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

July 27, 2010

MEMORANDUM TO: ACRS Members

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

SUBJECT: CERTIFICATION OF THE MEETING MINUTES FROM THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS 559th FULL COMMITTEE MEETING HELD ON FEBRUARY 5-7, 2009 IN ROCKVILLE, MARYLAND

The minutes of the subject meeting were certified on April 16, 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

April 16, 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 559th MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS), FEBRUARY 5-7, 2009r

I certify that based on my review of the minutes from the 559th 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	04/ 16 /0	04/ 16 /09

OFFICIAL RECORD COPY

CERTIFIED Date Certified: 04/16/09

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During its 559th meeting, February 5-7, 2009, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following report, letters, and memoranda:

REPORT

Report to Dale E. Klein, Chairman, NRC, from Mario V. Bonaca, Chairman, ACRS:

- SECY-08-0197, "Review of Options to Revise Radiation Protection Regulations and Guidance with Respect to the 2007 Recommendations of the International Commission on Radiological Protection," dated February 18, 2009

LETTERS

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

- Draft Final NUREG-1855, "Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking," and Draft Appendix A, "Example Implementation of the Process for the Treatment of PRA Uncertainty in a Risk-Informed Regulatory Application," dated February 23, 2009

- Draft Final Regulatory Guide DG-5021, "Managing the Safety/Security Interface," dated February 18, 2009

MEMORANDA

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

- Draft Regulatory Guides 1.189 (DG-1214), 1.28 (DG-1215), and DG-5028, dated February 11, 2009

- Draft Final Regulatory Guide 1.212, dated February 9, 2009

MINUTES OF THE 559th MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

ROCKVILLE, MARYLAND

The 559th meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on February 5-7, 2009. Notice of this meeting was published in the *Federal Register* on January 27, 2009 (72 FR 4782-4783) (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. Other attendees can be found at the sign-in sheets 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. Draft Final NUREG-1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking

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

The Committee met with representatives of the NRC staff, Electric Power Research Institute (EPRI), and ERIN Engineering to discuss draft final NUREG-1855, "Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decision-making," and the associated Appendix A, "Example Implementation of the Process for the Treatment of PRA Uncertainty in a Risk-Informed Regulatory Application."

The NRC staff described key elements of the report and discussed the collaboration between the NRC and EPRI in generating this document. EPRI described the scope and limitations of the report, and explained that the report addresses model and completeness uncertainties, and identifies which uncertainties should be designated as "key."

EPRI also discussed the changes made to the report since the ACRS subcommittee meeting on September 30, 2008. In the new draft, the scope of the report has been clarified and the emphasis has been placed on what is needed (rather than what is not needed). Many of these changes were in response to the members' comments at the September 30, 2008, subcommittee meeting.

ERIN Engineering also discussed an example of the use of the methods described in the main body of the document. The example is based on a proposed extension of the allowed outage time for the residual heat removal system at a hypothetical Boiling Water Reactor/4.

The Committee issued a letter to the Executive Director for Operations on this matter, dated February 23, 2009, recommending that NUREG-1855 be published without the Appendix A, and that the NRC staff revise and separately publish the Appendix A to include additional examples illustrating applications of the diverse aspects of the guidance described in the NUREG report. The ACRS will review the revised Appendix A when made available by the staff.

III. Draft Final Regulatory Guide DG-5021, Safety/Security Interface

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

The Committee met with representatives of the NRC staff to discuss the draft final Regulatory Guide DG-5021 that was developed to support the new rule 10 CFR 50.78, "Safety/Security Interface Requirements for Nuclear Power Reactors." The draft final regulatory guide, reviewed by the Committee, incorporated public comments, as appropriate. Although the emphasis of DG-5021 is to identify areas where planned or emergent changes could impact plant security provisions, it cites the use of existing change management processes for identifying adverse impact on safety. The Committee agreed with the provisions of the guide including the use of current management controls and processes, enhanced by additional screening processes and training, for implementation of the rule.

The Committee issued a letter to the Executive Director for Operations on this matter, dated February 18, 2009, recommending that the draft Regulatory Guide DG-5021 be issued as final. The Committee also recommended that all regulatory guidance for changes in the licensing basis (e.g., Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis") be updated to address consideration of the interface between safety and security, and the impact of the change on security.

IV. Digital Upgrade of the Oconee Reactor Protection System and Engineered Safety Features

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

The Committee met with representatives of the NRC staff and Duke Energy to discuss the digital upgrade of the Oconee Reactor Protection System (RPS) and Engineering Safety Features (ESF). The staff provided an overview of the Oconee License Amendment Request (LAR) to replace the existing RPS and ESF systems with a Digital Reactor Protective System/Engineered Safeguard Protective System (RPS/ESPS) system which is based on the TELEPERM XS platform. The new Oconee Digital Protection System will provide a plant response that does not require any manual operator actions for at least 30 minutes for all Chapter 15 accidents with the single exception of a manual trip during a small break loss of coolant accident.

Based on the review of the LAR, the staff has identified several issues. The primary issues include:

- Diversity and Defense-in-Depth
- Communications
- Changes to TXS Platform

The staff and Duke Energy have developed a strategy to resolve the remaining issues. The final Safety Evaluation Report (SER) is planned for completion in July 2009. This was an information briefing and no Committee action was necessary at this time. The Committee plans to review the final SER associated with this LAR.

V. SECY-08-0197, Options to Revise Radiation Protection Regulations and Guidance Based on Recommendations of the International Commission on Radiological Protection (ICRP)

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

The Committee met with representatives of the NRC staff to discuss the Options Paper to revise the NRC radiation protection regulations and guidance based on the 2007 ICRP recommendations included in Publication 103, "The 2007 Recommendations of the International Commission on Radiological Protection." During the 557th ACRS meeting held November 6-7, 2008, the NRC staff presented to the ACRS a plan to prepare the Options Paper.

The NRC staff presented three options for revising the NRC radiation protection regulatory framework: (1) Make no changes to the existing regulatory framework; (2) Update certain portions of the regulations, not previously revised, to conform to existing 10 CFR Part 20 concepts and quantities based on ICRP Publications 26 and 30; and (3) Begin the process of aligning, to a greater degree, the NRC's regulatory framework with the recommendations contained in ICRP Publication 103. The staff prefers Option 3. Under this Option, several factors were identified, including: the schedule upon which additional technical information will be available; the need to revise certain regulations and address their implementation for licensing new reactors; the variety of other technical and policy issues that may be considered when various portions of the regulations are proposed for amendment; and the availability of resources.

The Committee issued a report to the NRC Chairman, dated February 18, 2009, endorsing the NRC staff's preferred option 3. This Option would begin the process of moving toward a greater degree of alignment between the regulatory framework of 10 CFR Parts 20 and 50 and Appendix I of Part 50 with the recommendations contained in the December 2007 ICRP Publication 103. In addition, the Committee recommended that the NRC staff continue its participation in ICRP and other national and international committees and standards organizations, and that the NRC not develop separate radiation protection regulations for plant and animal species.

VI. Plant License Renewal Subcommittee Report (Beaver Valley License Renewal Application)

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

The Chairman of the Plant License Renewal Subcommittee provided a report to the Committee summarizing the results of the February 4, 2009, meeting with the NRC staff and representatives of FirstEnergy Nuclear Operating Company (FENOC) to review the draft Safety Evaluation Report (SER) related to license renewal application for the Beaver Valley Power Station (BVPS) Units 1 and 2. The NRC staff's draft SER, issued in January 2009, contained one open item. The current operating license expires on January 29, 2016, for Unit 1, and May 27, 2027, for Unit 2. During the meeting, FENOC representatives described the operating history, the license renewal review methodology, the aging management programs, and its commitment tracking system. The primary issues discussed were the submerged 4kV cables, the BVPS Unit 1 containment liner, fatigue cycles estimates, the nil ductility acceptance criterion, and the Boral Surveillance Program. The Committee plans to review the final SER related to the license renewal application for the BVPS, Units 1 and 2 in July 2009.

Plant License Renewal Subcommittee Report (NIST License Renewal Application)

[Note: Mr. Peter Wen was the Designated Federal Official for this portion of the meeting.]
The Chairman of the Plant License Renewal Subcommittee provided a report to the Committee summarizing the results of the February 4, 2009, meeting with the NRC staff and representatives of the National Institute of Standards and Technology (NIST) to review the license renewal application for the National Bureau of Standards Reactor (NBSR) and the associated NRC staff's SER with Open Items.

On April 9, 2004, NIST submitted its application to renew the NBSR operating license for an additional 20 years. The applicant continues to operate the facility in accordance with the current license under the provisions of 10 CFR 2.109, "Effect of timely renewal application." The NRC staff's draft SER was issued in January 2009 and contained one open item. The open item is related to the operator training and requalification program. The NRC staff is currently reviewing the applicant's program in this area. The Committee plans to review the final SER related to the license renewal application for the NBSR in April 2009.

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 December 2, 2008, to conclusions and recommendations included in the October 29, 2008, ACRS interim letter on Chapters 19 and 22 of the NRC staff's safety evaluation report with open items related to the certification of the ESBWR design. The Committee decided that it was satisfied with the EDO's response.

- The Committee considered the response of the Director, Office of Nuclear Regulatory Research (RES) dated December 15, 2008, on quality assessment of the selected research projects included in the ACRS letter dated October 22, 2008. The Committee decided that it was satisfied with the RES response.

B. Report of the Planning and Procedures Subcommittee Meeting

Review of the Member Assignments for the February ACRS Meeting

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

Anticipated Workload for ACRS Members

The anticipated workload for ACRS members through April 2009 was discussed. The objectives were:

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

Actions, Agreements, Assignments, and Commitments from the ACRS Retreat

The 2009 ACRS retreat was held on January 27-28, 2009 at the Residence Inn, Bethesda. Actions, agreements, and commitments resulting from the retreat were discussed.

Staff Requirements Memorandum (SRM)

In the January 8, 2009 SRM resulting from the November 7, 2008 ACRS meeting with the Commission, it was stated that the Committee should take note of the Commission directions to the staff, especially on the containment overpressure credit issue.

- The staff should consider what has been learned from the analyses of PWR sump performance and determine if issues have arisen that call for revising BWRs.

- With regard to power uprates for BWRs consistent with pervious Commission direction, the staff should continue working to resolve the differences of opinion between the Committee and the staff concerning containment overpressure credit, and as necessary and appropriate, provide policy decision papers to the Commission if a resolution cannot be reached.

Browns Ferry Units 1, 2, and 3 Extended Power Uprate Applications

The staff plans to provide a draft Safety Evaluation (SE) report for Browns Ferry Units 1 and 2 in early April in support of a Subcommittee meeting in May and full Committee meeting in June. [There is a possibility a complete SE may not be available for Units 1 and 2 in April.]

For Unit 3, the steam dryer information may not be available until late (October/November) 2009. There were some discussions among the staff about providing a partial SE to the ACRS in April for discussion at the May Subcommittee and June full Committee meetings. After the steam dryer information is made available, the Committee should review only that information and provide a final report to the Commission. The staff would like to know whether the Subcommittee/full Committee will be willing to review partial SE for Unit 3 and possibly for Units 1 and 2 in May and June, respectively.

It should be noted that during its October 20, 2006 meeting with the Commission, the Committee stated the following:

ACRS will review the extended power uprate application for Browns Ferry Units 1, 2, and 3 after receiving the complete Safety Evaluation report.

Biennial ACRS Report on the NRC Safety Research Program

The biennial ACRS report on the NRC Safety Research Program is due to the Commission on March 15, 2010. Drs. Shack and Powers will have the lead in coordinating the preparation of the report. Assignments for the members as well as format, content, and schedule for providing input to the report will be provided to the members during the March ACRS meeting.

