunsi
NAME	SMeador	CSantos/sam
DATE	12/14/10	12/14/10

OFFICIAL RECORD COPY

CERTIFIED

Date Certified: 12/14/2010

TABLE OF CONTENTS
MINUTES OF THE 577TH ACRS MEETING

NOVEMBER 4-6, 2010

- I. Opening Remarks by the ACRS Chairman (Open)
- II. Closure of Design Acceptance Criteria for New Reactors (Open)
- III. Standard Review Plan for Renewal of Independent Spent Fuel Storage Installation Licenses and Dry Cask Storage System Certificates of Compliance (Open)
- IV. Draft Final Revision 2 of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (Open)
- V. Long Term Cooling Approach for the Revised AP1000 Design (Open/Closed)
- VI. Meeting with the Commission (Open)
- VII. Assessment of the Quality of Selected NRC Research Projects (Open)
- VIII. Executive Session (Open)
 - A. Reconciliation of ACRS Comments and Recommendations
 - B. Report on the Meeting of the Planning and Procedures Subcommittee Held on Wednesday, November 3, 2010.

Appendices

- Appendix I – *Federal Register* Notice
- Appendix II – Meeting Schedule and Outline
- Appendix III – Attendance List
- Appendix IV – Future Agenda
- Appendix V – List of Meeting Handouts

During its 577th meeting, November 4-6, 2010, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following letters and memorandum:

LETTERS

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

- Response to the October 7, 2010, EDO Letter Regarding Closure of Design Acceptance Criteria for New Reactors, dated November 9, 2010
- Standard Review Plan for Renewal of Spent Fuel Dry Cask Storage System Licenses and Certificates of Compliance (NUREG-1927), dated November 16, 2010
- Draft Final Revisions to Generic License Renewal Guidance Documents, dated November 17, 2010

Letter to Dr. Brian Sheron, Director, Office of Nuclear Regulatory Research, NRC, from Said Abdel-Khalik, Chairman, ACRS:

- ACRS Assessment of the Quality of Selected NRC Research Projects – FY 2010, dated November 15, 2010

MEMORANDUM

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

- Withdrawal of Regulatory Guides 1.39, 1.81, and 1.154, dated November 9, 2010

MINUTES OF THE 577th MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

ROCKVILLE, MARYLAND

The 577th meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B1, Two White Flint North Building, Rockville, Maryland, on November 4-6, 2010. Notice of this meeting was published in the *Federal Register* on October 19, 2010 (72 FR 64366-64367) (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.

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: Dr. Said Abdel-Khalik (Chairman), Dr. J. Sam Armijo (Vice-Chairman), Mr. John Stetkar (Member-at-Large), Dr. Sanjoy Banerjee, Dr. Dennis Bley, Mr. Charles Brown, Dr. Michael Corradini, Dr. Dana A. Powers, Mr. Harold Ray, Dr. Michael Ryan, Dr. William Shack, and Mr. John Sieber. For a list of other attendees see Appendix III.

I. Chairman's Report (Open)

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

Dr. Said Abdel-Khalik, Committee Chairman, convened the meeting at 8:30 a.m. In his opening remarks he announced that the meeting was being conducted in accordance with the provisions of the Federal Advisory Committee Act. He reviewed the agenda items for discussion and noted that no written comments or requests for time to make oral statements from members of the public had been received. Dr. Bonaca also noted that a transcript of the open portions of the meeting was being kept and speakers were requested to identify themselves and speak with clarity and volume.

II. Closure of Design Acceptance Criteria for New Reactors

[Note: Mrs. Christina Antonescu was the Designated Federal Official for this portion of the meeting.]

During its 574th meeting, July 14-16, 2010, the Committee held extensive discussions on the closure of Design Acceptance Criteria (DAC) and Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC), with a particular focus on DAC for digital instrumentation and control. These discussions focused on the fundamental concept of DAC, the history of DAC, and the intent of

10 CFR Part 52 to advance standardization of nuclear reactor designs. The Committee issued a report on this matter dated August 9, 2010, concluding that DAC closure requires expertise, judgment, and interpretation and that it should be performed by NRC staff experts with an independent assessment by the ACRS. The Committee also concluded that it is preferable that all DAC be resolved no later than COL stage. However, whether resolved as part of the COL process or post-COL, proper closure of DAC requires a consistent scope and depth of evaluation. Closure of DAC was discussed during the November 5, 2010, meeting between ACRS and the Commission. On October 7, 2010, the Executive Director for Operations responded to the August 9, 2010, ACRS report.

