



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

December 29, 2009

MEMORANDUM TO:           ACRS Members

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

SUBJECT:                 CERTIFICATION OF THE MEETING MINUTES FROM  
                              THE ADVISORY COMMITTEE ON REACTOR  
                              SAFEGUARDS 566<sup>th</sup> FULL COMMITTEE MEETING  
                              HELD ON OCTOBER 8-10, 2009 IN ROCKVILLE, MARYLAND

The minutes of the subject meeting were certified on October 23, 2009 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

October 23, 2009

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 566<sup>th</sup> MEETING OF THE ADVISORY  
COMMITTEE ON REACTOR SAFEGUARDS (ACRS),  
OCTOBER 8-10, 2009

I certify that based on my review of the minutes from the 566<sup>th</sup> 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    |
| NAME   | SMeador    | CSantos/sam |
| DATE   | 10/23/2009 | 10/23/2009  |

OFFICIAL RECORD COPY

CERTIFIED

Date Certified: 10/23/2009

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During its 566<sup>th</sup> meeting, October 8-10, 2009, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports, letter, and memorandum:

### REPORTS

Reports to Gregory B. Jaczko, Chairman, NRC, from Mario V. Bonaca, Chairman, ACRS:

- Report on the 3-Dimensional Finite Element Analysis of the Oyster Creek Nuclear Generating Station Drywell Shell, dated October 16, 2009
- Report on the Draft Final Revision 2 to Regulatory Guide 1.189 (DG 1214), "Fire Protection for Nuclear Power Plants," dated October 20, 2009
- Closure of Steam Generator Action Plan Items 3.1k, 3.4, 3.5, 3.10, 3.11, and 3.12, dated October 22, 2009
- Report on the Safety Aspects of the License Renewal Application for the Susquehanna Steam Electric Station, Units 1 and 2, dated October 23, 2009

### LETTER

Letter to R. W. Borchardt, Executive Director for Operations, NRC, from Mario V. Bonaca, Chairman, ACRS:

- NRC Staff's Safety Evaluation Report with Open Items Regarding the North Anna, Unit 3 Combined License Application, dated October 23, 2009

### MEMORANDUM

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

- Withdrawal of Regulatory Guide 1.56, dated October 14, 2009

MINUTES OF THE 566<sup>th</sup> MEETING OF THE  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

ROCKVILLE, MARYLAND

The 566<sup>th</sup> meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on October 8-10, 2009. Notice of this meeting was published in the *Federal Register* on September 25, 2009 (72 FR 49042-49043). The purpose of this meeting was to discuss and take appropriate action on the items listed in the meeting agenda. 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. Mario Bonaca (Chairman), Dr. Said Abdel-Khalik (Vice-Chairman), Mr. J. Sam Armijo (Member-at-Large), Dr. George E. Apostolakis, Dr. Sanjoy Banerjee, Dr. Dennis Bley, Mr. Charles Brown, Dr. Michael Corradini, Mr. Otto L. Maynard, Dr. Dana A. Powers, Mr. Harold Ray, Dr. Michael Ryan, Dr. William Shack, Mr. John Sieber, and Mr. John Stetkar.

I. Chairman's Report (Open)

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

Dr. Mario Bonaca, 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.

## HIGHLIGHTS OF KEY ISSUES

### II. Combined License (COL) Application for North Anna, Unit 3, Economic Simplified Boiling Water Reactor (ESBWR), and the Draft Safety Evaluation Report (SER) with Open Items

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

The Committee met with representatives of the NRC staff and the applicant, Dominion Virginia Power (Dominion), to discuss the COL application for North Anna, Unit 3, and the associated NRC staff's draft Safety Evaluation Report (SER) with Open Items. Some of the topics discussed were: hydrologic engineering; geology; qualification and In-Service Testing (IST) Programs; plant water system, and Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC).