Quality Assessment of Selected NRC Research Projects

During its November 2008 meeting, the Committee selected the following research projects and Panels for quality assessment in FY2009:

- NUREG/CR-6964, " Crack Growth Rates and Metallographic Examinations for Alloy 600 and Alloy 82/182 from Field and Laboratory Materials Testing in PWR Environments"
  Panel: Armijo (Chair), Abdel-Khalik and Ray

- NUREG/CR-XXXX, "Diversity and Defense-in Depth for Digital Instrumentation and Control Systems"
  Panel: Brown (Chair), Apostolakis and Sieber

Normally, the Committee report is provided to the RES Director in October of each year. Since the Committee needs to prepare its biennial report on the NRC Safety Research Program this year, Dr. Powers proposed that the Committee complete its Quality Assessment report in July 2009.

Tour of the Mitsubishi and Westinghouse Simulators in Pittsburgh

Several ACRS members and ACRS staff are scheduled to tour the Westinghouse simulator on February 18 and the Mitsubishi simulator on February 20, 2009. On February 19, 2009, a Subcommittee meeting is scheduled to discuss selected Topical reports associated with US-APWR. A proposed schedule for the Subcommittee meeting and an itinerary for touring the simulators was discussed.

Reappointment of an ACRS Member

The Commission has reappointed Dr. Shack for a fifth term. He joins the elite group of members [Drs. Siess (24 yrs.), Okrent (24 yrs.), and Kerr (20 yrs.)] who served 20 or more years on the Committee.

ACRS Meeting With the Commission

The ACRS is scheduled to meet with the Commission on Thursday, June 4, 2009 to discuss items of mutual interest. A list of proposed topics will be provided to the Planning & Procedures Subcommittee and the full Committee during the March meetings.

TRACE Thermal-Hydraulic System Analysis Code

During the ACRS meeting with the Commission on November 7, 2008, Dr. Abdel-Khalik made several comments regarding the capability of the TRACE code in evaluating the passive system safety performance. Dr. Sheron, the RES Director, sent a memorandum to the Commissioners responding to the comments made by Dr. Abdel-Khalik at the Commission meeting. The Thermal-Hydraulic Phenomena Subcommittee should discuss, as needed, Dr. Sheron's comments during a future meeting on TRACE codes.

Revision to the ACRS Charter

In approving the renewal of the ACRS Charter, the Commission added a new paragraph stating that the ACRS shall report to and advise the Commission on issues associated with nuclear materials and waste management. This action stems from the merger of the ACNW&M with the ACRS.

Draft Regulatory Guides

The staff plans to issue the following Draft Regulatory Guides (DG) 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 2 to Regulatory Guide 1.189 (DG-1214), "Fire Protection for Nuclear Power Plants"

  Regulatory Guide 1.189 lacked clear guidance with respect to the treatment of fire-induced circuit failures. In SECY-08-0093, "Resolution of Issues Related to Fire-Induced Circuit Failures," the staff proposed clarifications to the NRC's guidance with regard to fire-induced circuit failures. The proposed Revision 2 (DG-1214) is to include the fire- induced circuit-failure clarifications described in SECY-08-0093.

- Proposed Revision 4 to Regulatory Guide 1.28 (DG-1215), "Quality Assurance Program Requirements (Design and Construction)"

  Regulatory Guide 1.28, Revision 3, endorsed the American National Standards Institute/American Society of Mechanical Engineers (ANSI/ASME) NQA-1-1983 standard, "Quality Assurance Program Requirements for Nuclear Power Plants." The proposed Revision 4 endorses the ANSI/ASME NQA-1-2008 standard, "Quality Assurance Program Requirements for Nuclear Facilities Applications," including ANSI/ASME NQA-1a-2008 (which is Addendum A to the NQA-1 standard).

- Draft Regulatory Guide (DG) - 5028, "Guidance on Making Changes to Emergency Response Plans for Nuclear Power Reactors"

  The NRC staff's objectives for 10 CFR 50.54(q) are to ensure that licensees (1) follow and maintain the effectiveness of their approved emergency plans, (2) evaluate proposed changes to these plans for their impact on the effectiveness of the plans, and (3) obtain prior NRC approval for changes that would reduce the effectiveness of the plans. These actions are essential if these plans are to continue to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The purpose of DG-5028 is to provide guidance on the implementation of 10 CFR 50.54(q) with respect to making changes to emergency response plans.

Final Regulatory Guide

The staff issued the following Regulatory Guide without ACRS review and would like to know whether the Committee wants to review this Guide.

- Regulatory Guide 1.212, "Sizing of Large Lead-Acid Storage Batteries"

  DG-1183 "Sizing of Large Lead-Acid Storage Batteries," was issued for public comment. No public comments were received. DG-1183 was issued as Regulatory Guide 1.212 "Sizing of Large Lead-Acid Storage Batteries," on November 20, 2008, without providing to the ACRS for review.

Travel Request

Dr. Said Abdel-Khalik requests Committee approval and support to attend the meeting of the OECD/NEA Task Force on Advanced Reactors Experimental Facilities, scheduled to be held between February 28 and March 4, 2009, in Paris, France.

rescinded. Such requests may be e-mailed to *MSEA@nrc.gov* or faxed to Angela McIntosh at (301) 415–5955. Questions about this Demand for Information may be referred to Tritium Exit Sign Inventory Support at (301) 415–3340.

Send responses to: Director, Office of Federal and State Materials and Environmental Management Programs, *Attention:* Angela R. McIntosh, Mail Stop T8–E24, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

Dated this 16th day of January 2009.

For the Nuclear Regulatory Commission.

Cynthia A. Carpenter,

Director, Office of Enforcement.

Attachment 1—List of General Material Licensees

Church of Jesus Christ of Latter Day Saints, 50 E Temple St., Salt Lake City, UT 84150.
Eli Lilly, Lilly Corporate Center, 893 S. Delaware, Indianapolis, IN 46285.
Home Depot, Attention: Ryan Williams, 2455 Paces Ferry Rd., SE., Atlanta, GA 30339.
Federal Corrections, Attention: RADM Newton E. Kendig, Assistant Director, Health Services Division, 320 First St., NW., Washington, DC 20534.
Department of the Air Force, Attn: Robert A. Rodgers, Maj, USAF, BSC, USAF Radioisotope Committee, HQ AFMOA/SG3PR, 110 Luke Ave., Suite 405, Bowling AFB, Washington, DC 20322–7050.
Chief of Naval Operations, Environment Protection Division (N45), Radiological Controls and Health, Office of Chief of Naval Operations (N455), Attention: CAPT Lino Fragoso, PhD, RSO, 2000 Navy Pentagon (NC–1 Suite 2000), Washington, DC 20350–2000.
Department of the Army, Army Material Command, Director of Army Radiation Safety, Attention: Greg Komp, RSO, 223 23rd Street, Suite 980, Arlington, VA 22060–5527.
United States Army Garrison-Rock Island Arsenal, IMWE–RIA–ZA Bldg 90, 1 Rock Island Arsenal, Rock Island, IL 61299–5000.
Honeywell International Inc., Attention: Peter Jungfer, 101 Columbia Road, Morristown, NJ 07962.
Stusser Electric Co., Dave Lockwood, 411 E. 54th Ave., Anchorage, AK 99518.
Herb Stevens Labor & Industry Building, John Fitch Plaza, Room 209, Trenton, NJ 08625.
Nassau Electric, 106 Black Horse Pike, West Collingswood Heights, NJ 08059.
Alton Iron Works Inc, 1475 Palisado Ave., Windsor, CT 06095.
University of Alaska, Dr. Ivan va Tets, RSC Chairman, 3211 Providence Drive, Anchorage, AK 99508.
Giant Food, Landover Corporate Headquarters, 8301 Professional Place, Suite 115, Landover, MD 20785.
Bed Bath and Beyond, Attention: Michael Wilck, 650 Liberty Ave., Union, NJ 07083.
U.S. General Services Administration, 1800 F Street, NW., Washington, DC 20405.
Department of Veterans Affairs, E. Lynn McGuire, Director, NHPP (115HP–NLR), Veterans Health Administration, 2200 Fort Roots Drive North, Little Rock, AR 72114–1706.
Middlebury College, Ed Sullivan, Environ. Health & Safety, Coordinator, 161 Adirondack View, Middlebury, VT 05753.
State Farm Insurance, Attn: Mike Devore, One State Farm Plaza, E–4, Bloomington, IL 61710.
Dupont, 1007 N. Market St., Attention: Leo Hamilton, Rm D–6088, Wilmington, DE 19898.
Anchorage School District, Carol Comeau, Superintendent, 5530 E Northern Lights Blvd., Anchorage, AK 99504–3135.
AMC Theaters, 920 Main Street, #1400, Kansas City, MO 64105.
AMR Corporation, Capt. Al Madar, Director of Safety, 4333 Amon Carter Blvd., Fort Worth, TX 76155.
Federated Retail Holdings, Inc., Elena Pharr, Environmental Services Manager, 7 West Seventh Street, 15th Floor, Cincinnati, OH 45202.
Helicopter Support, Inc., Attn: Carmen Jausel, Director, Environmental Health, 124 Quarry Road, Trumbull, CT 06611.
Avon Community Schools Corporation, Attn: Brock Bowsher, 7203 East U.S. Highway 36, Avon, IN 46123.
S.A.S. Technical Forwarding Dept., 150 Newark Intl. Airport, Newark, NJ 07114.
MEMC Electronic Materials, Inc., 501 Pearl Drive (City of O'Fallon), St. Peters, MO 63376.
United States Postal Service, Carolyn C. Cole, Manager, Energy Initiatives, 475 L'Enfant Plaza, SW., Washington, DC 20260.
Northwest Airlines, Inc., Attention: Kenneth J. Hylander, 2700 Lone Oak Pky., Eagan, MN 55121.
Smithsonian Institution, 1000 Jefferson Dr., SW., Washington, DC 20560.
Defense General Supply Center, 8000 Jefferson Davis Highway, Richmond, VA 23297–5100.
Feldman Electric, 210 Spanglers Mill Rd., New Cumberland, PA 17070.
Outrigger Hotel, Attn: David Lee, Vice President Property Services, 2375 Kuhio Avenue, Honolulu, HI 96815–2992.
Dominion Virginia Power, Attn: Peter Moss, P.O. Box 26532, Richmond, VA 23261–6532.
Goodrich Corporation, Attn: Dennis Hussey, 2730 W Tyvola Rd #600, Charlotte, NC 28217.
Thomson Tinos, 101 West 103rd Street, Indianapolis, IN 46290–1102.
State of Alaska, Dept. of Health & Social Services, Division of Public Health, Section of Laboratories, Radiological Health Program, 4500 Boniface Parkway, Anchorage, AK 99507–1270.
United States Coast Guard, 2100 Second Street, SW., Washington, DC 20024.
Atlantic Aviation, 6504 International Pkwy #2400, Plano, TX 75093.
Military Academy, West Point, Attn: Keith Katz, Safety, 667A Ruger Road, West Point, NY 10996.
NASA Headquarters, Attn: Marla Newstadt, 300 E St., SW., Code LM031, Washington, DC 20546.
Air Cruisers Company, 1740 Highway 34 N., Wall, NJ 07719.
Pacific Electric Sales Agency, 541 Ahui Street, Honolulu, HI 96813.
Wallens Ridge Prison, Attn: Adam Harvey Assistant Warden, 272 Dogwood Drive, P.O. Box 759, Big Stone Gap, VA 24219.

[FR Doc. E9–1680 Filed 1–26–09; 8:45 am]

BILLING CODE 7590–01–P

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 February 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, February 5, 2009, Conference Room T–2b3, 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.: Draft Final NUREG–1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking (Open)—The Committee will hear presentations by and hold discussions with

representatives of the NRC staff regarding the draft final NUREG–1855 and related matters.

10:45 a.m.–11:45 a.m.: Draft Final Regulatory Guide DG–5021, Safety/Security Interface (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the draft final Regulatory Guide DG–5021 on the Safety/Security Interface.

