



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

October 23, 2009

MEMORANDUM TO: ACRS Members

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

SUBJECT: CERTIFICATION OF THE MEETING MINUTES FROM
 THE ADVISORY COMMITTEE ON REACTOR
 SAFEGUARDS 562nd FULL COMMITTEE MEETING
 HELD ON MAY 7-9, 2009 IN ROCKVILLE, MARYLAND

The minutes of the subject meeting were certified on May 20, 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

May 20, 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 562nd MEETING OF THE ADVISORY
COMMITTEE ON REACTOR SAFEGUARDS (ACRS),
MAY 7-9, 2009

I certify that based on my review of the minutes from the 562nd 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	05/ 20 /09	05/ 20 /09

OFFICIAL RECORD COPY

CERTIFIED

Date Certified: 05/20/2009

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During its 562nd meeting, May 7-8, 2009, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following report, letter, and memoranda:

REPORT

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

- Proposed Resolution of Generic Safety Issue - 163, "Multiple Steam Generator Tube Leakage," dated May 20, 2009

LETTER

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

- Draft Final Regulatory Guide 1.214 (DG-1212), "Response Procedures for Potential or Actual Aircraft Attacks," dated May 18, 2009

MEMORANDA

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

- Proposed Revisions to Regulatory Guides 1.34, 1.43, 1.44, 1.50, 1.84, 1.147, and 1.193, dated May 20, 2009
- Draft Final Regulatory Guides 1.47, 1.69, and 3.52, dated May 20, 2009
- ACRS Review of Steam Generator Action Plan Items, dated May 18, 2009

MINUTES OF THE 562nd MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

ROCKVILLE, MARYLAND

The 562nd meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on May 7-9, 2009. Notice of this meeting was published in the *Federal Register* on April 21, 2009 (72 FR 18263-18265). The purpose of this meeting was to discuss and take appropriate action on the items listed in the meeting agenda. The meeting was open to public attendance.

A transcript of selected portions of the meeting is available in the NRC's Public Document Room at One White Flint North, Room 1F-19, 11555 Rockville Pike, Rockville, Maryland. Copies of the transcript are available for purchase from Neal R. Gross and Co., Inc., 1323 Rhode Island Avenue, NW, Washington, DC 20005. Transcripts are also available at no cost to download from, or review on, the Internet at <http://www.nrc.gov/ACRS/ACNW>.

ATTENDEES

ACRS Members: Dr. Mario Bonaca (Chairman), Dr. Said Abdel-Khalik (Vice-Chairman), Mr. J. Sam Armijo (Member-at-Large), Dr. George E. Apostolakis, Dr. Sanjoy Banerjee, Dr. Dennis Bley, Mr. Charles Brown, Dr. Michael Corradini, Mr. Otto L. Maynard, Dr. Dana A. Powers, Mr. Harold Ray, Dr. Michael Ryan, Dr. William Shack, Mr. John Sieber, and Mr. John Stetkar.

I. Chairman's Report (Open)

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

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

II. Proposed Rule on Risk-Informed Changes to Loss-of-Coolant Accident Technical Requirements

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

The Committee met with representatives of the NRC staff to discuss the revised proposed rule to amend Parts 50 and 52 to redefine large break loss-of-coolant accidents. The revised rule would establish a conservative transition break size (TBS) for pressurized water and boiling water reactors. Breaks larger than TBS would be considered beyond design basis; however, mitigation requirements would be retained for defense-in-depth and system reliability. In November 2005, the original proposed rule was published in the Federal Register. The Committee commented on the draft final rule in November 2006. During the May 2009 briefings staff provided an overview of the revised proposed rule and described the changes made in response to ACRS comments. The staff plans to reissue the entire rule for public comment in June 2009 and then provide the final rule to the commission in June 2010. The Committee decided that no report is warranted at this time. The Committee plans to review the draft final version of rule after the public comment period.

III. Proposed Resolution of Generic Safety Issue (GSI-163), "Multiple Steam Generator Tube Leakage"

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

The Committee met with representatives of the NRC staff to discuss the proposed resolution of GSI-163. The NRC initiated GSI-163 to address a concern of an NRC staff member in a Differing Professional Opinion (DPO) in 1991. The principal assertion addressed by GSI-163 was the potential for multiple steam generator (SG) tube leaks during a non-isolatable main steam line break (MSLB) outside containment to lead to core damage as a result of loss of all primary system coolant and safety injection fluid in the refueling water storage tank. Consequently, the integrity of the SG tubes must be ensured with high confidence.