Dominion representatives provided an overview of the North Anna, Unit 3, COL activities. Dominion discussed the responses to selected requests for additional information (RAIs) issued by the staff. In particular, Dominion discussed RAIs related to the function of the makeup water system; during shutdown/refueling mode, the plant service water system, and the circulating water system.

The staff provided the status of the resolution of the open items in the draft SER, especially the open issues related to the buried fiberglass piping used in the plant service water system and the proposed resolution to this issue. The staff also discussed the remaining open items on stability of subsurface materials and foundations, and safety-related mechanical equipment qualification. In closing, the staff stated that there were a few open items related to ITAAC and the Design Acceptance Criteria (DAC) that will be treated in a generic manner in the future.

The Committee issued a letter to the Executive Director for Operations on this matter, dated October 23, 2009, recommending that the staff proceed with the development of the final SER after resolving all open items. The Committee stated that at this time it has not identified any significant issues regarding the North Anna COL application.

### II. License Renewal Application and Final SER for the Susquehanna Steam Electric Station, Units 1 and 2

{Note: Mr. Peter Wen was the Designated Federal Official for this portion of the meeting}

The Committee met with representatives of the NRC staff and PPL Susquehanna, LLC (PPL or the applicant) to discuss the final SER related to the license renewal application for the Susquehanna Steam Electric Station, Units 1 and 2.

PPL discussed its general site information, operating experience, corrective actions, and commitment tracking process. PPL made 60 regulatory commitments for its license renewal program. The applicant also discussed four follow-up items resulting from the ACRS interim review: condition of underground medium voltage cables, station blackout recovery scoping, condition of containment, and aging of main steam line flow restrictors. PPL stated that it has established adequate aging management programs for the period of extended operation.

The NRC staff provided an overview of its review results, documented in the SER, and regional inspection results. The staff provided additional information regarding the applicant's plant-specific Boral operating experience, the Boral Coupon Testing Program, and the associated aging management program. The staff concluded that the applicant's Water Chemistry Program and Boral Coupon Testing Program are adequate to manage the aging effects of Boral used in the spent fuel pool racks. The staff also provided a brief discussion on the applicant's Metal Fatigue Monitoring Program and the effects of reactor coolant environment on the fatigue life of components and piping.

The Susquehanna final SER contained no open items. Based on its review, the staff concluded that the requirements of 10 CFR 54.29(a) have been met.

The Committee issued a report to the NRC Chairman on this matter, dated October 23, 2009, recommending that the PPL application for renewal of the operating licenses of Susquehanna Steam Electric Station, Units 1 and 2, be approved.

### III. Resolution of Several Steam Generator Action Plan (SGAP) Items

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

The Committee met with representatives of the NRC staff to discuss the resolution of the remaining task items in the SGAP. In particular, the staff discussed the closure of task items 3.1k, 3.4, 3.5, 3.10, and 3.12. The SGAP task items were intended to develop a better understanding of reactor coolant system conditions and corresponding component behavior under severe accidents. In addition, the items were expected to define the risk associated with severe accident induced steam generator tube ruptures leading to containment bypass. The presentation topics were from the following technical areas of research: thermal-hydraulics (computational fluid dynamics methods), steam generator tube material failures, reactor coolant system material failures, component behavior studies, and probabilistic risk assessment (PRA). The thermal-hydraulics analysis takes the PRA sequence being evaluated and determines the fluid temperatures and pressures as a function of time. These conditions are then used as inputs to the reactor coolant system material failure and component behavior models. The thermal-hydraulic results and material failure information are combined into a PRA model to determine the risk associated with the consequential steam generator tube rupture. The methods and models for evaluating reactor components under severe accident conditions were discussed. The staff stated that the remaining SGAP items can be closed and that the remaining issues associated with consequential steam generator tube failure risk no longer require the level of coordination and agency focus required to implement the action plan process.

The Committee issued a letter to the Chairman on this matter, dated October 22, 2009, recommending that the staff proceed with closure of the remaining SGAP items.