The Committee issued a response letter to the Executive Director for Operations on this matter, dated November 9, 2010. The Committee was pleased with the level of agreement between the staff and ACRS on several aspects of the Committee's recommendations: DAC closure requires expert judgment; subject matter experts with experience in the area covered by the DAC should perform the inspection of activities for verification of DAC closure; it is preferable to close DAC as early as possible; and proper closure of DAC requires a consistent scope and depth of evaluation. The Committee plans to review the DAC inspection procedure and pilot program. The Committee still believes that an independent ACRS assessment should be continued through at least the first few applications.

III. Standard Review Plan for Renewal of Independent Spent Fuel Storage Installation Licenses and Dry Cask Storage System Certificates of Compliance

[Note: Mr. Christopher Brown was the Designated Federal Office for this portion of the meeting.]

The Committee met with representatives of the NRC staff to discuss the standard review plan (SRP) for renewal of spent fuel dry cask storage systems (NUREG-1927) NUREG-1927 provides guidance to the staff to ensure that the applicant assesses the structures, systems, and components (SSCs) determined to be within the scope of renewal. The SRP also identifies aging effects requiring management and provides appropriate analyses of all SSCs with a time-dependent operating life. The Commission instructed the staff to develop this SRP after the final rule amending 10 CFR § 72.42 by extending the term allowed for specific Independent Spent Fuel Storage Installation (ISFSI) licenses from not to exceed 20 years to not to exceed 40 years. The Committee issued a letter to the Executive Director for Operations on this matter, dated November 16, 2010, recommending that NUREG-1927 be issued.

IV. Draft Final Revision 2 of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants"

[Note: Mr. Peter Wen was the Designated Federal Office of this portion of the meeting.]

The Committee met with representatives of the NRC staff to discuss draft final Revision 2 of NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (SRP-LR), and draft final Revision 2 of NUREG-1801, "Generic Aging Lessons

Learned (GALL) Report.” The staff presented background information; an overview of general changes to license renewal guidance documents; as well as major changes to aging management programs in the mechanical, structural, and electrical areas. The staff also discussed the changes made to these documents after receiving feedback from the Plant License Renewal Subcommittee on October 22, 2010. The Committee noted that the revised license renewal guidance documents have appropriately incorporated many lessons learned from the review of recent license renewal applications, associated safety evaluation reports, and domestic and foreign operating experience. The Committee viewed the proposed revisions as significant enhancements to the guidance available to the staff and the licensees for the management of aging during the period of extended operation. The Committee issued a letter to the Executive Director for Operations on this matter, dated November 17, 2010, recommending that the draft final revisions to the generic license renewal guidance documents be issued. The Committee also recommended that the staff continue to evaluate the need for revisions to the guidance documents in order to maintain them current.

V. Long-Term Core Cooling Approach for the Revised AP1000 Design

[Note: Mr. Weidong Wang was the Designated Official for this portion of the meeting.]

The Committee met with representatives of the NRC staff and Westinghouse Electric Company (WEC) to discuss the long-term core cooling approach for the revised AP1000 design. WEC presented the resolution of issues associated with debris generation, which is a key safety issue for pressurized water reactors (PWRs) and is related to Generic Safety Issue (GSI)-191, “Assessment of Debris Accumulation on PWR Sump Performance.” WEC described the differences between the AP1000 design and generic PWR designs. The AP1000 design has greatly reduced post loss of coolant accident (LOCA) debris sources. Since the AP1000 recirculation flow occurs by natural circulation with no active pumps, the recirculation has slow flow characteristics. Most of the possible LOCA locations will become flooded, allowing debris to enter the reactor coolant system without passing through screens. WEC performed analyses using the WCOBRA/TRAC code to set safety limits for the core cooling. Members questioned the oscillatory flow behavior observed in these calculations. WEC then presented fuel assembly test results that demonstrate that the AP1000 design meets safety limits derived from the WCOBRA/TRAC calculations. Members questioned the validity of these tests and the rationale for selecting the total amount of fiber and the portion of the fiber trapped at the core inlet. The prototypicality of the test rig and the pressure drop distribution along the flow path were also discussed. The staff’s presentation summarized their evaluation approach for the AP1000 GSI-191 long-term core cooling. The staff concluded that the fuel assembly head loss tests performed with design basis debris loading met the acceptance criteria with considerable margin and that there is reasonable assurance that, even in the presence of debris, adequate core cooling is maintained after the LOCA. This was an information briefing. No Committee action was necessary. The Committee plans to continue its review of the revised AP1000 design during its December 2-4, 2010, meeting.

