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

September 7, 2010

MEMORANDUM TO: ACRS Members

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

SUBJECT: CERTIFICATION OF THE MEETING MINUTES FROM THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS 567th FULL COMMITTEE MEETING HELD ON NOVEMBER 5-7, 2009 IN ROCKVILLE, MARYLAND

The minutes of the subject meeting were certified on November 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

November 19, 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 567th MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS), NOVEMBER 5-7, 2009

I certify that based on my review of the minutes from the 567th 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	11/ 19 /09	11/ 19 /09

OFFICIAL RECORD COPY

CERTIFIED Date Certified: 11/19/2009

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MINUTES OF THE 567th ACRS MEETING

NOVEMBER 5-7, 2009

Appendices

During its 567th meeting, November 5-7, 2009, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports and memorandum:

REPORTS

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

- Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities," dated November 12, 2009

- Westinghouse AP1000 Design Certification Amendment: Status of ACRS Review, dated November 13, 2009

MEMORANDUM

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

- Proposed Revisions to Regulatory Guides 1.82 and 4.11, dated November 6, 2009

MINUTES OF THE 567TH MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

ROCKVILLE, MARYLAND

The 567th meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on November 5-7, 2009. Notice of this meeting was published in the *Federal Register* on October 22, 2009 (72 FR 54595-54597) (Appendix I). The purpose of this meeting was to discuss and take appropriate action on the items listed in the meeting agenda (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. 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.
A list of meeting attendees is in Appendix III.

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.

II. Amendments to the AP1000 Design Control Document (DCD)

[Note: Mike Lee was the Designated Federal Official for this portion of the meeting.]

The Committee met with representatives of the NRC staff to discuss the NRC staff's review of the amendments to the AP1000 Design Control Document (DCD). The staff described the status of its review of the AP1000 DCD and the Reference Combined License Application (RCOLA). Since the certification of the AP1000 in 2006, Westinghouse has submitted two revisions to the DCD. These revisions include design and hardware changes such as a change in pressurizer shape, addition of a reactor vessel flow skirt and neutron panels, change in the reactor vessel diameter, increase in Class 1E voltage from 125v to 250v, change in design of turbine generator, expansion of existing liquid radioactive waste storage capacity, and an increase in the number of gray control rods. The staff is currently reviewing these changes and has issued several chapters of its draft Safety Evaluation Report (SER) with Open Items. Approximately 30 of the 130 open items have been closed, and about 50 requests for additional information (RAIs) are outstanding. Over 100 Technical Reports (TRs) have been submitted in support of the DCD amendment. In addition to the ongoing chapter-by-chapter review of draft SER chapters, the Committee expects to review selected TRs as well. The staff stated that the transition from Bellefonte to Vogtle as the AP1000 RCOLA is nearly complete. The staff plans to discuss the advanced final SER for Vogtle with the Committee in the fall of 2010.

The Committee issued a report to the NRC Chairman on this matter, dated November 13, 2009, concluding that its review of the AP1000 DCD amendment is keeping pace with the availability of draft SER chapters. Also, the Committee has not identified any items of potential concern in addition to those which have been previously identified by the NRC staff and remain under staff review.

III. Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities"

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

The Committee met with representatives of the NRC staff to discuss draft final Regulatory Guide (RG) 5.71, "Cyber Security Programs for Nuclear Facilities." The staff presented an overview of RG 5.71 and described the major changes to this Guide since March 2009. These changes addressed ACRS comments in a March 19, 2009, letter and included expanded guidance on how to establish, implement, and maintain a cyber security program. The NRC staff described the new detailed guidance for the selection of critical systems and critical digital assets (CDA). RG 5.71 employs 3 defense-in-depth protective strategies: (1) incorporate protective security boundaries for timely detection and response to a cyber attack (2) apply security controls to detect, deter, respond, and recover from a cyber attack, and (3) maintain a cyber security program. The selection of security controls incorporates an acceptable method for addressing cyber vulnerabilities. The security controls were adapted from the National Institute of Standards and Technology (NIST) cyber security standards as well as guidance from the U.S. Department of Homeland Security (DHS). The guide also addresses the management of potential vulnerabilities, weaknesses, and cyber risks introduced by changes in the system, network, environment, or emerging threats.

In addition, the regulatory guide includes a generic cyber security plan template that describes how CDAs are identified, how security controls are applied, and how the cyber security program will be maintained.

The Committee issued a report to the NRC Chairman on this matter, dated November 12, 2009, recommending that RG 5.71 be issued. The Committee noted that RG 5.71 adapts the NIST Standards for the development of plans but does not provide guidance to evaluate their adequacy. The Committee recommended that after the initial implementation of the cyber security plans, RG 5.71 be revised to include the resulting insights and provide guidance regarding the adequacy of cyber security plans and policies. In addition, longer-term research projects should be initiated by the NRC staff in the following areas: exploration of the use of Probabilistic Risk Assessment insights in cyber security; development of better guidance on the interaction between cyber security and safety; and investigation of supply chain attacks.

IV. Overview of the Advanced Boiling Water Reactor (ABWR) Design as Applied to the South Texas Project (STP) Combined License Application (COLA)

[Note: Ms. Maitri Banerjee was the Designated Federal Official for this portion of the meeting.]

The Committee met with representatives of the NRC staff and the STP Nuclear Operating Company (STPNOC) to discuss the previously certified ABWR design as applied to the STP Units 3 & 4. STPNOC submitted a COL in 2007. STPNOC representatives discussed the significant changes from the certified ABWR design. STPNOC representatives also discussed implementation of the new aircraft impact rule. STPNOC has submitted a DCD amendment to address the rule requirements.

The NRC staff also provided an overview of the alternate vendor qualification process. STPNOC selected Toshiba as the primary vendor supplying the ABWR design. However, the ABWR design was sponsored by General Electric Company who obtained the design certification. Hence, as required by the NRC regulations, the staff performed an alternate vendor review to demonstrate that Toshiba was capable of providing the previously certified ABWR for STP Units 3 & 4. This was an information briefing. No Committee action was necessary.

V. Subcommittee Reports

Significant Operating Experience

The Chairman of the Plant Operations and Fire Protection Subcommittee provided a report to the Committee summarizing the results of the Significant Operating Experience Report to Congress by the NRC Commissioners. Several events reported as abnormal occurrences were described. No abnormal events were identified at nuclear power plants, material licensees, or transportation licensees. Nuclear power plants initiating events and safety systems availability trends are low and continue to trend downward. The Industry Trend Program, the Accident Sequence Program, and the Reactor Oversight Program appear to be effective. The introduction of new technologies (like digital I&C) will likely cause new failure modes and new initiating events. However, the incidence of digital I&C events is currently low.

Economic Simplified Boiling Water Reactor (ESBWR) Subcommittee Report:

The Chairman of the ESBWR Subcommittee provided a report to the Committee summarizing the results of the October 20-22, 2009, meeting with representatives of the NRC staff and GE-Hitachi Nuclear Energy (GEH) to review the resolution of open items associated with the ESBWR Design Certification application. The discussion topics included dynamic loads on heat exchangers using passive-cooling; high-energy line break analyses; steam dryer loads; noncondensible gas in the Gravity Driven Cooling System (GDCS) pipelines; design of GDCS check valves; core design; and the applicability of the Critical Power Ratio (CPR) correlation to ESBWR fuel.

Radiation Protection and Nuclear Materials Subcommittee Report

The Chairman of the Radiation Protection and Nuclear Materials Subcommittee provided a report to the Committee summarizing the results of the November 4, 2009, meeting with representatives of the NRC staff to review draft Revision 1 to NUREG-1520, "Standard Review Plan [SRP] for the Review of a License Application for a Fuel Cycle Facility." The Subcommittee reviewed significant changes to the SRP with emphasis on Integrated Safety Analysis (ISA), and regulatory treatment of chemical safety, radiation safety, criticality safety, fire safety, and environmental protection. Changes to the SRP were made primarily to increase clarity and to add guidance based on previous reviews and lessons learned. The enhanced guidance subsumed a number of Interim Staff Guidance documents (ISGs) that had been used as supplemental information during staff reviews of license applications. The staff explained the motivation for integrating ISGs and other changes into the revised SRP.

Evolutionary Power Reactor (EPR) Subcommittee Report

The Chairman of the EPR Subcommittee provided a report to the Committee summarizing the results of the November 3, 2009, meeting with representatives of the NRC staff and AREVA, NP, to review Chapters 2 and 8 of the EPR Design Certification application. AREVA, NP, presented information from Chapter 2, "Site Characteristics," and Chapter 8, "Electric Power," of the Final Safety Analysis Report (FSAR) for the US EPR DCD. The NRC staff presented information resulting from the review of these two FSAR Chapters and documented in the SER with Open Items. Chapter 2 has several open items concerning meteorology and hydrology that were discussed. The staff review of Chapter 8 did not result in any open items.

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 21, 2009, to comments and recommendations included in the September 23, 2009, ACRS report on the Safety Aspects of the License Renewal Application for the Indian Point Nuclear Generating Units 2 and 3. The Committee decided that it was satisfied with the EDO's response.

- The Committee considered the EDO's response of October 21, 2009, to comments and recommendations included in the September 28, 2009, ACRS report on the Safety Aspects of the License Renewal Application for the Three Mile Island Nuclear Station, Unit 1. 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 November ACRS Meeting

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

Anticipated Workload for ACRS Members

The anticipated workload for ACRS members through March 2010 was discussed. The objectives are 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 proposed 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, Abdel-Khalik

Update on H1N1 (Swine) Flu Vaccine

The attached NRC announcement (pp.14) provides 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 through 64 years of age and who 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 has been met. Vaccination to people 65 and over will be offered after all other demands have been met.

Regulatory Guides (EMH)

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.

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), haven 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 p.m. on November 6, 2009.

DEPARTMENT OF JUSTICE

Antitrust Division

Notice Pursuant to the National Cooperative Research and Production Act of 1993—IMS Global Learning Consortium, Inc.

Notice is hereby given that, on September 17, 2009, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* (''the Act''), IMS Global Learning Consortium, Inc. has filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act's provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, Athabasca University, Athabasca, Alberta, Canada; BPS Bildungsportal Sachsen GmbH, Chemnitz, Germany; and Levelland Independent School District, Levelland, TX have been added as parties to this venture.

Also, University of North Carolina—Wilmington, Wilmington, NC; Angel Learning, Indianapolis, IN; Information Management Specialists, Montgomery, AL; eCollege.com, Denver, CO; Embanet, Toronto, Ontario, Canada; TIDIA Ae FAPESP Project, Sao Paulo, Brazil; Common Need, Inc., Alexandria, VA; and ACT, Iowa City, IA have withdrawn as parties to this venture.

In addition, Norwegian eStandards Project has changed its name to The Norwegian Secretariat for Standardization Learning Technology (NSSL), Oslo, Norway.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and IMS Global Learning Consortium, Inc. intends to file additional written notifications disclosing all changes in membership.

On April 7, 2000, IMS Global Learning Consortium, Inc. filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on September 13, 2000 (65 FR 55283)

The last notification was filed with the Department on June 30, 2009. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on August 21, 2009 (74 FR 42330).

Patricia A. Brink,

Deputy Director of Operations, Antitrust Division.

[FR Doc. E9–25306 Filed 10–21–09; 8:45 am]

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DEPARTMENT OF JUSTICE

Antitrust Division

Notice Pursuant to the National Cooperative Research and Production Act of 1993–ASTM International

Notice is hereby given that, on September 8, 2009, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* (''the Act''), ASTM International (''ASTM'') has filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing additions or changes to its standards development activities. The notifications were filed for the purpose of extending the Act's provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, ASTM has provided an updated list of current, ongoing ASTM standards activities originating between May 2009 and September 2009 designated as work items. A complete listing of ASTM work items, along with a brief description of each, is available at *http://www.astm.org.*

On September 15, 2004, ASTM filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on November 10, 2004 (69 FR 65226).

The last notification was filed with the Department on May 18, 2009. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on June 15, 2009 (74 FR 28728).

Patricia A. Brink,

Deputy Director of Operations, Antitrust Division.

[FR Doc. E9–25305 Filed 10–21–09; 8:45 am]

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DEPARTMENT OF JUSTICE

Antitrust Division

Notice Pursuant to the National Cooperative Research and Production Act of 1993–Interchangeable Virtual Instruments Foundation, Inc.

Notice is hereby given that, on September 10, 2009, pursuant to Section 6(a) of the National Cooperative Research and Production Act of 1993, 15 U.S.C. 4301 *et seq.* (''the Act''), Interchangeable Virtual Instruments Foundation, Inc. has filed written notifications simultaneously with the Attorney General and the Federal Trade Commission disclosing changes in its membership. The notifications were filed for the purpose of extending the Act's provisions limiting the recovery of antitrust plaintiffs to actual damages under specified circumstances. Specifically, Nokia, Copenhagen, Denmark has been added as a party to this venture.

No other changes have been made in either the membership or planned activity of the group research project. Membership in this group research project remains open, and Interchangeable Virtual Instruments Foundation, Inc. intends to file additional written notifications disclosing all changes in membership.

On May 29, 2001, Interchangeable Virtual Instruments Foundation, Inc. filed its original notification pursuant to Section 6(a) of the Act. The Department of Justice published a notice in the **Federal Register** pursuant to Section 6(b) of the Act on July 30, 2001 (66 FR 39336).

The last notification was filed with the Department on June 22, 2009. A notice was published in the **Federal Register** pursuant to Section 6(b) of the Act on August 3, 2009 (74 FR 38473).

Patricia A. Brink,

Deputy Director of Operations, Antitrust Division.

[FR Doc. E9–25303 Filed 10–21–09; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards

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 November 5–7, 2009, 11545 Rockville Pike, Rockville, Maryland.

The date of this meeting was previously published in the **Federal Register** on Monday, October 6, 2008, (73 FR 58268–58269).

Thursday, November 5, 2009, Conference Room T2–B3, Two White Flint North, Rockville, Maryland.

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.–10:30 a.m.: Amendments to the AP1000 Design Control Document (DCD) (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and Westinghouse Electric Company regarding amendments to the AP1000 DCD and related matters.

10:45 a.m.–12:15 p.m.: Draft Final Regulatory Guide 5.71, ''Cyber Security Programs for Nuclear Facilities'' (Open/Closed)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding draft final Regulatory Guide 5.71, ''Cyber Security Programs for Nuclear Facilities,'' NRC staff's resolution of public comments, and related matters. [**Note:** A portion of this session may be closed to discuss and protect information classified as National Security Information as well as Safeguards Information pursuant to 5 U.S.C. 552b (c) (1) and (3).]

1:15 p.m.–3:15 p.m.: Overview of the Advanced Boiling Water Reactor (ABWR) Design as Applied to the South Texas Project (STP) Combined License Application (COLA) (Open/Closed)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and the STP Nuclear Operating Company regarding an overview of the ABWR design as it applies to the STP COLA and related matters. [**Note:** A portion of this session may be closed to discuss and protect information classified as National Security Information as well as Safeguards Information pursuant to 5 U.S.C. 552b (c) (1) and (3).]

3:30 p.m.–5:30 p.m.: NRC Staff's Plan for the STP COLA Review (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding staff's plan for reviewing the STP COLA and related matters.

5:45 p.m.–7 p.m.: Preparation of ACRS Reports (Open)—The Committee will discuss proposed ACRS reports on matters discussed during this meeting.

Friday, November 6, 2009, Conference Room T2–B3, Two White Flint North, Rockville, Maryland.

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.–10 a.m.: Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed)—The Committee will discuss the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the Full Committee during future ACRS meetings, including anticipated workload and member assignments, review of applications for membership, and related matters. [**Note:** A portion of this session 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 a.m.–10:15 a.m.: Reconciliation of ACRS Comments and Recommendations (Open)—The Committee will discuss the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

10:30 a.m.–12 p.m.: Preparation for Meeting with the Commission on December 4, 2009 (Open)—The Committee will discuss topics for its meeting with the Commission on December 4, 2009.