The NRC staff evaluated the adequacy and effectiveness of industry practice and regulatory requirements related to the management of SG tube integrity to ensure that all tubes will exhibit acceptable structural margins against burst or rupture under normal operating conditions and Design Basis Accidents (DBAs). The staff indicated that new performance-based technical specification requirements are in place at all US PWRs. Furthermore, licensees are required to make projections of acceptable tube behavior over the interval between SG tube inspections. Operating experience also shows that effective management of SG tube integrity can be achieved through a performance-based strategy focused on satisfying tube integrity performance criteria.

The staff concluded that the technical specification requirements related to SG tube integrity provide reasonable assurance that all tubes will exhibit acceptable structural margins against burst or rupture under normal operating conditions and DBAs, including MSLB, and that leakage from one or multiple tubes under DBAs will be limited to very small amounts, consistent with the applicable regulations for offsite and control room dose. The staff concluded that the GSI-163 principal assertion and related concerns in the DPO are not substantiated and that GSI-163 should be closed. The Committee issued a report to the NRC Chairman on this matter, dated May 20, 2009, recommending that GSI-163 be closed.

IV. Draft Final Regulatory Guide 1.214 (DG-1212), "Response Procedures for Potential or Actual Aircraft Attacks"

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

The Committee met with representatives of the NRC staff to discuss draft final Regulatory Guide (RG) 1.214, "Response Procedures for Potential or Actual Aircraft Attacks." This Guide provides guidance for implementing requirements in 10 CFR 50.54(hh)(1) that was published on March 26, 2009. The Commission has determined that an aircraft attack is a beyond design basis threat; however mitigative measures are required for adequate protection of the public. This Guide provides one acceptable method for licensees and applicants to develop, implement, and maintain procedures for contingency actions in case of a potential or actual aircraft attack.

The staff discussed various actions required by 10 CFR 50.54(hh)(1) and the corresponding guidance in RG 1.214. The staff described the steps taken to develop the document, including coordination with stakeholders and other government agencies involved in this type of emergency response. The staff also described the current process for monitoring, communication, and notification to ensure threat authentication and follow-up action.

The Committee issued a letter to the Executive Director for Operations on this matter, dated May 18, 2009, recommending that Regulatory Guide 1.214 be issued after it is revised to emphasize the need for site specific mitigation strategies. The Committee also recommended that the staff review the use of the word "possible" throughout the document and revise the text where it sets unreasonable expectations.

V. Status and Update Concerning Revisions to the AP1000 Design Control Document

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

The Committee met with representatives of the NRC staff, Westinghouse Electric Company, and the NuStart Energy Consortium to discuss the latest amendments to the AP1000 Design Control Document (DCD). In January 2006, the NRC staff certified the AP1000 DCD that describes the standard plant design. During the 2007-2008 period, Westinghouse submitted new amendments to the AP1000 DCD to the NRC. The staff has subsequently been engaged in a review of those amendments, and complemented this review with meetings involving both Westinghouse and Nustart Energy consortium utilities comprising the AP1000 design center group.

The Westinghouse/NuStart representatives provided the Committee with an overview of the latest amendments to the currently certified design. The Westinghouse-proposed changes are expected to be extensive, and several involve Tier 1 information which will prompt the need for an NRC rulemaking at a later date. It is also expected that many of the proposed changes reflect Westinghouse's marketing of the AP1000 design both domestically as well as abroad. Westinghouse currently has contracts in-place with utilities for six AP1000-based reactors with more contracts expected in the future. The Bellefonte site is the currently designated reference Combined License Application (RCOLA) for the AP1000 design. NuStart representatives noted that they are in the process of transitioning this designation to the Vogtle site.

The staff described its plans for reviewing the latest amendments to the AP1000 DCD. The staff's design certification process includes ACRS review of the draft Safety Evaluation Report (SER) with open-items. Three ACRS Subcommittee meetings on the AP1000 DCD draft SER are currently scheduled for the balance of calendar year 2009. This was an information briefing. No Committee action was necessary.