#### IV. 3-Dimensional Finite Element Analysis of the Oyster Creek Drywell Shell

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

The Committee met with representatives of the NRC staff and Exelon Nuclear Generation Company (Exelon) to discuss the 3-dimensional (3-D) finite element analysis (FEA) of the Oyster Creek Nuclear Generating Station (Oyster Creek) drywell shell. During the Oyster Creek license renewal process, Exelon committed to perform a 3-D FEA of its drywell shell prior to entering the period of extended operation. By letter dated January 22, 2009, Exelon submitted the results of the Oyster Creek drywell shell analysis.

During the meeting, Exelon provided background information, described the drywell, discussed drywell thickness measurements, and summarized the analyses. Exelon explained why the ultrasonic thickness internal grid locations are representative of the general area average thickness. Exelon discussed specifically the modeling of the vent header boundary conditions, and explained the reasons why the vent pipes/header will not buckle before the shell. Exelon also discussed its finite element model, sensitivity studies, and overall results.

The staff presented its overview of the 3-D FEA and regional inspection results. The staff concluded that the Oyster Creek 3-D FEA was performed utilizing widely accepted engineering practices consistent with ASME Code, good engineering judgment, and applied conservatively biased realistic assumptions. The staff also concluded that the evaluations in all cases (baseline and sensitivity cases) confirm the Oyster Creek drywell shell complies with the ASME Code limits, and provide reasonable and realistic quantification of the available safety margin of the drywell shell for the postulated loading conditions.

The Committee issued a report to the NRC Chairman on this matter, dated October 16, 2009, stating that the analysis presented by Exelon fulfills its commitment to provide a modern, realistic, 3-D FEA that better quantifies the available safety margin for the current Oyster Creek drywell shell configuration. The Committee agreed with the staff's conclusion that this analysis was performed using good engineering practices and judgment and used conservatively biased realistic assumptions.

#### V. Draft Final Revision 2 to Regulatory Guide 1.189, "Fire Protection for Nuclear Power Plants"

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

The Committee met with representatives of the NRC staff to review draft final Regulatory Guide (RG) 1.189, Revision 2, "Fire Protection for Nuclear Power Plants." The staff described the changes in RG 1.189 including discussions of safe shutdown success path components and components important to safety, the use of operator manual actions and fire modeling for assessing components important to safe shutdown, and examples of safe shutdown success path components and components important to safe shutdown.

The staff also discussed the previously unresolved issues in relation to the Nuclear Energy Institute document (NEI), NEI 00-01, Revision 2, "Guidance for Post Fire Safe Shutdown Circuit Analysis," and subsequent staff resolution of these issues. In addition, the staff discussed the industry comment that NEI 00-01 should be referenced in the Guide.

The Committee issued a report to the NRC Chairman on this matter, dated October 20, 2009, recommending that Regulatory Guide 1.189, Revision 2 be issued as final.

#### VI. 10 CFR Part 52 Regulatory Process

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

Representatives of the NRC staff provided an overview of the new reactor licensing process under 10 CFR Part 52, "Early Site Permits, Standard Design Certifications, and Combined Licenses for Nuclear Power Plants." The staff discussed requirements for licensing such as applicant qualifications, design acceptability, environmental impacts, operational programs, site safety, and verification of the closure of ITAAC and DAC. The staff also discussed the regulatory process related to Early Site Permit (ESP), Design Certification, COL, Standard Design Approval, Manufacturing License, and Limited Work Authorization (LWA).

This was an information briefing. No Committee action was necessary.

#### VII. Draft ACRS Report on the NRC Safety Research Program

The Committee discussed the draft 2010 ACRS biennial report to the Commission on its review and evaluation of the NRC Safety Research Program and will continue these discussions during its November 5-7, 2009 meeting.