VI. Meeting with the Commission

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

On November 5, 2010, the Committee met with the NRC Commissioners to discuss the following topics of mutual interest:

- ABWR Aircraft Impact Assessment
- 10 CFR 50.46(a), "Risk-Informed Changes to Loss-of-Coolant Accident Technical Requirements"
- Mixed Oxide Fuel Fabrication Facility
- ESBWR – Long-Term Core Cooling
- Design Acceptance Criteria

The November 16, 2010, Staff Requirements Memorandum associated with this meeting identified no requirements for ACRS or staff action.

VII. Assessment of the Quality of Selected NRC Research Projects

[Note: Dr. Hossein Nourbakhsh was the Designated Federal Official for this portion of the meeting.]

The Committee completed its report on the quality assessment of the research projects on NUREG/CR-6947, "Human Factors Considerations with Respect to Emerging Technology in Nuclear Power Plants," and NUREG/CR-6997, "Modeling a Digital Feedwater Control System Using Traditional Probabilistic Risk Assessment Methods." The Committee issued a letter to the Director of the Office of Nuclear Regulatory Research dated November 15, 2010, transmitting this report. NUREG/CR-6997 was found to be of superior professional quality with some elements of innovation. NUREG/CR-6947, by itself, was judged to not be a technical research report suitable for quality review by ACRS. Even as a summary/management report, it could be substantially improved by clarifying priorities, interdependencies, and intended continued activities.

VI. Executive Session

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

A. Reconciliation of ACRS Comments and Recommendations/EDO Commitments

- The Committee considered the EDO's response of October 7, 2010, to comments and recommendations included in the August 9, 2010, ACRS report on the closure of DAC f for new reactors. The Committee issued a response letter to the Executive Director for Operations on this matter, dated November 9, 2010.
- The Committee considered the EDO's response of October 25, 2010, to comments and recommendations included in the September 17, 2010, ACRS report on SECY-10-0113, "Closure Options for Generic Safety Issue – 191, Assessment of Debris Accumulation in Pressurized Water Reactor Sump Performance." The Committee decided that it was satisfied with the EDO=s response.

- The Committee considered the EDO's response of October 18, 2010, to comments and recommendations included in the September 22, 2010, ACRS report on the long-term core cooling for the Economic Simplified Boiling Water Reactor (ESBWR). The Committee decided that it was satisfied with the EDO's response.
- The Committee considered the EDO's response of October 26, 2010, to comments and recommendations included in the September 27, 2010, ACRS report on the license application for the Mixed Oxide Fuel Fabrication Facility and the associated Safety Evaluation Report. The Committee decided that it was satisfied with the EDO's Response

B. Report of the Planning and Procedures Subcommittee Meeting

Anticipated Workload for ACRS Members

The anticipated workload for ACRS members through February 2011 were discussed and the objectives were to:

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

Regulatory Guides and Branch Technical Positions

a) Withdrawal of Regulatory Guides

The staff plans to withdraw the following Regulatory Guides and would like to know whether the Committee wants to review these Guides prior to being withdrawn.

- Withdrawal of Regulatory Guide 1.39, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants"

Regulatory Guide 1.39 endorsed the American Nuclear Standards Institute (ANSI) N45.2.3-1973, "Housekeeping during the Construction Phase of Nuclear Power Plants," which provided a method acceptable to the NRC staff for complying with the pertinent quality assurance requirements of 10 CFR Part 50, Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." The current revisions of Regulatory Guides 1.28, "Quality Assurance Program Criteria (Design and Construction)," and 1.33, "Quality Assurance Program Requirements (Operation)," adequately address the Quality Assurance Program with the latest joint ANSI and American Society of Mechanical Engineers standard NQA-1, which conforms to the requirements of 10 CFR Part 50, Appendix B.