VI. Subcommittee Report

Safety Research Program Subcommittee Report

The Chairman of the Subcommittee on the Safety Research Program provided a report to the Committee summarizing the results of the April 16–17, 2009, meeting with the NRC staff on the Seismic Safety Research Program Plan. The staff published this Plan in 2008 describing specific products and activities intended to provide improved information on seismic hazard characterization and the treatment of those hazards in siting and design decisions for new nuclear power plants. To help place this Program Plan in context, the Subcommittee was briefed on the user needs that form the technical basis for the work that has been identified. The Program Plan identifies about 40 products and activities. The Subcommittee learned that about 17 of these are currently under way to varying degrees. The Subcommittee was also briefed on the status of two of the research activities in progress as well as the U.S. Department of Energy (DOE) experience (including lessons-learned) related to the use of probabilistic methods in evaluating the seismic safety of defense-related nuclear facilities. The Committee will provide comments and recommendations regarding the Seismic Safety Research Program Plan as part of its review of the NRC Research Program Plan in March 2010.

VII. Quality Assessment of Selected Research Projects

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

The Committee discussed the status of the ACRS Panels' review of the quality assessment of the NRC research projects on the following topics: NUREG/CR-6964, "Crack Growth Rates and Metallographic Examinations of Alloy 600 and Alloy 82/182 from Field and Laboratory Materials Testing in PWR Environments," and Draft NUREG/CR-XXXX, "Diversity Strategies for Nuclear Power Plant Instrumentation and Control Systems." The Committee plans to discuss the results of Panels' reviews of the above projects during its meeting on June 3-5, 2009.

VIII. 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 April 1, 2009, to comments and recommendations included in the March 13, 2009, ACRS letter on Draft Final Rule 10 CFR 50.61a, "Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events." The Committee decided that it was satisfied with the EDO's response.
- The Committee considered the EDO's response of April 14, 2009, to comments and recommendations included in the February 23, 2009, letter on Draft Final NUREG-1855, "Guidance on the Treatment of Uncertainties Associated with Probabilistic Risk Assessments 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." The Committee decided that it was satisfied with the EDO's response.

B. Report of the Planning and Procedures Subcommittee Meeting

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

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

Anticipated Workload for ACRS Members

The anticipated workload for ACRS members through July 2009 were discussed and the objectives were to:

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

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 topics approved by the Commission is as follows:

+ Overview

- Accomplishments
- Future Plant Activities
- License Renewal/Power Upgrades
- Ongoing/Future Activities

+ Crediting Containment Accident Pressure in the NPSH Calculations

+ Pressurized Thermal Shock Rule

+ Digital I&C Matters

+ Options to Revise NRC Regulations Based on ICRP Recommendations/Progress on Recommendations of the Independent External Review Panel on the Materials Licensing Program

[NOTE: The second part of Item 5 related to Progress on Recommendations of the Independent Review Panel will be presented by Dr. Ryan as a member of the Independent External Review Panel on the Materials Licensing Program.]

Presentation slides on the above topics prepared by the staff engineers and approved by the cognizant members were sent to all members and the ACRS staff on April 29, 2009. The current slides reflect incorporation of the comments received. These slides will be provided to the Committee for discussion and approval at the May meeting.

ACRS Review of the Steam Generator Action Plan Items

NUREG-1740, "Voltage-Based Alternative Repair Criteria," documents the conclusions and recommendations of the ACRS associated with the Differing Professional Opinion (DPO) on steam generator tube integrity. Subsequent to the issuance of the NUREG report, the staff included the issues raised by the ACRS in NUREG-1740 in Section 3 of the Steam Generator Action Plan. In several reports and letters to the Commission and the EDO, the Committee stated that it looks forward to reviewing the details of the staff's response to the recommendations in NUREG-1740. The EDO agreed to provide updates to the Committee on the resolution of the ACRS concerns in NUREG-1740. In its May 21, 2004 letter, the Committee provided its views on the adequacy of the staff's resolution of certain issues in NUREG-1740. The staff is in the process of resolving the issues in the Steam Generator Action Plan. Because of the significant changes in management and staff, Dr. Powers proposes that we remind the staff of the following:

The staff should provide the resolution package of those issues identified in Section 3 of the Steam Generator Action Plan for ACRS review prior to closing them out. The staff should provide an opportunity to the Committee to review the resolution of other Steam Generator Action Plan items prior to declaring them closed.