#### VIII. AP1000 Subcommittee Report

The Chairman of the AP1000 Subcommittee provided a report regarding the matters discussed at the October 6-7, 2009, Subcommittee meeting. In that meeting, the Subcommittee was briefed by representatives of the NRC staff and the Westinghouse Electrical Company on three Chapters of the amended AP1000 Design Control Document (DCD) as well as the corresponding Chapters of the draft SER with open items. The specific Chapters were Chapter 3 (Design of Structures, Components, Equipment, and Systems), Chapter 8 (Electric Power), and Chapter 18 (Human Factors Engineering). The Standard Review Plan Sections 3.7 and 3.8 pertaining to the treatment of seismic issues and the design of containment structures were not discussed, and have been deferred to a later Subcommittee meeting. It was noted that these Chapters contain about 30 open items pertaining to the staff's AP1000 design review. The Subcommittee plans to continue its review of the AP1000 DCD amendments during future meetings.

## 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 September 22, 2009, to comments and recommendations included in the July 24, 2009 ACRS letter concerning draft final Regulatory Guide 1.215, "Guidance for ITAAC Closure under 10 CFR Part 52." The Committee was partially satisfied with the EDO's response.

**The staff has argued that using the design certification process, and post-licensing inspections and reviews, will be adequate to support DAC closure. Since detailed design information may not be available during the design certification process, the ACRS remains concerned that the DAC closure process is not satisfactorily defined to ensure adequacy of the design. ACRS and NRO have initiated a dialogue focused on this subject. The ACRS is looking forward to ongoing engagement on this subject with NRO as the staff continues to work out the details for ITAAC/DAC closure.**

- The Committee considered the EDO's response of August 25, 2009, to comments and recommendations included in the July 27, 2009 ACRS letter concerning draft Final Revision 3 to Regulatory Guide (RG) 1.100, "Seismic Qualification of Electrical and Active Mechanical Equipment and Functional Qualification of Active Mechanical Equipment for Nuclear Power Plants." The Committee decided that it was satisfied with the EDO's response.
- The Committee considered the EDO's response of August 27, 2009, to comments and recommendations included in the July 22, 2009 ACRS letter concerning draft Template NEI-08-08, "Generic FSAR Template Guidance for Life Cycle Minimization of Contamination," and Draft DC/COL-Interim Staff Guidance -06. The Committee decided that it was satisfied with the EDO's response.

### B. Report of the Planning and Procedures Subcommittee Meeting

#### Review of the Member Assignments and Priorities for ACRS Reports and Letters for the May ACRS Meeting

Member assignments and priorities for ACRS reports and letters for the October 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 the ACRS members through February 2010 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

### Webstreaming of the ACRS Meetings

During its October 2009 meeting, the Committee was provided with the following options proposed by the Panel that was established by the Committee in May 2009 to discuss the pros and cons of participating in the Webstreaming Program and provide recommendations for use by the Committee in making a decision:

- Do nothing and not change from the status-quo.
- Allow for webcasting of the audio portion of the full Committee meetings when presentations are made to the Committee with simultaneous posting of the slides presented to the Committee.
- Allow for webcasting of the video and audio of the full Committee meetings when presentations are made to the Committee with simultaneous posting of the slides presented to the Committee.
- Allow for webcasting of the audio portion of the ACRS Subcommittee meetings when presentations are made to the Subcommittee with simultaneous posting of the slides presented to the Subcommittee.
- Allow for webcasting of the video and audio of the ACRS Subcommittee meetings when presentations are made to the Subcommittee with simultaneous posting of the slides presented to the Subcommittee.