12:45 p.m.–2:45 p.m.: Digital Upgrade of the Oconee Reactor Protection System and Engineered Safety Features (Open/Closed)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and Duke Energy regarding the digital upgrade of the reactor protection system and engineered safety features at Oconee Nuclear Station, Units 1, 2, & 3, and related matters.

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

3 p.m.–7 p.m.: Preparation of ACRS Reports (Open)—The Committee will discuss proposed ACRS reports on matters discussed during this meeting, as well as a proposed report on containment overpressure credit.

Friday, February 6, 2009, Conference Room T–2b3, 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.: SECY–08–0197, Options to Revise Radiation Protection Regulations and Guidance Based on Recommendations of the International Commission on Radiological Protection (ICRP) (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding options to revise the NRC radiation protection regulations and guidance based on the recommendations of the ICRP.

10:15 a.m.–10:45 a.m.: Subcommittee Reports (Open)—The Committee will hear reports by and hold discussions with the cognizant Chairman of the Plant License Renewal Subcommittee regarding interim reviews of the Beaver Valley and National Institute of Standards and Technology license renewal applications and the associated NRC Staff's Safety Evaluation Reports with Open Items that were discussed during meetings on February 4, 2009.

10:45 a.m.–11:45 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 and other matters related to the conduct of the ACRS business. **[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]

11:45 a.m.–12 p.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.

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

Saturday, February 7, 2009, Conference Room T–2b3, Two White Flint North, Rockville, Maryland

8:30 a.m.–12:30 p.m.: Preparation of ACRS Reports (Open)—The Committee will continue its discussion of proposed ACRS reports.

12:30 p.m.–1 p.m.: Miscellaneous (Open)—The Committee will discuss 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.

Procedures for the conduct of and participation in ACRS meetings were published in the **Federal Register** on October 6, 2008, (73 FR 58268–58269). In accordance with those procedures, oral or written views may be presented by members of the public, including representatives of the nuclear industry. Electronic recordings will be permitted only during the open portions of the meeting. Persons desiring to make oral statements should notify the 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 portions of this meeting noted above to discuss organizational and personnel matters that relate solely to the internal personnel rules and practices of the ACRS, and information the release of which would 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 a portion of the meeting to protect information designated as proprietary by Duke Energy or its contractors pursuant to 5 U.S.C. 552b(c)(4).

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, as well as the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by contacting 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@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: January 21, 2009

Annette L. Vietti-Cook,

Secretary of the Commission.

[FR Doc. E9–1679 Filed 1–22–09; 4:15 pm]

BILLING CODE 7590–01–P

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

January 15, 2009

AGENDA
559th ACRS MEETING
FEBRUARY 5-7, 2009

THURSDAY, FEBRUARY 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/CS/SD)
   - 1.1) Opening statement
   - 1.2) Items of current interest

2) 8:35 – 10:30 A.M. Draft Final NUREG-1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking (Open) (GEA/HJV)
   - 2.1) Remarks by the Subcommittee Chairman
   - 2.2) Briefing by and discussions with representatives of the NRC staff regarding draft final NUREG-1855 and related matters.

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

10:30 – 10:45 A.M. * BREAK *****

3) 10:45 – 11:45 A.M. Draft Final Regulatory Guide DG-5021, Safety/Security Interface (Open) (MVB/MB)
   - 3.1) Remarks by the Subcommittee Chairman
   - 3.2) Briefing by and discussions with representatives of the NRC staff regarding draft final Regulatory Guide DG-5021 on Safety/Security Interface.

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

11:45 – 12:45 P.M. * LUNCH *****

4) 12:45 – 2:45 P.M. Digital Upgrade of the Oconee Reactor Protection System and Engineered Safety Features (Open/Closed) (CB/CEA)
   - 4.1) Remarks by the Subcommittee Chairman
   - 4.2) Briefing by and discussions with representatives of the NRC staff and Duke Energy regarding digital upgrade of the reactor protection system and engineered safety features at Oconee Nuclear Station, Units 1, 2, & 3, and related matters.

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

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

2:45 –3:00 P.M. ***** BREAK**

5) 3:00 – 7:00 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
- 5.1) Draft Final NUREG-1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking (GEA/HJV)
- 5.2) Draft Final Regulatory Guide DG-5021, Safety/Security Interface (MVB/MB)
- 5.3) Containment Overpressure Credit Issue (WJS/MVB/ZA)

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

6) 8:30 – 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/EMH/SD)

7) 8:35 – 10:00 A.M. SECY-08-0197, Options to Revise Radiation Protection Regulations and Guidance Based on Recommendations of the International Commission on Radiological Protection (ICRP) (Open) (MTR/NMC)
- 7.1) Remarks by the Subcommittee Chairman
- 7.2) Briefing by and discussions with representatives of the NRC staff regarding options to revise NRC radiation protection regulations and guidance based on the recommendations of the ICRP.

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

10:00 – 10:15 A.M. ***** BREAK *****

8) 10:15 – 10:45 A.M. Subcommittee Reports (Open)
- 8.1) Report by and discussions with the Chairman of the Plant License Renewal Subcommittee regarding Interim Review of the Beaver Valley License Renewal Application and the Safety Evaluation Report (SER) with Open Items that were discussed during the Subcommittee meeting on February 4, 2009 (DCB/CLB)

8.2) Report by and discussions with the Chairman of the Plant License Renewal Subcommittee regarding Interim Review of the National Institute of Standards and Technology (NIST) License Renewal Application and the SER with Open Items that were discussed during the Subcommittee meeting on February 4, 2009 (JDS/PW)

9) 10:45 – 11:45 A.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed) (MVB/EMH)

9.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the Full Committee during future ACRS meetings.

9.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, including anticipated workload and member assignments.

[NOTE: A portion of this 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) 11:45 – 12:00 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.

12:00 – 1:00 P.M. * LUNCH *****

11) 1:00 – 7:00 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:

11.1) Draft Final NUREG-1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking (GEA/HJV)

11.2) Draft Final Regulatory Guide DG-5021, Safety/Security Interface (MVB/MB)

11.3) Containment Overpressure Credit Issue (WJS/MVB/ZA)

11.4) SECY-08-0197, Options to revise Radiation Protection Regulations and Guidance based on Recommendations of the International Commission on Radiological Protection (ICRP) (MTR/NMC)

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

12) 8:30 – 12:30 P.M. Preparation of ACRS Reports (Open)
(10:30-10:45 A.M. BREAK) Continue discussion of the proposed ACRS reports listed under Item 11.

13) 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.

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
559th FULL COMMITTEE MEETING

February 5, 2009

PLEASE PRINT

TODAY'S DATE: February 5, 2009

	NAME	NRC ORGANIZATION
1	Mary Tobin	NRC/RES
2	GARETH PARRY	NRC/NRR
3	T.	
4	DON DUBE	NRC/NRO
5	KEVIN COYNE	NRC/RES/DRA
6	KAMIAR JAMALI	NRC/NRO/ARP
7	STEVEN ARNDT	NRC/NRR/DE
8	Pat Hilyard	NRR/DE
9	John N. Ridgely	RES
10	RODNEY FANNOR	NRC/RII
11	Alan Shropshire	NRC/NSIR
12	TIM REED	NRC/NRR/DPR
13	JOHN FROST	NRC/NSIR/DSP
14	Mike McCoppin	NSIR/EP
15	James Andersson	NSIR/EP
16	Arlon Costa	NSIR/DPR
17	Mike Lee	ACRS
18	Joseph Petrosky	NRR/DE/EICB
19	Rick Stattel	NRR/DE/EICB
20	Eva Brown	NRR/DORL/LPL11-2
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
DIGITAL I & C SYSTEMS SUBCOMMITTEE MEETING
Oconee RPS/ESF Open Session

February 5, 2009
Date

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	NAME	NRC ORGANIZATION
1	Pat Hiland	NRR/DE
2	BILL KEMPER	NRR/DE/EICB
3	Daniel Santos	RES/DE
4	Jonah Peterson	NRR/DE/EICB
5	DAVID SKEEN	NRR/DE
6	Melanie Wong	NRR/DORL.
7	John Stang	NRR/DORL
8	Jared Wermiel	NRR/DE
9	Stewart Bailey	NRR/DE
10	Richard Rossmyer	OCM-PBL
11	Paul Rebstock	NRC/RES/DE/EICB
12	Pong Chung	NRR/DE/EICB
13	Ed Miller	NRR/DORL
14	Steve Arndt	NRR/DE
15	Paul Loeser	NRR/DE/EICB
16	Barry Marcus	NRR/DE/EICB
17	Bernie Dittman	NRR/DE/EICB
18	Terry Jackson	NRR/DE/ICE2
19	Allen Howe	NRR/DORL
20	Tim Mossman	NRR/DE/EICB
21	Deirdre Spaulding-Yeomans	DRO/DE/ICE1
22	Girish Singh	NRR/DE/EICB
23	Samir Darbali	NRR/DE/EICB
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
559th FULL COMMITTEE MEETING

February 5, 2009

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TODAY'S DATE: February 5, 2009

	NAME	AFFILIATION
1	Timothy Wheeler	Sandia
2	Doug True	ERIN
3	DON VANOVER	ERIN
4	KEN CANAVAN	EPRI
5	Jeff LaChance	Sandia
6	~~Jason Trauger~~	LINK
7	John Lehner	BNL
8	~~RODNEY TANNER~~	
9	~~JAMES ANDERSEN~~	
10	Bonnie Schnetzler	USNRC
11	CHRIS EARLS	NEI
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
DIGITAL I & C SYSTEMS SUBCOMMITTEE MEETING
Oconee RPS/ESF Open Session

February 5, 2009
Date

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	NAME	AFFILIATION
1	Jacob Bryan	Duke / Oconee Major Projects
2	Boyd Shingleton	Duke / Oconee Regulatory Compliance
3	Michael Bailey	Duke / Oconee Plant Engineering
4	Sean Kelley	AREVA NP, Inc.
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
559th FULL COMMITTEE MEETING

February 6, 2009

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TODAY'S DATE: February 6, 2009

	NAME	NRC ORGANIZATION
1	[illegible]	NRO/DCIP/CHPB
2	Mark Tonigan	FSME/DILR
3	Jocelyn Mitchell	RIS
4	Roger Pedersen	NRR
5	Tim Frye	NRO/DCIP/CHPB
6	Thomas Young	RSME/DILR
7		
8		
9	DAVID WRONA	NRR/DLR
10	AHSAN SALLMAN	NRR/DSS/SCVB
11	BRUCE HEIDA	NRR/DSS/SCVB
12	Eva Brown	NRR/DORL/LPL II-2
13	Sher Bahadur	NRR/DSS
14	N. R. Karipineni	NRR/DSS/SCVB
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
559th FULL COMMITTEE MEETING

February 6, 2009

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TODAY'S DATE: February 6, 2009

	NAME	AFFILIATION
1	Ellen Anderson	NEI
2	GEORGE OLIVER	NEI
3	J Stewart Bland	Clearpeake Nuclear Svcs
4	AMANDA ANDERSON	DOE
5	RALPH ANDERSEN	NEI
6	~~[illegible]~~	HP
7	~~[illegible]~~ JAMES EMENS	TVA
8		
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

February 11, 2009

AGENDA
560th ACRS MEETING
MARCH 5-7, 2009

THURSDAY, MARCH 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/CS/SD)
- 1.1) Opening statement
- 1.2) Items of current interest

2) 8:35 – 10:15 A.M. Draft Final Regulatory Guide 5.71 (formerly DG–5022), "Cyber Security Programs for Nuclear Facilities" (Open/Closed) (GEA/CEA)
- 2.1) Remarks by the Subcommittee Chairman
- 2.2) Briefing by and discussions with representatives of the NRC staff regarding draft final Regulatory Guide 5.71, NRC staff's resolution of stakeholders' 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).]

