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

May 7, 2002

The Honorable Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Dear Chairman Meserve:

SUBJECT: SUMMARY REPORT - 491st MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS, APRIL 11-12, 2002, AND OTHER RELATED ACTIVITIES OF THE COMMITTEE

During its 491st meeting, April 11-12, 2002, the Advisory Committee on Reactor Safeguards (ACRS) discussed several matters and completed the following reports. In addition, the Committee authorized Dr. John T. Larkins, Executive Director, ACRS, to transmit the memorandum noted below:

REPORTS:
The following reports were issued to Chairman Meserve, NRC, from George E. Apostolakis, Chairman, ACRS:

- GE Nuclear Energy Licensing Topical Report, NEDC-33004P, "Constant Pressure Power Uprate," dated April 17, 2002

- Report on the Safety Aspects of the License Renewal Application for the Turkey Point Nuclear Plant, Units 3 and 4, dated April 19, 2002

MEMORANDA:
The following memoranda were issued to William D. Travers, Executive Director for Operations, NRC, from John T. Larkins, Executive Director, ACRS:

- Draft Regulatory Guide DG-1118 (Proposed Revision 1 to Regulatory Guide 1.53), "Application of the Single-Failure Criterion to Safety Systems," dated April 16, 2002

- Criteria for the Treatment of Individual Requirements in a Regulatory Analysis, dated April 17, 2002

- Draft Final Amendment to 10 CFR 50.55a, "Codes and Standards," dated April 19, 2002

HIGHLIGHTS OF KEY ISSUES

1. Final Review of the Turkey Point License Renewal Application

The Committee heard presentations by and held discussions with representatives from the NRC staff and the Florida Power and Light Company (FPL) regarding the license renewal application for Turkey Point, Units 3 and 4, and the associated NRC staff's final safety evaluation report (SER). The staff and FPL representatives discussed the resolution of open items identified by the staff in draft SER, the management of the adverse effects of heat and moisture on medium and low-voltage nonenvironmentally qualified cables, the management of control rod drive housing cracking, and written comments from a member of the public regarding safety concerns with the continued operation of Turkey Point. Also, the staff provided its rationale for determining that components connecting the units to the offsite power source, including the startup transformers, are part of the licensing basis and must be included in the scope of license renewal.

Committee Action

The Committee issued a report dated April 19, 2002, recommending approval of the license renewal application for Turkey Point Nuclear Plant, Units 3 and 4.

2. Advanced Reactor Research Plan

The Committee heard presentations by and held discussions with representatives of the Office of Nuclear Regulatory Research (RES) regarding the draft advanced reactor research plan. The focus of the plan is on determining the critical information that will be needed to establish safety standards for new reactor designs. RES considers the plan to be a work in progress. Currently, the plan does not delineate the research that will be conducted by RES, but identifies the information gap that exists in terms of the tools and data that are necessary to review new reactor designs.

Committee Action

The Committee will continue to follow-up and interact with the NRC staff on this matter during future meetings.

3. CRDM Penetration Cracking and Reactor Pressure Vessel Head Degradation

The Committee heard presentations by and held discussions with representatives of the Nuclear Energy Institute, Electric Power Research Institute/Materials Reliability Program, Davis Besse, and the NRC staff, regarding NRC Bulletins 2001-01 and 2002-01. Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration (VHP) Nozzles," issued on August 3, 2001, requested information related to the structural integrity of the vessel head penetration nozzles. Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," issued on March 18, 2002, required information related to reactor pressure vessel head inspection and maintenance programs and the bases for continued operation until the inspections can be performed.

The presentations included the characterization of the degradation found at Davis-Besse in response to Bulletin 2001-01, the safety significance assessment at Davis-Besse, the preliminary results of the augmented inspection at Davis-Besse, the responses to Bulletin 2001-01, and the requirements of Bulletin 2002-01.

Committee Action

The Committee requested another briefing to discuss data to support the findings presented and to hear long-term plans for managing possible future degradation at nuclear power plants.

4. Westinghouse Owners Group (WOG) and Electric Power Research Institute (EPRI) Initiatives Related to Risk-Informed Inservice Inspection of Piping

The Committee heard presentations by and held discussions with representatives of the NRC staff concerning the draft safety evaluation of an addendum to EPRI Topical Report (EPRI-ISI-TR) that has already been approved by the staff. The intent of the addendum is to modify risk-informed inservice inspection programs to include break exclusion region (BER) piping sections or "no break zones" such as containment penetrations. A similar addendum is currently under review by the staff for the WOG RI-ISI program. The staff plans to issue a draft safety evaluation on the WOG addendum in late 2002. Therefore, the Committee members did not review the addendum to the WOG Topical Report at this time.

Committee Action

This was an information briefing and the Committee did not take any action. The Committee members agreed with the staff that the RES addendum was an appropriate extension of the previously approved EPRI Topical Report. The Committee plans to continue its review of future addendums to both the EPRI and the WOG Topical Reports on this subject.

5. General Electric (GE) Nuclear Energy Topical Report: "Constant Pressure Power Uprate"

The Committee heard presentations by and held discussions with representatives of GE Nuclear Energy and the NRC staff regarding GE's application for approval of its Licensing Topical Report (LTR), "Constant Pressure Power Uprate" (CPPU). The LTR is a process document that includes a methodology designed to simplify both a licensee's submittal and the NRC staff's review process pertaining to core power uprates for BWR plants. Pursuant to use of CPPU, several key operating parameters are held constant (e.g., reactor coolant system pressure and core flow, fuel mechanical design, etc.). Topics that can be disposed of generically are done so in a more process-efficient manner. Plant-specific review topics have also been evaluated to allow a more focused analysis approach.

Committee Action

The Committee issued a report dated April 17, 2002, recommending that GE's CPPU LTR be approved for application to BWR power increases of up to 20 percent of original licensed thermal power.

RECONCILIATION OF ACRS COMMENTS AND RECOMMENDATIONS

- The Committee discussed the response from the Executive Director for Operations (EDO) dated March 29, 2002, to the ACRS comments and recommendations included in the ACRS report dated February 14, 2002, concerning the review and evaluation of the NRC safety research program.

  The Committee decided that it was satisfied with the EDO's response.

- The Committee considered the response from the EDO dated March 22, 2002, to comments and recommendations included in the ACRS report dated February 14, 2002, concerning staff efforts regarding a reevaluation of the technical basis

for assurance of reactor vessel integrity under pressurized thermal shock (PTS) conditions.

The Committee was satisfied with the EDO's response.

OTHER RELATED ACTIVITIES OF THE COMMITTEE

During the period from March 7 through April 9, 2002, the following Subcommittee meetings were held:

- Plant License Renewal - March 13, 2002

The Subcommittee reviewed the NRC staff's final Safety Evaluation Report related to the license renewal of Turkey Point Nuclear Power Plant, Units 3 and 4.

- Planning and Procedures - April 9, 2002

The Subcommittee discussed proposed ACRS activities, practices, and procedures for conducting Committee business and organizational and personnel matters relating to ACRS and its staff.

- Materials and Metallurgy, and Plant Operations - April 9, 2002

The Subcommittees held discussions regarding issues related to the investigation of control rod drive mechanism (CRDM) penetration cracking and reactor pressure vessel head degradation.

LIST OF MATTERS FOR THE ATTENTION OF THE EDO

- The Committee plans to review the draft final version of Regulatory Guide DG-1118 (proposed Revision to Regulatory Guide 1.53), "Applicability of the Single-Failure Criterion to Safety Systems," after reconciliation of public comments.

- The Committee plans to review the incorporation of proposed criteria for treatment of individual requirements in regulatory analysis prior to being issued for public comment.

- The Committee plans to hear a briefing on the generic resolution of voids in the concrete containment walls during the June 6-8, 2002 ACRS meeting, as committed by the staff.