Based on his review, Dr. Bonaca recommends that the Committee not object to the withdrawal of this Regulatory Guide.

- Withdrawal of Regulatory Guide 1.81, "Shared Emergency and Shutdown Electric Systems for Multi-Unit Nuclear Power Plants"

Regulatory Guide 1.81 is being withdrawn because it conflicts with current guidance in 10 CFR 50.55a(h). The regulatory guide recommended that onsite emergency electric power systems should not be shared between units on a common site. However, the regulations in 10 CFR 50.55a(h) state that applications for construction permits filed after May 13, 1999 must meet the requirements of the Institute of Electrical and Electronic Engineers (IEEE) Std. 603-1991, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations." Section 5.13, "Multi-Unit Stations," of IEEE Std. 603-1991 allows the sharing of electrical power systems between units so long as the shared components follow the guidance in IEEE Std. 308-1980, "IEEE Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations." Section 8, "Multi-Unit Station Considerations," of IEEE Std. 308-1980 states that Class 1-E power systems can be shared between units provided that the ability to simultaneously perform required safety functions is not impaired.

Based on his review, Mr. Sieber recommends that the Committee not object to the withdrawal of this Regulatory Guide, since it is inconsistent with current regulations.

- Withdrawal of Regulatory Guide 1.154, "Format and Content of Plant-Specific Pressurized Thermal Shock Safety Analysis Reports for Pressurized Water Reactors"

Regulatory Guide 1.154, issued in 1987, described an acceptable method to justify continued operation of the plant by demonstrating that the likelihood of a through-wall crack during continued operation was acceptably low, even when the reactor pressure vessel exceeded the reference temperature (RT) screening criteria in the pressurized thermal shock (PTS) regulations 10 CFR 50.61. Recently, NRC staff has developed a technical basis that supports updating 10 CFR 50.61. This technical basis concludes that the risk of through-wall pressure vessel cracking due to a PTS event is much lower than previously estimated. This finding indicates that the RT screening criteria in 10 CFR 50.61 were overly conservative and could impose an unnecessary burden on some licensees. Therefore, NRC staff has developed a proposed new rule, 10 CFR 50.61a, "Alternate Fracture Requirements for Protection against Pressurized Thermal Shock Events," which allows, but does not require, that licensees comply with more permissive RT limits derived in a risk-informed manner, provided that certain requirements regarding vessel inspection and surveillance programs, as outlined in 10 CFR 50.61a, are met. As a result, the guidance provided by Regulatory Guide 1.154 is significantly outdated and, in some cases, technically deficient.

Based on his review, Dr. Shack recommends that the Committee not object to the withdrawal of these RGs.

Election of Officers for CY 2011

During its December 2010 meeting, the Committee will elect Chairman and Vice Chairman for the ACRS and Member-at-Large for the Planning and Procedures Subcommittee. Section 8.4 of the ACRS Bylaws state the following:

A member may withdraw his name from consideration by written notice to the ACRS Executive Director, no later than two weeks before the election.

Accordingly, those members who do not wish to be considered for all or any of the Offices should inform the ACRS Executive Director in writing by November 19, 2010.

Deferring Visit to Reactor Site from Next July

Based on the expected heavy workload in the coming year, Member Jack Sieber is proposing that the members consider deferring next summer's trip to a reactor site.

ACRS Calendars for 2013 and 2014

In order to support future activities planning, the staff has discussed and developed a proposed ACRS calendar for 2013 and 2014.

SRM SECY-10-0043 – Blending of Low-Level Radioactive Waste

On October 13, 2010, the Commission issued an SRM approving one of the staff's recommended options to revise the Commission's current position on blending to be risk-informed and performance-based. This shall be implemented through a combination of rulemaking and the issuance of guidance.

The SRM states that, "After the staff develops a Branch Technical Position regarding the circumstances under which the large scale blending described in SECY-10-0043 is acceptable, it should be reviewed by the Advisory Committee for Reactor Safety (ACRS). Following ACRS review, the guidance should be published for public comment."