Assignment of Core Members to the ACRS Subcommittees

During the January 2009 retreat, the members discussed assignment of core members to the ACRS Subcommittees. Such an assignment will not prohibit the members from attending any Subcommittee meetings of interest to them. These assignments and the revised Subcommittee tasks will be sent to the members following the May ACRS meeting. It will be submitted to the full Committee for approval during the June meeting.

Webstreaming of the ACRS Meeting

During its April 2009 meeting, the Committee discussed the March 6, 2009 Staff Requirements Memorandum in which the Commission stated that:

If the ACRS decides to pursue Webstreaming of ACRS meetings, the ACRS should prepare a proposed plan reflecting their interests, in consultation with the Office of Administration (ADM).

Subsequent to the meeting, the ACRS staff (Jenny et. al) met with representatives of ADM to gather additional information, as requested by the members, for use by the Committee in making a decision whether to pursue webstreaming of ACRS meetings. The information gathered is provided below.

ADM is currently preparing a Statement of Work (SOW) for a new contract that will probably be signed in late 2009. ADM will be the primary point of contact for the agency-wide (including Regions) Webstreaming services. In the contract, ADM will include the new ACRS conference room (T2-B1), Commissioners' Conference Room, and the Auditorium such that these rooms will be equipped for Webstreaming of meetings.

The SOW will specify that the contractor provide support for Webstreaming of 100 meetings per year. ACRS can choose the number of meetings it wants to webstream. Since the capability for webstreaming concurrent meetings does not exist at this time, only one of the Agency meetings will be webstreamed at any given time. If decided to participate, the Committee should consider participating in the webstreaming program under the agency-wide contract managed by ADM rather than sharing the ASLBP webstreaming contract.

Regulatory Guides

a. Draft Final Regulatory Guides

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

Draft Final Revision 1 to Regulatory Guide 1.69, "Concrete Radiation Shields and Generic Shield Testing for Nuclear Power Plants"

Draft Final Revision 1 to Regulatory Guide 1.69 endorses American National Standards Institute (ANSI)/ American Nuclear Society (ANS) Standard 6.3.1-1987; R2007, which describes a test program to be used in evaluating biological radiation shielding in nuclear reactor facilities under

normal operating conditions, including anticipated operational occurrences, with some exceptions. Also, ANSI/ANS-6.4-2006, American Concrete Institute (ACI) 349-06, and ACI 349.1R-07 are acceptable for the construction of radiation shielding structures of hot laboratories, radiochemical plants, experimental facilities, nuclear fuel fabrication plants, and the shielding structures for nuclear power plants, with a few exceptions. Section C.1 lists specific guidelines for the combined use of the above standards in the design and construction of the concrete radiation shields for nuclear power plants. Section C.2 lists the specific provisions of the above standards that the NRC has not endorsed. As a result of public comments this version includes a sentence under section C. Regulatory Position, item 2, first paragraph, indicating that "It is not required that the software be updated regularly." In addition, item (f) under the same Section was deleted.

Draft Final Revision 2 to Regulatory Guide 3.52, "Standard format and Content for the Health and Safety Sections of License Renewal Applications for Uranium Processing and Fuel Fabrication"

Draft Final Revision 2 to Regulatory Guide 3.52 endorses the methods and procedures for evaluation and verification of the licensing of special nuclear material (SNM) detailed in NUREG-1520, "Standard Review Plan for the Review of a License Application for a Fuel Cycle Facility," as a process that the NRC has found acceptable for meeting the regulatory requirements. NUREG-1520 addresses the health, safety, and environmental protection requirements of 10 CFR Part 20, "Standards for Protection against Radiation," and 10 CFR Part 70, "Additional Requirements for Certain Licensees Authorized to Possess a Critical Mass of Special Nuclear Material," including the accident safety requirements reflected in Subpart H. NUREG-1520 describes the scope, level of detail, and acceptance criteria for reviews.

Based on his review of these Guides, Dr. Ryan recommends that the Committee not review these Guides.