- The Committee plans to review further developments to the Advanced Reactor Research Plan during future meetings.

- The Committee plans to continue its review of future addendums to the EPRI and WOG topical reports associated with risk-informed inservice inspection of piping during future meetings.

- The Committee plans to hear a briefing from the staff regarding the data to support the findings of the reactor vessel head degradation investigations and long-term plans for managing possible future degradation of reactor pressure vessel head at nuclear power plants during a future meeting.

PROPOSED SCHEDULE FOR THE 492nd ACRS MEETING

The Committee agreed to consider the following topics during the 492nd ACRS meeting, May 2-4, 2002:

- Brunswick Steam Electric Plant, Units 1 & 2 Core Power Uprate
- Expert Panel Recommendations on Source Term for High Burnup and Mixed Oxide (MOX) Fuel
- Confirmatory Research Program on High Burnup Fuel
- Safeguards and Security Activities (Closed)
- PHEBUS-FP, PHEBUS-2K and PHEBUS-LOCA International Projects

Sincerely,

George E. Apostolakis
Chairman

CERTIFIED

Date Issued: 5/14/2002
Date Certified: 5/22/2002

TABLE OF CONTENTS
MINUTES OF THE 491st ACRS MEETING

APRIL 11-12, 2002

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MEMORANDA

The following memoranda were issued to William D. Travers, Executive Director for Operations, NRC, from John T. Larkins, Executive Director, ACRS:

- Draft Regulatory Guide DG-1118 (Proposed Revision 1 to Regulatory Guide 1.53), "Application of the Single-Failure Criterion to Safety Systems," dated April 16, 2002

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APPENDICES

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MINUTES OF THE 491st MEETING OF THE
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
APRIL 11-12, 2002
ROCKVILLE, MARYLAND

The 491st meeting of the Advisory Committee on Reactor Safeguards (ACRS) was held in Conference Room 2B3, Two White Flint North Building, Rockville, Maryland, on April 11-12, 2002. Notice of this meeting was published in the *Federal Register* on March 29, 2002 (65 FR 15256) (Appendix I). The purpose of this meeting was to discuss and take appropriate action on the items listed in the meeting schedule and outline (Appendix II). The meeting was open to public attendance. There were no written statements or requests for time to make oral statements from members of the public regarding the meeting.

A transcript of selected portions of the meeting is available in the NRC Public Document Room at the One White Flint North Building, Mail Stop 1F-15, Rockville, MD, 20852-2738. [Copies of the transcript are available for purchase from Neal R. Gross and Co., Inc., 1323 Rhode Island Avenue, NW, Washington, DC 20005-3701, and on the ACRS/ACNW Web page at (www.NRC.gov/ACRS/ACNW).]

ATTENDEES

ACRS Members: ACRS Members: Dr. George Apostolakis (Chairman), Dr. Mario V. Bonaca (Vice Chairman), Dr. F. Peter Ford, Dr. Thomas S. Kress, Mr. Graham M. Leitch, Dr. Dana A. Powers, Mr. Stephen L. Rosen, Dr. William J. Shack, and Mr. John D. Sieber. Dr. Graham B. Wallis did not attend this meeting. For a list of other attendees, see Appendix III.

I. Chairman's Report (Open)

[Note: Dr. John T. Larkins was the Designated Federal Official for this portion of the meeting.]

Dr. George E. Apostolakis, Committee Chairman, convened the meeting at 8:30 a.m. and reviewed the schedule for the meeting. He summarized the agenda topics for this meeting and discussed the administrative items for consideration by the full Committee.

II. Final Review of the Turkey Point License Renewal Application (Open)

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

Dr. Mario Bonaca, Chairman of the Plant License Renewal Subcommittee, stated that the Subcommittee held a meeting on the Turkey Point license renewal application (LRA) on March 13, 2002, at the Turkey Point site. He stated that concerns had been raised by two members of the public regarding voids that had been found in Turkey Point concrete containment during the 1980's. During the March 13th meeting, the applicant explained to the Subcommittee how the issue had been addressed by Turkey Point. As a result, the Subcommittee was reasonably confident that the issue had been adequately addressed for both units at Turkey Point. However, the Subcommittee still had questions about whether the issue had generic implications, and how the issue was being addressed generically by the staff.

Mr. P.T. Kuo, Program Director for the License Renewal and Environmental Impacts Programs, Office of Nuclear Reactor Regulation (NRR), introduced Mr. Frank Gillespie, the Assistant Director of the Division of Regulatory Improvement Programs, NRR, to give opening remarks. Mr. Gillespie addressed the containment void issue. He explained the generic issue was being addressed under the allegations process, and that the staff might not be able to fully address the generic aspects at this point. They were, however, prepared to address how it was resolved for Turkey Point.

Industry Presentation

Mr. Steve Hale from the Florida Power and Light Company (FPL) then gave the applicant's presentation. Mr. Hale gave an overview of the application and the process used to develop it. The key points from Mr. Hale's presentation include:

- FPL utilized lessons learned from previous LRAs, NRC requests for additional information (RAIs) and associated responses, and generic issue resolutions in developing their application. FPL also utilized all available guidance in developing their LRA, including the draft Standard Review Plan for License Renewal; the draft Generic Aging Lessons Learned Report; the draft Regulatory Guide DG-1047, "Standard Format and Content for Applications to Renew Nuclear Power Plant Operating Licenses"; and the industry guidance in NEI 95-10, "Industry Guidelines for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule."

- For performing aging management reviews (AMRs) on structures and components (SCs) determined to be within the scope of license renewal, FPL utilized industry and Turkey Point operating experience. Turkey Point also has a metallurgical lab which is used to evaluate nonconforming conditions when they occur. The metallurgical lab history was utilized in supporting aging effect conclusions reached during AMRs.

- FPL included a list in the Final Safety Analysis Report Supplement of all commitments made to support their LRA related to their aging management programs (AMPs). The applicant also included a list of all of their time limited aging analyses (TLAAs).

- To resolve an open item related to Seismic Category 2 piping systems over Seismic Category 1 piping and equipment (Seismic II/I), FPL included additional piping segments within the scope of license renewal. Specifically, FPL did not originally include the Seismic Category 2 piping within scope unless it was at a safety related/non-safety related functional boundary and was included in the seismic analysis. For all other Seismic II/I piping, FPL had originally included only the pipe supports within the scope of license renewal. The staff's concern is that there are other potential interactions between Category II piping and Category I piping/equipment that can occur if the Category 2 piping fails (e.g., pipe whip, jet impingement, physical contact, and leakage). The staff concluded that Category 2 piping (not just the supports) whose failure can in any way prevent a safety system from performing its safety function must be included within the scope of license renewal consistent with 10 CFR 54.4. Accordingly, FPL included these piping segments within the scope of license renewal.

- The staff identified an open item based on three issues related to one-time inspections of field erected tanks in the Turkey Point LRA: 1) the acceptance criteria was not clearly defined, 2) there were no provisions identified for additional examinations if the inspection reveals extensive loss of material, and 3) FPL did not provide adequate justification for the use of a one-time inspection. In its response, FPL justified the use of a one-time inspection because no significant aging is expected. This conclusion is justified based on the plant's operating experience. The acceptance criterion is that the loss of material cannot exceed the tank's corrosion allowance. Additional inspections, if needed, would be added based on the one-time inspection findings.