1 p.m.–3:30 p.m.: Draft ACRS Report on the NRC Safety Research Program (Open)—The Committee will discuss the draft ACRS report on the NRC Safety Research Program.

3:45 p.m.–4:45 p.m.: Significant Operating Experience (Open)—The Committee will hear a report by and hold discussions with the Chairman of the ACRS Subcommittee on Plant Operations and Fire Protection regarding significant operating events, insights gained from these events, and any follow-up actions by the Subcommittee and/or the Full Committee.

4:45 p.m.–5:15 p.m.: Subcommittee Reports (Open)—The Committee will hear reports by and hold discussions with the Chairmen of the ACRS Subcommittees regarding: Resolution of Open Items associated with the review of the ESBWR Design Certification; the Evolutionary Power Reactor (EPR) Design Certification Application Review; and the NUREG–1520, ''Standard Review Plan for Review of a License Application for a Fuel Cycle Facility,'' that were discussed during the meetings on October 20–22, November 3, and 4, 2009, respectively.

5:30 p.m.–7 p.m.: Preparation of ACRS Reports (Open)—The Committee will discuss proposed ACRS reports.

Saturday, November 7, 2009, Conference Room T2–B3, Two White Flint North, Rockville, Maryland

8:30 a.m.–10 a.m.: Preparation of ACRS Reports (Open)—The Committee will continue its discussion of proposed ACRS reports.

10:15 a.m.–1 p.m.: Process for ACRS Review of Amendments to the DCD of Previously Certified Reactor Designs (Open)—The Committee will discuss potential enhancements to the current ACRS process for reviewing amendments to the DCDs related to previously certified reactor designs.

1 p.m.–1:30 p.m.: Miscellaneous (Open)—The Committee will continue its discussion related to the conduct of Committee activities and specific issues that were not completed during previous meetings.

Procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 14, 2009, (74 FR 52829–52830). In accordance with those procedures, oral or written views may be presented by members of the public, including representatives of the nuclear industry. Thirty-five hard copies of each presentation or handout should be provided to the Designated Federal Official 30 minutes before the meeting. In addition, one electronic copy of each presentation should be emailed to the Designated Federal Official one 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. Electronic recordings will be permitted only during the open portions of the meeting. Persons desiring to make oral statements should notify the Cognizant ACRS staff 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 Cognizant ACRS staff 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 Cognizant ACRS staff if such rescheduling would result in major inconvenience.

In accordance with Subsection 10(d) Public Law 92–463, I have determined that it may be necessary to close a portion of this meeting noted above to discuss organizational and personnel matters that relate solely to internal personnel rules and practices of ACRS, and information the release of which constitute a clearly unwarranted invasion of personal privacy pursuant to 5 U.S.C. 552b(c)(2) and (6). In addition it may be necessary to close portion of the meeting to protect information classified as national security, as well as safeguards information pursuant to 5 U.S.C. 552b(c)(1),(2) and (3).

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 Girija Shukla, Cognizant ACRS staff (301–415–6855), between 7:15 a.m. and 5 p.m. (ET). ACRS meeting agenda, meeting transcripts, and letter reports are available through the NRC Public Document Room at *pdr.resource@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/.*

Video teleconferencing 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., (ET), 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 video teleconferencing link. The availability of video teleconferencing services is not guaranteed.

Dated: October 15, 2009.

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. E9–25320 Filed 10–21–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards (ACRS); Meeting of the ACRS Subcommittee on ESBWR; Notice of Meeting

The ACRS Subcommittee on the Economic Simplified Boiling Water Reactor (ESBWR) will hold a meeting on November 17–18, 2009, Room T2–B3, 11545 Rockville Pike, Rockville, Maryland.

The meeting will be open to public attendance, with the exception of a portion that may be closed to protect information that is proprietary to General Electric—Hitachi Nuclear Americas, LLC (GEH) and its contractors pursuant to 5 U.S.C. 552b(c)(4).

The agenda for the subject meeting shall be as follows:

Tuesday, November 17, 2009, 8:30 a.m.–5 p.m.

Wednesday, November 18, 2009, 8:30 a.m.–1 p.m.

The Subcommittee will review the resolution of containment issues and ventilation and dose issues associated with the ESBWR design certification. The Subcommittee will hear presentations by and hold discussions with representatives of the NRC staff, GEH, and other interested persons regarding this matter.

The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Members of the public desiring to provide oral statements and/or written comments should notify the Designated Federal Official (DFO), Christopher L. Brown (Telephone: 301–415–7111, E-mail: *Christopher.Brown@nrc.gov*) five days prior to the meeting, if possible, so that appropriate arrangements can be made. Thirty-five hard copies of each presentation or handout should be provided to the DFO thirty minutes before the meeting. In addition, one electronic copy of each presentation should be e-mailed to the DFO one day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the DFO with a CD containing each presentation at least 30 minutes before the meeting. Electronic recordings will be permitted only during those portions of the meeting that are open to the public. Detailed procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 14, 2009 (74 FR 52829–52830).

Detailed meeting agendas and meeting transcripts are available on the NRC Web site at *http://www.nrc.gov/reading-rm/doc-collections/acrs*. Information regarding topics to be discussed, changes to the agenda, whether the meeting has been canceled or rescheduled, and the time allotted to present oral statements can be obtained from the Web site cited above or by contacting the identified DFO. Moreover, 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 these references if such rescheduling would result in major inconvenience.

Dated: October 15, 2009.

Cayetano Santos,

Chief, Reactor Safety Branch A, Advisory Committee on Reactor Safeguards.

[FR Doc. E9–25423 Filed 10–21–09; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards; Meeting of the ACRS Subcommittee on Reliability and Probabilistic Risk Assessment; Notice of Meeting

The ACRS Subcommittee on Reliability and Probabilistic Risk Assessment (PRA) will hold a meeting on November 13, 2009, in Room T2–B3, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland.

The entire meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

Friday, November 13, 2009–8:30 a.m.–2:30 p.m.

The Subcommittee will review the Draft Final Revision 1 to Regulatory Guide 1.205 (DG–1218), ''Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants;'' the Draft final Standard Review Plan Section 9.5.1.2, ''Risk-Informed and Performance-Based Fire Protection Program;'' NRC Staff's resolution of public comments on these documents; and related matters. The Subcommittee will hear presentations by and hold discussions with representatives of the NRC staff, the Nuclear Energy Institute, the Electric Power Research Institute, and other interested persons regarding these matters. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as

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

October 15, 2009

AGENDA
567th ACRS MEETING
NOVEMBER 5-7, 2009

THURSDAY, NOVEMBER 5, 2009, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

1) 8:30 – 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/EMH/MPL)
   - 1.1) Opening statement
   - 1.2) Items of current interest

2) 8:35 – 10:30 A.M. Amendments to the AP1000 Design Control Document (DCD) (Open) (HBR/MPL)
   - 2.1) Remarks by the Subcommittee Chairman
   - 2.2) Briefing by and discussions with representatives of the NRC staff and Westinghouse Electric Company regarding amendments to the AP1000 DCD and related matters.

   Members of the public may provide their views, as appropriate.

10:30 – 10:45 A.M. ***** BREAK *****

3) 10:45 – 12:15 P.M. Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities" (Open/Closed) (GEA/CEA)
   - 3.1) Remarks by the Subcommittee Chairman
   - 3.2) Briefing by and discussions with representatives of the NRC staff regarding draft final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities," NRC staff's resolution of public comments, and related matters.

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

   [NOTE: A portion of this session may be closed to discuss and protect information classified as National Security Information as well as Safeguards Information pursuant to 5 U.S.C. 552b (c) (1) and (3).]

12:15 – 1:15 P.M. ***** LUNCH *****

4) 1:15 – 3:15 P.M. Overview of the Advanced Boiling Water Reactor (ABWR) Design as Applied to the South Texas Project (STP) Combined License Application (COLA) (Open/Closed) (SAK/MB)
- 4.1) Remarks by the Subcommittee Chairman
- 4.2) Briefing by and discussions with representatives of the NRC staff and the STP Nuclear Operating Company regarding an overview of the ABWR design as it applies to the STP COLA and related matters.

Members of the public may provide their views, as appropriate.

[NOTE: A portion of this session may be closed to discuss and protect information classified as National Security Information as well as Safeguards Information pursuant to 5 U.S.C. 552b (c) (1) and (3).]

3:15 – 3:30 P.M. * BREAK *****

5) 3:30 – 5:30 P.M. NRC Staff's Plan for the STP COLA Review (Open) (SAK/MB)
- 5.1) Remarks by the Subcommittee Chairman
- 5.2) Briefing by and discussions with representatives of the NRC staff regarding staff's Plan for reviewing the STP COLA and related matters.

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

5:30 – 5:45 P.M. * BREAK *****

6) 5:45 – 7:00 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
- 6.1) Amendments to the AP1000 DCD (HBR/MPL)
- 6.2) Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities" (GEA/CEA)

FRIDAY, NOVEMBER 6, 2009, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

7) 8:30 – 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/EMH)

8) 8:35 – 10:00 A.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed) (MVB/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 session 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) 10:00 – 10:15 A.M. Reconciliation of ACRS Comments and Recommendations (Open) (MVB/CS/AFD)
Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

10:15 – 10:30 A.M. * BREAK *****

10) 10:30 – 12:00 P.M. Preparation for Meeting with the Commission on December 4, 2009 (Open) (MVB, et al. /EMH, et al.)
Discussion of the topics for meeting with the Commission on December 4, 2009.

12:00 – 1:00 P.M. * LUNCH *****

11) 1:00 – 3:30 P.M. Draft ACRS Report on the NRC Safety Research Program (Open) (DAP, et al./HPN, et al.)
11.1) Remarks by the Subcommittee Chairman
11.2) Discussion of a draft ACRS report on the NRC Safety Research Program

3:30 – 3:45 P.M. * BREAK *****

12) 3:45 – 4:45 P.M. Significant Operating Experience (Open) (JDS/KDW)
12.1) Remarks by the Subcommittee Chairman
12.2) Briefing by and discussion with the Chairman of the ACRS Subcommittee on Plant Operations and Fire Protection regarding significant operating events, insights gained from these events, and any follow-up actions by the Subcommittee and/or the Full Committee.

13) 4:45 – 5:15 P.M. Subcommittee Reports (Open)
13.1) Report by and discussions with the Chairman of the ESBWR Subcommittee regarding Resolution of Open Items Associated with the Review of the ESBWR Design Certification that were discussed during the meeting on October 20-22, 2009. (MLC/CLB/KDW)

13.2) Report by and discussions with the Chairman of the EPR Subcommittee regarding Evolutionary Power Reactor (EPR) Design Certification Application Review that was discussed during the meeting on November 3, 2009. (DAP/DAW)

13.3) Report by and discussions with the Chairman of the Radiation Protection and Nuclear Materials Subcommittee regarding proposed changes to NUREG-1520, "Standard Review Plan for Review of a License Application for a Fuel Cycle Facility," that was discussed during the meeting on November 4, 2009. (MTR/JHF)

5:15 – 5:30 P.M. ***** BREAK *****

14) 5:30 – 7:00 P.M Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
14.1) Amendments to the AP1000 DCD (HBR/MPL)
14.2) Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities" (GEA/CEA)

SATURDAY, NOVEMBER 7, 2009, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

15) 8:30 – 10:00 A.M. Preparation of ACRS Reports (Open)
Continue discussion of the proposed ACRS reports listed under Item 14.

10:00 – 10:15 A.M. ***** BREAK *****

16) 10:15 – 1:00 P.M. Process for ACRS Review of Amendments to the DCD of Previously Certified Reactor Designs (Open) (MVB/CS)
16.1) Remarks by the ACRS Chairman
16.2) Discussion of potential enhancements to the current ACRS process for reviewing amendments to the DCDs related to previously certified reactor designs.

17) 1:00 – 1:30 P.M. Miscellaneous (Open) (MVB/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:

- During the days of the meeting, phone number 301-415-7360 should be used in order to access 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.

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
567th FULL COMMITTEE MEETING

November 5-7, 2009

PLEASE PRINT

TODAY'S DATE: November 6, 2009

	NAME	NRC ORGANIZATION
1	Eileen McKenna	NRO/DNRL
2	DON DUBE	NRO/DSRA
3	FRANCIS AKSTULEWICZ	NRO/DNRL
4	Billy Gleaves	NRO/DNRL
5	Phyllis Clark	NRO/DNRL
6	Perry Buckberg	NRO/DNRL
7	STELLA OPIARA	NSIR/DSP
8	Nimi Dhindsa	NSIR/DSP
9	JOHN RYCHNA	NSIR/DSP
10	Monika Coflin	NSIR/DSP
11	MICHAEL SHINN	NSIR/DSP
12	Eric Lee	NSIR/DSP
13	Karl Sturzebecher	Research
14	David Santos	RES/DE
15	STEPHEN WYMAN	NRR/EICB
16	Paul Loeser	NRR/DE/EICB
17	Gursh Singh	NRR/DE/EICB
18	Tim Mossman	NRR/DE/EICB
19	Brett Rini	RES/DE
20	Robert Kelly	NRO/DCIP/CHPB
21	Steve Williams	NRO
22	RAJ ANAND	NRO
23	Jan Jung	NRO
24	Dinesh Taneja	NRO
25	Eugene O. Eagle JI.	NRO/DE/ICE2
26	Erick M. Martinez	NRO/DE/ICE2
27	Tekia Govan	NRO/DNRL/NGE2
28	Jack Zhao	NRO/DE/ICE2

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
567th FULL COMMITTEE MEETING

November 5-7, 2009

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TODAY'S DATE: November 6, 2009

	NAME	NRC ORGANIZATION
1	JERRY Wilson	NRC/NRO
2	Scott Head	STPNOC
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
567th FULL COMMITTEE MEETING

November 5-7, 2009

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TODAY'S DATE: November 6, 2009

NAME	AFFILIATION
OBAID BHATTY	TRUENORTH CONSULTING, TEXAS
ED CUMMINS	WESTINGHOUSE
BILL GROSS	NEI
Storm Kauffman	MPR
Amy Aughtman	SNC
[illegible] SISK	WEC
Mike Melton	WPC
Amy M. Monroe	SCE&G
RICHARD GRUMBIR	NUSTART / Excel
Neil Haggerty	NuStart / Excel
Peter Behr	climatewire
Wes Sparkman	SNC
Ray Lewis	AREVA
PERRY PEDERSON	NRC
Coley Chappell	STPNOC
James Jenkins	STPNOC
Mark McBurnett	STPNOC
Brad Maurer	Westinghouse
CAROLINE SCHLASEMAN	TANE / MPR ASSOCIATES
Fumihiko Ishibashi	TANE
Hirohide Oikawa	Toshiba
Kyle Dittman	STPNOC
BOB HOOKS	Sargent & Lundy, LLC
Michael Murray	STPNOC
Nirmal Jain	Westinghouse
Al Gutterman	Morgan Lewis & Bockius LLP

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
567th FULL COMMITTEE MEETING

November 5-7, 2009

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TODAY'S DATE: November 6, 2009

	NAME	AFFILIATION
1	Bill Stallwell	STPNOC Units 3+4
2	Steve Williams	NRC
3	RAC MEMBER	NRC
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

November 9, 2009

AGENDA
568th ACRS MEETING
DECEMBER 3-5, 2009

THURSDAY, DECEMBER 3, 2009, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

1) 8:30 – 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/EMH/PW)
   - 1.1) Opening statement
   - 1.2) Items of current interest

2) 8:35 – 10:00 A.M. License Renewal Application for the Prairie Island Nuclear Generating Plant, Units 1 and 2 (Open) (HBR/PW)
   - 2.1) Remarks by the Subcommittee Chairman
   - 2.2) Briefing by and discussions with representatives of the NRC staff and Northern States Power Company regarding the license renewal application for the Prairie Island Nuclear Generating Plant, Units 1 and 2, the associated NRC staff's final Safety Evaluation Report (SER), and related matters.