### ACRS Meeting With the Commission

The ACRS is scheduled to meet with the Commission between 9:30 and 11:30 a.m. on Friday, December 4, 2009. Topics proposed by the Committee and approved by the Commission are as follows:

- Overview (Bonaca)  
Major Accomplishments  
Future Plant Design Activities  
Containment Accident Pressure Credit Issue  
Major Areas of Ongoing and Future ACRS Activities

- Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)/Design Acceptance Criteria (DAC) Closure Process (Bley)
- Amendment to the AP1000 Design Control Document (Ray)
- Three-Dimensional Finite Element Analysis of the Oyster Creek Drywell Shell (Shack)
- Beaver Valley Containment Liner Corrosion (Armijo)
- Cyber Security Programs for Nuclear Power Plants (Apostolakis)

Copies of draft slides will be distributed to the Committee during the November meeting. The Committee needs to approve a set of slides during the November meeting.

#### Election of Officers for CY 2010

During its December 2009 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 20, 2009.

#### Quality Assessment of Research Projects in FY 2010

A list of research projects proposed by RES for ACRS quality assessment in FY 2010 was discussed. Dr. Powers needs to propose two projects and Panels for assessing the selected projects.

In addition, RES proposes the following enhancements to the ACRS quality assessment process.

After familiarizing with the research projects selected for quality assessment, cognizant ACRS Subcommittee hold a Subcommittee meeting with the research Project Manager and representatives of the User Office to obtain an overview of the project and the User Office's insights on the expectations for the project with regard to their needs.

In addition, an informal meeting be held with the Project Manager to answer additional Subcommittee questions and to provide clarification of information prior to completing the quality assessment.

Dr. Powers proposed the following research projects and Panels for quality assessment in FY 2010:

Modeling a Digital Feedwater Control System Using Traditional Probabilistic Risk Assessment Methods

Panel: Stetkar (Chair), Ray, Sieber

Human Factors Consideration with Respect to Emerging Technology in Nuclear Power Plants (NUREG/CR-6947)

Panel: Bley (Chair), Ryan, Abdell-Khalik

#### Update on H1N1 (Swine) Flu Vaccine

The NRC announced an update on the status of the availability of the H1N1 vaccine for NRC employees. NRC has received an initial delivery of H1N1 vaccine in Headquarters. NRC will follow the CDC recommendations for prioritizing H1N1 vaccination. In accordance with the CDC recommendations, priority will be give to employees who are:

- Pregnant
- Who live with or care for children younger than 6 months of age
- Who are health care and emergency medical services personnel with direct patient care
- Who are from 6 months through 24 years of age, or
- Who are between 25 and 64 years of age and have health conditions associated with higher risk medical complications from influenza

Those who meet one of the above categories and are interested n H1N1 vaccine should visit the Health Center, One White Flint North, between 2-4 p.m.

Vaccination to everyone from ages 25 through 64 years will be offered once the demand for the above priority groups have been met. Vaccination to people 65 and over will be offered after all other demands have been met.

#### Regulatory Guides (EMH)

##### a) Draft Regulatory Guide

The staff plans to issue the following Draft Final Regulatory Guide and would like to know whether the Committee wants to review this Guide prior to being issued final.

Draft Final Regulatory Guide 1.141, "Containment Isolation Provisions for Fluid Systems"

Regulatory Guide 1.141 was issued in 1978. The Proposed Revision 1 to this Guide was issued as DG-1213 for public comment on June 30, 2009. The proposed revision incorporates operating experience from the past three decades. Significantly, this revision includes improved regulatory guidance as a result of the staff's review of the lessons learned from the accident at Three Mile Island Nuclear Generating Station, Unit 2. It also updates the NRC guidance on

acceptable design, testing, and maintenance requirements that licensees may use to comply with their plant-specific design criteria for the isolation of fluid systems that penetrate the primary containment of light-water-cooled reactors. No comments have been received; therefore no changes have been made from the DG-1213.

Based on his review of this Regulatory Guide, Mr. Ray recommends that the Committee not review this Guide.

#### b) Proposed Regulatory Guides

The staff plans to issue the following Proposed Regulatory Guides for public comment and would like to know whether the Committee wants to review these Guides prior to being issued for public comment.