In response to questions from the Committee, Mr. Hale provided the following additional information:

- Turkey Point withstands hurricanes very well, including effects of missiles. For Hurricane Andrew, the plant withstood 150-160 mile per hour winds. The main damage occurred when a tower from one of the adjacent fossil fuel plants fell over, damaging one of the nuclear plant's fire water tanks. Despite significant numbers of missiles during Hurricane Andrew, the plant withstood the impacts very well. Turkey Point is adequately designed to withstand category 5 hurricanes. There are two primary concerns with hurricanes: wind and storm surge. Both units are designed for wind speeds up to 300 miles per hour, which is adequate to withstand category 5 wind speeds. For storm surges, Turkey Point is located 18 feet above sea level. FPL has installed stop logs at the site to block surges up to 20 feet. In addition, safety-related components are located at 22.5 feet or higher. Mr. Hale stated that 22.5 feet is easily adequate to withstand any surges that could be expected from a category 5 hurricane.

- The stacks on the adjacent fossil fuel plants are included within the scope of license renewal in the application due to seismic concerns. The stacks are 400 feet tall.

- Bechtel performed a detailed evaluation for FPL on the root cause of the voids found in the containment. Bechtel concluded that the voids were caused by the difficulty of pouring concrete in the area of the construction joint around the hatch. Bechtel also concluded that voiding elsewhere in the containment concrete was unlikely. Based on Bechtel's findings, FPL concluded that the containment integrity was not threatened by the presence of the voids, and that the event was not reportable under 10CFR21.

- Turkey Point completed 100% visual inspections of the reactor vessel heads in both units during their last refueling outage. No leakage or degradation of the reactor vessel head was identified. Each reactor vessel head has a radiation monitor located above it. No corrosion products have been found in the radiation monitor filters.

NRC Staff Presentation

Mr. Raj Auluck, the NRC Project Manager for the Turkey Point LRA review, gave the presentation on the staff's safety evaluation report (SER). Mr. Auluck explained that the Turkey Point application was the fifth LRA received by the NRC, and the first LRA for a Westinghouse-designed plant. The current licenses are due to expire in 2012 for Unit 3 and 2013 for Unit 4. The staff's review consisted of reviews of the applicants' scoping and screening methodologies and results, AMPs, and TLAAs. These reviews were supplemented by NRC site audits and inspections. The staff conducted one audit

on-site and two inspections of the Applicant's scoping, screening, and aging management reviews. The scoping and screening methodology review was conducted in two parts: 1) an initial desk top review of the LRA supporting information, and 2) an on-site audit to review supporting documentation (e.g., selected engineering reports, engineering procedures, and design documentation).

Mr. Auluck stated that two parties petitioned for a hearing on the Turkey Point LRA. The Atomic Safety and Licensing Board held a pre-hearing conference in Homestead, Florida on petitioner standing and the admissibility of contentions. In an order issued on February 26, 2002, the Board ruled that both parties had standing to intervene; however, neither petitioner proffered admissible contentions. As such, their intervention petitions were denied.

The staff discussed the resolution of the four open items identified in the draft SER and one new emerging issue. The open items are 1) scoping for Seismic II/I piping systems, 2) acceptance criteria for field erected tanks internal inspection aging management program, 3) scope of reactor vessel head alloy 600 penetration inspection program, and 4) reactor pressure vessel underclad cracking. The resolution of the first two open items were previously discussed in the applicant's presentation above.

Mr. Jim Medoff, from the License Renewal and Environmental Impacts Programs, NRR, discussed the reactor vessel head alloy 600 penetration inspection program open item. This open item was resolved by FPL's commitments to continue participation in the industry program for inspection of vessel head penetration nozzles, and to update this program as necessary based on industry experience.

Mr. Barry Elliot from the Materials and Chemical Engineering Branch, NRR, discussed the staff's review of Westinghouse Electric's generic license renewal reports. Specifically, he discussed four Westinghouse topical reports (WCAPs) dealing with aging management of pressurizers, reactor internals, reactor coolant system supports, and Class 1 piping and associated pressure boundary components. He also discussed a fifth WCAP on cracking associated with weld deposited cladding in operating PWR plants. The staff had not completed its review of the first four WCAPs in time for FPL to credit them in the Turkey Point LRA; however, FPL was able to demonstrate the applicability of the reports to Turkey Point in their responses to the staff's RAIs. The fifth report on cracking associated with weld deposited cladding was credited in the application as part of the applicant's TLAAs, and was utilized to resolve the open item on reactor pressure vessel underclad cracking.

The staff discussed the new emerging issue on station blackout (SBO). He stated that the staff's position had changed from the position discussed with the Plant License

Renewal Subcommittee. Because the issue is emerging late in the process, it will be addressed in a supplemental SER. Mr. Jim Lazevnick from the Electrical Branch, NRR, discussed the staff's position. Specifically, to meet the requirements of the SBO rule (10 CFR 50.63), the plant has to demonstrate its ability to cope with the event. The length of time that the licensee must be able to cope with an SBO event is determined by four factors. One of these factors is the probable time needed to reconnect to offsite power (i.e., the ability to recover from the event). If aging effects for the offsite power connection are not managed, then Turkey Point may need a longer coping duration to account for a longer recovery time. Accordingly, the staff's final position is that the off-site power circuits between the switchyard and the safety buses should be included within the scope of license renewal.

The staff presented its response to comments received by the ACRS from a public citizen, Mr. Oncavage. Specifically, four issues were identified: 1) the effect of voids on aging degradation rates and the structural integrity of concrete containment structures, 2) the effect of hurricane wind speeds and storm waves on the safe operation of the Turkey Point plant, 3) the effect of terrorist air attacks on the safety and operability of the Turkey Point plant, and 4) the effect of inadequate spent fuel storage capacity on the plant's ability to operate in the renewed period of operation.

Mr. Hans Ashar and Mr. Goutam Bagchi from NRR addressed the voids issue. The key points of their discussion is that the purpose of the concrete is to hold the reinforcing steel in place. All tensile structural loads are absorbed by the reinforcing steel. Leak tightness is maintained by the steel liner. Small voids will not be identified by structural integrity tests (SITs), however, they are of little consequence because the containment loads are handled by the reinforcement steel, not the concrete. Large voids, if they occur would be identified during the SIT.

Mr. Medoff addressed the remaining concerns from Mr. Oncavage. The staff believes that the plant is adequately designed to withstand category 5 hurricane wind forces and storm surges. The safety related equipment at Turkey Point are located at a level above any anticipated storm surge. Terrorist concerns are being handled generically by the NRC. Spent fuel storage capacity is addressed by the plant technical specifications which provide the maximum number of assemblies that can be stored in the spent fuel pool.

The staff has reviewed Mr. Oncavage's concerns through its allegation process. They provided Mr. Oncavage with a written response on their findings and closed the allegation. The staff committed to providing a copy of the NRC's response to Mr. Oncavage to the Committee. In addition, the staff committed to returning to the ACRS

at a future date to discuss the issue of containment voids, and how it was resolved generically.

Committee Action

The Committee issued a report on this subject on April 19, 2002. The Committee will continue its review on the generic issue of voids in concrete containments at a future meeting.

III. Advanced Reactor Research Plan (Open)

[Note: Dr. Medhat El-Zeftawy was the Designated Federal Official for this portion of the meeting.]

Dr. Thomas Kress, Advanced Reactor Subcommittee Chairman, stated that the Office of Nuclear Regulatory Research (RES) has developed a draft advanced reactor research plan as a result of the staff's commitment to the Commission. RES considers this plan to be in its early stages as the plan will necessarily change as knowledge and experience grow.

Dr. John Flack, RES, stated that the staff in developing the plan, focused on determining the critical information that will be needed to establish safety standards for new reactor designs. Currently, the plan does not delineate the research that will be conducted by RES, rather it, identifies the information gap that exists at NRC in terms of the necessary tools and data.

The key topics in the proposed research areas follow:

- Regulatory framework based on risk-informed, performance-based principles,
- Accident analysis (probabilistic risk assessment methods, human factors, and instrumentation and control),
- Reactor/plant analysis (thermal-fluid dynamics, nuclear analysis and fission product release and transport),
- Fuel analysis (fuel performance testing, and fuel qualification),
- Materials analysis (graphite behavior and high-temperature materials performance),

- Structural analysis (containment vs. confinement performance, external challenges),
- Consequence analysis (dose calculations, environmental impact studies),
- Nuclear materials safety and nuclear waste, and
- Nuclear safeguards and security.