   Members of the public may provide their views, as appropriate.

10:00 – 10:15 A.M. ***** BREAK *****

3) 10:15 – 12:15 P.M. Draft Final Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," and Draft Final Standard Review Plan (SRP) Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection" (Open) (GEA/GSS/JCL)
   - 3.1) Remarks by the Subcommittee Chairman
   - 3.2) Briefing by and discussions with representatives of the NRC staff and the industry regarding draft final Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," Draft Final SRP Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection," NRC staff's resolution of public comments, and related matters.

   Members of the public may provide their views, as appropriate.

12:15 – 1:15 P.M. ***** LUNCH *****

4) 1:15 – 3:15 P.M. Long-Term Core Cooling Approach for the Economic Simplified Boiling Water Reactor (ESBWR) Design (Open) (MLC/KW/CLB)

4.1) Remarks by the Subcommittee Chairman

4.2) Briefing by and discussions with representatives of the NRC staff and General Electric - Hitachi Nuclear Energy (GEH) regarding the long-term core cooling approach for the ESBWR design, and related matters.

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

Members of the public may provide their views, as appropriate.

3:15 – 3:30 P.M. ***** BREAK *****

5) 3:30 – 5:00 P.M. Draft Final Revision 1 to Regulatory Guide 1.151 (DG-1178), "Instrument Sensing Lines" (Open) (OLM/ZA)

5.1) Remarks by the Subcommittee Chairman

5.2) Briefing by and discussions with representatives of the NRC staff regarding draft final Revision 1 to Regulatory Guide 1.151 (DG-1178), "Instrument Sensing Lines," NRC staff's resolution of public comments, and related matters.

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

5:00 – 5:15 P.M. ***** BREAK *****

6) 5:15 – 5:45 P.M. Subcommittee Reports (Open)

6.1) (5:15 - 5:30 P.M) Report by and discussions with the Chairman of the Reliability & PRA Subcommittee regarding NRC's proposed policy statement on Safety Culture that was discussed during the meeting on November 12, 2009. (GEA/JHF)

6.2) (5:30 - 5:45 P.M) Report by and discussions with the Chairman of the AP1000 Subcommittee regarding Chapters 7 and 9 of the draft SER associated with the AP1000 Design Control Document Amendment that was discussed during the meeting on November 19-20, 2009. (HBR/MPL)

7) 5:45 – 7:00 P.M. Preparation of ACRS Reports (Open)

Discussion of proposed ACRS reports on:

7.1) License Renewal Application for the Prairie Island Nuclear Generating Plant, Units 1 and 2 (HBR/PW)

7.2) Draft Final Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," and Draft Final

Standard Review Plan (SRP) Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection" (GEA/GSS/JCL)

7.3) Long-Term Core Cooling Approach for the Economic Simplified Boiling Water Reactor Design (MLC/KW/CLB)

7.4) Draft Final Revision 1 to Regulatory Guide 1.151 (DG-1178), “Instrument Sensing Lines” (OLM/ZA)

FRIDAY, DECEMBER 4, 2009, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

8) 8:30 – 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/EMH)

9) 8:35 – 9:15 A.M. Discussion of Topics for Meeting with the Commission (Open) (MVB, et al./EMH, et al.)
Discussion of the following topics for meeting with the Commission:

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

9:15 – 9:30 A.M. ***** BREAK *****

10) 9:30 – 11:30 A.M. Meeting with the Commission - Commissioners’ Conference Room, One White Flint North (Open) (MVB, et al. /EMH, et al.)
Meeting with the Commission to discuss topics listed under Item 9.

11:30 – 1:15 P.M. ***** LUNCH *****

11) 1:15 – 2:30 P.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed) (MVB/EMH)

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.

[NOTE: A portion of this session 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.]

12) 2:30 – 2:45 P.M. Reconciliation of ACRS Comments and Recommendations (Open) (MVB/CS/AFD)
Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

13) 2:45 – 3:00 P.M. Election of ACRS Officers for CY-2010 (Open) (EMH/SD)
Election of the Chairman and Vice-Chairman for the ACRS and Member-at-Large for the Planning and Procedures Subcommittee for CY-2010.

3:00 – 3:15 P.M. * BREAK *****

14) 3:15 – 5:15 P.M. Draft ACRS Report on the NRC Safety Research Program (Open) (DAP, et al/HPN, et al.)
14.1) Remarks by the Subcommittee Chairman
14.2) Discussion of a draft ACRS report on the NRC Safety Research Program

5:15 – 5:30 P.M. * BREAK *****

15) 5:30 – 7:00 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
15.1) License Renewal Application for the Prairie Island Nuclear Generating Plant, Units 1 and 2 (HBR/PW)
15.2) Draft Final Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," and Draft Final Standard Review Plan (SRP) Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection" (GEA/GSS/JCL)
15.3) Long-Term Core Cooling Approach for the Economic Simplified Boiling Water Reactor Design (MLC/KW/CLB)
15.4) Draft Final Revision 1 to Regulatory Guide 1.151 (DG-1178), “Instrument Sensing Lines” (OLM/ZA)

SATURDAY, DECEMBER 5, 2009, CONFERENCE ROOM T-2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

16) 8:30 – 12:30 P.M. Preparation of ACRS Reports (Open)
(10:00-10:15 A.M. BREAK) Continue discussion of the proposed ACRS reports listed under Item 15.

17) 12:30 – 1:00 P.M. Miscellaneous (Open) (MVB/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:

- During the days of the meeting, phone number 301-415-7360 should be used in order to access 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.

Appendix IV

LIST OF HANDOUTS FROM THE
567TH ACRS MEETING NOVEMBER 5-7, 2009

Agenda Item 2:
Amendments to the AP1000 Design Control Document (DCD)

1. Proposed Schedule
2. Status Report
3. ACRS Information Requests of NRO for November 2009 AP1000 Briefing
4. ACRS AP1000 Review Schedule as of October 21, 2009

Agenda Item 3:
Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities"

5. Table of Contents
6. Proposed Agenda
7. Status Report
8. References:
9. RG 5.71 " Cyber security Programs For Nuclear Facilities", November, 2009 (ML092670517)
10. NRC Cyber Security Tasks: The Relationships between NRC Cyber Security Regulatory Initiatives
11. NERC Memorandum of Understanding (MOU)
12. The Cyber Security Assessment Team (CSAT) Charter and Procedures (ML0924603050.doc, ML0915502630.doc, ML0915502730.doc, ML0915502900.doc)
13. Cyber Security Overview: Cyber Security for Nuclear Reactors
14. NIST SP 800-53, Rev. 3, "Recommended Security Controls for Federal Information Systems," National Institute of Standards and Technology, Gaithersburg, MD, August 2009
15. NIST SP 800-53, "Guide to Industrial Control Systems," National Institute of Standards and Technology, Gaithersburg, MD, December 2008
16. 73-54 Language from the SECY issued July 2008
17. 73-55 Language from the SECY- issued July 2008

Agenda Item 4:
Overview of the Advanced Boiling Water Reactor (ABWR) Design as Applied to the South Texas Project (STP) Combined License Application (COLA)

18. Table of Contents
19. Proposed Agenda
20. Status Report
21. Attachments:
22. STP Departures from the Certified ABWR Design
23. Slides for a pre-submittal meeting on Westinghouse BWR ECCS Evaluation Model: Supplement 5 – Application to the ABWR.

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Amendment to the AP1000 Design Control Document (DCD) Presentation to the ACRS

Eileen McKenna

NRO/DNRL/NWE2, Chief

November 5, 2009

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Briefing Purpose and Agenda

- Status briefing regarding proposed AP1000 design certification amendment (DCA)
  - application
  - staff review
  - Committee presentations
- Update on reference combined license (RCOL) application

AP1000 Design Certification Amendment

- Current AP1000 Design Certification - Appendix D to 10 CFR Part 52 (Revision 15 to the AP1000 Design Control Document (DCD)) – effective 2006
- Safety Evaluation Report – NUREG-1793, “Final Safety Evaluation Report Related to Certification of the AP1000 Design”
- Post-certification Activities
  - NuStart Submittal of over 100 Technical Reports (TRs) beginning in 2006(list of TRs provided separately)
  - Staff Review of TRs – which address aspects of AP1000 Design and COL information items (in support of specific DCD changes)
  - Topics with multiple TRs include seismic, HFE, I&C, components

Application for Design Certification Amendment

- Application of May 26, 2007 based upon Revision 16 to the AP1000 DCD
- Reference to 10 CFR Part 52, Section 52.63 – Finality of Standard Design Certifications
- Submittal of Revision 17 of the AP1000 DCD – September 22, 2008
- RAI responses leading to DCD changes
- Revision 18

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Review of the AP1000 DCA

- Six phase review schedule
- Review is focused on changes proposed by Westinghouse, using SRP-based review
- Issuance of Individual Chapters in Phase 2 (SER with Open Items [SER/OIs]) to become a supplement to NUREG-1793
- Presentation of chapters at ACRS meetings

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Requests for Additional Information

- Presently about 47 RAIs pending
- Some RAIs amplify on open items (e.g., seven RAIs on HFE, nine on I&C, nine for chapter 9)
- Chapter 3 has ten, chapter 6 has seven, and there are five others

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I&C Design Acceptance Criteria (DAC)

- Instrumentation and control
  - Diverse Actuation System (Table 2.5.1-4 commitment 4)
    - -- Design requirements
    - -- System Definition
    - -- hardware and software development
  - Protection and Monitoring System (Table 2.5.2-8 commitment 11)
    - -- Design requirements
    - -- System Definition
    - -- hardware and software development (design and implementation)

DAC – Human Factors Engineering Table 3.2-1 of Tier 1

- Integration of Human Reliability Analysis with Human Factors Engineering design
- Task analysis (TA) performed IAW TA implementation plan
- Human systems interaction design for control room IAW implementation plan
- HFE program Validation and Verification plan developed IAW programmatic level description of HFE V&V plan

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Piping DAC

- Table 1-2 in introduction to DCD contains list of analysis methods, Codes, modeling assumptions, and acceptance criteria for AP1000 piping and pipe support design
- Revision 17 proposes removal of DAC on basis of completion of risk-significant set of piping packages
- Staff review continuing

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COL Information Items

- Table 1.8-2 of Tier 2 of the DCD contains all the COL information items.
- DCA added information about whether action needed by COL applicant or holder
- DCA proposes closure/deletion of 25 items, revision of 12 items, addition of 9 items
- Examples of COL items

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Current DCA Review Schedule

- Published schedule had last chapter of SER w/OI issued in January
- Schedule for chapters 3 and 6 being re-evaluated due to additional submittals expected on shield building and sump

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Open Item Status

- 124 Open items
- Attached table shows chapter breakdown
- Responses received for about one-third of items to date

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Safety Evaluation Reports (SERs) with Open Items (OIs)

SERs w/Open Items by Chapter	OIs Open	OIs Closed
1	2	--
2	6	--
3	35	--
4	--	1
5	2	2
7	22	--
8	5	--
9	11	--
10	1	4
11	--	1
12	4	1
13	1	--
14	1	2
16	5	5
17	--	3
18	5	2
19	2	4
Total	**102**	**25**

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Significant Design/Hardware Changes

- Seismic analyses (soils, high frequency)
- Structural changes for AIA (shield building and others)
- Enhancements for security, loss of large areas
- Containment Sump changes
- Control Room Ventilation System revision
- Integrated Head Package
- Pressurizer shape change
- Flow skirt and neutron panels added; RV diameter change, baskets moved
- Fuel storage racks – change in capacity, associated design changes
- Class 1E dc voltage now 250 V, second reserve aux transformer (and fast transfer), turbine and control system, additional waste monitor tanks

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Changes in Materials

- Changes for ASME code of record, procurement
- Main steam line change to SA-335 Grade P11 alloy
- RCP flywheel change to bimetallic with tungsten alloy inserts. Alloy 625 for flywheel enclosure
- RV change to copper limit
- Add additional SS types for RV internals (304,304H,304L)
- CRDM components materials

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Fuel and core design changes

- Gray rod control assemblies (from 4 to 12 with Ag-In-Cd)
- Use of borosilicate or wet annular burnable absorbers
- Changes to internals affect on method for determining total design bypass flow

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Committee Interactions

- Orientation briefings in October 2007 and May 2009
- SC meeting July 23-24,2009 (10 chapters)
- Subcommittee meeting Oct 6-7,2009 (3 chapters)
- SC meeting Nov 19-20, 2009 (2 chapters and info brief on sump testing)
- January 13-14,2010 SC briefing scheduled (chapter 15, other topics of interest)

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Status for AP1000 Reference Combined License Application

DNRL

November 5, 2009

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AP1000 Lead COL Status

- Transition from Bellefonte to Vogtle as the AP1000 reference COL is nearly complete:
  - Staff issued Bellefonte SER with Open Items for Chapters 1, 2, 3 (except 3.7/3.8), 4, 5, 7, 8, 10, 11, 12, 13 (except 13.6/13.7), 14, 16, 17, 18, 19
  - Bellefonte SER with Open Items Chapters 6, 9, and 15 will be issued on a schedule that comports with AP1000 DCD SER with Open Items schedule
- Staff preparing Vogtle's Advanced Final Safety Evaluation Report with no Open Items (Advanced FSER).
  - The current schedule for completion of the Advanced FSER is late summer/early fall 2010.
  - ACRS interactions on the Advanced FSER in fall 2010.