10:15 – 10:30 A.M. * BREAK *****

3) 10:30 – 12:15 P.M. Draft Final Revisions to 10 CFR 50.61, "Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events" (Open) (WJS/MLB/CLB)
- 3.1) Remarks by the Subcommittee Chairman
- 3.2) Briefing by and discussions with representatives of the NRC staff regarding draft final revisions to 10 CFR 50.61 related to Pressurized Thermal Shock Events, 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.

12:15 – 1:15 P.M. ***** LUNCH *****

4) 1:15 – 2:45 P.M. Draft Final Regulatory Guide 1.200 (formerly DG-1200), "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities" (Open) (DCB/HPN)

4.1) Remarks by the Subcommittee Chairman

4.2) Briefing by and discussions with representatives of the NRC staff regarding draft final Regulatory Guide 1.200, 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.

2:45 –3:00 P.M. ***** BREAK**

5) 3:00 – 7:00 P.M. Preparation of ACRS Reports (Open)

Discussion of proposed ACRS reports on:

5.1) Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities" (GEA/CEA)

5.2) Draft Final Revisions to 10 CFR 50.61, "Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events" (WJS/MLB/CLB)

5.3) Draft Final Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities" (DCB/HPN)

5.4) Containment Overpressure Credit Issue (WJS/MVB/ZA)

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

6) 8:30 – 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (MVB/EMH/SD)

7) 8:35 – 10:00 A.M. Draft Final Regulatory Guide 5.73 (formerly DG-5026), "Fatigue Management for Nuclear Power Plant Personnel" (Open) (JWS/HJV)

7.1) Remarks by the Subcommittee Chairman

7.2) Briefing by and discussions with representatives of the NRC staff regarding draft final Regulatory Guide 5.73, 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.

10:00 – 10:15 A.M. ***** BREAK *****

8) 10:15 – 12:15 P.M. International Human Reliability Analysis (HRA) Empirical Pilot Study (Open) (GEA/HPN)

8.1) Remarks by the Subcommittee Chairman

8.2) Briefing by and discussions with representatives of the NRC staff and international stakeholders regarding the HRA Empirical Pilot Study and related matters.

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

12:15 – 1:15 P.M. ***** LUNCH *****

9) 1:15 – 2:00 P.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open/Closed) (MVB/EMH)

9.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the Full Committee during future ACRS meetings.

9.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, including anticipated workload and member assignments.

[NOTE: A portion of this 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) 2:00 – 2:15 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.

11) 2:15 – 2:45 P.M. Subcommittee Reports (Open)

11.1) Report by and discussions with the Chairman of the Plant License Renewal Subcommittee regarding Interim Review of the Indian Point License Renewal Application and the Safety Evaluation Report (SER) with Open Items that were discussed during the Subcommittee meeting on March 4, 2009 (OLM/PW)

11.2) Report by and discussions with the Chairman of the US-APWR Subcommittee regarding selected Topical Reports associated with the US-APWR Design that were discussed during the Subcommittee meeting on February 19, 2009,

as well as insights gained from the tour of the Mitsubishi nd Westinghouse simulators on February 18 and 20, 2009 (OLM/NMC)

2:45 –3:00 P.M. ***** BREAK**

12) 3:00 – 7:00 P.M. Preparation of ACRS Reports (Open)
Discussion of proposed ACRS reports on:
12.1) Draft Final Regulatory Guide 5.71, "Cyber Security Programs for Nuclear Facilities" (GEA/CEA)
12.2) Draft Final Revisions to 10 CFR 50.61, "Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events" (WJS/MLB/CLB)
12.3) Draft Final Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities" (DCB/HPN)
12.4) Containment Overpressure Credit Issue (WJS/MVB/ZA)
12.5) Draft Final Regulatory Guide 5.73, "Fatigue Management for Nuclear Power Plant Personnel" (JWS/HJV)

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

13) 8:30 – 2:30 P.M. Preparation of ACRS Reports (Open)
Continue discussion of the proposed ACRS reports listed under Item 12.

14) 2:30 – 3:00 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.

Appendix IV

LIST OF DOCUMENTS FROM THE
559TH ACRS MEETING FEBRUARY 2-5, 2009

Agenda Item 2:
Draft Final NUREG-1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking

1. Proposed Schedule
2. Status Report
3. NUREG-1855, *Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking,* Draft Final (already transmitted to Members on 1/14/09)
4. EPRI-1016737, *Treatment of Parameter and Model Uncertainty for Probabilistic Risk Assessments,* Final Report, December 2008 (already transmitted to Members on 1/21/09)

Agenda Item 3:
Draft Final Regulatory Guide DG-5021, Safety/Security Interface

5. Table of Contents
6. Proposed Meeting Agenda
7. Status Report

Agenda Item 4:
Digital Upgrade of the Oconee Reactor Protection System and Engineered Safety Features

8. Table of Contents
9. Proposed Agenda
10. Status Report
11. References:
    - Duke System Function Description"
    - "Evaluation of Proposed Change"
    - NRC Acceptance for Review Memo
    - "Software Design Description"
    - "Function Block Manual"
    - NRC Trip Report - Oconee May 08
    - NRC Trip Report - Areva Sep 08
12. Documents
    - LIC – 101 – “License Amendment Review Procedures”
    - LIC – 200 – “Standard Review Plan (SRP) Process”
    - DI&C - ISG - 01 “Interim Staff Guidance on Digital I&C, Cybersecurity, Dec. 31, 2007
    - DI&C - ISG -02 “Interim Staff Guidance on Digital I&C on Diversity Defense-in-Depth Issues, September 26, 2007
    - DI&C - ISG -04 “Interim Staff Guidance on Digital I&C on Highly –Integrated Control Rooms- Communications (HICRs), September 28, 2007

Appendix IV

LIST OF DOCUMENTS FROM THE
559TH ACRS MEETING FEBRUARY 2-5, 2009

Agenda Item 7:
SECY-08-0197, Options to Revise Radiation Protection Regulations and Guidance Based on Recommendations of the International Commission on Radiological Protection (ICRP)

13. Table of Contents
14. Proposed Schedule
15. Status Report
16. Attachments
    - Options to Revise Radiation Protection Regulations and Guidance with Respect to the 2007 Recommendations of the International Commission on Radiological Protection, SECY-08-0197, December 18, 2008
    - Plans for Review of Radiation Protection Regulations in Light of the New International Commission on Radiological Protection Recommendations, SECY-08-0092, June 30, 2008
    - Advisory Committee on Nuclear Waste and Materials Letters

Treatment of PRA Uncertainties in Risk-Informed Decision Making

Advisory Committee on Reactor Safeguards

February 5, 2009

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

EPRI ELECTRIC POWER RESEARCH INSTITUTE

Presented by:

- U.S. Nuclear Regulatory Commission
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  - Ken Canavan, kcanavan@epri.com
  - Don Vanover, devanover@erineng.com
  - Doug True, detrue@erineng.com

Objective of Meeting

- Discuss US Nuclear Regulatory Commission (NRC) and Electric Power Research Institute (EPRI) work
- Future work
- Request letter

Outline

- Purpose of Program
- NRC and EPRI Collaboration
- Scope and Limitations
- Changes to the Reports
- Detailed Example
- Future Work

Purpose of Program

- Provide guidance in support of the requirements addressing uncertainty in the ASME/ANS Probabilistic Risk Assessment (PRA) Standard
- Provide guidance on how to treat uncertainties associated with PRA in risk-informed decision making

NRC and EPRI Collaboration

- NRC and EPRI work start with consideration of the decision under consideration, the PRA standard, and the supporting PRA model
  - NRC focus is from a regulatory perspective
  - EPRI focus is from an industry perspective.
- NRC and EPRI efforts provide guidance on parameter and model uncertainties
- Regarding parameter uncertainties
  - NRC NUREG provides guidance on characterization and propagation
  - EPRI report provides guidance on detailed and approximate methods

NRC and EPRI Collaboration

- Regarding model uncertainties
  - EPRI report provides guidance on the identification and characterization of the sources of uncertainty
  - NRC NUREG provides guidance on identification of sources of uncertainty key to the decision.
- NRC NUREG also provides guidance addressing uncertainties
  - From non-modeled risk contributors (referred to as completeness uncertainty)
  - In the risk results and insights so that they are treated in the integrated risk-informed decision making

Scope and Limitations

- Limited to addressing the uncertainties associated with the use of the results of risk assessment models for risk-informed decision making
  - Does not include guidance for uncertainties associated with other analyses
- Guidance not provided for sources of uncertainty associated with internal fire and external hazards, and for low power shutdown conditions
- Guidance provided on the process for identification and characterization, and for how to factor the results into the decision-making, is generic and is independent of the specific source of uncertainty

Scope and Limitations (cont'd)

- Guidance not provided for performing expert judgment or elicitation
- Guidance not provided for employing an expert panel
- Guidance focuses on currently operating reactors
- Process is applicable for advanced LWRs and non-LWRs, and reactors in the design stage
  - the screening criteria and the specific sources of uncertainty may not be applicable
  - sources unique to these reactors not addressed

Scope and Limitations (cont'd)

- A model uncertainty needs to be distinguished from an assumption or approximation that is made to limit scope of model (e.g., with respect to level of detail)
- These assumptions and approximations are generally not considered to be model uncertainties
- Methods for addressing this aspect are not explicitly included, but are addressed when assessing the validity of conclusions

Changes Since ACRS Sub-Committee

- Clarified scope and limitations regarding:
  - operating reactors, new or future (non-LWR) reactors
  - initiating events and power conditions
  - level of guidance (e.g., expert panel)
- Changed tone so that the guidance is for what needs to be done, rather than what is not needed
- Clarified that the guidance is how to deal with uncertainty in the context of making a risk-informed decision, rather than providing an assessment of the global uncertainty in CDF and LERF

Changes Since ACRS Sub-Committee (cont'd)

- Added guidance on presenting assessment of credibility of results from alternative assumptions
- Added discussion that the information in Table A-4 in EPRI 1016737 is a valuable additional resource and may be useful for specific application
- Added clarification regarding the uncertainty associated with the use of a single model, not because it's consensus, but because it's the only available model
- Clarified the term "uncertainty intervals" (term that is used in ASME/ANS Standard)

Changes Since ACRS Sub-Committee (cont'd)

- Added a warning about the impact of not taking into account state-of-knowledge correlation (SOKC) on truncation
- Renamed SOKC correlation to epistemic correlation
- Enhanced the guidance regarding relative screening so that focus is not screening on absolute value
- Clarified that the "estimate" is in the context of "in lieu of propagating" (impacts EPRI report)

Changes Since ACRS Sub-Committee (cont'd)

- Provided guidance to treat human reliability analysis (HRA) as a special case:
  - Unreasonable to expect use of different HRA models.
  - Sensitivity studies should reflect variability from different methods
- Identified the choice of standby failure rate model (EPRI report) as a source of model uncertainty rather than whether the parameter is the correct value
  - Guidance on need to justify model selection is provided

Overview of Appendix A

- Example implementation of the guidance
- Utilizes an AOT extension for the RHR system at a hypothetical BWR-4
- Attempts to exercise most aspects of the uncertainty guidance: parametric, modeling, and completeness
- Also provides examples of how compensatory measures can be used to address modeling uncertainties

A.1 – Scope of Results Needed

- Based on RG 1.177, Requires
  - ΔCDF, ΔLERF, ICCDP, ICLERP
- Considered At-power Only, Due to AOT Being Evaluated
- ΔCDF, ΔLERF maintained in Region III, so total CDF/LERF not required

A.2 – Scope of Risk Assessment

- Utilizes the Insights from the Internal Events PRA to Identify Important Risk-related Functions of RHR
- Quantitative Treatment (PRA) of Internal Events, Internal Floods, Internal Fires
- Quantitative Screening of Seismic
- Qualitative Screening of Other Hazard Groups