The staff indicated that, where possible, the plan outlined a technology-neutral perspective. However, when design-specific safety issues are addressed, the plan discriminates between different technologies. The proposed plan will provide a platform for communicating program objectives and goals and receiving feedback from internal and external stakeholders. The research activities within the scope of the current plan include the Pebble Bed Modular Reactor (PBMR), Gas Turbine Modular Helium Reactor (GT-MHR), International Reactor Innovative and Secure (IRIS), and the AP-1000 designs.

There are two types of research that were considered in the proposed plan. These are research to establish the technical basis for regulatory decision-making, and research necessary to address uncertainties and gain insights into safety margins and failure points.

The staff also took advantage of the Department of Energy-sponsored Modular High-Temperature Gas Cooled Reactor (MHTGR) pre-application review that was performed in the late 1980s and early 1990s.

The advanced reactor research efforts for the arena of Safeguards and Security will support the regulatory offices in the assessment of proliferation potential and the evaluation of security measures, material control, and accounting systems needed for preventing and detecting nuclear material diversion. RES will support other offices and agencies as requested for assessing and limiting the vulnerability of advanced reactor plants and fuel cycle activities to sabotage outside threats.

The staff indicated that the proposed plan addresses the issues that were raised in Dr. Powers' trip report regarding the High Temperature Gas-Cooled Reactor Workshop held on October 10-12, 2001. The staff anticipates that this is the first of a series of meetings with the ACRS, and that more detailed discussions with the ACRS on the proposed plan will follow in subsequent meetings.

Committee's Action

This briefing was for information only. The Committee expects to follow-up on the staff's proposed advanced research plan during future meetings.

IV. CRDM Penetration Cracking and Reactor Pressure Vessel Head Degradation (Open)

[Mrs. Maggalean W. Weston was the Designated Federal Official for this portion of the meeting.]

Dr. F. Peter Ford, Chairman of the Materials and Metallurgy subcommittee, introduced this topic to the committee. Mr. John D. Sieber, Chairman of the Plant Operations subcommittee, co-chaired this effort. The Committee heard presentations by and held discussions with representatives of NEI, EPRI/MRP, Davis Besse, and the NRC staff. The purpose of this meeting was to hear information regarding NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration (VHP) Nozzles," issued August 3, 2001, which requested information relating to the structural integrity of the VHP nozzles and NRC Bulletin 2002-01: Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity, issued March 18, 2002. This required information relating to reactor pressure vessel (RPV) head inspection and maintenance programs and a basis for continued operation until the inspections can be performed. The presentation provided a status of Davis-Besse's vessel head degradation, responses to Bulletin 2001-01, information regarding Bulletin 2002-01, and preliminary results of the augmented inspection (AIT) at Davis-Besse.

NRC Staff and Industry Presentations

The staff presentations were made by Mr. Allen Hiser and Mr. Kenneth Karwoski, NRR, and Mr John Grobe, Region III. The industry presentations were made by Mr. Larry Mathews, EPRI/MRP; and, Mr. John Wood and Mr. Ken Byrd, First Energy Nuclear Operating Company (FENOC).

During a recent UT examination of VHP nozzles required by NRC Bulletin 2001-01, Davis-Besse Nuclear Power Plant found that five VHP nozzles required repair due to cracking in the nozzle adjacent to the J-welds which attach the VHP nozzles to the vessel head. On March 5, 2002, during a repair of the nozzles, the licensee identified an unexpected rotation and lateral movement of one of the nozzles during the machining operation. On March 6, the licensee removed the VHP nozzle and discovered significant metal loss from the reactor vessel head, adjacent to VHP nozzle No. 3 where cracking had been identified. The eroded area of the vessel head is 4 to 5 inches across and completely penetrates the low-alloy steel to the stainless steel

cladding. Some further undercutting of the low-alloy steel along the stainless steel cladding has been identified. Davis-Besse estimates that the eroded volume contains about 40 pounds of steel.

Examination of the reactor vessel head adjacent to VHP nozzle No. 2 found a smaller area of erosion. This area is up to 3/16 inch from the nozzle and about 1 ½ inches across.

The reactor vessel head is fabricated from low-alloy steel, approximately 6 inches thick, with an inner cladding of stainless steel, about 1/4 to 3/8 inches thick.

The AIT report provided information on the containment air cooler clogging, containment radiation monitor filter clogging and boric acid buildup and corrosion on the reactor head as opportunities missed to identify the problem with the vessel head at Davis-Besse. The preliminary root of the cavity was postulated to be caused by boric acid corrosion from leakage through cracks in the nozzle and that significant corrosion began at least 4 years ago.

NRC Bulletin 2002-01 was issued March 18, 2002 and required that within 15 days, pressurized water reactor addressees provide information on their RPV head inspection and maintenance programs and these programs' ability to identify degradation. Additional requirements were included for 15, 30, and 60 days.

Committee Action

The Committee concluded that these issues required another briefing in the near future to discuss data to support some of the statements being made and to hear long term plans to manage potential degradation at nuclear power plants. No report was written at this meeting because of a lack of information on the final AIT report, the completion of the root cause analysis, the Davis-Besse repair plan, and data to substantiate statements made.

V. Westinghouse Owners Group (WOG) and Electric Power Research Institute (EPRI) Initiatives Related to Risk-Informed Inservice Inspection of Piping (Open)

[Note: Mr. Howard J. Larson was the Designated Federal Official for this portion of the meeting.]

Dr. William Shack, cognizant ACRS member, provided a preamble stating that the Committee had reviewed risk-informed inservice inspection of piping in the past and

agreed with the staff that better inspections could be performed by focusing those inspections to identify the degradation of piping in the segments for which failure had the most severe consequences.

The Committee heard presentations by, and held discussions with, representatives of the NRC staff concerning the staff's draft safety evaluation of an addendum (EPRI-BER-TR) to EPRI Topical Report EPRI-ISI-TR. The staff previously approved EPRI-ISI-TR. The intent of the addendum is to modify risk-informed inservice inspection programs to include break exclusion region (BER) piping sections or "no break zones" such as containment penetrations. In addition to the EPRI addendum, NRC has also received an addendum to the WOG RI-ISI program to modify the ISI program to include risk-informed methodologies for selected augmented inspection programs. The staff is waiting on additional information from the WOG in order to complete its review and does not expect to provide its draft safety evaluation to the ACRS until later in 2002.

The NRC staff reviewed the background and regulatory approach for implementing RI-ISI programs at reactor facilities. The staff noted that it expected 99 of the operating reactor units plan to implement RI-ISI programs and that 50 reactor units have already submitted programs to NRC for approval, 37 using the EPRI methodology and 13 using the WOG methodology.

The NRC staff noted that there was very little change to the original methodology to include the inspection of BER piping. The NRC staff stated that by implementing RI-ISI for BER piping the industry could substantially reduce the radiological dose associated with the inspections as well as place greater emphasis on higher risk piping.

During the above discussions the ACRS members noted the following points:

Dr. Apostolakis questioned why NRC had to approve licensees' implementation of EPRI-ISI-TR since the staff has already approved the methodology. The staff stated that it required approval because it requested relief from the ASME Code regarding Class 1 and 2 piping. In addition, the staff noted that most licensees do not follow the methodologies in total, but make some changes to the accepted methodology for its particular facility.