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Proposal for upcoming ACRS Interactions

November 2009 to February 2010

- Interact with ACRS staff to identify "issues of interest" to ACRS subcommittee members
  - Related to standard content
  - Related to site-specific content

Spring and Summer 2010

- Conduct ACRS subcommittee informational briefings on "issues of interest"

Fall 2010

- Conduct ACRS subcommittee and full committee briefings on Vogtle and Summer Advanced FSERs

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Regulatory Guide RG 5.71 Cyber Security Programs for Nuclear Facilities

Presented to: Advisory Committee on Reactor Safeguards

Karl Sturzebecher & Eric Lee
US Nuclear Regulatory Commission
November 5, 2009

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Purpose of the Meeting

- Review enhancements to RG 5.71
- Overview of RG 5.71
- Request letter with feedback

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Enhancements

- New framework
- Deterministic methodology using NIST standards
- Provided self tailoring full spectrum security controls
- Detailed guidance & examples to meet the rule
- Addresses the differences between DI&C and IT systems
- Defensive architecture
- Security lifecycle enhancements
- Security Plan Template - Submittal

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Overview of RG 5.71

Cyber Security Program

- Form a Cyber Security Team (CST)
- Identify Critical Systems (CS's) and Critical Digital Assets (CDAs)
- Defense-in-Depth Protective Strategies

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Overview of RG 5.71

Defense-in-Depth Protective Strategies

Strategy 1 - Incorporate protective security boundaries for timely detection and response against a cyber attack

Strategy 2 - The application of security controls coupled with the physical program to detect, deter, respond and recover from a cyber attack

Strategy 3 - Maintain the Cyber Security Program, which includes improving the program

Application of Strategy 1&2

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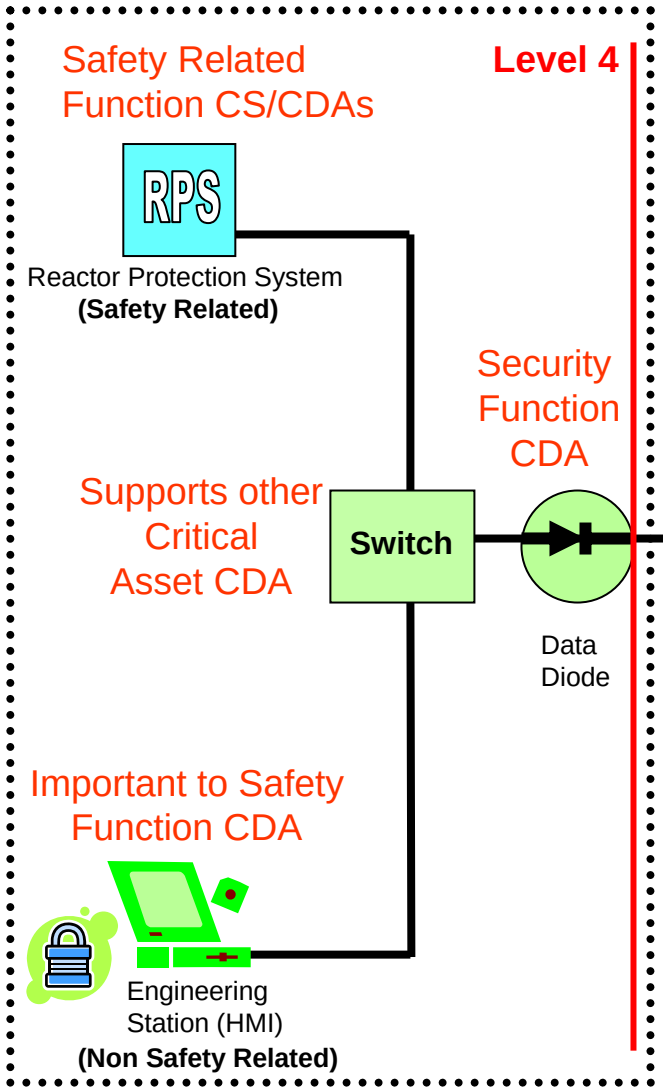
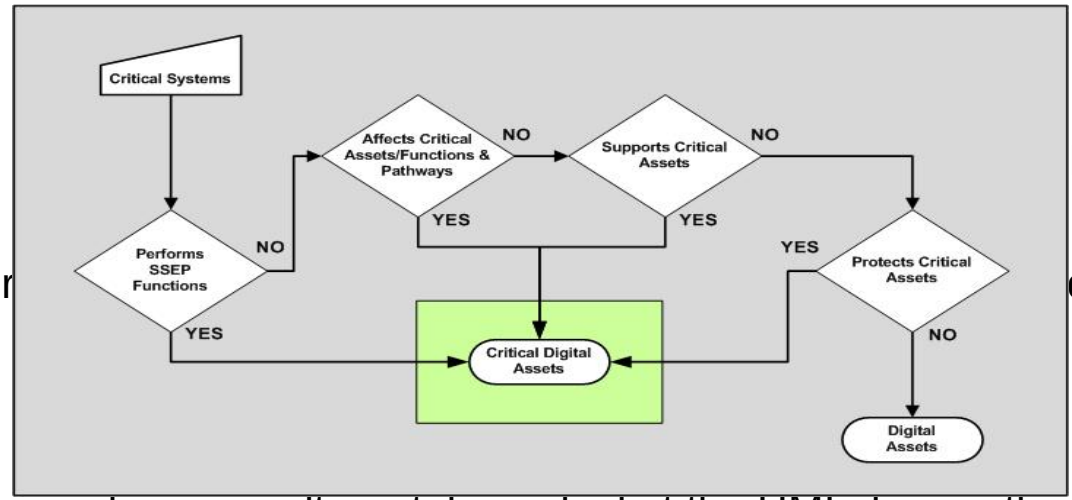


The Steps:

- Determine CSs and CDAs
- Review and validate
-
-
-
-
-



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however alternately applied at the HMI along with Physical Security

C: Authentication is applicable, do A or B

- Complete addressing for all security controls per CDA
- Test for vulnerabilities and ensure effectiveness
- Complete sufficient documentation for NRC inspection
- Maintain the Cyber Security Program

Physical Security

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Application of Strategy 3

Maintaining the Cyber Security Program

- Actively monitor and update cyber security
- Change control
- Review as part of the physical security program
- Retain records and documents

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Overview of RG 5.71

Cyber Security Plan Template

- Describe Cyber Security Team qualifications
- Describe how CDAs are identified
- Describe the defensive architecture
- Describe how all cyber security controls in RG 5.71 Appendices B&C are addressed and applied
- Document commitment to have sufficient documentation available for review upon inspection
- Describe how cyber security program will be maintained

Appendix A

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Summary of RG 5.71

- Addresses an intelligent, malicious adversary
- Based on experience and expertise for defending similar or greater threats
- Peer reviewed on widely accepted standards

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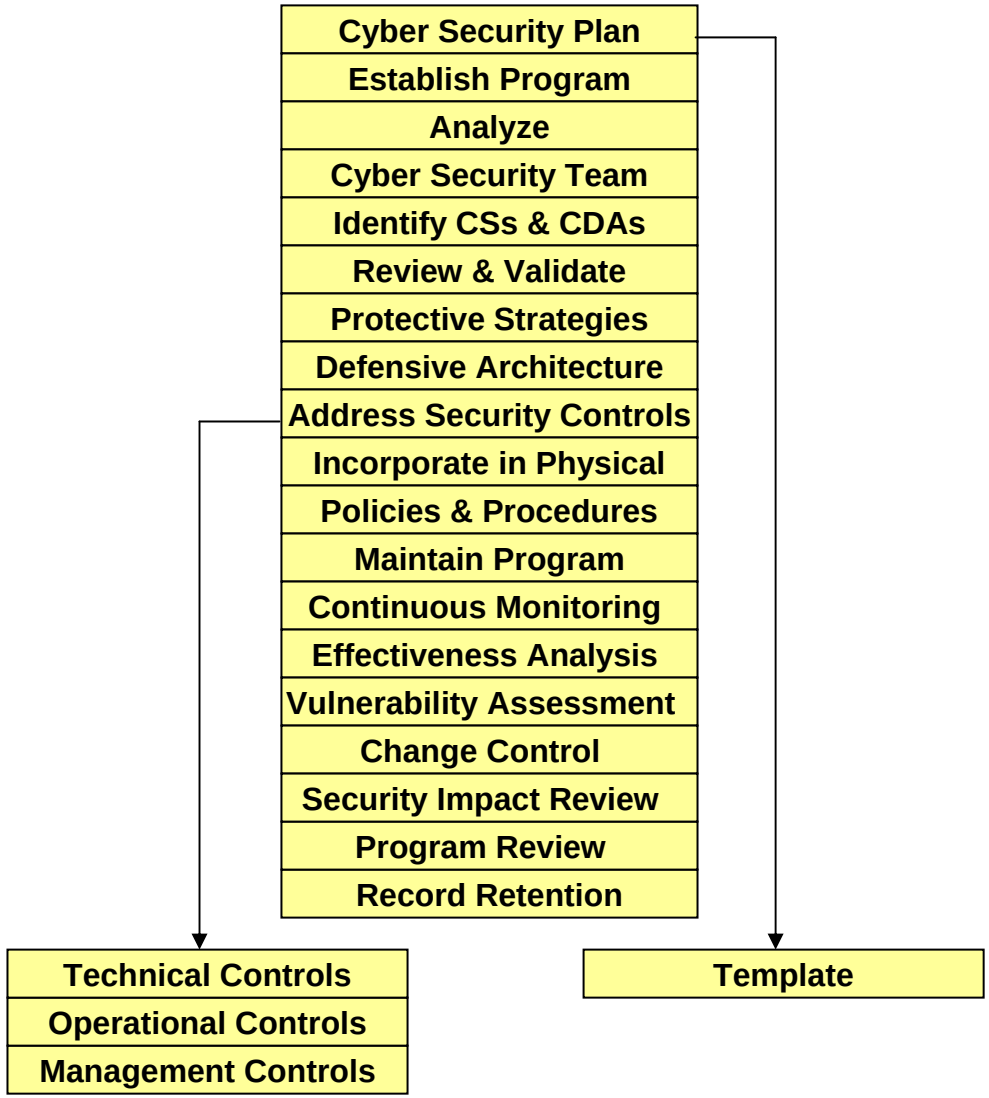
Enhancements Backup #1

March 2009 Version

Cyber Security Plan
Cyber Security Program
Analyze
Incorporate in Physical
Attack Vectors
Apply Security Controls
Protective Strategies
Policies & Procedures
Roles & Responsibilities
Review Program
Record Retention

November 2009 Version



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Methodology Backup #2

March 2009 Version

- Risk based methodology
- Use attack vector analysis to prove need
- Apply security controls
- Bottom up approach

November 2009 Version

- Deterministic methodology using NIST security controls
- Self tailoring technical security controls
- Vulnerability assessment & effectiveness analysis confirm protection
- Top down approach

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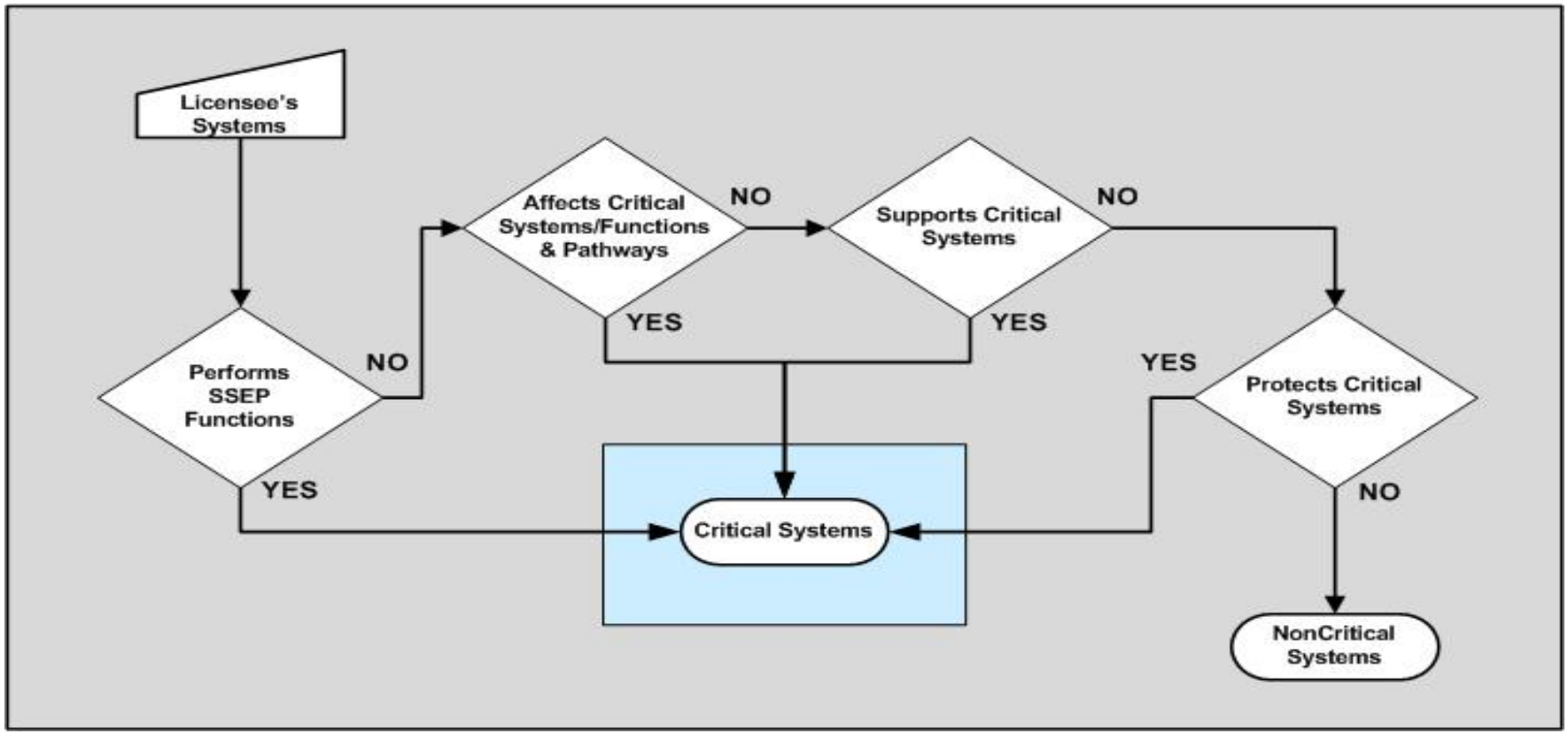
Flow Chart Backup #3

Identify Critical Systems (CSs) & Critical Digital Assets (CDAs)



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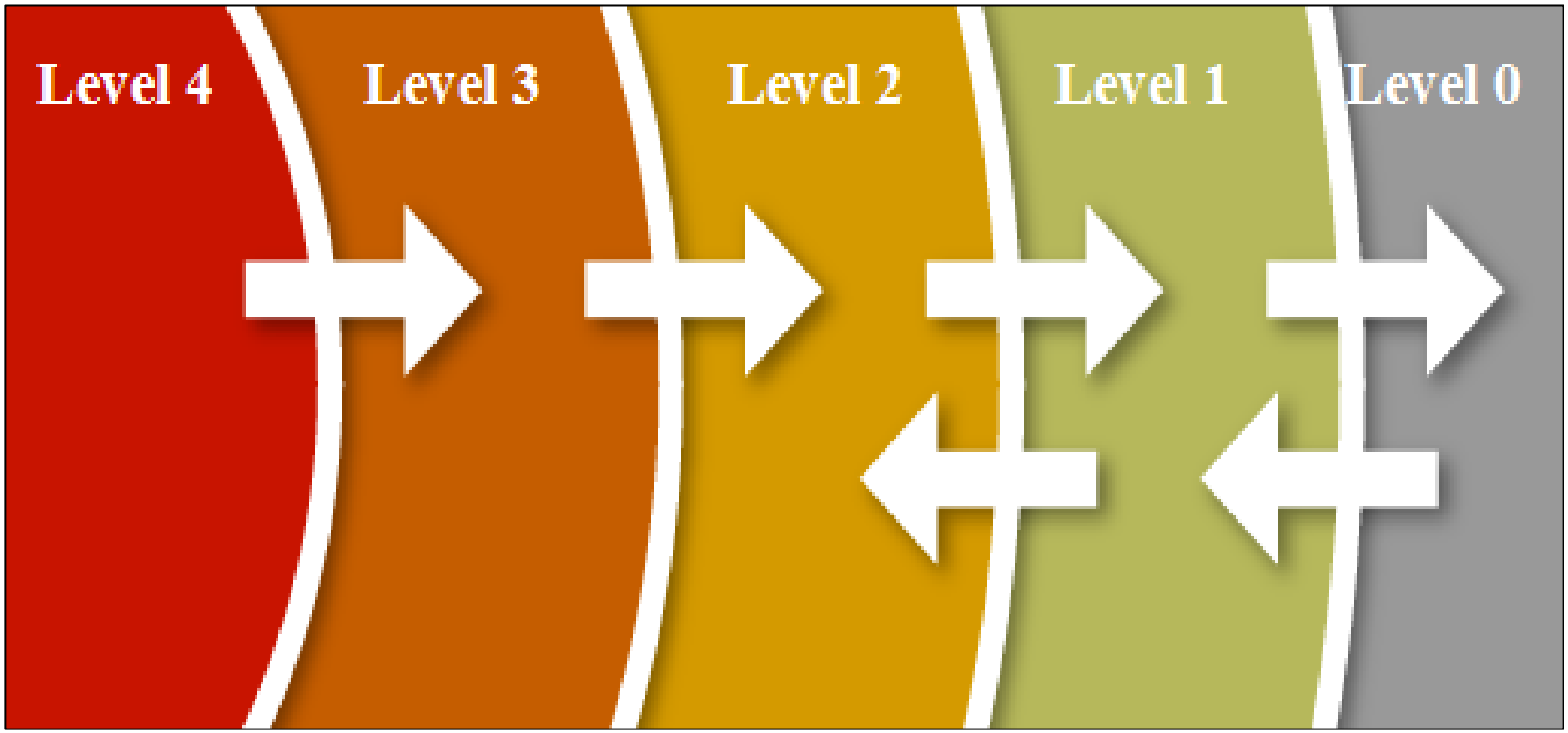
Strategy 1 - Backup #4