Proposed Revision 4 to Regulatory Guide 1.82 (DG-1234), "Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident"

DG-1234 incorporates insights gained from the work being performed to resolve GSI-191, "Assessment of Debris Accumulation on PWR Sump Performance," and Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors." The appropriate GSI-191 lessons learned for PWRs has been applied to BWRs. The regulatory positions of the Guide were revised to make them consistent with staff positions described in safety evaluations on industry guidance documents and several industry topical reports that are associated with GSI-191 and NRC Generic Letter 2004-02. DG-1234 also incorporates staff review guidance in the areas of chemical effects, coating, and head loss testing.

Based on his review of this Proposed Regulatory Guide, Dr. Banerjee recommends that the Committee review the draft final revision to this Guide after reconciliation of public comments.

Proposed Revision 2 to Regulatory Guide 4.11 (DG-4016), "Terrestrial Environmental Studies for Nuclear Power Plants"

Regulatory Guide 4.11 was first issued in July 1976 and last revised in August 1977. Throughout the United States, some terrestrial ecological procedures have become standardized, new ecological mapping have been developed, and new technologies, such as the Geographic Information System (GIS), have been developed and widely applied. The proposed revision to this Guide addresses procedures and technical resources presently in use and directs users to technical information sources containing relevant updated data.

Based on his review of this Proposed Regulatory Guide, Dr. Ryan recommends that the Committee review the draft final revision to this Guide after reconciliation of public comments.

#### Quadripartite Group Meetings

ACRS Members Dr. Powers and Mr. Brown; and Ms. Antonescu of ACRS staff attended the third Quadripartite Working Group (WG) Meeting hosted by Japan's Nuclear Safety Commission (NSC) in Tokyo on October 13-15, 2009. The NSC letter of appreciation for ACRS' participation in this meeting was discussed.

The next Plenary Quadripartite Meeting will be hosted by France's Groupe Permanent D'experts Pour Les Réacteurs Nucléaires (GPR) in spring of 2011. Topics of interest for the subsequent working group meetings will be collected at the Plenary meeting.

#### Christmas Party

The Christmas Party sponsored by the members is scheduled for Friday, December 4, following the meeting with the Commission.

The meeting was adjourned at 7:00 pm on October 9, 2009.

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
565<sup>th</sup> FULL COMMITTEE MEETING

October 8-10, 2009

PLEASE PRINT

TODAY'S DATE: October 8, 2009

| <u>NAME</u>             | <u>NRC ORGANIZATION</u> |
|-------------------------|-------------------------|
| 1 Janelle Jessie        | NRO/DNRL                |
| 2 Mark McBride          | NRO/DSER/RHEB           |
| 3 JERRY Wilson          | NRO / NRG A             |
| 4 John Lai              | ACRSI/SPB/F             |
| 5 FRANCIS AKSULEWICZ    | NRO/DNRL                |
| 6 Tom Kevern            | NRO/DNRL                |
| 7 Brad Hanney           | NRO/DSER/RSAR           |
| 8 Marcia Carpenter      | OGC                     |
| 9 Seshagini Rao Tammara | NRO/DSER/RSAC           |
| 10 Mark Tonacci         | NRO/DNRL/NGE1           |
| 11 Bruce Musico         | NRC/NPIR                |
| 12 WEIJUN WANG          | NRO/DSER                |
| 13 Thomas Scarborough   | NRO/DE/CIB2             |
| 14 LARRY WILCOX         | NRO/DSRA/SBPS           |
| 15 John Segala          | NRO/PSAA/SBPA           |
| 16 Aida Rivera-Vardna   | NRO/DUP/CQVB            |
| 17 A. H. Hsia           | NRO/DSER                |
| 18 David Terao          | NRO/DE/CIB1             |
| 19 Neil Ray             | NRO/DE/CIB2             |
| 20 ERIC OESTERLE        | NRO/DNRL/NRGA           |
| 21 George GEORGIEV      | NRO/DE/NRO              |
| 22 Eduardo Sastre       | NRO/DE/CIB2             |
| 23 Matthew McConnell    | NRO/DE/FEED             |
| 24 CHRISTOPHER COOK     | NRO/DSER/RHEB           |
| 25 DUC NGUYEN           | NRR/DLR                 |
| 26 E. Gettys            | NRR/DLR                 |
| 27 CLIFF DAVIS          | NRR/DLR                 |
| 28 M. Banic             | NRR/DLR                 |