A.3 – Comparison to Acceptance Guidelines

Base Case Results Presented to Decision Maker

Figure of Merit	Total Value	Acceptance Guideline	Below Acceptance Guideline?
CDF_{NEW}	1.65E-05/yr	<1.0E-04/yr	Yes
ΔCDF	2.73E-07/yr	<1.0E-06/yr	Yes
$ICCDP_A$	1.15E-07	<5.0E-07	Yes
$ICCDP_B$	4.08E-07	<5.0E-07	Yes
$LERF_{NEW}$	<1.0E-05/yr	<1.0E-05/yr	Yes
$\Delta LERF$	<1.0E-07/yr	<1.0E-07/yr	Yes
$ICLERP_A$	<5.0E-08	<5.0E-08	Yes
$ICLERP_B$	<5.0E-08	<5.0E-08	Yes

A.3 - Potential Sources of Model Uncertainty - Internal Events

- Based on identification of the significant contributors to the results, the following are identified as relevant to the application:
  - Viability of CRD injection post containment failure
  - Various Human Errors:
    - Failure to depressurize RPV
    - Failure to bypass containment isolation
    - Failure to cross-tie IA to PCIG
    - Failure to utilize CRD for RPV Makeup
  - LOOP failure to recover probabilities
  - Credit for RHRSW pump repair
  - Medium LOCA partition factor
  - No credit for maintaining ECCS injection post-venting

A.3 - Potential Sources of Model Uncertainty - Internal Fires

- Most of the Potential Internal Event Sources of Uncertainty Also Found in Internal fires
- Sources of Uncertainty Unique to Fire:
  - Scenario initiating event frequencies
  - General conservatism of fire scenario treatment

A.3 – Parametric Uncertainty Evaluation

Result	Internal Events		Internal Fires	
	RHR "A" Case	**RHR "B" Case**	**RHR "A" Case**	**RHR "B" Case**
Propagated Mean Values				
CDF_X	6.56E-06/yr	7.31E-06/yr	1.57E-05/yr	3.05E-05/yr
CDF_{BASE}	3.80E-06/yr		1.25E-05/yr	
$\Delta CDF = CDF_X - CDF_{BASE}$	**2.76E-06/yr**	**3.51E-06/yr**	**3.20E-06/yr**	**1.80E-05/yr**
Point Estimate Mean Values				
CDF_X	6.53E-06/yr	7.23E-06/yr	1.57E-05/yr	3.03E-05/yr
CDF_{BASE}	3.73E-06/yr		1.25E-05/yr	
$\Delta CDF = CDF_X - CDF_{BASE}$	**2.80E-06/yr**	**3.50E-06/yr**	**3.20E-06/yr**	**1.78E-05/yr**

A.3 – Sensitivity Studies on Model Uncertainties

- Human Error Probabilities (HEPs) as a class
- Frequency of medium LOCAs that are too big for CRD makeup capabilities
- CRD survivability following containment failure scenarios
- Fire scenario initiating event frequencies

A.3 – Insights for Decision-makers

- Risk results below acceptance guidelines for all but two sensitivity cases (key sources of uncertainty):
  - Human Error Probability (HEP) Development
  - CRD survivability following containment failure
- Potential Compensatory Measures:
  - Perform pre-shift briefs on potentially important human actions
  - Pre-alignment of alternate injection systems as containment pressure increases.
  - Pre-shift briefs identifying the important fire scenarios or roving fire watches in areas with increased sensitivity

Future Work

- Two-day public workshop scheduled for May 5 and 6, 2009
- Gather insights and lessons learned from workshop
- Expand to address other scope items
- Expand to support new and advanced reactors

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Protecting People and the Environment

DG-5021
Managing the Safety/Security Interface

ACRS Presentation

February 5,2009

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Discussion Topics

- Power Reactor Security Rulemaking
  - Currently with OMB (since 12/19/08)
  - Provided status to ACRS last summer
- Portions requiring ACRS review
  - § 50.54(hh) "Mitigative Strategies and Response Procedures for Potential or Actual Aircraft Attacks"
  - § 73.54 "Protection of Digital Computer and Communication Systems and Networks"
  - § 73.58 "Safety/Security Interface Requirements for Nuclear Power Reactors"
- This briefing focuses on the guidance for § 73.58
  - Staff requests ACRS to provide the Commission its views on acceptability of this regulatory guide

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§ 73.58 Safety/Security Interface

- Addresses part of UCS petition (PRM 50-80)
- Makes explicit what is already implicitly required by regulation
- (b) Requires licensees to assess/manage potential for adverse interactions between security ↔ safety
- (c) Scope – Planned and emergent activities
- (d) Conflicts – Communicate conflicts and take compensatory and mitigative actions

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§ 73.58 Safety/Security Interface

- Published in Federal Register July 24, 2007
- Public Meeting held; comments received
- Several public meetings held between Sept. 2009 and January 2009 to resolve and disposition comments

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RG-5021
Managing the Safety/Security Interface

- Focus of the guide:
  - The types of controls and process intended for review
  - Review of current management controls & processes
  - The program areas that should be considered

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RG-5021
Managing the Safety/Security Interface

- Focus of the guide:
  - The types of planned or emergent activities that should be considered
  - The screening process for safety/security interface
  - Training that is required

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Summary

- Staff requests ACRS provide its opinion on acceptability of the final rule provisions to the Commission

Digital Upgrade of the Oconee Reactor Protection System and Engineered Safety Features

Presented by: NRR / EICB

Pat Hiland Director DE
Bill Kemper Branch Chief EICB
Rich Stattel Technical Reviewer EICB

February 5, 2009 12:45-2:45 P.M.

Presentation Outline / Agenda

- **Introduction**
- **Overview of Oconee License Amendment Request (LAR)**
- **Diversity and Defense in Depth**
- **Communication**
- **Changes to TXS Platform**

Introduction
TXS Platform & Oconee LAR

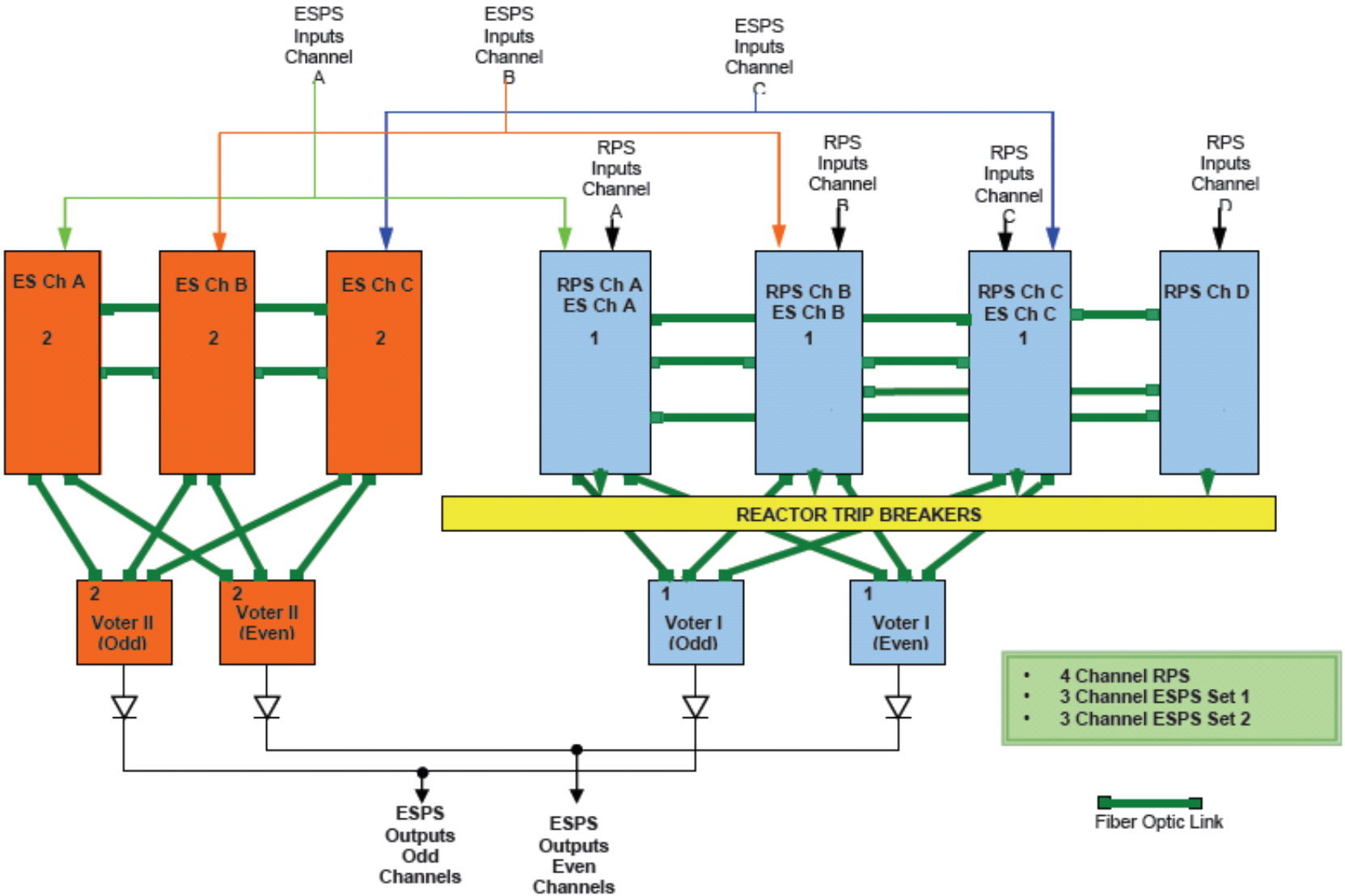
- On January 31, 2008, Oconee submitted a LAR to replace the existing analog RPS and ESPS systems with a Digital RPS/ESPS system.
- The Safety Evaluation Report for the Teleperm XS (TXS) Topical Report was Issued in May 2000.
- The Oconee Digital Reactor Protective System / Engineered Safeguard Protective System (RPS/ESPS) is Based on the TXS Platform.
- As part of the NRR acceptance review process the NRC accepted the LAR (April 24, 2008) for review and documented six issues that could present a challenge to approving the LAR:
  - (1) Diversity and Defense-in-Depth (D3)
  - (2) Bi-Directional Communications
  - (3) AREVA Software Program Manual (SPM)
  - (4) TXS Platform Changes since the approval of the TXS topical Report
  - (5) Verification and Validation (V&V) program / process
  - (6) Software Tools used for V&V
- The status of the review is considered to be Pre-Decisional Information.