Deploy Defensive Architecture



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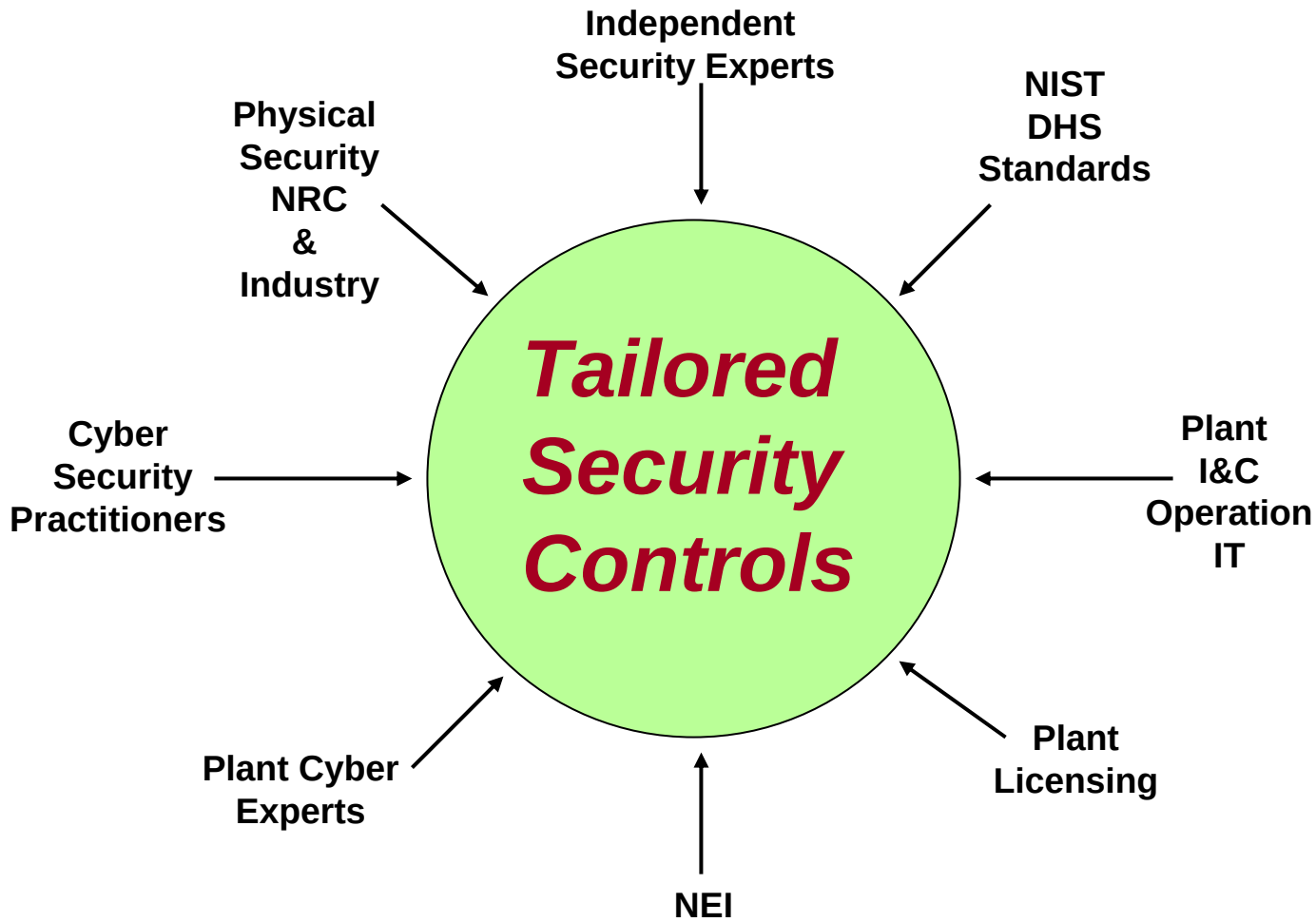
Strategy 2 - Backup #5



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Strategy 2 - Backup #6

The three ways to address technical security controls

A: Apply security control to CDA

B: If security control can not be implemented then use alternative controls or countermeasures with same degree of protection

C: If the security issue does not exist, then the security control is not applicable

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References:

NIST SP 800-53, Rev. 3, “Recommended Security Controls for Federal Information Systems,” National Institute of Standards and Technology, Gaithersburg, MD, August 2009.

NIST SP 800-30, “Risk Management Guide for IT Systems,” National Institute of Standards and Technology, Gaithersburg, MD,

NIST SP 800-37, “Guide to Certification and Accreditation of Federal Information Systems,” National Institute of Standards and Technology, Gaithersburg, MD, May 2004.

NIST SP 800-82, “Guide to Industrial Control Systems Security,” National Institute of Standards and Technology, Gaithersburg, MD, September 29, 2008.

DHS, “Catalog of control systems Security: Recommendations for Standards Developers,” Department of Homeland Security, Washington, DC, September 2008.

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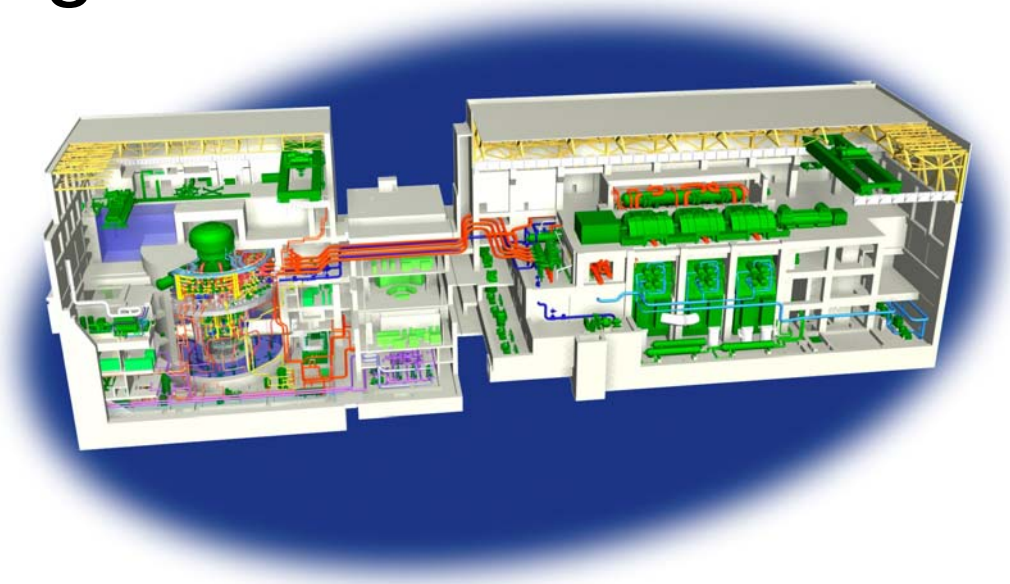
Advisory Committee on Reactor Safeguards



Overview
Advanced Boiling Water Reactor (ABWR)
South Texas Project (STP) Units 3 & 4

November 5, 2009
(Open/Closed)

Introductions

Attendees

STPNOC
Mark McBurnett
Scott Head
Bill Stillwell
Jim Tomkins
Coley Chappell
Mike Murray
Kyle Dittman

TANE
Hiroshi Sakamoto
Fumihiko Ishibashi
Bob Schrauder

Toshiba
Hirohide Oikawa

Westinghouse
Bob Quinn
Brad Maurer
Nirmal Jain

Sargent & Lundy
Bob Hooks

MPR
Caroline Schlaseman

Desired Outcome

Provide an overview to ACRS on the background of the certified U.S. Advanced Boiling Water Reactor (ABWR) to be provided by Toshiba for South Texas Project Units 3 and 4

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Agenda

- Introduction – Mark McBurnett
- ABWR Overview – Hiroshi Sakamoto
- ABWR Technology & Comparison to BWR – Hiroshi Sakamoto
- Aircraft Impact (CLOSED) – Bob Quinn
- History of STP Units 3 & 4 COL Application – Mark McBurnett
- Departures from the ABWR DCD – Mark McBurnett
- Fuel Design and Licensing – Bob Quinn
- Conclusion

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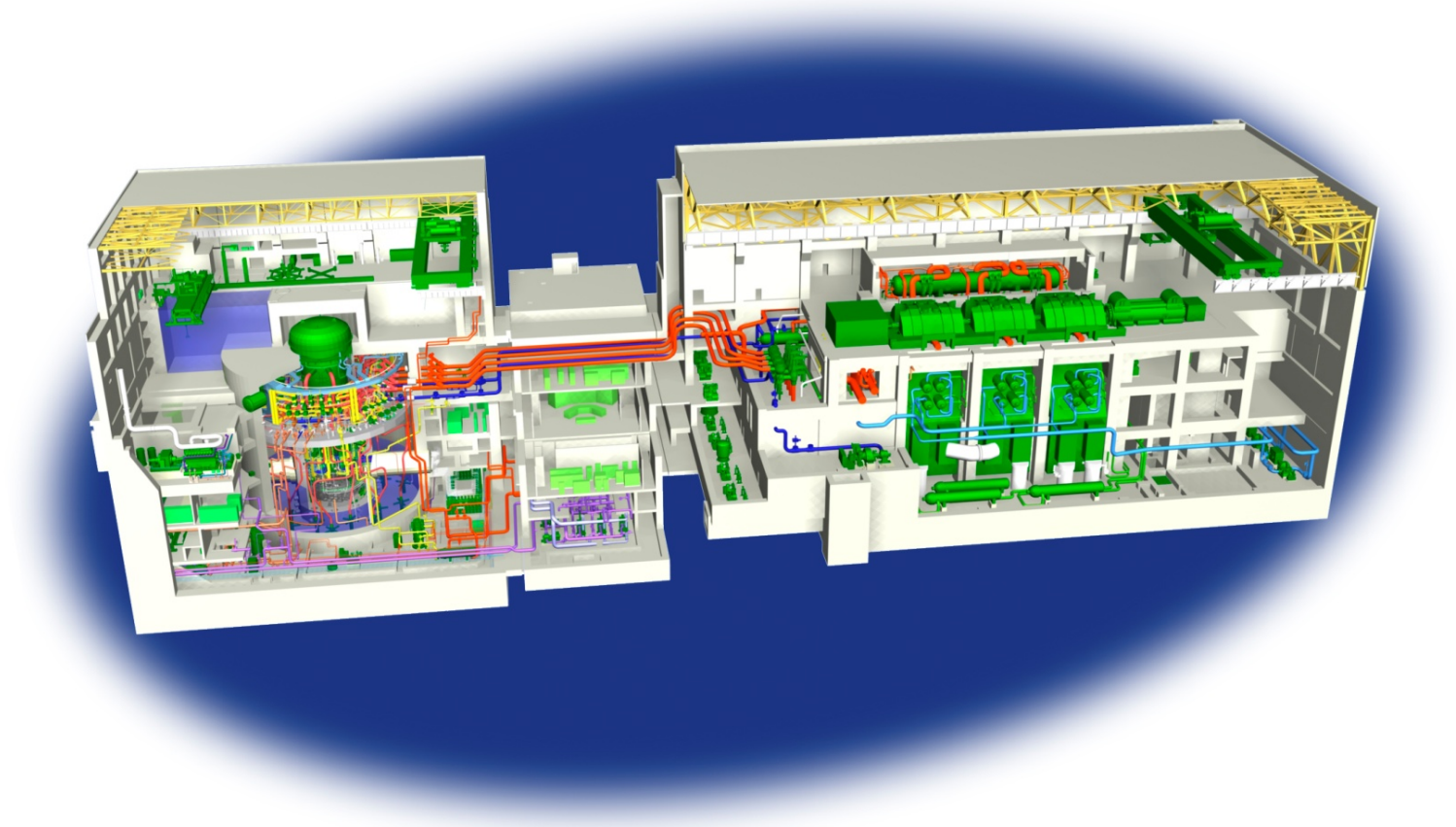
Engineering, Procurement, and Construction (EPC) Team

- **Prime Contractor:**
  Toshiba through Toshiba America Nuclear Energy
- **Sub Contractors:**
  - **Fluor**
  - **Sargent & Lundy**
  - **Westinghouse**
  - **MPR**

Overview
Advanced Boiling Water Reactor (ABWR)



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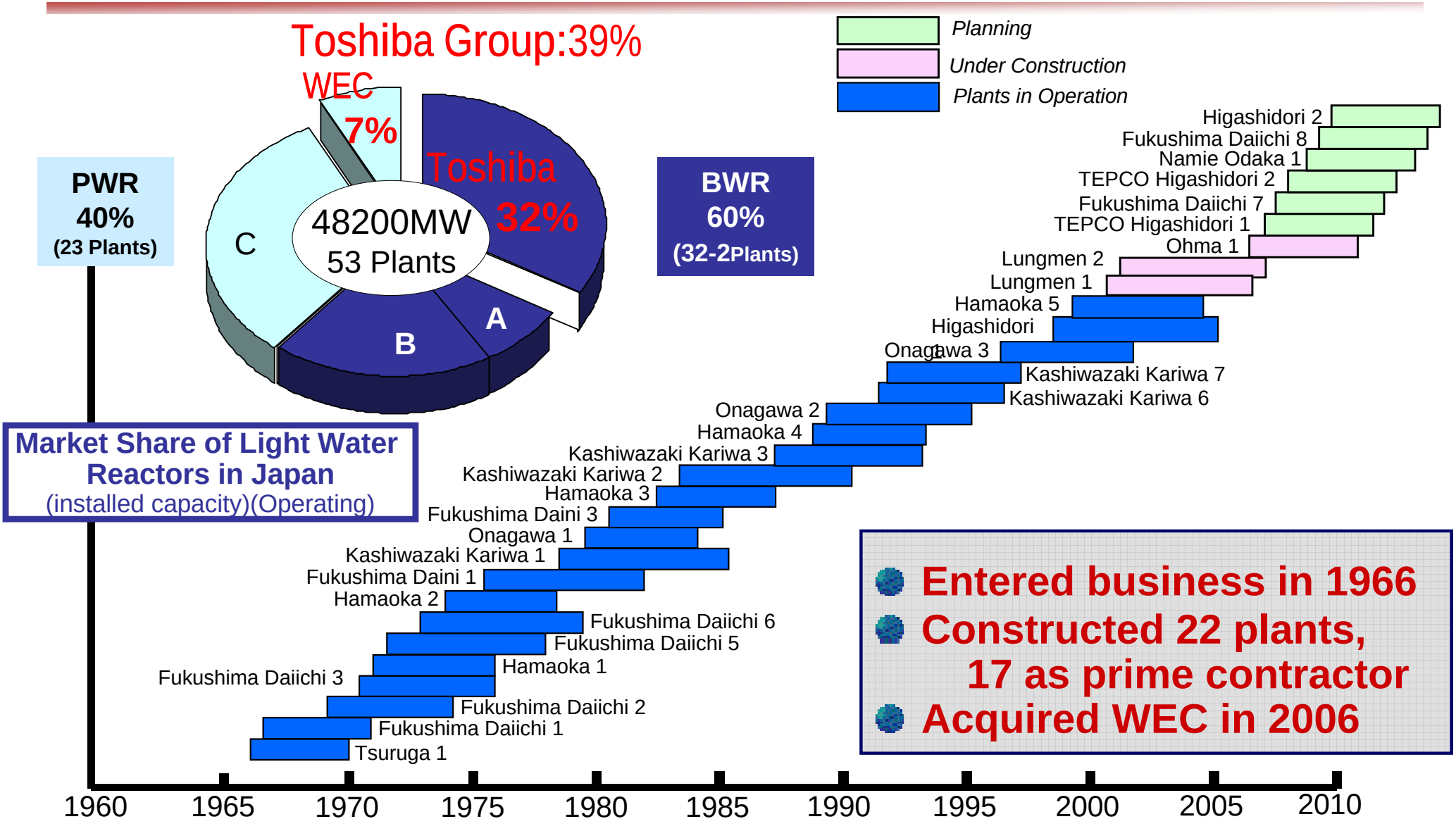
Toshiba Experience