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
565<sup>th</sup> FULL COMMITTEE MEETING

October 8-10, 2009

PLEASE PRINT

TODAY'S DATE: October 8, 2009

| NAME                          | NRC ORGANIZATION |
|-------------------------------|------------------|
| 1 Bill Rogers                 | NRR/DLR          |
| 2 <del>Seung Min</del>        | NRR/DLR          |
| 3 <del>DAVID ALLEY</del>      | NRR/DLR          |
| 4 JAY ROBINSON                | NRR/DLR          |
| 5 Glenn Meyer                 | Region T/DPS     |
| 6 JAMES MEDOFF                | NRR/DLR          |
| 7 Brian Harris                | NRR/DLR          |
| 8 SAMSON LEE                  | NRR/DLR          |
| 9 Robert Sun                  | NRR/DLR          |
| 10 Emma Wong                  | NRR/DCI          |
| 11 <del>Bart Fe</del>         | DLR              |
| 12 Bryce Lehman               | NRR/DLR          |
| 13 <del>R. Gan</del>          | NRR/DLR          |
| 14 Andrew Primaris            | NRR/DLR          |
| 15 <del>ALBERT WONG</del>     | NRR/DLR          |
| 16 <del>Chuang-yeh Yang</del> | NRR/DLR          |
| 17 BARRY ELLIOT               | NRR/DLR          |
| 18 Rachel Vaucher             | NRR/DLR          |
| 19 Zuhua Xi                   | NRO/DSEP         |
| 20 Simon Sheng                | NRR/DCI          |
| 21 R. Auluck                  | NRR/DLR          |
| 22 C. Boyd                    | RES/DSA          |
| 23 Selim Sancahtar            | RES/DRA          |
| 24 BOB PALLA                  | NRR/DRA          |
| 25 Jason Schaperow            | RES/DSA          |
| 26 Tim McQuinty               | NRR/DPR          |
| 27 Chaks Ferris               | RES/DE           |
| 28 <del>STUART RICHARDS</del> | RES/DE           |

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
565<sup>th</sup> FULL COMMITTEE MEETING

October 8-10, 2009

PLEASE PRINT

TODAY'S DATE: October 8, 2008

NAME

NRC ORGANIZATION

Ken Kosowski

NRR/DCS

Itans Asher

NRR/DLR

Allen Hiser

NRR/DLR

SAMSON LEE

NRR/DLR

John Muninger

NRC

TIM OHARA

NRC REGION 1

KAMAL MANOLY

NRR/DE

Louise Lund

NRR/DLR

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
566<sup>th</sup> FULL COMMITTEE MEETING