Recently Found Hole in Steel Liner of Turkey Point Reactor

We have received an e-mail from Mr. Arnie Gundersen regarding the recently reported (Miami Herald, posted on October 27, 2010) rusty quarter-sized hole and a 30-inch section of corrosion in the steel liner of one of two nuclear reactor containment buildings at the South Miami-Dade County facility. The discovery occurred during an inspection while the reactor was shutdown for refueling; the hole is already being repaired. Mr. Gundersen questions the staff's handling of his concerns regarding the AP1000 design and hopes the ACRS will be more demanding when reviewing the AP1000 containment at some future date. Also, Mr. Gundersen asks to attend a future ACRS meeting so that he can brief the members on his concerns.

Proposed ACRS interaction at the March 2011 Commission Meeting with NRR on CAP

A June 25, 2010 SRM states that, "in the staff's forthcoming paper on containment accident pressure, the staff should discuss where staff aligns with the ACRS and disagrees with the ACRS regarding containment accident pressure (CAP) credit, including the use of risk information, defense-in-depth implications, and need to assess the practicality of hardware changes to eliminate the need for CAP credit." This SECY paper is due to the Commission by December 31, 2010. Based on a recent e-mail from SECY, the ACRS may be asked to participate, as a separate panel, during an upcoming NRR briefing to the Commission on CAP. SECY is asking for names to be submitted.

Report on October 18 Subcommittee Meeting on Thermal-Hydraulics Phenomena

On October 18, 2010, the Thermal-Hydraulics Phenomena subcommittee reviewed near and long term planned activities for the Office of Nuclear regulatory research such as the TRACE computer code development and validation as well as associated experimental studies of thermal-hydraulic phenomena.

Status of Solicitation for New Members

As mentioned during the last P&P meeting, the ACRS has received permission from the Commission to extend the solicitation for a new member and to solicit for multiple positions. The new solicitation was published in the Federal Register on October 27, 2010, and will close after 90 days.

Christmas Party

The members have been sponsoring a Christmas party for the ACRS Office staff in December of each year. The Committee should decide whether it wants to keep up with this tradition.

Upcoming EDO Lunch with ACRS P&P Subcommittee on Jan/13/2011

The EDO lunch with the ACRS is scheduled for January 13, 2011. In order to better accommodate the event, a two-hour window should be allocated.

C. Future Meeting Agenda

Appendix IV summarizes the proposed items endorsed by the Committee for the 578th ACRS Meeting, December 2-4, 2010.

A list of documents that were provided to the Committee during the 577th ACRS Meeting is listed in Appendix V.

The meeting was adjourned at 7:00 p.m. on November 5, 2010.



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

**AGENDA
577th ACRS MEETING
November 4-6, 2010**

**THURSDAY, NOVEMBER 4, 2010, CONFERENCE ROOM T-2B1, 11545 ROCKVILLE PIKE,
ROCKVILLE, MD**

- 1) 8:30 AM - 8:35 AM Opening Remarks by the ACRS Chairman (Open) (SAK/EMH)
1.1) Opening Statement
1.2) Items of Current Interest
- 2) 8:35 AM - ~~9:30~~ ~~10:00~~ AM Standard Review Plan for Renewal of Independent Spent Fuel
Storage Installation Licenses and Dry Cask Storage System
Certificates of Compliance (Open) (MTR/CLB)
2.1) Remarks by the Subcommittee Chairman
2.2) Briefing by and discussions with representatives of the
NRC staff regarding the Standard Review Plan for renewal
of Independent Spent Fuel Storage Installation Licenses
and dry cask storage system Certificates of Compliance.
- 9:52 ~~10:00~~ AM - 10:15 AM ***** BREAK *****
- 3) 10:15 AM - ~~11:46~~ ~~12:00~~ PM Draft Final Revision 2 of NUREG-1801, "Generic Aging Lessons
Learned (GALL) Report," and NUREG-1800, "Standard Review
Plan for Review of License Renewal Applications for Nuclear
Power Plants" (Open) (MVB/PW)
3.1) Remarks by the Subcommittee Chairman
3.2) Briefing by and discussions with representatives of the
NRC staff regarding Draft Final Revision 2 of NUREG-
1801, "Generic Aging Lessons Learned (GALL) Report,"
and NUREG-1800, "Standard Review Plan for Review of
License Renewal Applications for Nuclear Power Plants."
- 11:46 AM ~~12:00~~ PM - 1:00 PM ***** LUNCH *****

- 4) 1:00 PM - 4:00 ~~5:00~~ PM Long-Term Core Cooling Approach for the Revised AP1000 Design (Open/Closed) (HBR/WW)
CLOSED PORTION 1-5 pm
4.1) Remarks by the Subcommittee Chairman
4.2) Briefing by and discussions with representatives of the NRC staff and Westinghouse regarding the long-term core cooling approach for the revised AP1000 design.