Draft Final Revision 1 to Regulatory Guide 1.47, "Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems"

The previous version of Regulatory Guide 1.47 endorsed the (IEEE) standard 279-1971, which has since been withdrawn by the IEEE. The proposed Draft Final Revision 1 to Regulatory Guide 1.47 identifies the differences between IEEE 279-1971 and IEEE 603-1991 and endorses IEEE 603-1991. IEEE 603-1991 is specifically referenced in 10 CFR 50.55 a, "Codes and Standards," and is more explicit than IEEE 279-1971. Regulatory Guide 1.47, Revision 0, Regulatory Positions C.3 and C.4 are now explicitly present in IEEE 603-1991. Therefore, these positions have been removed. A new position with respect to digital instrumentation and controls has been added. This new position states that a consistent means of indication should be provided for detection of any inoperable condition of a portion of a digital safety system or subsequent automatic compensatory action that results in bypass or inoperable condition of a portion of a digital safety. Revision 1 also incorporates guidance from Branch Technical Position 8-5, "Supplemental Guidance for Bypass and Inoperable Status Indication for Engineered Safety Features Systems."

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

Proposed Regulatory Guides

The staff plans to issue the following Draft Regulatory Guides (DGs) for public comment and would like to know whether the Committee wants to review this document prior of being issued for public comment.

Proposed Revision 35 to Regulatory Guide 1.84 (DG 1191), "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III"

The staff issued RG 1.84 in October 2007. Regulatory Guide 1.84 lists all Section III Code Cases that the NRC has approved for use. For Revision 35 of the guide, the NRC reviewed the Section III Code Cases listed in Supplements 2-11 to the 2004 Edition of the ASME BPV Code and Supplement 0 to the 2007 Edition (Supplement 0 also serves as Supplement 12 to the 2004 Edition) (except for Code Cases pertaining to high-temperature gas-cooled reactors; certain requirements in Section III, Division 2, not endorsed by the NRC; liquid metal; and submerged spent fuel waste casks). Appendix A to this guide lists the supplements reviewed, the applicable edition, and the date on which each supplement was approved by the ASME Board on Nuclear Codes and Standards. Appendix B is a list of the Section III Code Cases addressed in the eleven supplements. Finally, Appendix C is a current list of all Section III Code Cases. Code Cases provide alternatives to existing Code requirements that the ASME developed and approved. The new Code Cases and revisions to existing Code Cases listed as approved in Tables 1 and 2 of this guide are incorporated by reference into 10 CFR 50.55a. Code Cases approved by the NRC may be used voluntarily by licensees as an alternative to compliance with ASME Code provisions that have been incorporated by reference into 10 CFR 50.55a. Requirements related to Code Case implementation are provided in 10 CFR 50.55a(b). When a licensee initially applies a Code Case listed in Tables 1 or 2, the licensee must implement the most recent version of that Code Case incorporated by reference in 10 CFR 50.55a. The respective proposed revised rule is in the process to be issued for public comment. This guide is to be issued at the same time for public comment.

Proposed Revision 16 to Regulatory Guide 1.147 (DG 1192), "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1"

The staff issued RG 1.147 in October 2007. For Revision 16 of Regulatory Guide 1.147, the NRC reviewed the Section XI Code Cases listed in Supplements 2 through 11 to the 2004 and Supplement 0 published with the 2007 Edition (Supplement 0 also serves as Supplement 12 to the 2004 Edition) of the ASME BPV Code. Appendix A to this guide lists the supplements reviewed, the edition, the supplement number, and the date on which the supplement was approved by the ASME Board on Nuclear Codes and Standards. Appendix B is a list of the Section XI Code Cases published by the ASME in the eleven supplements. Finally, Appendix C is a current list of all Section XI Code Cases. When a licensee initially implements a Code Case, 10 CFR 50.55a requires that the most recent version of that Code Case as listed in Tables 1 and 2 be implemented. If a Code Case is implemented by a licensee and a later version of the Code Case is incorporated by reference into 10 CFR 50.55a and listed in Tables 1 and 2 during the licensee's present 120-month ISI program interval, that licensee may use either the later

version or the previous version. An exception to this provision would be the inclusion of a limitation or condition on the use of the Code Case that is necessary, for example, to enhance safety. Licensees who choose to continue use of the Code Case during the subsequent 120-month ISI program interval will be required to implement the latest version incorporated by reference into 10 CFR 50.55a and listed in Tables 1 and 2. The respective proposed revised rule is in the process to be issued for public comment. This guide is to be issued at the same time for public comment.