Introduction
Review Process

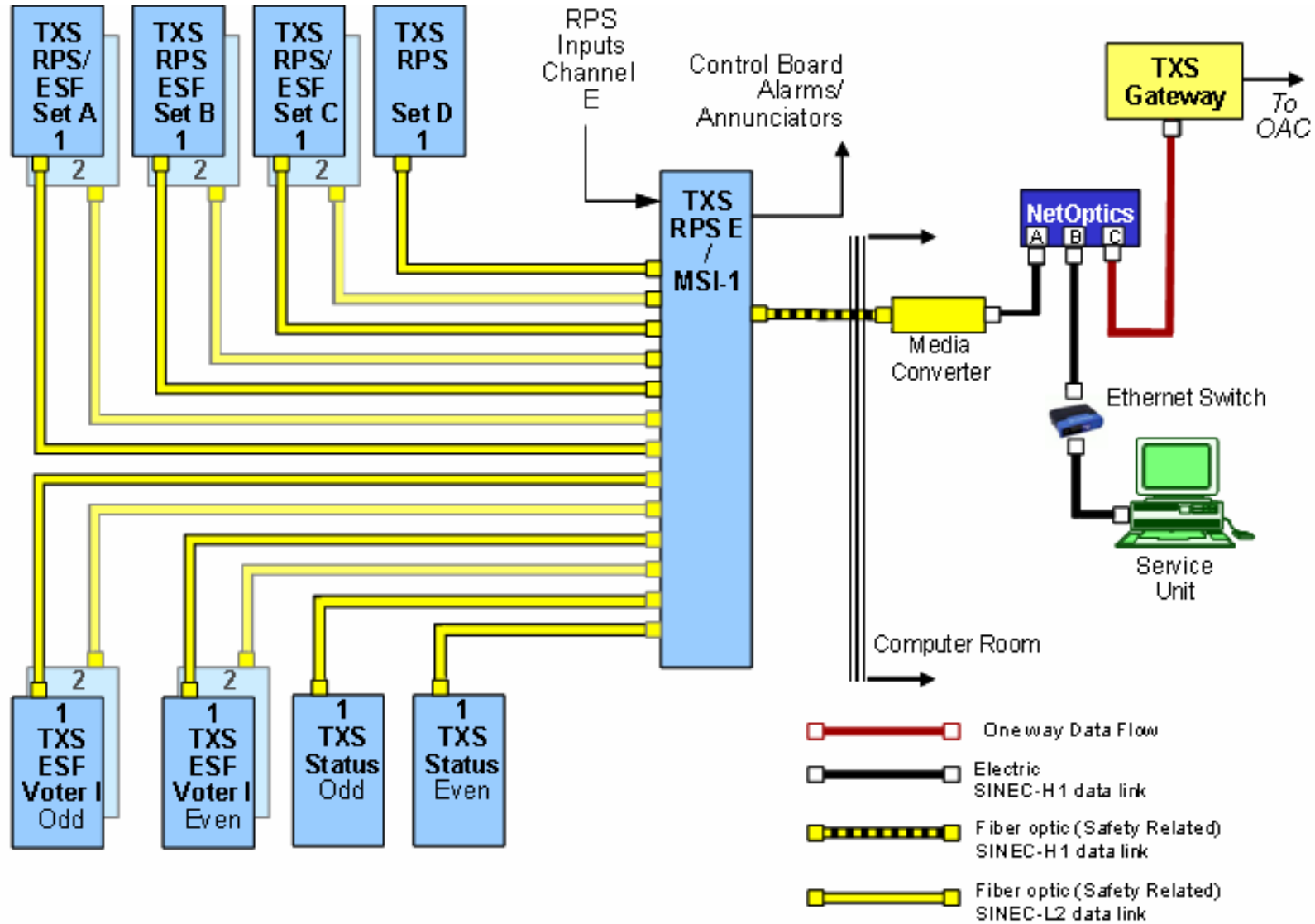
- **EICB is conducting the review in accordance with Standard Review Plan (SRP) Chapter 7 (NUREG-0800, Chapter 7) and LIC -101.**

- **Interim Staff Guidance (ISG) was developed by the Task Working Groups (TWGs) of the Digital I&C Steering Committee. Specifically:**
  - **ISG#1 is being used to guide the review of cyber security aspects.**
  - **ISG#2 is being used to guide the review of Diversity and Defense-in-Depth aspects.**
  - **ISG#4 is being used to guide the review of Communications aspects**

Overview of Oconee Application
RPS/ESPS System Architecture



Overview of Oconee Application
Safety to Non-Safety Communication Architecture



Diversity and Defense in Depth (D3)
Guidance

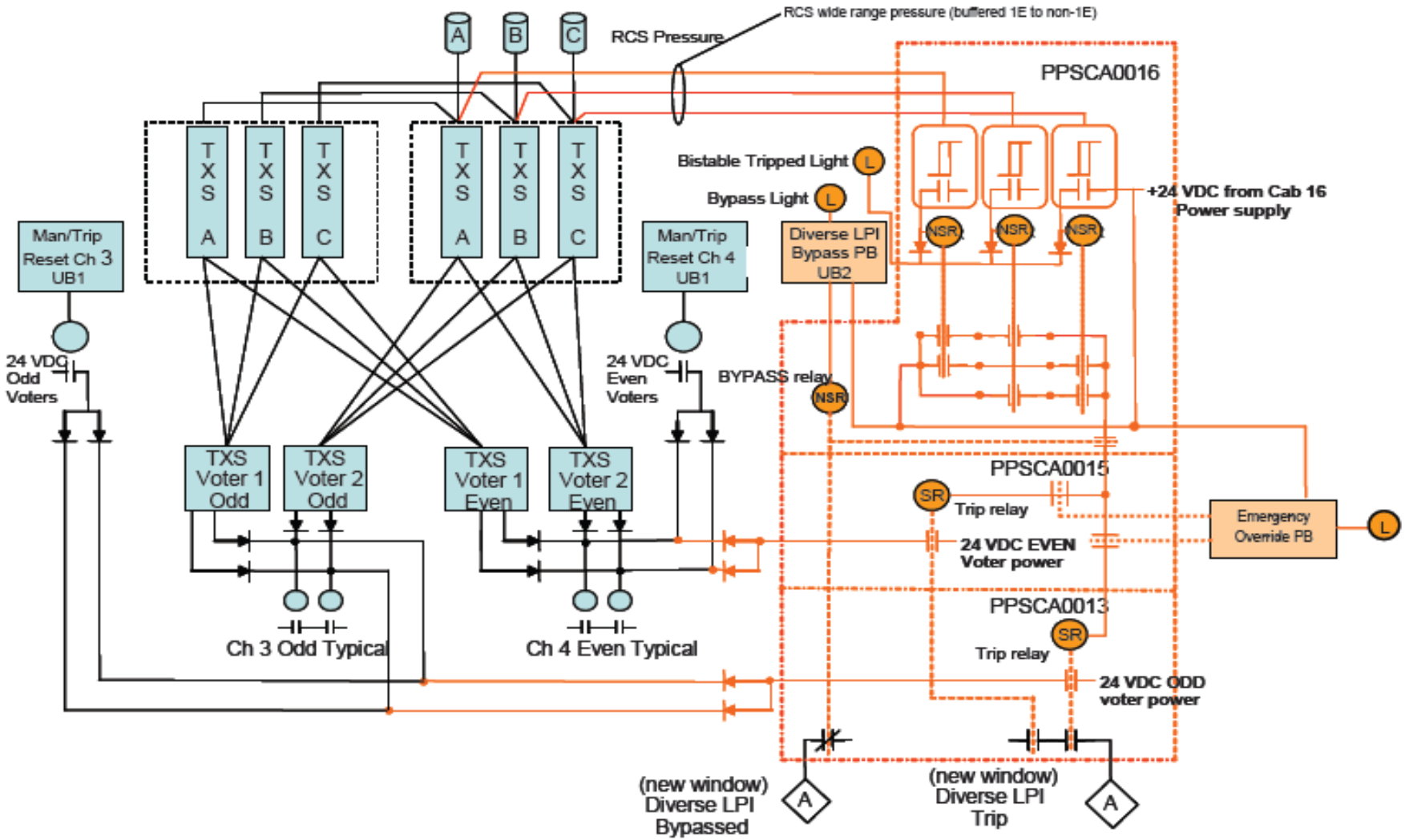
- **Guidance for Diversity Assessment**
  - **SRM to SECY-93-087 Item II.Q**
    Establishes NRC policy for Diversity and Defense in Depth
    - **NUREG/CR-6303**
      Method for Performing Diversity and Defense-in-Depth Analyses of Reactor Protection Systems
    - **Branch Technical Position (BTP) 7-19**
      Guidance for Evaluation of Diversity and Defense-in-Depth in Digital Computer-Based Instrumentation and Control Systems
    - **Interim Staff Guide (DI&C-ISG-02)**
      Diversity and Defense-in-Depth Issues

Diversity and Defense in Depth
Oconee Diversity Solution

- **The Oconee ESPS Safety System Actuations**
  - **Reactor Building Cooling and Isolation**
  - **Reactor Building Spray**
  - **High Pressure Safety Injection Actuation System**
  - **Low Pressure Safety Injection Actuation System**

- **Oconee's New Automatic Diverse Actuation Systems**
  - **High Pressure Injection DAS (HP DAS)**
  - **Low Pressure Injection DAS (LP DAS)**
- **ATWS – The Oconee existing design already includes a diverse Reactor Trip system.**

Diversity and Defense in Depth
Diverse LPI Actuation System (DAS)



Diversity and Defense in Depth
Manual Operator Action

- **The new Oconee Digital Protection System will provide a plant response that does NOT require any manual operator actions for at least 30 minutes for all chapter 15 accidents with the single exception of a manual reactor trip during a Small Break Loss-Of-Coolant Accident (SBLOCA)**
  - **This action is required within 2 minutes of the transient.**
  - **Oconee already has a requirement to trip the reactor and reactor coolant pumps within 2 minutes during an SBLOCA (Minimum Subcooled Margin Requirement)**
  - **Therefore, even though this manual action is required in much less than 30 minutes, it is a reasonable exception to the D3 Interim Staff Guidance criteria.**

Diversity and Defense in Depth
Current NRC Assessment (Pre-Decisional)

- **The inclusion of Diverse High Pressure and Low Pressure Injection DAS systems into the Oconee design provides an acceptable degree of diversity to address common cause failures of those Digital actuation channels.**
- **Manual Actions >30 minutes to address CCF's of RPS/ESPS actuations are compliant with ISG2 and provide adequate means of response to a Software Common Cause Failure.**
- **The Manual Action of 2 minutes for the Reactor Trip in the case of a Small Break LOCA is acceptable.**

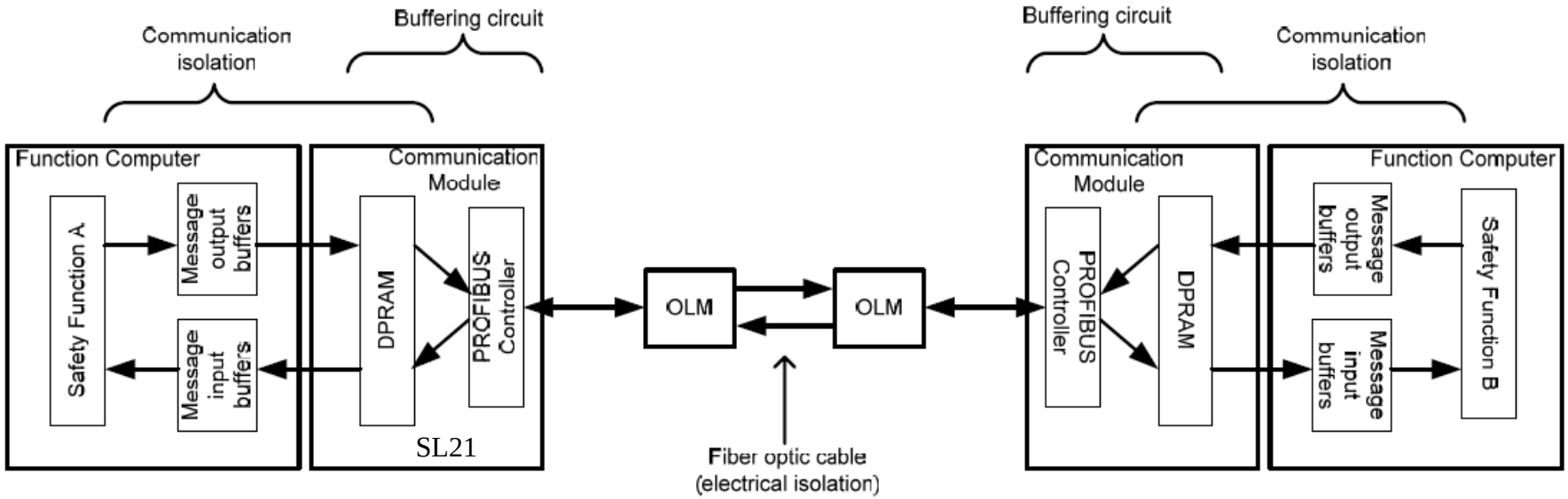
Diversity and Defense in Depth
Path Forward