[NOTE: A portion of this session may be closed to protect information that is proprietary to Westinghouse and its contractors pursuant to 5 U.S.C. 552b (c)(4).]

~~4:00 PM - 4:15 PM~~ 3:13 pm – 3:30 pm ***** BREAK *****

- 5) ~~4:15~~ 5:18 PM - 5:15 PM Discussion of Topics for Meeting with the Commission (Open)(SAK, et al./EMH, et al.)
Discussion of the following topics for meeting with the Commission:
5.1) Overview
5.2) ABWR Aircraft Impact Assessment
5.3) 10 CFR 50.46(a), "Risk-Informed Changes to Loss-of-Coolant Accident Technical Requirements"
5.4) Mixed Oxide Fuel Fabrication Facility
5.5) ESBWR – Long-term Core Cooling
5.6) Design Acceptance Criteria (DAC)

- 6) 5:15 PM - 7:00 PM Preparation of ACRS Reports (Open)
6.1) Standard Review Plan for Renewal of Independent Spent Fuel Storage Installation Licenses and Dry Cask Storage System Certificates of Compliance (MTR/CLB)
6.2) Draft Final Revision 2 of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (MVB/PW)
6.3) Long-Term Core Cooling Approach for the Revised AP1000 Design (HBR/WW)

FRIDAY, NOVEMBER 5, 2010, CONFERENCE ROOM T-2B1, 11545 ROCKVILLE, PIKE, ROCKVILLE, MD

- 7) 8:30 AM - 9:15 AM Discussion of Topics for Meeting with the Commission (Open) (SAK, et al./EMH, et al.)
Continuation of the discussion of the topics for meeting with the Commission listed in item 5.

9:15 AM - 9:30 AM * BREAK *****

- 8) 9:30 AM - 12:15 PM Meeting with the Commission (Open) (SAK, et al./EMH, et al.)
Meeting with the Commission to discuss topics listed under Item 5, Commissioners' Conference Room, One White Flint North.
- 12:15 PM - 1:15 PM** *** LUNCH ***
- 9) 1:15 PM - 2:45 PM Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed) (SAK/EMH)
- 9.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the Full Committee during future ACRS meetings
- 9.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, including anticipated workload and member assignments.
- [NOTE: A portion of this meeting may be closed pursuant to 5 U.S.C. 552b (c) (2) and (6) to discuss organizational and personnel matters that relate solely to internal personnel rules and practices of ACRS, and information the release of which would constitute a clearly unwarranted invasion of personal privacy.]**
- 10) ~~2:45~~ **2:51** PM - ~~3:00~~ **3:05** PM Reconciliation of ACRS Comments and Recommendations (Open) (SAK, et al./CS/AFD)
Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.
- 3:00** ~~3:05~~ **PM - 3:15** ~~3:20~~ **PM** *** BREAK ***
- 11) ~~3:15~~ **3:20** - ~~4:15~~ **3:50** PM Assessment of the Quality of Selected NRC Research Projects (Open) (DAP/HPN)
- 11.1) Remarks by the Subcommittee Chairman
- 11.2) Discussions with members of the ACRS Panels performing the quality assessment of the NRC research projects on: NUREG/CR-6947, "Human Factors Consideration with Respect to Emerging Technology in Nuclear Power Plants," and NUREG/CR-6997, "Modeling a Digital Feedwater Control System Using Traditional Probabilistic Risk Assessment Methods"
- 12) 4:15 PM - 7:00 PM Preparation of ACRS Reports (Open)
- 12.1) Standard Review Plan for Renewal of Independent Spent Fuel Storage Installation Licenses and Dry Cask Storage System Certificates of Compliance (MTR/CLB)

- 12.2) Draft Final Revision 2 of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (MVB/PW)
- 12.3) Long-Term Core Cooling Approach for the Revised AP1000 Design (HBR/WW)
- 12.4) Assessment of the Quality of Selected NRC Research Projects (DAP/HPN).