Dr. Kress and Dr. Apostolakis requested clarification on the BER. The staff stated that the BER was the result of General Design Criterion 4, "Environmental and Dynamic Effects Design Basis," that requires structures, systems, and components important to safety be designed to accommodate the effects of a postulated accident and include appropriate protection against dynamic and environmental effects of postulated pipe ruptures. The staff added that it generally consisted of piping between the interior and exterior containment isolation valves. Dr. Kress noted that BER piping must be designed and inspected to exclude the possibility of breaking. The staff also added that

the biggest difference between BER and non-BER is that a piping break in a BER pipe does not need to be postulated. Therefore, the effects of a break in BER do not have to be considered in the design of surrounding equipment.

Dr. Apostolakis raised a concern that not postulating breaks in BER piping goes against the defense-in-depth philosophy.

Dr. Apostolakis questioned the use of 10 CFR 50.59 to make changes to the BER inservice inspection program. The staff noted if the change affected the methodology used in EPRI-BER-TR then it could not be changed in 10 CFR 50.59.

Dr. Kress expressed concern that when using the guidelines of Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis," you should not violate the defense-in-depth philosophy and that a break in BER piping appeared to violate defense-in-depth.

Dr. Apostolakis and Dr. Kress agreed with the staff that based on inspection experience, it makes sense to focus the inspections on the areas were degradation is expected to occur and areas were the consequences of a piping failure are high.

Dr. Kress questioned whether all of the BER piping would eventually get inspected. The staff stated that if degradation was found during inspections the scope of the inspections would increase. Eventually, this could lead to the inspection of 100% of the piping.

Dr. Apostolakis questioned how the staff was applying uncertainty analysis as presented in RG 1.174. This question was raised because it was his understanding that most licensee's probabilistic risk assessments do not routinely contain uncertainty analyses. The staff noted that it believes that RG 1.174 states that uncertainty could be addressed if a reasonably conservative analysis or a bounding analysis is performed.

Committee Action

This was an information briefing and the Committee did not take any action. The Committee members agreed with the staff that the addendum was an appropriate extension of the previously approved EPRI Topical Report. The Committee plans to continue its review of future addendums to both the EPRI and the WOG Topical Reports on this subject.

VI. General Electric (GE) Nuclear Energy Topical Report: "Constant Pressure Power Uprate" (Open)

[Note: Paul A. Boehnert was the Designated Federal Official for this portion of the meeting.]

Mr. Sieber, cognizant ACRS Member for this issue, introduced this topic to the Committee. He noted that the Thermal-Hydraulic (T/H) Phenomena Subcommittee discussed this matter during meetings held on January 16-18 and March 6, 2002. Elements of the CPPU methodology were previously reviewed by the Committee during the March ACRS Meeting, as used by the Clinton plant licensee for its Extended Power Uprate (EPU) application. Two issues are of note for this review: GE's modeling of the core spray distribution as impacted by EPU, and, whether the staff needs to exercise additional oversight of reload analysis methodology, pursuant to use of CPPU.

GE Nuclear Energy Presentation (**Open/Closed**)

Representatives of GE Nuclear Energy discussed the following topics relative to the CPPU Licensing Topical Report:

- Introduction
- Key Elements of CPPU Program
- Power Uprate Implementation Status
- CPPU License Topical Report
  - Approach
  - Heat Balance/Power-Flow Map
  - Relation to ELTR 1&2
  - CPPU Process Simplification
  - Issue Dispositions
  - LTR Format
  - Plant-Specific Submittal
- Specific Topics
  - Standard BWR Reload Analysis Scope
  - Core Spray Distribution
- Concluding Remarks

GE's approach is aimed at streamlining the licensee's submittal and the NRC staff's review process by keeping the LTR scope narrow. Using the CPPU approach results in no change to: RCS pressure or core flow, the MELLLA/MEOD plant operational upper boundary limit[1], source term methods, fuel mechanical design, cycle length or

[1] GE has submited a LTR to allow expansion of the MELLLA power/flow operating region. Known as the "MELLLA +" approach, this Topical Report is currently under staff review.

operational enhancements. Review topics are disposed generically or on a plant-specific basis (~ 50% for each). For the generic topics, the goal is process efficiency; thus, the fuel dependent evaluations will be performed via the cycle reload analysis. For the plant-specific review topics, key aspects of the uprate (e.g., vessel fluence, ECCS LOCA performance, ATWS, fire protection, etc.) will be evaluated to allow a focused, standardized plant-specific analysis.

In response to Committee Members' questions, the following was noted:

- Use of CPPU does not change the scope of the reload analysis.

- Mr. Leitch asked how the issue of the impact of uprate on a plant's standby gas treatment system was handled generically. GE said that bounding assumptions were made that apply to all BWR plants; however, licensees must still perform an analysis to confirm that its plant operates within the acceptable parameters.

- Regarding the reload analyses, most are performed by GE and are retained in their record files. Most licensees participate directly in this process with GE and all licensees audit GE's work. However, some licensees perform their own independent analysis and GE said that they have been audited by the NRC staff several times over the past 8-9 years, in addition to the three recent EPU audits.

- Mr. Rosen requested information regarding the impact of EPU on the core power distribution. GE indicated that this information will be available for the Committee's upcoming review of the Brunswick plant.

NRC Staff Presentation

Representatives of NRR made a brief presentation regarding their review of the GE CPPU LTR. Topics discussed included: NRR Audits of GE Methodology, Fuel Design and Operation, Thermal Limits Assessment, Conclusions.

NRR found the CPPU LTR acceptable to reference for BWR extended power uprates. Staff audits have confirmed compliance to restrictions on staff-approved methodology.

In response to questions from Dr. Powers, NRR said that the bases for judging that current fuel designs are meeting safety criteria rests on staff/vendor analyses, results of staff audits, and the limited amount of applicable test data that is currently available. Mr. Marsh noted that the staff will be providing the Committee a response, in the near future, to the concerns it recently expressed regarding this matter. In response to Mr Sieber, NRR said that it intends to continue to perform audits, as noted above, for plants pursuing the CPPU power uprate approach.

Committee Action

The Committee issued a report to Chairman Meserve on this matter, dated April 17, 2001. The Committee's report recommended that GE's CPPU LTR be approved for application to BWR power increases of up to 20 percent of original licensed thermal power.

X. Executive Session (Open)

[Note: Dr. John T. Larkins was the Designated Federal Official for this portion of the meeting.]

A. Reconciliation of ACRS Comments and Recommendations

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

The Committee discussed the response from the NRC Executive Director for Operations (EDO) to ACRS comments and recommendations included in recent ACRS reports:

- The Committee discussed the response from the Executive Director for Operations (EDO) dated March 29, 2002, to the ACRS comments and recommendations included in the ACRS report dated February 14, 2002, concerning the review and evaluation of the NRC safety research program.

  The Committee decided that it was satisfied with the EDO's response.

- The Committee considered the response from the EDO dated March 22, 2002, to comments and recommendations included in the ACRS report dated February 14, 2002, concerning staff efforts regarding a reevaluation of the technical basis for assurance of reactor vessel integrity under pressurized thermal shock (PTS) conditions.

  The Committee was satisfied with the EDO's response.

B. Report on the Meeting of the Planning and Procedures Subcommittee (Open)

The Committee heard a report from the ACRS Chairman and the Executive Director, ACRS, regarding the Planning and Procedures Subcommittee meeting held on April 9, 2002. The following items were discussed:

Review of the Member Assignments and Priorities for ACRS Reports and Letters for the April ACRS meeting

Member assignments and Priorities for ACRS reports and letters for the April 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 June 2002 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

During this session, the Subcommittee discussed and developed recommendations on the items that require Committee decision.

Quadripartite Meeting Update

As recommended by the Committee at the March 2002 ACRS meeting, Drs. Apostolakis and Larkins met with the NRC Chairman to obtain feedback regarding the extent to which ACRS can participate and discuss Safeguards and Security issues at the Quadripartite meeting. The NRC Chairman did not object to ACRS participation in the discussion of Safeguards and Security issues. However, care should be exercised not to divulge the proposed NRC and industry activities associated with enhancing the Safeguards and Security programs.