Proposed Revision 3 to Regulatory Guide 1.193 (DG 1193), "ASME Code Cases not Approved for Use"

The NRC staff has reviewed Section III and Section XI Code Cases listed in Supplements 2-11 to the 2004 Edition, and Supplement 0 to the 2007 Edition of the ASME BPV Code. It should be noted that Supplement 0 to the 2007 Edition also serves as Supplement 12 to the 2004 Edition. Draft Revision 35 of Regulatory Guide 1.84, "Design, Fabrication, and Materials Code Case Acceptability, ASME Section III" (Ref. 4), and Draft Revision 16 of Regulatory Guide 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1" (Ref. 5), have been published concurrently with this guide to identify the Code Cases that the NRC has determined to be acceptable alternatives to applicable parts of Section III and Section XI.

For this guide, the NRC reviewed the Section III and Section XI Code Cases listed in Supplements 2-11 to the 2004 Edition, and Supplement 0 to the 2007 Edition of the ASME BPV Code. Licensees may not implement Code Cases listed in this guide without prior NRC approval. The respective proposed revised rule is in the process to be issued for public comment. This guide is to be issued at the same time for public comment.

Based on his review of these Proposed Regulatory Guides, Dr. Shack recommends that the Committee review the draft revisions final revision to Regulatory Guides 1.84, 1.147, and 1.193 after reconciliation of public comments.

Proposed Revision 1 to Regulatory Guide 1.43 (DG 1221), "Control of Stainless Steel Weld Cladding of Low-Alloy Steel Components"

The NRC initially issued Regulatory Guide 1.43, "Control of Stainless Steel Weld Cladding of Low-Alloy Steel Components," in May 1973. The guidance does not reflect changes in the ASME Boiler and Pressure Vessel Code since 1973. Therefore, revision of this regulatory guidance is necessary to reflect updates in the ASME Code. Controls should be exercised to limit the occurrence of underclad cracking in low-alloy steel safety-related components clad with stainless steel. Welding processes that induce underclad cracking by generating excessive heating and promoting grain coarsening in the base metal should not be used for cladding any grade of material that has a known susceptibility to underclad cracking. Welding procedures used for cladding these grades of material should be qualified for use to demonstrate that underclad cracking is not induced. These controls need not be applied to the cladding of materials demonstrated to be resistant to underclad cracking, such as SA-533 Grade B Class 1 plate made to fine-grain practice and heat-treated to develop a fine-grained structure. Weld cladding practices used in the fabrication of low-alloy steel safety-related components should be conducted in accordance with the guidelines established in this RG.

Proposed Revision 1 to Regulatory Guide 1.50 (DG 1222), "Control Preheat Temperature for Welding of Low-Alloy Steel"

The NRC initially issued Regulatory Guide 1.50, "Control of Preheat Temperature for Welding of Low-Alloy Steel," in May 1973. The American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME B&PV Code), Section III, "Nuclear Power Plant Components,"¹ specifies certain requirements associated with manufacturing Code Class 1, 2, and 3 components. Section III requires adherence to Section IX, "Welding Qualifications," of the ASME B&PV Code, including the requirements governing procedure qualifications for welds. Review of the requirements of Section IX for procedure qualifications and the fabrication requirements of Section III indicates the desirability of supplementary requirements to ensure adequate control of welding variables in the production welding of low-alloy steels. The assurance of satisfactory welds in low-alloy steels can be increased significantly and, in particular, the propensity for cracks (cold cracks) or reheat cracks forming in underbead areas and heat-affected zones (HAZs) can be minimized by maintaining proper preheat temperatures on the base metals concurrent with controls on other welding variables. The guidance does not reflect changes in the ASME B&PV Code since 1973. Therefore, revision of this regulatory guidance is necessary to reflect updates in the ASME Code.