SATURDAY, NOVEMBER 6, 2010, CONFERENCE ROOM T-2B1, 11545 ROCKVILLE PIKE, ROCKVILLE, MD

- 13) 8:30 AM - 1:00 PM Preparation of ACRS Reports (Open)
Continue discussion of the proposed ACRS reports listed under Item 12. There may be a 15 minutes break at some point during this activity.

- 13) 1:00 PM - 1:30 PM Miscellaneous (Open)(SAK/EMH)
Discussion of matters related to the conduct of Committee activities and specific issues that were not completed during previous meetings, as time and availability of information permit.

NOTES:

- When appropriate, members of the public and representatives of the nuclear industry may provide their views during the briefings.
- During the days of the meeting, phone number 301-415-7360 should be used in order to contact anyone in the ACRS Office.
- Presentation time should not exceed 50 percent of the total time allocated for a given item. The remaining 50 percent of the time is reserved for discussion.
- Thirty five (35) hard copies and one (1) electronic copy of the presentation materials should be provided to the ACRS in advance of the briefing.
- One (1) electronic copy of each presentation should be emailed to the Designated Federal Official 1 day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the Designated Federal Official with a CD containing each presentation at least 30 minutes before the meeting.



**UNITED STATES
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WASHINGTON, DC 20555 – 0001**

November 22, 2010

**REVISED AGENDA
578TH ACRS MEETING
DECEMBER 2-4, 2010**

**THURSDAY, DECEMBER 2, 2010, CONFERENCE ROOM T-2B1, 11545 ROCKVILLE PIKE,
ROCKVILLE, MD**

- 1) 8:30 AM - 8:35 AM Opening Remarks by the ACRS Chairman (Open) (SAK/EMH)
- 1.1) Opening Statement
 - 1.1) Items of Current Interest
- 2) 8:35 AM - 10:00 AM Final Safety Evaluation Report Associated with the License
Renewal Application for the Kewaunee Power Station (Open)
(MVB/KLH)
- 2.1) Remarks by the Subcommittee Chairman
 - 2.2) Briefing by and discussions with representatives of the
NRC staff and Dominion Energy Kewaunee, Inc., regarding
the Final Safety Evaluation Report Associated with the
License Renewal Application for the Kewaunee Power
Station.

10:00 AM - 10:15 AM * BREAK *****

- 3) 10:15 AM - 12:15 PM Final Safety Evaluation Report Associated with the Amendment to
the AP1000 Design Control Document (Open/Closed) (HBR/WW)
- 3.1) Remarks by the Subcommittee Chairman
 - 3.2) Briefing by and discussions with representatives of the
NRC staff and Westinghouse regarding the Final Safety
Evaluation Report Associated with the Amendment to the
AP1000 Design Control Document

**[NOTE: A portion of this session may be closed in order to
discuss and protect information designated as proprietary by
Westinghouse and its contractors pursuant to 5 U.S.C
552b(c)(4)]**

12:15 PM - 1:00 PM * LUNCH *****

- 4) 1:15 PM - 7:00 PM Continue Discussion of the Final Safety Evaluation Report Associated with the Amendment to the AP1000 Design Control Document under Item 3 (Open/Closed) (HBR/WW)

There may be 15 minutes breaks at some point during this activity.

[NOTE: A portion of this session may be closed in order to discuss and protect information designated as proprietary by Westinghouse and its contractors pursuant to 5 U.S.C 552b(c)(4)]

FRIDAY, DECEMBER 3, 2010, CONFERENCE ROOM T-2B1, 11545 ROCKVILLE PIKE, ROCKVILLE, MD

- 5) 8:30 AM - 8:35 AM Opening Remarks by the ACRS Chairman (Open) (SAK/EMH)

- 6) 8:35 AM - 10:00 AM Safety Culture Policy Statement (Open) (DCB/DAW)
6.1) Remarks by the Subcommittee Chairman
6.2) Briefing by and discussions with representatives of the NRC staff, EPRI, and NEI regarding the Safety Culture Policy Statement.

10:00 AM - 10:15 AM * BREAK *****

- 7) 10:15 AM - 12:15 PM Preparation of ACRS Reports (Open)
7.1) AP1000 Long-Term Core Cooling (HBR/WW)
7.2) Final Safety Evaluation Report Associated with the Amendment to the AP1000 Design Control Document (HBR/WW)
7.3) Final Safety Evaluation Report Associated with the License Renewal Application for the Kewaunee Power Station (MVB/KLH)
7.4) Safety Culture Policy Statement (DCB/DAW)

12:15 PM - 2:00 PM * LUNCH *****

- 8) 2:00 PM - 3:00 PM Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed) (SAK/EMH)
8.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the Full Committee during future ACRS meetings.
8.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, including anticipated workload and member assignments.