During the March meeting it was agreed that the following technical papers would be submitted for discussion at the Quadripartite meeting:

- Safety Culture and Safety Management
- Risk-Informed Regulation
- Thermal-Hydraulic Analysis and Code Issues
- Stress Corrosion Cracks in Pressure Retaining Components in Nuclear Power Plants
- Risk Analysis of Spent Fuel Storage

Staff Requirements Memorandum

In a Staff Requirements Memorandum (SRM) dated December 20, 2001, resulting from the ACRS meeting with the Commission on December 5, 2001, the Commission requested the following:

- The ACRS should continue to review staff efforts on risk-based PIs and improvements to the significance determination process.

- The staff, with ACRS input, should provide recommendations for resolving, in a transparent manner, apparent conflicts and discrepancies between aspects of the revised reactor oversight process that are risk-informed (e.g., significance determination process) and those that are performance-based (e.g., performance indicators).

- The ACRS should continue its efforts to ascertain regulatory challenges for future reactor designs. The Committee should also ensure that it is prepared to review NRC staff efforts on advanced reactors in the near term, including issues related to Westinghouse's AP1000, General Atomics' gas turbine modular helium reactor, and Exelon's pebble bed modular reactor.

As recommended by the Committee during its February 2002 meeting, Mr. Sieber agreed to develop a plan for addressing the ROP issues in the SRM after an informal meeting with the staff, which is to be held during the April ACRS meeting.

Dr. Kress agreed to develop a plan to address the issues on future plant designs after the Committee's review of the Advanced Reactors Research Plan in April.

ACRS Meeting with the NRC Commissioners

The ACRS is scheduled to meet with the NRC Commissioners on Wednesday, July 10, 2002, between 2:00 and 4:00 p.m. The Committee proposed the following topics during the March meeting. These topics have been sent to the Commission.

- Overview by the ACRS Chairman
- Status of ACRS activities on power uprates, license renewal, and Human Reliability Research Plan
- Advanced reactor designs
- Mixed Oxide Fuel Fabrication Facility
- Risk-Informing Special Treatment Requirements of 10 CFR Part 50
- PTS reevaluation project

Celebration of the 500th ACRS Meeting

During the March 2002 meeting, the Committee agreed to a plan proposed by Dr. Kress for celebrating the 500th ACRS meeting (now planned for March 2003, which is also coincidental with the Committee's 50th anniversary). A proposed schedule was discussed.

ACRS Senior Fellow Position

The vacancy announcement for the ACRS Senior Fellow position has closed and a Rating Panel has reviewed the applications and provided a list of best-qualified candidates. ACRS management is in the process of interviewing the best-qualified candidates. It was recommended that the Planning and Procedures Subcommittee members interview these candidates on behalf of the full Committee.

Joint ACRS/ACNW Workshop

The ACRS and ACNW Committees have agreed to hold a joint workshop on August 27 (p.m.) - 29, 2002, to discuss uncertainty and the use of formal decision analysis in the regulatory decisionmaking process. This workshop will be held in the NRC Auditorium. The NRC staff and external stakeholders will be invited to participate and provide presentations.

Program Plan for the 2003 Research Report

The Committee has agreed to submit a comprehensive report to the Commission on the NRC Safety Research Program for 2003. Dr. Ford has the lead responsibility for coordinating the report.

Financial Disclosure Form

Mr. John Szabo, OGC, has forwarded the Financial Disclosure Form (SF 278) to all members. This form should be completed and submitted to OGC by May 15, 2002. Those who need an extension to complete this form should contact Rebecca Lambert, OGC (301-415-1613) or rll@nrc.gov). Extension of up to 45 days after May 15th can be granted by OGC for good cause. Subsequent to reviewing the completed forms, OGC will send a conflict-of-interest statement to each member.

C. Future Meeting Agenda

Appendix IV summarizes the proposed items endorsed by the Committee for the 492nd Meeting, May 2-3, 2002.

The 491st meeting was adjourned at 6:30 pm on Friday, April 12, 2002.

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

May 22, 2002

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

FROM: George E. Apostolakis, Chairman
Advisory Committee on Reactor Safeguards

SUBJECT: CERTIFIED MINUTES OF THE 491st MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS (ACRS), APRIL 11-12, 2002

I certify that based on my review of the minutes from the 491st 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.

George E. Apostolakis, Chairman

May 22, 2002
Date

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

May 14, 2002

MEMORANDUM TO: ACRS Members

FROM: Sherry Meador
Technical Secretary

SUBJECT: PROPOSED MINUTES OF THE 491st MEETING OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS - APRIL 11-12, 2002

Enclosed are the proposed minutes of the 491st meeting of the ACRS. This draft is being provided to give you an opportunity to review the record of this meeting and provide comments. Your comments will be incorporated into the final certified set of minutes as appropriate.

Attachment:
As stated

interlocks to state the reset values for the allowable values. (ITS 3.3.1)

18. Implement Technical Report EE–0116, Revision 1, "Allowable Values for Surry and North Anna Improved Technical Specifications (ITS) Tables 3.3.1–1 and 3.3.2–1."

Environmental Impacts of the Proposed Action

The NRC staff has completed its evaluation of the proposed action and concludes that the proposed TS conversion would not increase the probability or consequences of accidents previously analyzed and would not affect facility radiation levels or facility radiological effluents. Specifically, the proposed TS changes will not increase the probability or consequences of accidents, no changes are being made in the types or amounts of any effluent that may be released offsite, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not have a potential to affect any historic sites because no previously undisturbed area will be affected by the proposed TS changes. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the proposed action, the staff considered denial of the proposed action (*i.e.*, the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources

The action does not involve the use of any different resource than those previously considered in the Final Environmental Statement for the North Anna Power Station, Units 1 and 2, dated April 1973.

Agencies and Persons Consulted

On February 27, 2002, the staff consulted with the Virginia State Official, Mr. Les Foldesi of the Virginia Department of Health, Bureau of Radiological Health, regarding the environmental impact of the proposed action. The State official had no comments.

Finding of No Significant Impact

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated December 11, 2000, as supplemented by letters dated May 30, June 18, July 16, July 20, August 13, August 27, September 27, October 10, October 17, November 8, November 19, November 29, December 3, December 7, December 12, and December 13, 2001, and January 2, January 25, January 31, February 11, February 18, February 22, February 27, and March 7, 2002. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the internet at the NRC Web site, *http://www.nrc.gov/reading-rm.html*. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1–800–397–4209 or 301–415–4737, or by e-mail to *pdr@nrc.gov*.

Dated at Rockville, Maryland, this 25th day of March 2002.

For the Nuclear Regulatory Commission.

Stephen R. Monarque,

Project Manager, Section 1, Project Directorate II, Division of Licensing Project Management, Office of Nuclear Reactor Regulation.

[FR Doc. 02–7607 Filed 3–28–02; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards; Meeting Notice

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 April 11–13, 2002, in Conference Room T–2B3, 11545 Rockville Pike, Rockville, Maryland. The date of this meeting was previously published in the **Federal Register** on Monday, November 26, 2001 (66 FR 59034).

Thursday, April 11, 2002

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.: Final Review of the Turkey Point License Renewal Application (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and the Florida Power and Light Company regarding the license renewal application for Turkey Point Units 3 and 4, and the associated staff's Safety Evaluation Report (SER).

10:45 A.M.—12:30 P.M.: Advanced Reactor Research Plan (Open)—The Committee will hear presentations by and hold discussions with representatives of the Office of Nuclear Regulatory Research (RES) regarding RES" draft Advanced Reactor Research Plan.