October 8-10, 2009

PLEASE PRINT

TODAY'S DATE: October 9, 2009

| <u>NAME</u>         | <u>NRC ORGANIZATION</u> |
|---------------------|-------------------------|
| 1 Jaclyn Storch     | OIG                     |
| 2 Charles Moulton   | NRR/DRA/AFPB            |
| 3 JERRY WILSON      | NRO/NRGA                |
| 4 ERIC OESTERLE     | NRO/DNRL/NRGA           |
| 5 Alex Klein        | NRR/DRA/AFPB            |
| 6 Daniel Franklin   | NRR/DRA/AFPB            |
| 7 John Tappert      | NRO/DCID                |
| 8 Phil Reed         | RES/DRA                 |
| 9 Nonette Gilles    | NRO/DNRL/NRGA           |
| 10 LAURA DUDAS      | NRO/DE                  |
| 11 Andy Campbell    | NRO/DCIP                |
| 12 TRAVIS CHAPMAN   | NRO/DCIP/CFSB           |
| 13 DENISE Mc GARRAN | NRO/DCIP/CFSB-ITAC      |
| 14 MARK KOWAL       | NRO/DCIP/CFSB           |
| 15 Mike Junge       | NRO/DCIP/COA            |
| 16 DON HABIB        | NRO/DNRL/NWE1           |
| 17 Eileen McKenna   | NRO/DNRL/NWE2           |
| 18 SALMAN HAO       | HR/HRTD/RFT             |
| 19 PATRICK SEKERAK  | NRO/DE/EMB              |
| 20 K Robert HSU     | NRO/DE/EMBI             |
| 21 Ann Hodgdon      | OIG                     |
| 22 EARL R. LIBBY    | NRO/DNRL/NRGA           |
| 23 Jocelyn Mitchell | RES                     |
| 24                  |                         |
| 25                  |                         |
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| <u>NAME</u>            | <u>AFFILIATION</u>              |
|------------------------|---------------------------------|
| 1 Richard Baker        | Bechtel                         |
| 2 Lynn Van-Derpoel     | Bechtel                         |
| 3 Douglas Kemp         | Bechtel                         |
| 4 Rick Kingston        | GE-Hitachi                      |
| 5 MARVIN Smith         | DOMINION                        |
| 6 Patricia Campbell    | GEH                             |
| 7 GEOFFREY QUINN       | BECHTEL                         |
| 8 JOE HEGNER           | DOMINION                        |
| 9 Tony Banks           | Dominion                        |
| 10 JIN CHUNG           | MNES                            |
| 11 JOHN KRAUS          | SSES                            |
| 12 ROSS GARDNER        | SSES PPL                        |
| 13 James K. Williams   | PPL SSES                        |
| 14 Christopher Hoffman | PPL SSES                        |
| 15 Bruce Swayer        | PPL SSES                        |
| 16 Dale Roth           | PPL Susquehanna                 |
| 17 Duane Filchner      | PPL Susquehanna                 |
| 18 Dave Flyte          | PPL Susquehanna                 |
| 19 Jeffrey Weik        | PPL Susquehanna                 |
| 20 Susan Miller        | PPL Susquehanna                 |
| 21 Philip Brady        | PPL SUSQUEHANNA                 |
| 22 Daniel Miller       | PPL susquehanna                 |
| 23 Richard D Pagodini  | PPL Susquehanna                 |
| 24 Gary L. Stevens     | Structural Integrity Associates |
| 25 JAMES STAVELY       | PSEG                            |
| 26 MASSOUD TAFAZZOLI   | AREVA                           |
| 27 Mitch McFarland     | AREVA                           |
| 28 Jim Davis           | SELF                            |

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|-------------------------|----------------------|
| 1 Erach Patel           | ATH                  |
| 2 Wilbur (P.B.) Jackson | ATK                  |
| 3 MIKE Galagher         | EXELON               |
| 4 DAVID Benson          | EXELON               |
| 5 S.S. (Stan) Tang      | Structural Integrity |
| 6 JOHN O'ROURKE         | EXELON               |
| 7 PETER TAMBURRO        | EXELON               |
| 8 JOHN HUFNAGEL         | EXELON               |
| 9 Howie RAY             | EXELON               |
| 10 CLARENCE MILLER      | EXELON               |
| 11 DON FONTANA          | EXELON               |
| 12 Ray Kuyler           | Morgan Lewis         |
| 13 A.C. KADAK           | MIT.                 |
| 14 Tim Lippold          | RES/DE/CMB           |
| 15 Steve Trajman        | SAT Gmelants         |
| 16 Brian Harty          | NRC/OGC              |
| 17 Nancy Chapman        | SERCA/Bechtel/       |
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