- **Duke provided the necessary documentation to support the stated conclusions.**
  - **Setpoints for the High Pressure and Low Pressure Injection Diverse Actuation Systems to support the Diversity and Defense in Depth strategy.**
  - **Description of the built-in conservatism of the D3 analysis program.**
- **The NRC staff is in the process of writing the D3 Safety Evaluation**

Communication
Guidance

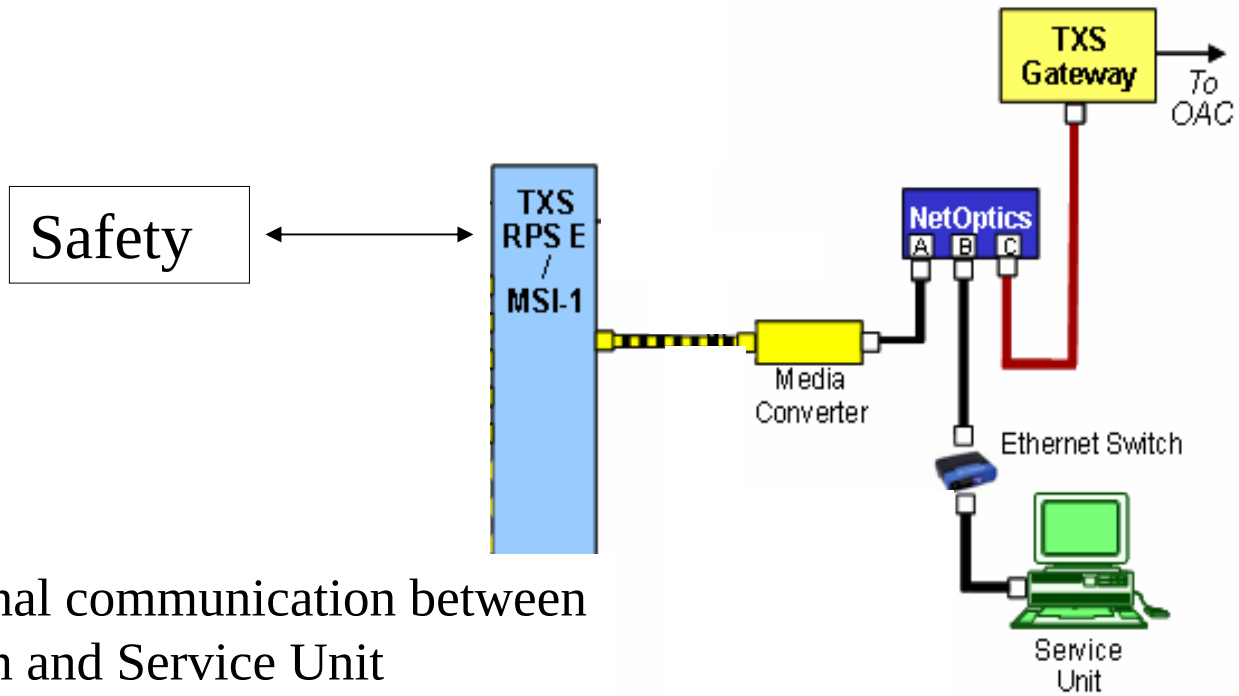
- **Guidance for Communication**
  - **IEEE 603, "IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations"**
  - **IEEE 7-4.3.2, "Standard Criteria for Digital Computer in Safety Systems of Nuclear Power Generating Station"**
  - **ISG#4, "Highly Integrated Control Rooms-communication Issues"**

Inter-Channel Communications
Oconee Solution



- Provides electrical isolation between Safety Channels
- Provides communication isolation between Safety Channels
- Deterministic in nature

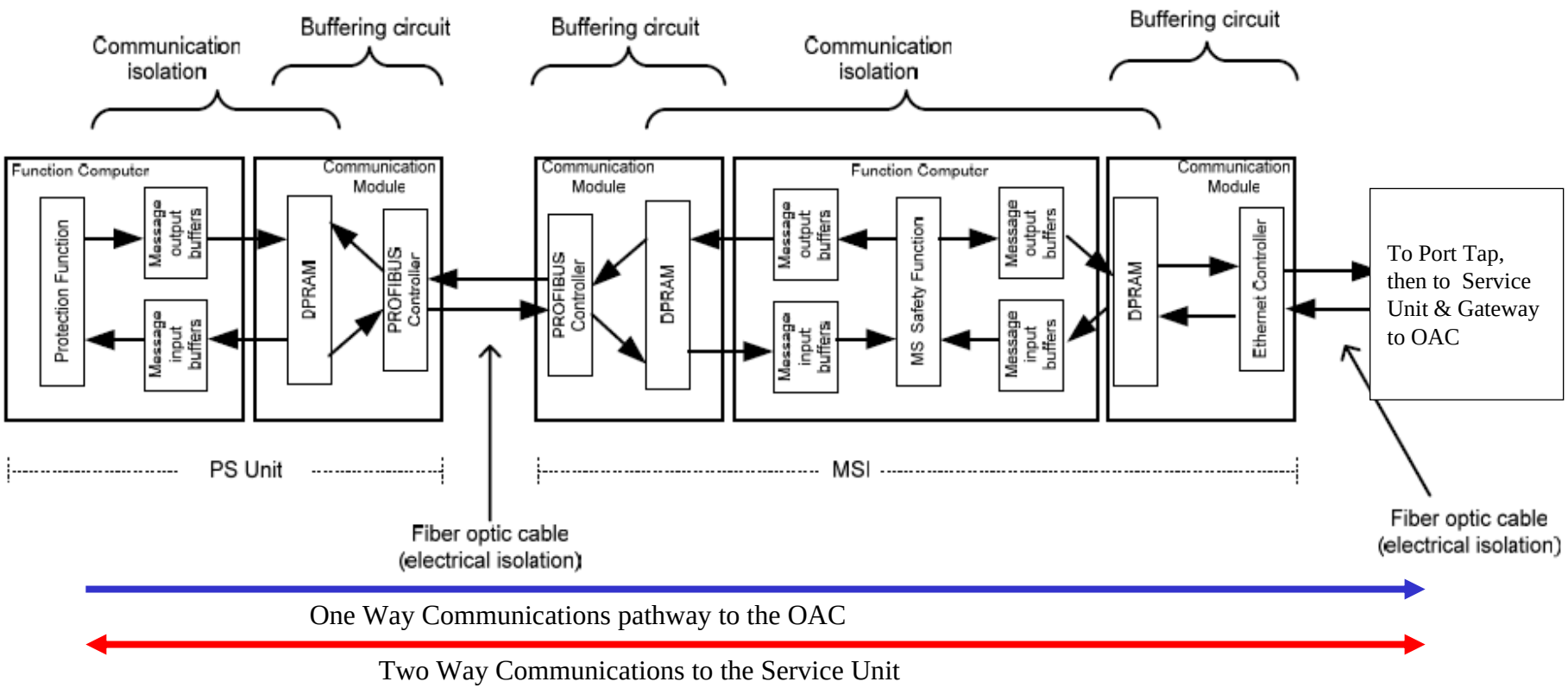
Communication
Between Safety and Non-safety Systems



- Bi-directional communication between safety system and Service Unit

- One way communication between safety system and gateway to OAC

Safety to Non-Safety Communications
Oconee Solution



- Provides electrical isolation between Safety and Non-Safety Systems
- Provides communication isolation between Safety and Non-Safety Systems
- The MSI serves as a Safety to Non-Safety Boundary
- Deterministic in nature

Communication
Current NRC Assessment (Pre-Decisional)

- **The Oconee License Amendment Request appears to adequately address each of the twenty adherence points listed in ISG#4 with the exception of one Item.**
  - **ISG#4 Item 10 - Deviation in Oconee LAR**
    - **The Service Unit will be connected to the MSI during plant operations.**

- **The Port Tap device appears to provide an acceptable one way communications solution for the SR to NSR communications pathway but not all of the supporting information has been accepted by the staff.**

Communication
Path Forward

- **The NRC review staff is currently documenting the evaluation for each of the 20 ISG#4 adherence points in regard to the Oconee Design.**

- **Oconee will provide additional proprietary information to support the stated functionality of the Port Tap device. As an alternate the Staff may conduct an audit at the vendor facility.**

Changes to TXS Platform Criteria

- **The Teleperm XS (TXS) Topical Report and Safety Evaluation were issued in May of 2000**

- **Since then, numerous changes to the approved platform were necessitated due to obsolescence and advancements in digital technology. These changes include:**
  - **Hardware**
  - **Software**
  - **Procedure**

- **A Review of these changes to the approved platform is necessary to assure that the changes are acceptable.**

Changes to TXS Platform
Significant Hardware Changes

- The Safety function processor was replaced with an updated safety function processor
- The Communication module was changed
- Some I/O modules were upgraded
- A change was made to the Subrack

NOTE: All of these changes were incorporated to enhance the performance of the platform.

Changes to TXS Platform
Significant Software Changes

- **Software types in TXS Topical Report**
  - **SPecification And Coding Environment (SPACE) - Tools**
  - **TXS Platform Software**
    - **Operating System (OS)**
    - **Run Time Environment (RTE)**
- **Software Changes**
  - **Updated SPACE**
    - **Ported SPACE to new Operating System**
    - **Changed Database Management System**
  - **Updated TXS Software (Necessitated by the Hardware Changes)**
    - **Operating System (OS)**
    - **Run Time Environment (RTE)**

Changes to TXS Platform
Significant Procedure Changes

- **Several changes were made to the plans and procedures that were addressed in the TXS Topical Report.**
- **These changes were made in order to maintain the high quality development process.**
  - **Procedure changes were required to:**
    - **Add Detailed Requirements**
    - **Address Plant Specific Action Items called for by the TXS Topical Report SER.**
    - **Improve configuration management control**
  - **Procedure Evaluations are being conducted on a sampling basis.**