1:30 P.M.—3:30 P.M.: CRDM Penetration Cracking and Reactor Pressure Vessel Head Degradation (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and industry, including Davis-Besse regarding issues related to the investigation of circumferential cracks in PWR control rod drive mechanism (CRDM) penetration nozzles and weldments, and reactor pressure vessel head degradation at the Davis-Besse Nuclear Power Plant.

3:50 P.M.—5:15 P.M.: Westinghouse Owners Group (WOG) and Electric Power Research Institute (EPRI) Initiatives Related to Risk-Informed Inservice Inspection of Piping (Open)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding the staff's draft safety evaluation reports on WOG and EPRI addendums to their topical reports (WCAP–14572 and EPRI TR–112657) for risk-informed inservice inspection of piping, including extension of risk-informed methods to the break exclusion region piping.

5:30 P.M.—7 P.M.: Proposed ACRS Reports (Open)—The Committee will discuss proposed ACRS reports on matters considered during this meeting. Also, it may discuss a response prepared by the Advisory Committee on Nuclear Waste (ACNW) to the Executive Director for Operation's letter dated

March 6, 2002 to the ACNW report dated January 14, 2002 regarding risk-informing NMSS activities.

Friday, April 12, 2002

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.: General Electric (GE) Nuclear Energy Topical Report: "Constant Pressure Power Uprate" (Open/Closed)—The Committee will hear presentations by and hold discussions with representatives of the NRC staff and General Electric Nuclear Energy regarding GE Topical Report, "Constant Pressure Power Uprate," and the associated NRC staff's safety evaluation.

Note: A portion of this session may be closed to discuss General Electric proprietary information.

10:50 A.M.—11:45 A.M.: Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open)—The Committee will discuss the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future meetings. Also, it will hear a report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS.

11:45—12 Noon.: Reconciliation of ACRS Comments and Recommendations (Open)—The Committee will discuss the responses from the NRC Executive Director for Operations (EDO) to comments and recommendations included in recent ACRS reports and letters. The EDO responses are expected to be made available to the Committee prior to the meeting.

1 P.M.—7 P.M.: Proposed ACRS Reports (Open)—The Committee will discuss proposed ACRS reports.

Saturday, April 13, 2002

8:30 A.M.—12:30 P.M.: Proposed ACRS Reports (Open)—The Committee will continue its discussion of proposed ACRS reports.

12:30 P.M.—1:00 P.M.: Miscellaneous (Open)—The Committee will discuss matters related to the conduct of Committee activities and matters 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 3, 2001 (66 FR 50462). 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 and questions may be asked only by members of the Committee, its consultants, and staff. Persons desiring to make oral statements should notify Dr. Sher Bahadur, ACRS, 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 Dr. Sher Bahadur 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 Dr. Sher Bahadur if such rescheduling would result in major inconvenience.

In accordance with Subsection 10(d) Public Law 92–463, I have determined that it is necessary to close a portion of this meeting noted above to discuss proprietary information per 5 U.S.C. 552b(c)(4).

Further information regarding topics to be discussed, whether the meeting has been canceled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements, and the time allotted therefor can be obtained by contacting Dr. Sher Bahadur (telephone 301–415–0138), between 7:30 a.m. and 4:15 p.m., EST.

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/NRC/ADAMS/index.html*.

Videoteleconferencing 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., EST, 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 videoteleconferencing link. The availability of videoteleconferencing services is not guaranteed.

Dated: March 25, 2002.

Andrew L. Bates,

Advisory Committee Management Officer.

[FR Doc. 02–7604 Filed 3–28–02; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Yucca Mountain Review Plan, NUREG–1804, Revision 2,; Draft Report for Comment

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of availability and request for comments.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is announcing the availability of, and requesting comments on, "Yucca Mountain Review Plan, NUREG–1804, Revision 2, Draft Report for Comment." The "Yucca Mountain Review Plan" provides guidance to the NRC staff for evaluating a potential license application for a geologic repository.

DATES: Comments should be submitted at the public meetings, or in writing by March 29, 2002. Comments received after this date will be considered, if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

In addition to providing opportunity for written (and electronic) comments, public meetings on the "Yucca Mountain Review Plan" will be held during the public comment period. A notice announcing these meetings will be published in the **Federal Register**.

ADDRESSES: Submit written comments to: Michael T. Lesar, Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Mail Stop T–6D59, Washington, DC 20555–0001. Deliver comments to 11545 Rockville Pike, Rockville, Maryland, between 7:45 a.m. and 4:15 p.m., on Federal workdays.

Copies of any comments received and documents related to this action may be examined at the NRC Public Document Room, One White Flint North, Public File Area O1–F21, 11545 Rockville Pike, Rockville, Maryland. Documents are also available electronically at NRC's Public Electronic Reading Room on the Internet at http://www.nrc.gov/reading-

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

March 18, 2002

SCHEDULE AND OUTLINE FOR DISCUSSION
491st ACRS MEETING
APRIL 11-13, 2002

THURSDAY, APRIL 11, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

1) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open)
- 1.1) Opening statement (GEA/JTL/SD)
- 1.2) Items of current interest (GEA/SD)
- 1.3) Priorities for preparation of ACRS reports (GEA/JTL/SD)

2) 8:35 - ~~10:30~~ 11:15 A.M. Final Review of the Turkey Point License Renewal Application (Open) (MVB/RE/SD)
- 2.1) Remarks by the Subcommittee Chairman
- 2.2) Briefing by and discussions with representatives of the NRC staff and the Florida Power and Light Company regarding the license renewal application for Turkey Point Units 3 and 4, and the associated staff's Safety Evaluation Report (SER).

~~**10:30 - 10:45 A.M.**~~ 11:15 - 11:30 ***BREAK***

3) ~~10:45~~ 11:30 - ~~12:30 P~~1:05 P.M. Advanced Reactor Research Plan (Open) (TSK/MME)
- 3.1) Remarks by the Subcommittee Chairman
- 3.2) Briefing by and discussions with representatives of the Office of Nuclear Regulatory Research (RES) regarding RES' draft Advanced Reactor Research Plan.

~~**12:30 - 1:30 P.M.**~~ 1:05 - 1:50 ***LUNCH***

4) ~~1:30~~ 1:50 - ~~3:30~~ 3:40 P.M. CRDM Penetration Cracking and Reactor Pressure Vessel Head Degradation (Open) (FPF/MWW)
- 4.1) Remarks by the Subcommittee Chairman
- 4.2) Briefing by and discussions with representatives of the NRC staff and industry, including Davis-Besse regarding issues related to the investigation of circumferential cracks in PWR control rod drive mechanism (CRDM) penetration nozzles and weldments, and reactor pressure vessel head degradation at the Davis-Besse Nuclear Power Plant.

Other interested parties may provide their views, as appropriate.

~~**3:30 - 3:50 P.M.**~~ 3:40 - ***BREAK***

5) 3:50 - ~~5:15~~ 6:30 P.M. Westinghouse Owners Group (WOG) and Electric Power Research Institute (EPRI) Initiatives Related to Risk-Informed Inservice Inspection of Piping (Open) (WJS/FPF/TJK/SD)

5.1) Remarks by the Subcommittee Chairman

5.2) Briefing by and discussions with representatives of the NRC staff regarding the staff's draft safety evaluation reports on WOG and EPRI addendums to their topical reports (WCAP-14572 and EPRI TR-112657) for risk-informed inservice inspection of piping, including extension of risk-informed methods to the break exclusion region piping.

Representatives of WOG and EPRI may provide their views, as appropriate.