Nuclear Operating Company STP



Market Share of Light Water Reactors in Japan
(installed capacity)(Operating)

- **Entered business in 1966**
- **Constructed 22 plants, 17 as prime contractor**
- **Acquired WEC in 2006**

Continuous Construction Experience

ABWR Progression

STP 3,4

Hamaoka 5

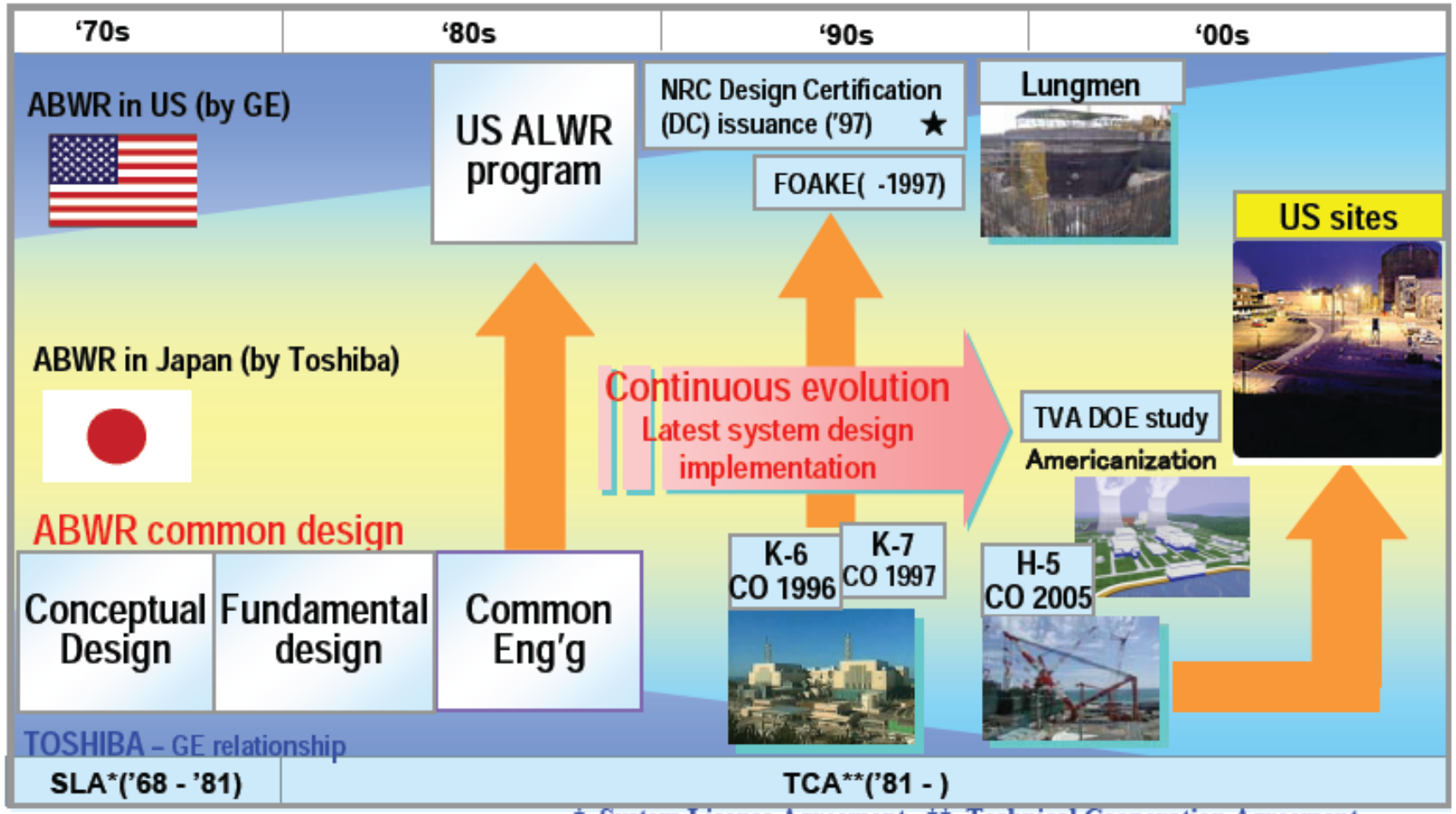
Shika 2

Lungmen 1,2

US ABWR
DCD

Kashiwazaki 6,7

ABWR was Jointly Developed in Japan

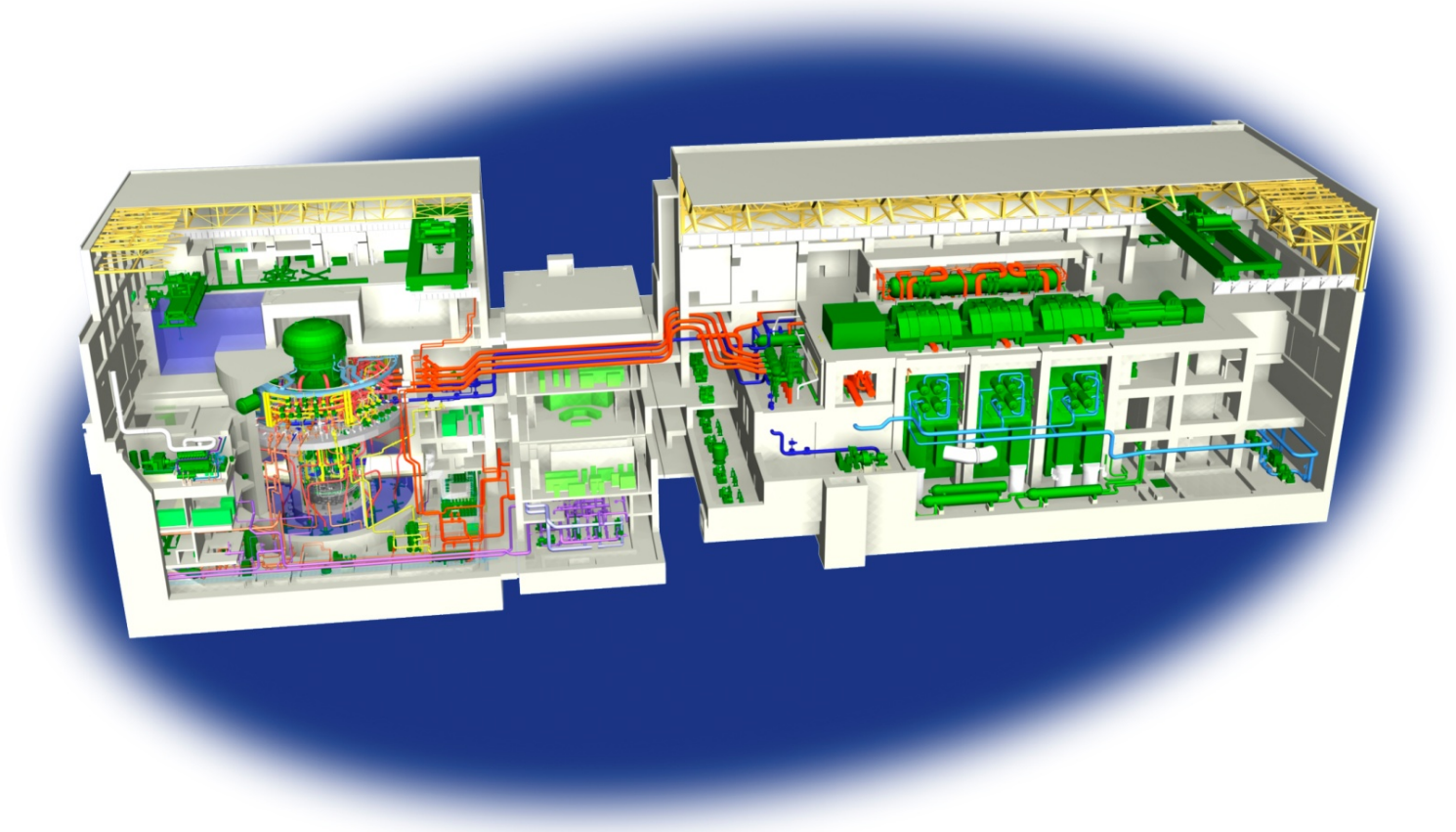


Toshiba ABWR Experience

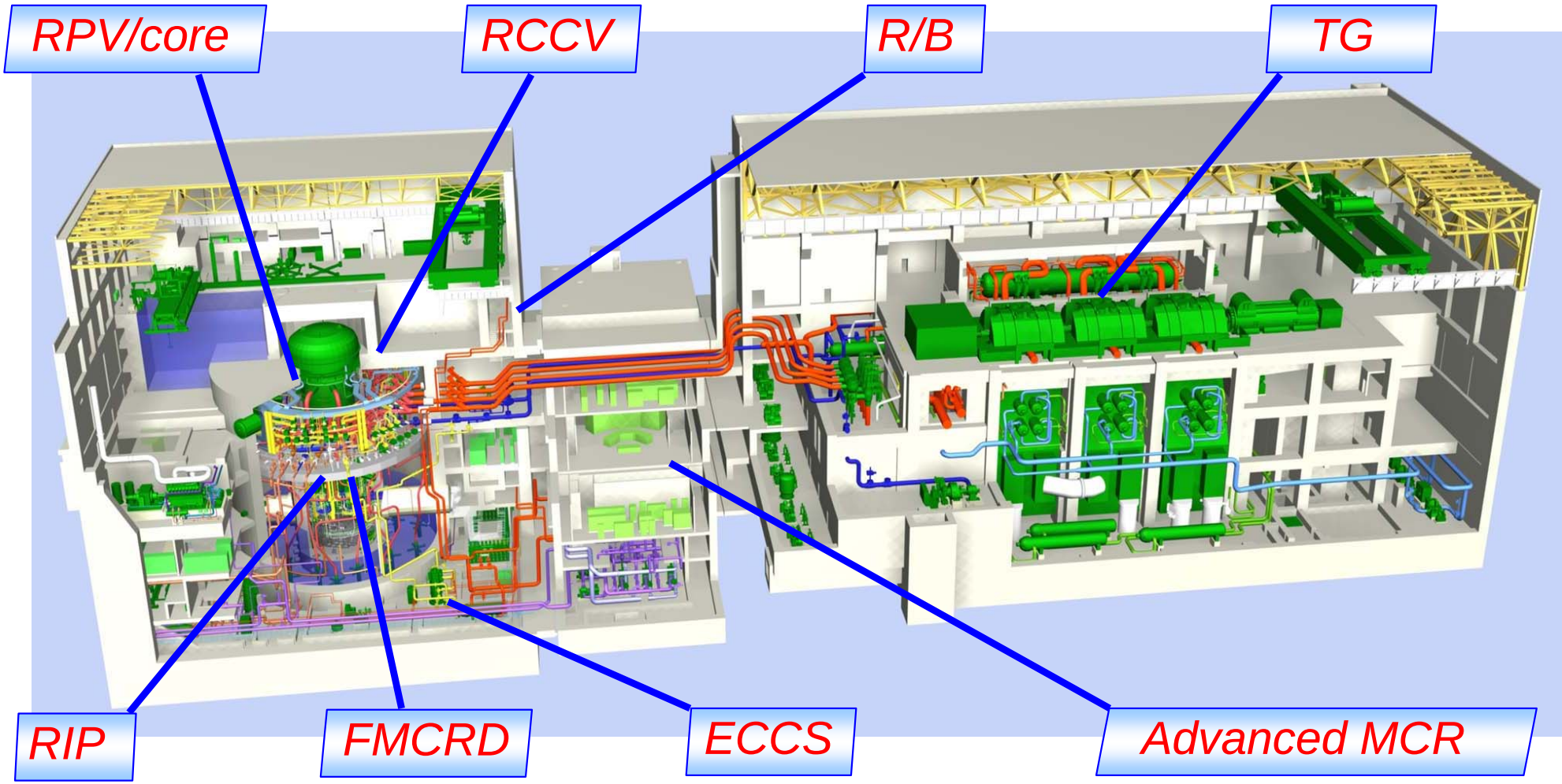
Development of the ABWR Design:

- **ABWR was developed in Japan, under the cooperation of Toshiba, Hitachi, and GE and was supported by TEPCO and other utilities**
- **Toshiba has a complete set of ABWR design documents through the development of the above and actual construction in Japan**

ABWR to BWR Comparisons



Overview of ABWR

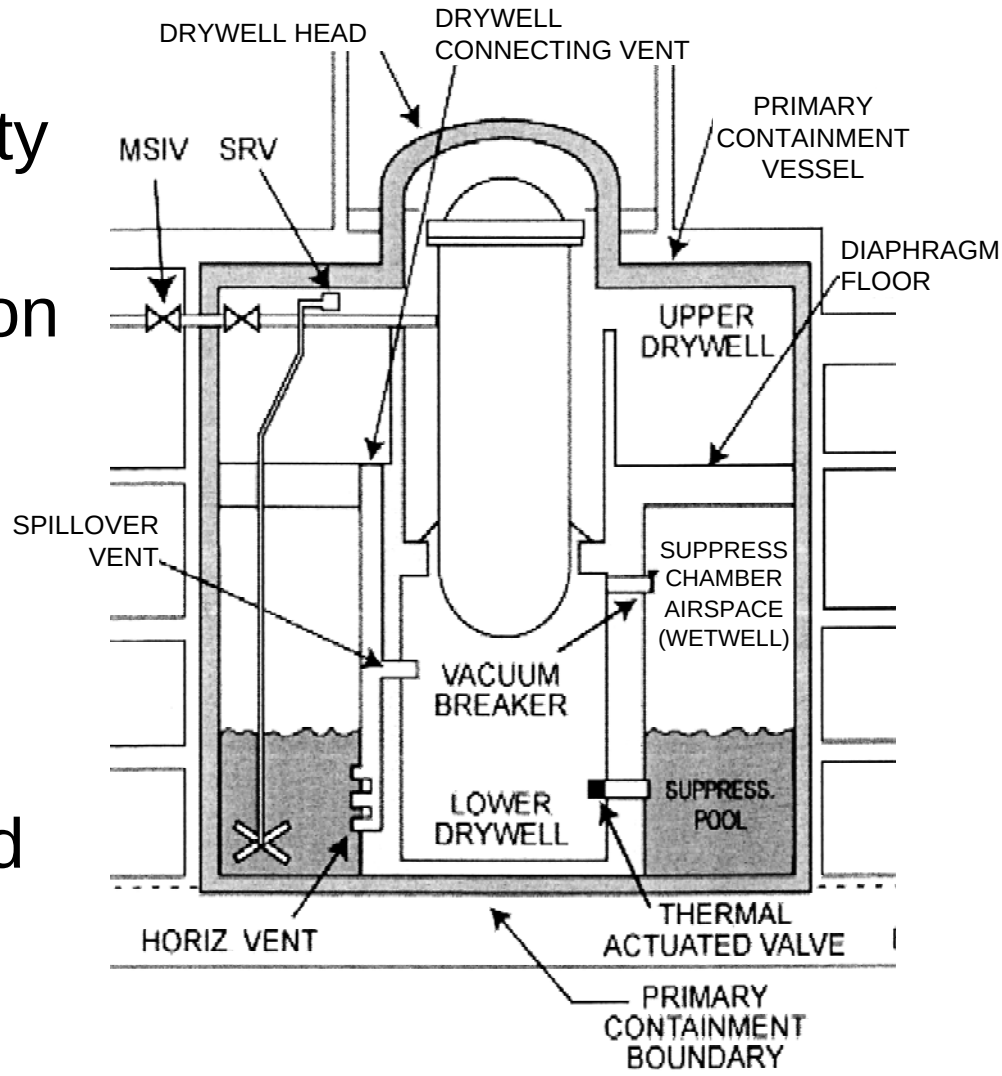


	ABWR	BWR
Recirc Flow	10 Internal recirc pumps (RIPs)	2 External recirc loops – Variable recirc pumps – Flow control valves
Control Rod Drive	Fine motion control rod drives –Group or “gang” control capability –Electrical fine motion drive, hydraulically scrammed	Hydraulically operated control rods with single rod operation
LOCA Design	RPV water level post-blowdown above top of active fuel (TAF)	RPV water level post-blowdown 2/3 core height with spray cooling