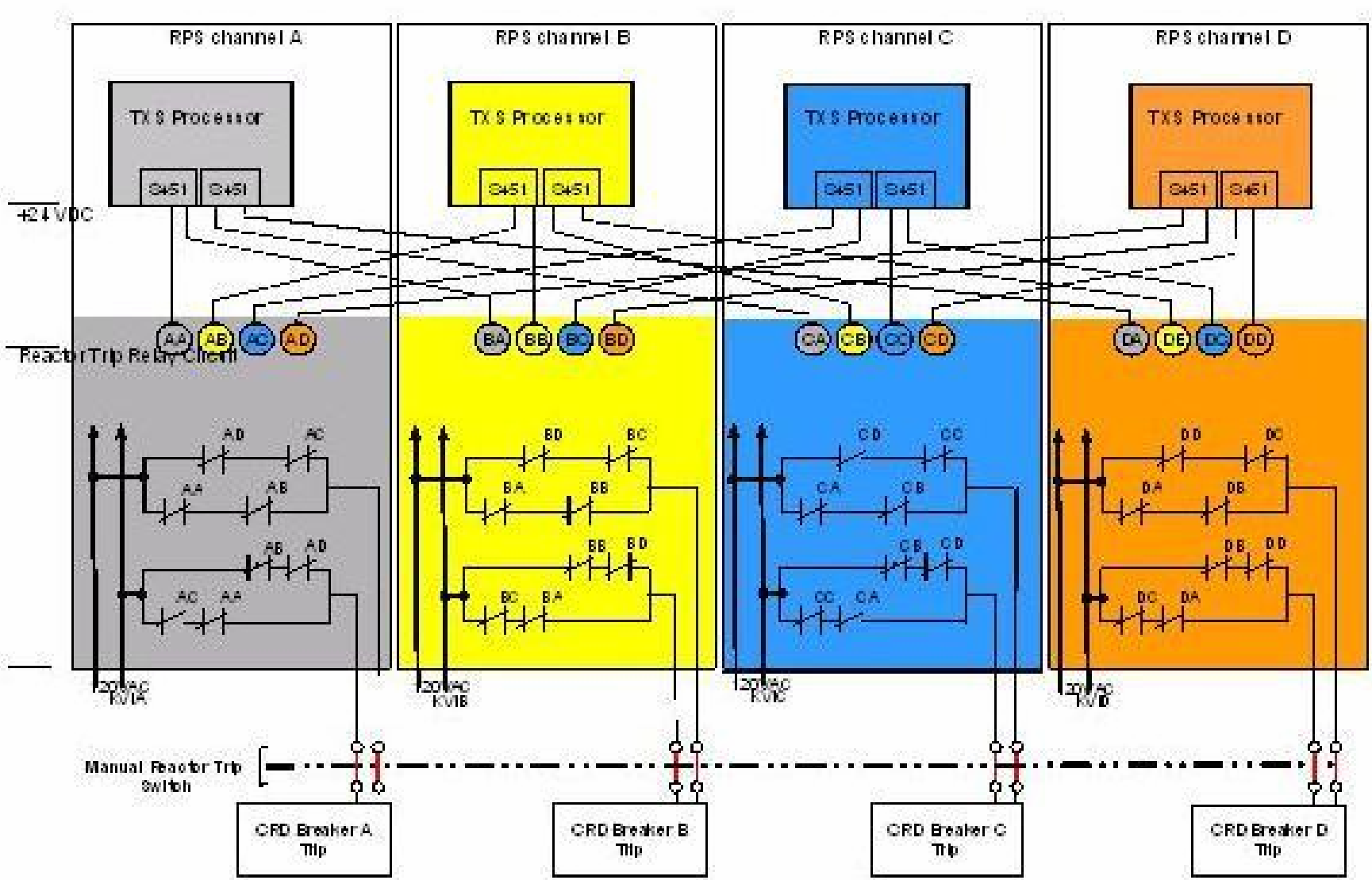
Changes to TXS Platform
Path Forward

- **Hardware Changes**
  - **Review is Complete**
  - **Sample of hardware test reports to be reviewed**
- **Software Changes**
  - **Review to be completed by April 2009**
  - **Sample of software changes to be reviewed**
- **Procedure Changes**
  - **Review is Complete**
  - **Sample of procedure changes to be reviewed**

Overall Summary

- **Summarize path forward D3**
  - **Duke has provided all of the necessary documentation to support the Oconee D3 Position.**
  - **The Staff is reviewing this documentation and is in the process of drafting the Diversity (D3) portion of the Safety Evaluation.**
- **Summarize path forward Communications**
  - **The NRC review staff is currently documenting the evaluation for each of these 20 ISG#4 positions in regard to the Oconee Design.**
  - **The Staff needs to evaluate the NetOptics device technical basis.**
- **Summarize path forward TXS Changes**
  - **The review of the hardware and procedure changes is complete**
  - **Review of the software changes is still in progress**
  - **Samples of the changes will be reviewed.**

Backup Slides
RPS Relay Voting



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Options to Revise Radiation Protection Regulations

SECY-08-0197

Advisory Committee on Reactor Safeguards
February 6, 2009

Kimyata Morgan Butler, Ph.D.
Office of Federal and State Materials and Environmental Management Programs

Background

- **NRC Staff Information briefing to ACRS on November 6, 2008**
  - **Presentation of background information on ICRP recommendations, radiation protection**
  - **Discussion of staff identified technical issues in 10 CFR Part 20 and 10 CFR Part 50**
- **SECY-08-0197, December 18, 2008, is publically available.**

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SECY-08-0197

- Policy Issue Notation Vote paper provided to Commission on December 18, 2008
- Provides Options for next steps regarding NRC radiation protection standards
- Provides Background on technical issues in 10 CFR Part 20 and 10 CFR Part 50
- Recommends Commission approval for staff to undertake stakeholder dialogue and technical basis development

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Regulatory Options

- **Options include:**
  - **No Action**
  - **Update 10 CFR Part 50 and Part 50 Appendix I**
  - **Engage Stakeholders & Develop Technical Basis to Increase Alignment of NRC Radiation Protection Framework with ICRP 103**
- **Factors considered**
  - **Schedule for technical information**
  - **New reactor licensing**
  - **Other issues that may be raised outside ICRP changes**
  - **Resources**

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Option 1: No Action

- Commission concludes there is no need for changes in any of the current regulations
- Pros
  - No resources needed
- Cons
  - Not responsive to current scientific information
  - Regulations remain inconsistent
  - Does not improve international consistency
  - Nuclear Power industry has stated preference to update requirements

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Option 2: Update Part 50

- Commission concludes there is no basis to update Part 20, but agrees to update Part 50 and Part 50 Appendix I to current Part 20 methodology
- Pros
  - Reduced burden for nuclear power by improving consistency between Part 20 and Part 50
- Cons
  - Not responsive to current scientific information
  - Does not improve international consistency
  - Only partially responsive to industry interest

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Option 3: Engage Stakeholders & Develop Technical Basis

- Commission concludes there is sufficient basis to continue dialogue and develop technical basis
- Pros
  - Starts process that could improve scientific basis, improve internal regulatory consistency, and increase international consistency
  - Engages stakeholders early to identify issues, and solutions, before beginning rulemaking
- Cons
  - Resources necessary for stakeholder engagement and technical basis development

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Staff Recommendation

- Option 3, begin process of moving towards greater degree of alignment
- Begin stakeholder dialogue with stakeholder communities on technical issues and options
- Begin technical basis development Interact with other Federal and State Agencies to foster consistency in directions and approach
- Provide recommendations for rulemaking when technical basis available

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Questions?

Questions?

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Background Materials

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Background

- Most recent rulemaking to incorporate the recommendations of the ICRP into 10 CFR 20 was completed in 1991, and was based primarily on ICRP Publications 26 (1977)
- Regulations that contained explicit dose criteria, rather than cross-references to Part 20, were not updated in 1991, and remain based primarily on ICRP Publications 1 (1958) and 2 (1959)

Background (continued)

- NRC staff recommended in 2001 that the Commission wait for next set of ICRP recommendations, and begin Technical Basis development
- Commission agreed in April 2002, but did not approve Technical Basis efforts
- ICRP Recommendations published in December 2007, as Publication 103, following considerable public consultation

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Considerations

- Numerous inquiries to Commission and Staff about the status of updates to U.S. radiation protection regulations
- Globalization of economy and industry places greater importance on regulatory consistency
- Other countries and international organizations already starting process of update
- Interest from nuclear power industry to update standards and increase consistency

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Initial Interactions

- Staff has engaged States, nuclear industry, medical community, ACRS, ACMUI
- General agreement that updates and modifications are warranted
- Impacts of technical issues are highly dependent upon approach taken for resolution
- Lack of information for some licensee segments, particularly industrial and medical
- States will use revision as basis to regulate both AEA and non-AEA radiation activities

Technical Issues for Part 20

- Total Effective Dose
- Constraints
  - Occupational Exposure
  - Public Exposure
- Dose limits
  - Occupational
  - Public
  - Embryo/fetus of Declared Pregnant Woman
- Numerical values of weighting factors and Appendix B

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Technical Issues Part 50, App I

- Align App. I criteria concepts with Part 20
- Reconsider criteria in Sect. II.A, II.B, and II.C
- Update definition of dose receptors in Sect. II and IV
- Update cost-benefit criteria in Sect. II.D
- Assess whether Sect. I and V need qualifiers, i.e., existing fleet of reactors vs. new plants

Technical Issues Part 50, App I

- Revise Sect. I in differentiating applicability between LWR, Non-LWR, and NGNP
- Redefine compliance requirements for “licensed operation” for sites with multiple licensees
- Assess whether compliance with 40 CFR Part 190 needs further elaboration in Part 20 or guidance

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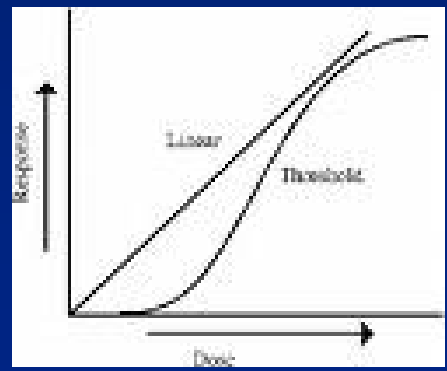
ICRP Publication 103

- Consolidated material from ICRP Publication 60 and subsequent publications
- Maintained fundamental principles of:
  Justification, Optimization, and Limitation
- Radiation risk remains as ~ 5 x 10^{-4} per rem
- LNT for prospective radiation control programs



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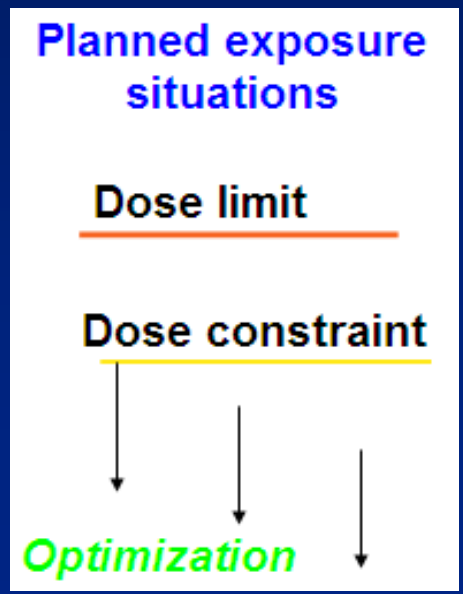
ICRP Publication 103

- Moved to a “situation” based framework
  - Planned Exposure Situations
  - Emergency Exposure Situations
  - Existing Exposure Situations
- Emphasized Optimization using Dose Constraints
- Retained Dose Limits and values
  - Occupational Exposure: 10 rem / 5 years, max of 5 rem in any one year
  - Public Exposure: 100 mrem
  - Embryo/Fetus: 100 mrem



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ICRP Continuing Work

- Assessment of new scientific information has resulted in new tissue and radiation weighting factors
- Efforts now underway to calculate new dose conversion factors using updated models and information
- Commonly used radionuclides to be available in 2011 ... Complete set 2014

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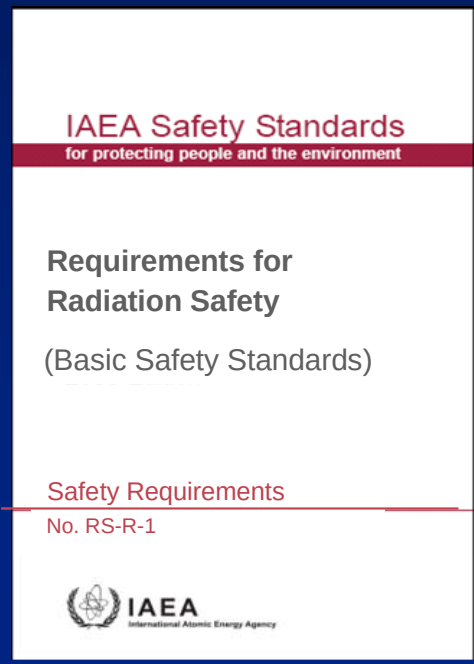
International Standards Work

- **IAEA continuing revision of Basic Safety Standards.**
  - **Draft reviewed by RASSC in November**
  - **Additional drafting in topical meetings**
  - **Further review at RASSC in June, 2009**
  - **Eventual Member State comment**
- **Draft moves to adopt ICRP Recommendations**



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International Standards Work

- **Revision of Euratom Basic Safety Standards**
  - **Revision of BSS Directive 96/29**
  - **Incorporate new ICRP recommendations**
  - **Consolidate all existing legislation**
  - **Integration of natural and artificial sources**
  - **Protection of the Environment**
- **Draft to Article 31 Group of Experts Plenary October, 2009**

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