Proposed Revision 1 to Regulatory Guide 1.34 (DG 1223), "Control of Electroslag Weld Properties"

The NRC initially issued Regulatory Guide 1.34, "Control of Electroslag Weld Properties," in December 1972. Section III requires adherence to ASME Boiler and Pressure Vessel Code, Section IX, "Welding Qualifications," which includes the requirements for the procedure qualification for welds. Review of the requirements of the procedure qualification stated in Section IX indicates that supplementary requirements are desirable to provide assurance of adequate weld metal properties when the electroslag welding process is used. The guidance does not reflect changes in the ASME Boiler and Pressure Vessel Code since 1972. Therefore, revision of this regulatory guidance is necessary to reflect updates in the ASME Code.

Proposed Revision 1 to Regulatory Guide 1.44 (DG 1224), "Control of the Processing and Use of Stainless Steel"

The NRC initially issued Regulatory Guide 1.44, "Control of the Use of Sensitized Stainless Steel," in May 1973. The guidance does not reflect changes in the ASME Boiler and Pressure Vessel Code since 1973. Unstabilized, austenitic stainless steel of the AISI Type 3XX series used for components that are part of (1) the reactor coolant pressure boundary, (2) systems required for reactor shutdown, (3) systems required for emergency core cooling, and (4) reactor vessel internals that are relied on to permit adequate core cooling for any mode of normal operation or under credible postulated accident conditions should meet the criteria established in this RG. Therefore, revision of this regulatory guidance is necessary to reflect updates in the ASME Code.

Based on his review of these Proposed Regulatory Guides, Dr. Armijo recommends that the Committee review the draft final revisions to Regulatory Guides 1.43, 1.50, and 1.34, after reconciliation of public comments, and the proposed Revision 1 to RG 1.44 prior to issuing it for public comment.

Draft Template NEI-08-08, “Generic FSAR Template Guidance for Life-Cycle Minimization of Contamination,” and Draft ISG-006, “Evaluation and Acceptance Criteria for 10 CFR 20.1406 to Support Design Certification and Combined License Applications.”

Staff issued Regulatory Guide (RG) 4.21, “*Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning*,” in June 2008, providing guidance on meeting the requirements of 10 CFR 20.1406, “Minimization of Contamination.” 20.1406 was promulgated by NRC staff to prevent the recurrence of “legacy decommissioning sites,” where difficulties with longstanding contamination from nuclear materials have left some NRC-licensed facilities without a feasible path to meeting NRC license termination requirements. The Advisory Committee on Nuclear Waste & Materials reviewed the staff’s technical basis for 10 CFR 20.1406, as well as draft and final versions of RG 4.21.

NEI-08-08

The Nuclear Energy Institute (NEI) submitted NEI 08-08, “*Generic FSAR Template Guidance for Life-Cycle Minimization of Contamination*,” in December 2008. NEI-08-08 is intended to be part of the safety analysis report in a Combined License Application (COLA), and describes the content of operating programs/processes that will demonstrate compliance with 20.1406. NEI has asked NRC to endorse NEI-08-08 in accordance with the requirements of 10 CFR 50.4, consistent with the design-centered approach of NRC reviews of the new nuclear power plants so that only a single staff review is required of the majority of the FSAR information being submitted to demonstrate compliance with 20.1406.

ISG-006

The NRO Health Physics Branch is also developing Interim Staff Guidance (ISG) ISG-006 on “*Evaluation and Acceptance Criteria for 10 CFR 20.1406 to Support Design Certification and Combined License Applications*.” This document addresses the design requirements for meeting 20.1406 that are to be included in Design Certification Documents, and where needed, as site or plant-specific design features in a COLA where there is a deviation from the certified design. ISG-006 is intended to provide supplemental guidance to the NRC staff since the standard Review Plan (SRP) was revised before RG 4.21 was issued. The staff plans to incorporate ISG-006 into the next revision of the SRP.

Transition of NRC Travel Management Services to Call Centers

NRC has offered personal travel services at the Carlson Travel Management center previously located on the 9th floor of Two White Flint Building as a supplement to phone reservations. As a result of the eTravel implementation effort an online travel reservation booking tool is now available to all NRC travelers. Although NRC travelers can conduct all of their domestic travel business in eTravel, the NRC will continue to provide personalized travel services via Carlson Travel agents at their dedicated government call centers. Effective March 30, 2009, all NRC employees are to call Carlson toll free number 1-866-250-2160.

Third Quadripartite Working Group Meeting

Japan's Nuclear Safety Commission (NSC) will host the third Quadripartite Working Group (WG) Meeting in Tokyo tentatively scheduled for October 13-15, 2009 on the main topic of Digital I&C and an afternoon dedicated to Seismic Safety issues.