[NOTE: A portion of this meeting may be closed pursuant to 5 U.S.C. 552b (c) (2) and (6) to discuss organizational and personnel matters that relate solely to internal personnel rules and practices of ACRS, and information the release of which would constitute a clearly unwarranted invasion of personal privacy.]

9) 3:00 PM - 3:15 PM Reconciliation of ACRS Comments and Recommendations
(Open) (SAK, et al./AFD/CS)
Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

3:15 PM - 3:30 PM * BREAK *****

10) 3:30 PM - 7:00 PM Preparation of ACRS Reports (Open)
Continue discussion of the proposed ACRS reports listed under Item 7. There may be a 15 minutes break at some point during this activity.

SATURDAY, DECEMBER 4, 2010, CONFERENCE ROOM T-2B1, 11545 ROCKVILLE PIKE, ROCKVILLE, MD

11) 8:30 AM - 3:30 PM Preparation of ACRS Reports (Open)
Continue discussion of the proposed ACRS reports listed under Item 7. There may be 15 minutes breaks at some point during this activity.

12) 3:30 PM - 4:00 PM Miscellaneous (Open)(SAK/EMH)
Discussion of matters related to the conduct of Committee activities and specific issues that were not completed during previous meetings, as time and availability of information permit.

NOTES:

- When appropriate, members of the public and representatives of the nuclear industry may provide their views during the briefings.
- During the meeting, phone number 301-415-7360 should be used in order to contact anyone in the ACRS Office.
- Presentation time should not exceed 50 percent of the total time allocated for a given item. The remaining 50 percent of the time is reserved for discussion.
- Thirty five (35) hard copies and one (1) electronic copy of the presentation materials should be provided to the ACRS in advance of the briefing.

- One (1) electronic copy of each presentation should be emailed to the Designated Federal Official 1 day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the Designated Federal Official with a CD containing each presentation at least 30 minutes before the meeting.

LIST OF HANDOUTS
577th ACRS MEETING
NOVEMBER 4-6, 2010

- I. Opening Remarks by the ACRS Chairman
 - 1. Opening Remarks
 - 2. Items of Interest

- II. Standard Review Plan for Renewal of Independent Spent Fuel Storage Installation Licenses and Dry Cask Storage System Certificates of Compliance
 - 3. Proposed Agenda
 - 4. Status Report
 - 5. Past Committee Letter on related topic
 - 6. Standard Guide for Evaluation of Materials Used in Extended Service of Interim Spent Nuclear Fuel Dry Storage Systems

- III. Draft Final Revision 2 of NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," and NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants"
 - 7. Table of Contents
 - 8. Proposed Agenda
 - 9. Status Report
 - 10. Draft NUREG-1801, Revision 2, "Generic Aging Lessons Learned (GALL) Report
 - 11. Draft NUREG-1800, Revision 2, "Stand Review Plan for Review of License Renewal Applications for Nuclear Power Plants"
 - 12. Track Change Version of Draft GALL Report - Difference between 2005 and 2010 Versions
 - 13. Track Change Version of Draft SRP-LR - Difference between 2005 and 2010 Versions
 - 14. Draft NUREG-1950, "Disposition of Public Comments and Technical Bases for Changes in the License Renewal Guidance Documents NUREG-1801 and NUREG-1800"

- IV. Long-Term Core Cooling Approach for the Revised AP1000 Design
 - 15. Table of Contents
 - 16. Proposed Agenda
 - 17. Status Report
 - 18. Presentation Slides on Long-Term Cooling Debris Issues Resolution by Westinghouse and Staff, Oct. 5, 2010, AP1000 SC meeting
 - 19. Advanced Final Safety Evaluation for the AP1000 DCD Rev. 17 Chapter 6, NRO staff, 2010
 - 20. Consultant Reports, G. Wallis and T. Kress, Oct. 2010
 - 21. Overview of Long-term Core Cooling Issues - Westinghouse AP1000 Pressurized Water Reactor, ACRS Staff Report, 2009