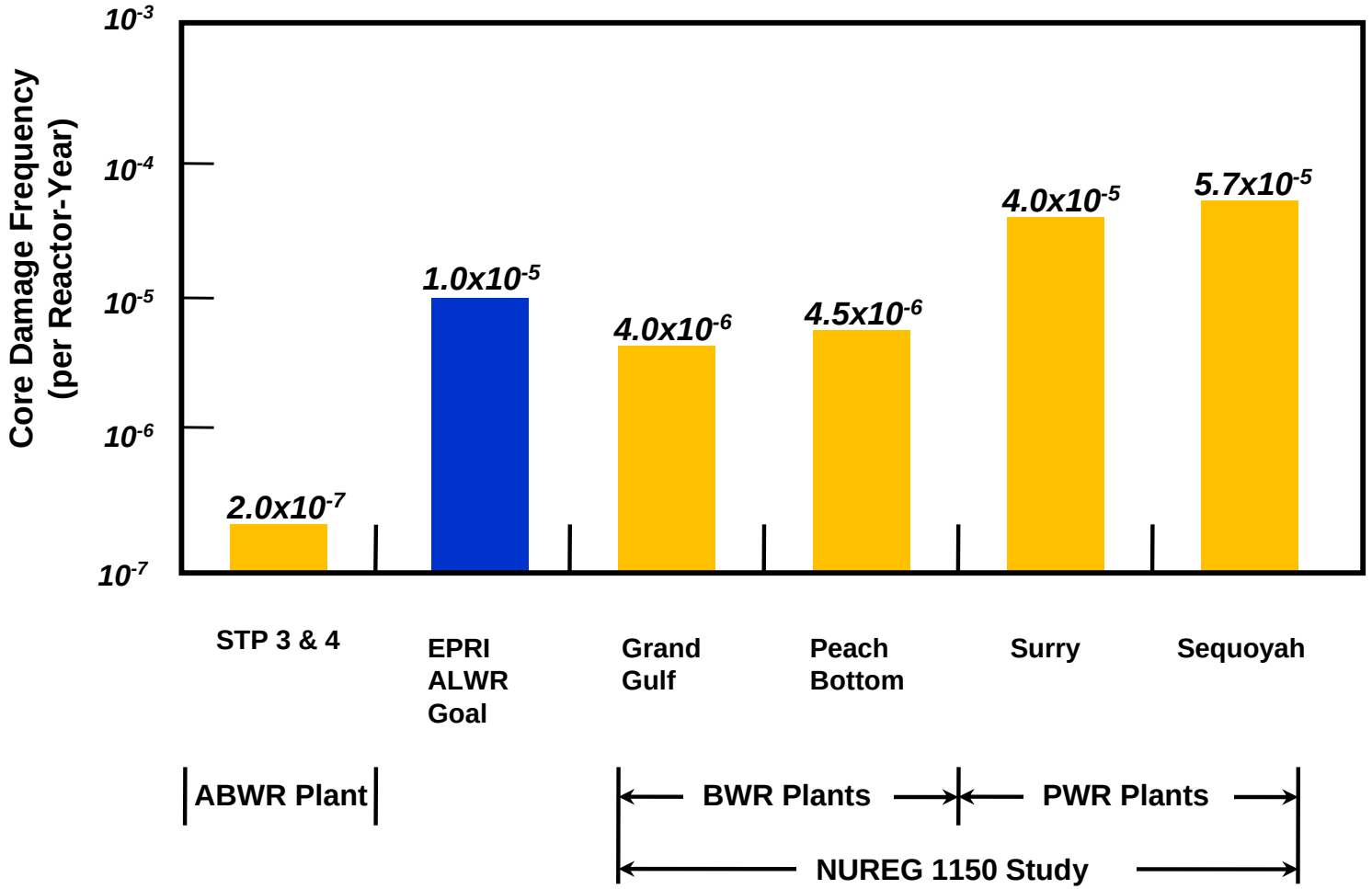
	ABWR	BWR
ECCS	3 divisions high pressure + 3 divisions low pressure flooding	1 division high pressure + 2 divisions core spray and low pressure flooding
ATWS Mitigation Features	Advanced design: – Alternate Rod Insertion (ARI) – Recirc Pump Trip (RPT) – Auto Standby Liquid Control (SLCS) initiation – Fine Motion Control Rod Drive auto run-in – Auto feedwater pump runback	10 CFR 50.62 required RPT, ARI and SLCS

ABWR Severe Accident Mitigation Features

- Inerted containment
- Lower drywell flood capability
- Lower drywell special concrete and sump protection
- Suppression pool - fission products scrubbing and retention
- Containment overpressure protection (COPS)
- Drywell sumps corium shield
- AC Independent Water Addition (ACIWA)

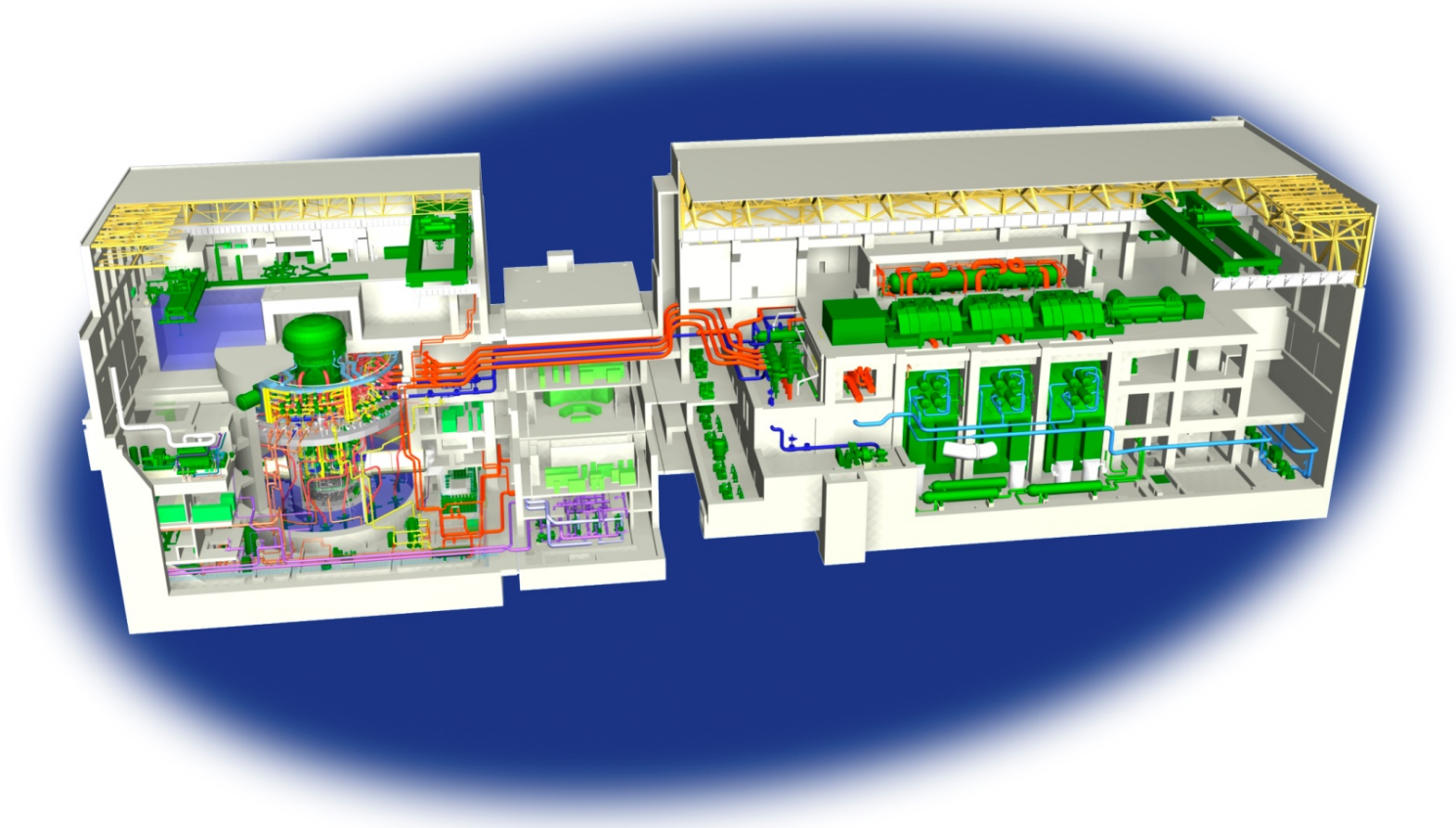


Core Damage Frequency - Internal Events

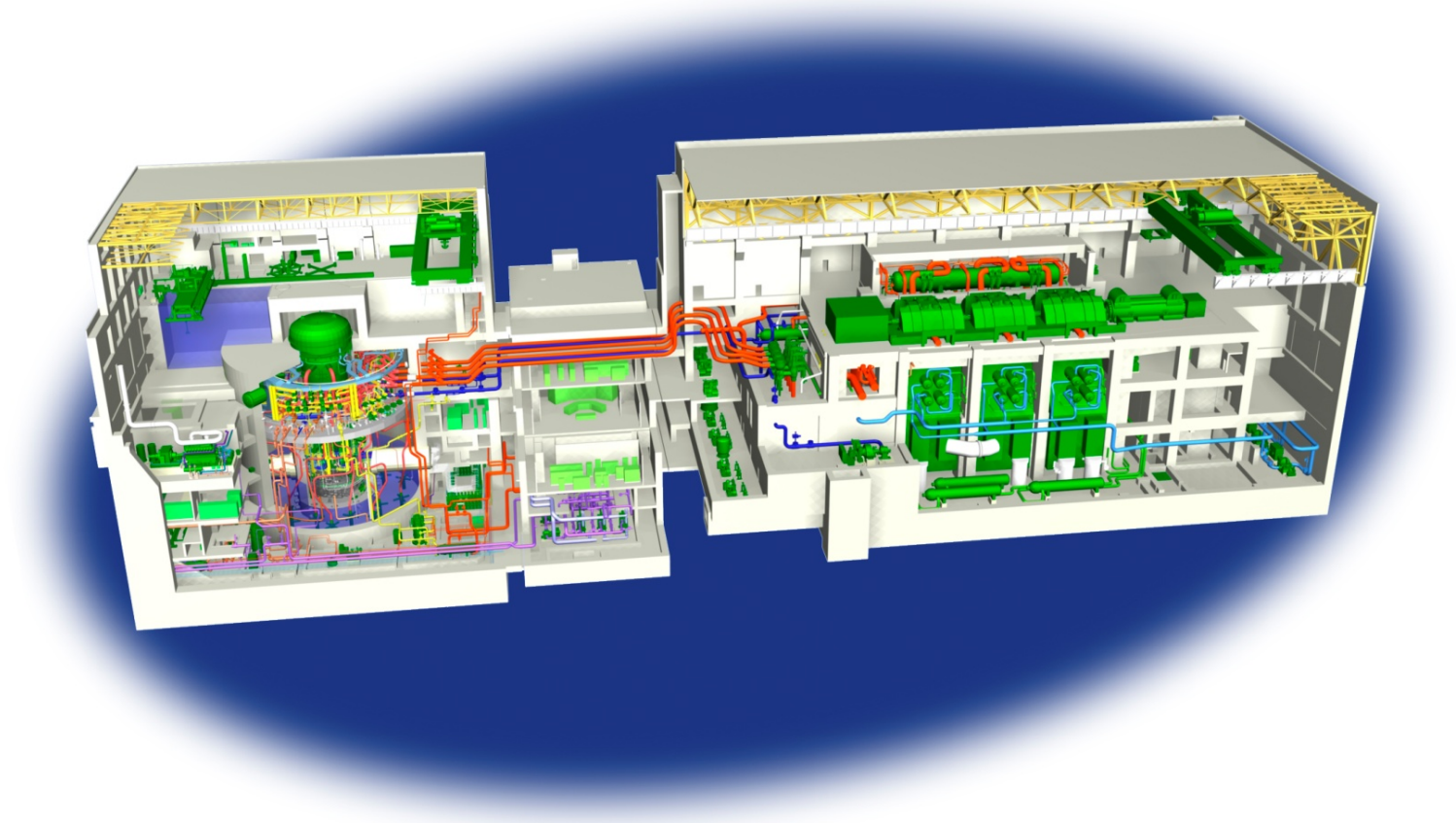


Advanced Control Room

Aircraft Impact Assessment
(Closed)



History of STP Units 3 and 4 COLA



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Site Characteristics

- Large site – 12,200 acres
- Large Main Cooling Reservoir – 7,000 acres sized for 4 units
- Infrastructure in place
  - Road, rail and barge access
  - Transmission corridor
- Low population density nearby
- Existing State, County and Site Emergency Plans
- Strong community support

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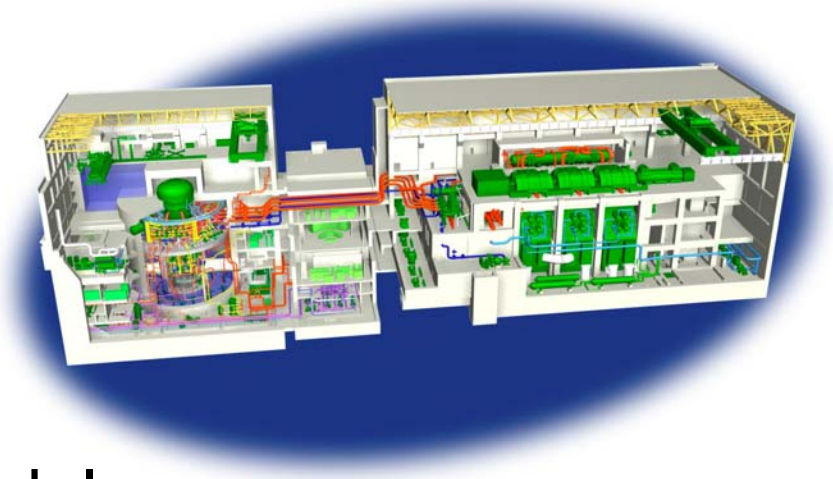
Technology Selection

ABWR is proven reactor technology

- Design Certification issued
- Four Units in Operation



Objectives

- Least licensing risk
- Predictable construction schedule
- Generation online as soon as possible
- Take advantage of advanced state of ABWR design and engineering
- Maximize use of existing plant design
- Minimize departures from Certified Design

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Alternate Vendor Capabilities