ACRS Members' Visit to Watts Barr, ORNL and Region II-July 28 thru 30, 2009

The ACRS Subcommittee on Plant Operations and Fire Protection plans to hold a meeting with the Region II Administrator on July 30, 2009 to discuss items of mutual interest. During the week of this meeting, ACRS members plan to visit Watts Bar site, meet with TVA management and NRC inspectors, and tour the ORNL facility. Itineraries for the Watts Bar and ORNL visits and proposed items to be covered during the meeting with Region II Administrator was discussed.

The meeting was adjourned at 12:00 noon on May 9, 2009.

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
562nd FULL COMMITTEE MEETING

May 7-9, 2009

PLEASE PRINT

TODAY'S DATE: May 7, 2009

<u>NAME</u>	<u>NRC ORGANIZATION</u>
1 RALPH LANDRY	NRC/DERA
2 Stephen Dinsmore	NRC/NRR/DRA
3 STEVEN A. LAUR	NRC/NRR/DRA
4 Tim Collins	NRR/DSS
5 Rob Traynor	RBS/DB
6 Alexander Fotigodis	NRR/DE
7 Glenn Brant	NRR/DRA
8 Ben Beasley	RES/DRA
9 John Kauffman	RES/DRA/OEGIB
10 Kevin Coyne	RES/DRA/PRAB
11 M GAVRILAS	NRR/DCI/CSGB
12 Michele EVANS	NRR/DCT
13 JOHN W. LUBINSKI	NRR/DCI
14 Asimios Malliakos	RES/DRA/OEGIB
15 Mehdi Reisi Fard	RES/DRA/OEGIB
16 PREM P. SAHAY	NRR/DE/EEEB.
17 BOB PALLA	NRR/DRA/APLA
18 Charles Harris	RES/DE/CMB
19 Selim Sancaktar	RES/DRA/PRAB
20 Ken Karwowski	NRC/NRR/DCT
21 Rachel Vaucher	NRC/NRR/ASA
22 Andrew Johnson	NRR/DCI/CSGB
23 Tina Ghosh	NRR/DRA/APLA
24 Doug Coe	RES/DRA
25 Allen Hsieh	NRR/DLA
26 Dennis Gordon	NRC/NSIR/DSP
27 Vince Williams	NRC/NSIR/DSP
28 Todd Hilsmeier	NRC/NRR/SPLB

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	<u>NAME</u>	<u>NRC ORGANIZATION</u>
1	Mohammed Shuaib	NRC / NSIR NSIR / OSP
2	David Dice	NRC / NSIR
3	Alan Shropshire	NRC / NSIR
4	William Goff	NRC / NSIR
5	Doug Hugel	NRC / NSIR
6	Stephanie Coffin	NRO / DNRL / NWE1
7	Erleen McKenna	NRO / DNRL / NWE2
8	Joe Sebrostky	NRO / DNRL / NWE1
9	Janelle B. Jessie	NRO / DNRL / NGE1
10	Sujata Goetz	NRO / DNRL / NWE1 NWE1
11	Tom Keven	NRO / DNRL / NCE1
12	David Terao	NRO / DE / CIB1
13	JOSEPH COLACCINO	NRO / DNRL / NARP
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	<u>NAME</u>	<u>AFFILIATION</u>
1	Carl Berger	Energetics
2	Maurice Conley	Platts/McGraw-Hill
3	Spyros Traiforou	LINK
4	Amy Aughtman	SNC
5	Rob Sisk	WEC
6	SKOWBANY	ENERCON
7	ED CUMMINS	WESTINGHOUSE
8	Wes Sparkman	SNC
9	Peter Hastings	Duke Energy / NuStart
10	RICHARD GRUMBIR	NUSTART
11	Andrea Sterdis	TVA
12	Thomas Spink	TVA
13	DAVE WATERS	PROGRESS Energy
14	Jack A. Bailey	TVA
15	Jean-Pierre BESTER	EDF
16	GORDON P. Arent	TVA
17	MATHEW Williams	NuStar
18	Eddie R Grant	NuStart
19	Ashok S. Bhattacharya	TVA
20	Dan Stout	TVA
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