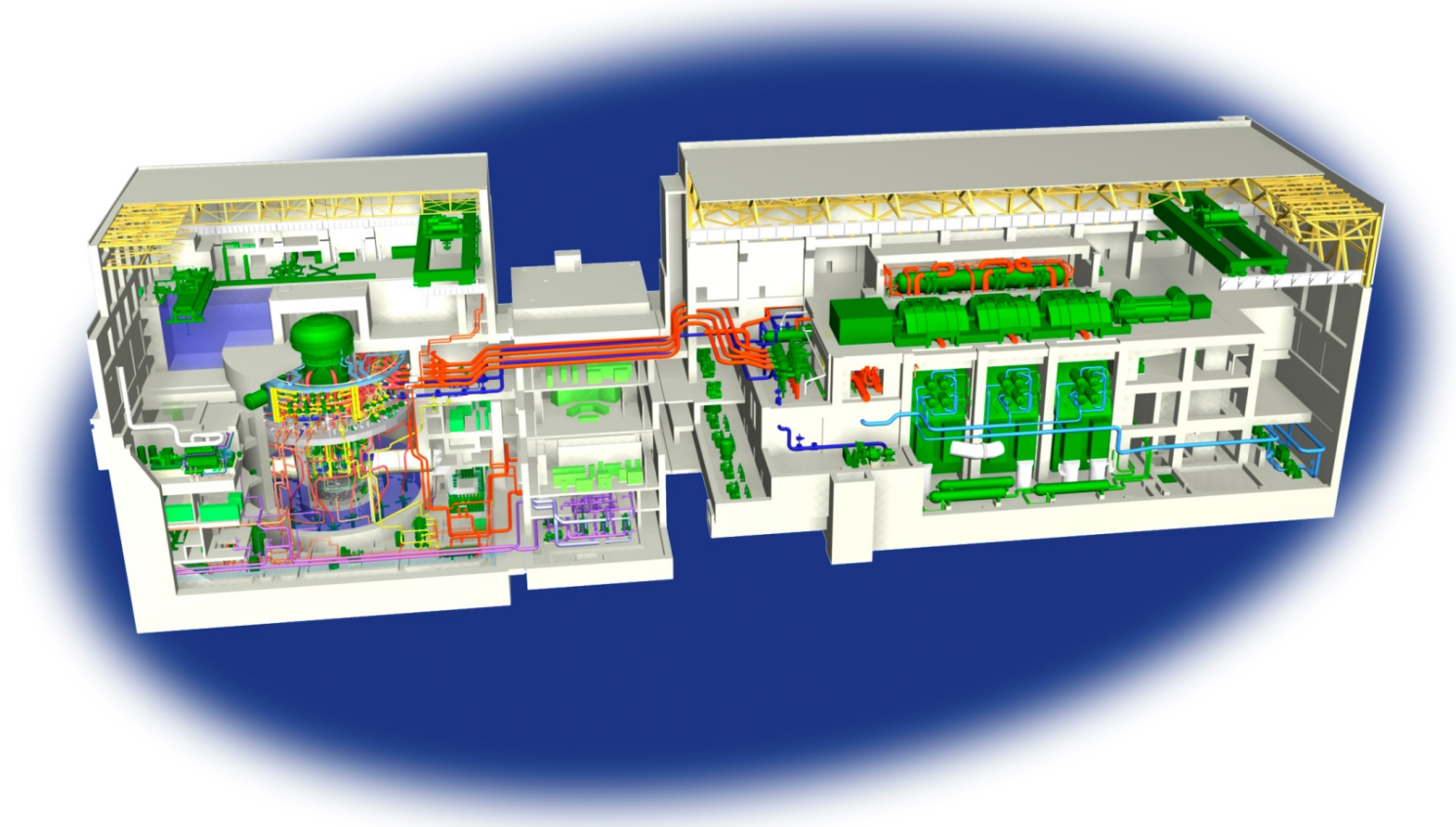
STP Due Diligence review was performed:

- Objectives
  - Toshiba Capability Assessment Oversight
  - Independent Assessment
- Conclusions
  - STP Concluded Toshiba is qualified to supply the U.S. ABWR
  - Confidence in the ability of the EPC Team to build the Certified ABWR Design and support the STP COLA
  - Project risks and impacts have been addressed and found acceptable

History of the STP Units 3 and 4 COLA

09/20/07	COLA submitted referencing 10 CFR 52, Appendix A, ABWR Design Certification
11/29/07	NRC accepted COLA for docketing (52-012 and 52-013)
08/18/08	STP letter to NRC regarding Due Diligence Report finding Toshiba is qualified as Alternate Vendor
09/24/08	COLA Revision 2 submitted to NRC
08/28/09	NRC completed independent assessment that finds Toshiba qualified as Alternate Vendor
09/16/09	COLA Revision 3 submitted to NRC
09/17/09	NRC completed COLA Safety Review Phase I (RAIs Issued)

Departures from the ABWR DCD Tier 1, Tier 2*, Technical Specifications, and Notable Tier 2



Departures from the ABWR Design Control Document (DCD)

- STP 3 & 4 is basically identical to the U.S. ABWR Certified Design
- Limited number of Tier 1 Departures (13)
- One Tier 2* Departure

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Tier 1 Departures

New Technology	• Safety-Related I&C Architecture • RCIC Turbine/Pump
Site Specific	• Site Parameters
Corrections	• Feedwater Line Break Mitigation • Reactor Building Safety-Related DG HVAC
Enhancements	• I&C Power Divisions (4th Division I&C) • RHR System and Spent Fuel Pool Cooling • Hydrogen Recombiner Elimination • Delete High Radiation MSIV Closure and Scram
Miscellaneous	• RPV System RIP Motor Casing Cladding • Re-classification of RW Bldg to Non-Seismic • Control Systems Inputs, Tests, and Hardware • Breaker/Fuse Coordination and Low Voltage Testing

Tier 1 Departures

New Technology

- Safety-Related I&C Architecture (STD DEP T1 3.4-1)
  - Separate and independent system level data communication capabilities replace obsolete technology
  - Functional (vs. hardware) design of digital controls platforms
  - Eliminated unnecessary redundant actuation logic
- RCIC Turbine/Pump (STD DEP T1 2.4-3)
  - Simplified monoblock design (integral turbine and pump)
  - Installed and operating in international applications

Tier 1 Departures

Site Specific

- Site Parameters (STP DEP T1 5.0-1)
  - STP 3 & 4 site requires departures from the reference ABWR DCD site parameters selected to bound most potential U.S. sites:
    - Minimum shear wave velocity
    - Design basis flood level (increased ~7 feet) due to main cooling reservoir failure as a design basis event
    - Maximum design precipitation rate (rainfall) and maximum wet-bulb temperatures (humidity)

Tier 1 Departures

Corrections

- Feedwater Line Break Mitigation (STD DEP T1 2.4-2)
  - Safety-related trip of condensate pumps after Feedwater Line Break (FWLB) in containment, to limit mass flow
  - Related Tier 2 Departures requiring NRC approval:

    Containment Analysis (STD DEP 6.2-2) updates modeling using GOTHIC (WCAP-17058), for feedwater flow into the drywell (FWLB), drywell connecting vents, and decay heat curves (non-conservative for long-term analysis)

    Revised Pool Swell Analysis (STD DEP 3B-2) incorporates new pool swell method to address containment response as described in STD DEP 6.2-2

Tier 1 Departures

Corrections

- Reactor Building Safety-Related Diesel Generator HVAC (STD DEP T1 2.15-2)
  - Diesel Generator (DG) engine room temperature limit during operation is below 60°C vice 50°C
  - No impact to environment for DG controls

Enhancements

- I&C Power Divisions (STD DEP T1 2.12-2)
  - Adds 4th safety-related division to Class 1E I&C Power Supply System

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Tier 1 Departures

Enhancements

- RHR System and Spent Fuel Pool Cooling
  (STD DEP T1 2.4-1)
  - Adds RHR A capability so that any of the three RHR loops can supply fuel pool cooling or makeup
  - Increases flexibility to coordinate division outages
- H2 Recombiner Requirements Elimination
  (STD DEP T1 2.14-1)
  - Complies with 10 CFR 50.44, amended after Certification
- Deletion of MSIV Closure and Scram on High Radiation
  (STD DEP T1 2.3-1)
  - Existing regulatory and BWR industry initiative to eliminate spurious trips

Tier 1 Departures

Miscellaneous

- RPV System Reactor Internal Pump (RIP) Motor Casing Cladding (STD DEP T1 2.1-2)
  - Consistent with design in use for operating ABWRs
- Re-classification of Radwaste Building Substructure to Non-Seismic (STD DEP T1 2.15-1)
  - Commits to Regulatory Guide 1.143 rev. 2 for the design of radwaste processing SSCs
- Control Systems Changes to Inputs, Tests, and Hardware (STD DEP T1 2.2-1)
  - Test clarification for Rod Control and Information System (RCIS) non-Class 1E uninterruptible power supplies, such that either will maintain both RCIS channels operational

Tier 1 Departures

Miscellaneous

- Breaker/Fuse Coordination and Low Voltage Testing (STD DEP T1 2.12-1)
  - Modifies interruption device coordination to conform with acceptable industry practices, and codes and standards (e.g., IEEE 141, IEEE 242, etc.), and to coordinate to the maximum extent possible
  - Allows for as-built performance type voltage testing and analyses at the manufacturer's shop, and comparison of pre-operational tests against system voltage analyses

Tier 2* Departure

Tier 2* Departure

- Codes, Standards, and Regulatory Guide Edition Changes (STD DEP 1.8-1)
  - Updates compliance to more current revisions/editions of selected applicable NRC Regulatory Guides and Industry Codes and Standards which have been approved or endorsed by the NRC
  - Ensures more recent industry design and construction practices are used, updates requirements in fields that have advanced considerably since certification, and deletes obsolete requirements

Departures from the Generic Technical Specifications

- Tier 2 design changes that require conforming changes (9) Examples:
  - **Containment Analysis** (STD DEP 6.2-2) as previously noted
  - **Plant Medium Voltage Electrical System** (STD DEP 8.3-1) changes to a dual voltage (13.8 kV and 4.16 kV) design, increases DG and Combustion Turbine Generator (CTG) ratings, and revises CTG required start time to comply with RG 1.155 for Station Blackout (SBO) alternate AC
- Other changes to the Tech Specs (7)
- Editorial changes that do not change intent

Tier 2 Departures

- Except as previously noted, changes to Tier 2 information do not require an exemption or prior NRC approval
  - Screened/evaluated according to Part 52 App A, VIII.B.5
  - Changes are site-specific (e.g., Turbine Generator design), regulatory-related (e.g., dual units), corrections, updates, and clarifications
- Radwaste changes are considered notable for their scope:
  - **Liquid Radwaste Process Equipment** (STD DEP 11.2-1)
    - Modular components and reduced system complexity, no fundamentally new equipment or processes
    - Removes Concentrators (Evaporators), and changes number/capacities of installed tanks and pumps

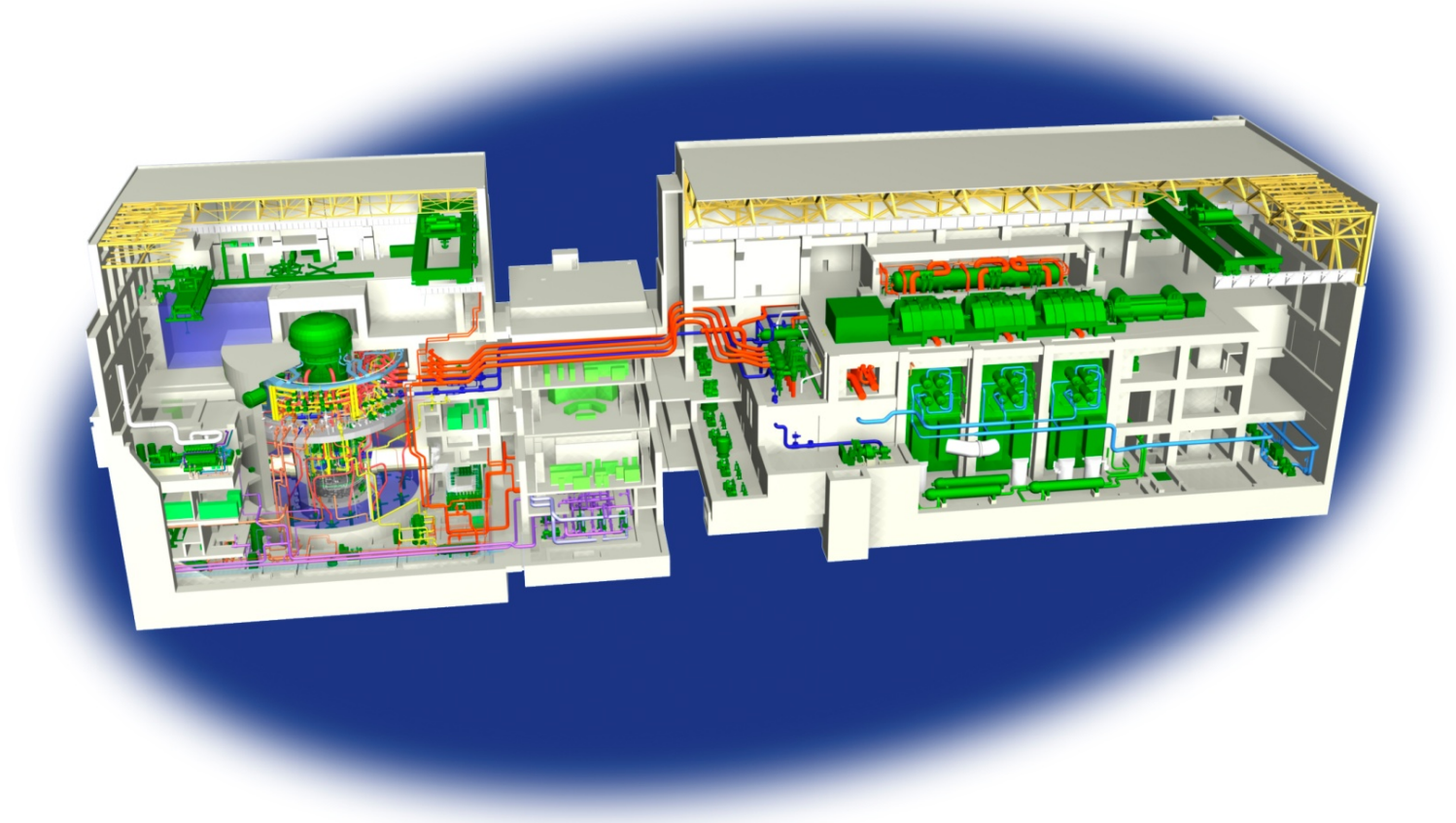
Tier 2 Departures

- **Gaseous Waste Management System** (STD DEP 11.3-1)
  - Recombiner train with proven operational experience
  - Changes number, arrangement and vessel size of charcoal adsorbers (total mass unchanged)
  - Adds offgas evacuation system and revises charcoal adsorber vault temperature to optimize performance with no changes to design basis or function
- **Radioactive Solid Waste Update** (STD DEP 11.4-1)
  - Modular components and reduced system complexity, no fundamentally new equipment or processes
  - Deletes Incinerator and Compactor, and changes number/capacities of tanks and pumps

Tier 2 Departures

- **ECCS Suction Strainers** (STD DEP 6C-1)
  - Upgrades strainers to state-of-the-art cassette type
  - Meets latest regulatory guidance in RG 1.82 Rev. 3

Fuel Design and Licensing



Fuel Background and Overview

- STP 3&4 COLA does not depart from the certified fuel design
- COL amendment to be submitted ~ 2 years prior to fuel load

STP 3&4 Fuel Status and Schedule

- Westinghouse Licensing Topical Reports (LTRs) are being submitted to expand the safety analysis methodology to ABWR design
  - 2 new LTRs (transient and stability analyses)
  - 1 revision (reload methodology)
  - 8 supplements (transient, LOCA, containment, and control rod blades)
- Schedule of LTR submittals
  - 2 completed in September and October 2009
  - 1 planned for April 2010, 4 in June 2010, and 4 in September 2010
- LTR submittal schedule and expected NRC review supports STP 3&4 fuel amendment submittal in 2013

Conclusion