~~5:15 - 5:30 P.M.~~ 5:05-5:20 ***BREAK***

6) 5:30 - ~~7:00~~ 7:15 P.M. Proposed ACRS Reports (Open)

6.1) Final Review of the Turkey Point License Renewal Application (MVB/RE/SD)

6.2) Advanced Reactor Research Plan (TSK/MME)

6.3) Circumferential Cracking of CRDM and PWR Vessel Head Degradation (FPF/MWW)

FRIDAY, APRIL 12, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

7) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (GEA/JTL/SD)

8) 8:35 - ~~10:30~~ 10:50 A.M. General Electric (GE) Nuclear Energy Topical Report: "Constant Pressure Power Uprate" (Open/Closed) (JDS/PAB)

8.1) Remarks by the Subcommittee Chairman

8.2) Briefing by and discussions with representatives of the NRC staff and General Electric Nuclear Energy regarding GE Topical Report, "Constant Pressure Power Uprate," and the associated NRC staff's safety evaluation.

NOTE: A portion of this session may be closed to discuss General Electric proprietary information.

~~10:30 - 10:50 A.M. ***BREAK***~~

9) ~~10:50~~ 11:05 - ~~11:45~~ 1:50 A.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open) (GEA/JTL/SD)

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, and organizational and personnel matters relating to the ACRS.

10) 3:30 - 3:35 ~~11:45 - 12:00~~ Noon. Reconciliation of ACRS Comments and Recommendations (Open) (GEA, et al./SD, et al.)
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) 1:50 - 6:30 ~~1:00 - 7:00~~ P.M. Proposed ACRS Reports (Open)
Discussion of proposed ACRS reports on:

2:20 - 3:15 + 4:45 - 6:30
- 11.1) Final Review of the Turkey Point License Renewal Application (MVB/RE/SD)
- 11.2) Advanced Reactor Research Plan (TSK/MME)
- 11.3) Circumferential Cracking of CRDM and PWR Vessel Head Degradation (FPF/MWW)

1:50 - 2:20 + 3:45 - 4:13
- 11.4) GE Topical Report, "Constant Pressure Power Uprate" (JDS/PAB) Final

SATURDAY, APRIL 13, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

12) 8:30 - 12:30 P.M. Proposed ACRS Reports (Open)
Continue discussion of proposed ACRS reports listed under Item 11.

13) 12:30 - 1:00 P.M. Miscellaneous (Open) (GEA/JTL)
Discussion of matters related to the conduct of Committee activities and matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

NOTE:

- **Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.**
- **Thirty-Five (35) copies of the presentation materials should be provided to the ACRS.**

APPENDIX III: MEETING ATTENDEES

491st ACRS MEETING
APRIL 11-13, 2002

NRC STAFF (4/11/2002)

W. Burton, NRR
M. Hartman, NRR
R. Emch, NRR
B. Elliot, NRR
S. Arndt, RES
J. Flack, RES
J. Ibarra, RES
S. Browde, RES
J. Mitchell, RES
J. Kramer, RES
J. Persensky, RES
H. Graves, RES
N. Kadambi, RES
D. Carlson, RES
J. Muscara, RES
S. Ali, RES
A. Rubin, RES
S. Koenick, NRR
F. Grubell, NRR
S. Rubin, RES
F. Eltawila, RES
E. Trager, RES
A. Levin, OCM/RAM
A. Cubbage, NRR
C. Ader, RES
T. Jensen-Otsu, RES
A. Mediola, NRR
F. Orr, NRR
P. Kang, NRR
R. Auluck, NRR
J. Calvo, NRR
M. Switzer, RES
L. Cupidon, RES
E. Hackett, RES
S. Long, NRR
S. Bajwa, NRR
J. Chung, NRR
B. Bateman, NRR
A. Lee, NRR
K. Wichman, NRR
K. Karwoski, NRR
J. Strosnider, NRR
J. Davis, RES
J. Grobe, RIII
A. Hiser, NRR
S. Bloom, NRR
S. Dinsmore, NRR
Y.C. Li, NRR
S. Malik, NRR
T. Chan, NRR
M. Johnson, NRR
M. Kirk, RES
B. Wetzel, NRR
E. McKenna, NRR
A. Kein, NRR
S. Browde, RES
Y. C. Li, NRR
H. Ashan, NRR
D. Terao, NRR
G. Bagchi, NRR
G. Galketi, NRR
J. Straaisha, NRR

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC

K. Cosens, NEI
H. Fontecilla, Dominion
J. Wood, FENOC
C. Boggess, Westinghouse
P. Kotwicki
D. Weakland, FENOC
D. Grabski, FENOC
D. Raleigh, LIS, Scientech
P. Gunter, NIRS
D. Lockwood, FENOC
C. Brinkman, Westinghouse
F. Miraglia, Self
J. Roe, Scientech
B. Herman, Self
R. Lessy,
S. Fyfitch, FRA-ANP
R. Huston, Licensing Support Services
D. Horner, McGraw-Hill
K. Balkey, Westinghouse
P. O'Reagan, EPRI
M. Henig, Dominion
B. Corrin, Dominion
L. Wraniewicz, Dominion
A. Nelson, NEI
B. Youngblood, ISL
J. LaChance, SNL
J. Lehner, BNL
E. C. Lin, BNL
L. Mathews, Southern Nuclear
J. Powers, FENOC
M. McLaughlin, FENOC

NRC STAFF (4/12/2002)
J. Donoghue, NRR
S. Dembell, NRR
T. Marsh, NRR
L. Barnett, NRR
R. Caruso, NRR
J. Wermiel, NRR
S. Bajwa, NRR
B. Pettis, NRR
C. Wu, NRR
M. Shauaki, NRR
A. Passarelli, NRR
G. Thomas, NRR
M. Hart, NRR
S. Jones, NRR
R. Landry, NRR
N. Trehan, NRR
D. Desaulniers, NRR
D. Harrison, NRR
G. Georgiev, NRR
D. Thatcher, NRR
J. Wigginton, NRR
T. Huang, NRR
E. Kendrick, NRR

ATTENDEES FROM OTHER AGENCIES AND GENERAL PUBLIC
H. Hoang, GE
D. Pappone, GE
F. Bolger, GE
I. Nir, GE
G. Strambeck, GE
B. Gitnick, ISL

APPENDIX IV: FUTURE AGENDA

The Committee agreed to consider the following during the **XX**th ACRS Meeting, **XX**, 2000:

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

April 17, 2002

SCHEDULE AND OUTLINE FOR DISCUSSION
492nd ACRS MEETING
MAY 2-4, 2002

THURSDAY, MAY 2, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

1) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open)
   - 1.1) Opening statement (GEA/JTL/SD)
   - 1.2) Items of current interest (GEA/SD)

2) 8:35 - 10:30 A.M. Brunswick Steam Electric Plant, Units 1 & 2 Core Power Uprate (Open/Closed) (GBW/JDS/PAB)
   - 2.1) Remarks by the Subcommittee Chairman
   - 2.2) Briefing by and discussions with representatives of the NRC staff and the Carolina Power and Light Company regarding the license amendment to increase core power level by approximately 15% for the Brunswick Steam Electric Plant, Units 1 & 2, pursuant to the General Electric Nuclear Energy Extended Power Uprate Program.

   NOTE: A portion of this session may be closed to discuss General Electric proprietary information.

10:30 - 10:45 A.M. ***BREAK***

3) 10:45 - 11:45 A.M. Expert Panel Recommendations on Source Term for High Burnup and Mixed Oxide (MOX) Fuel (Open) (MVB/AWC/MME)
   - 3.1) Remarks by the Subcommittee Chairman
   - 3.2) Briefing by and discussions with representatives of the NRC staff regarding an Expert Panel's recommendations on source term for high burnup and MOX fuel and on revising NUREG-1465, "Accident Source Terms for Light Water Nuclear Power Plants."

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

11:45 - 12:45 P.M. ***LUNCH***

4) 12:45 - 1:45 P.M. Confirmatory Research Program on High Burnup Fuel (Open) (TSK/TJK/MME)
   - 4.1) Remarks by the Subcommittee Chairman
   - 4.2) Briefing by and discussions with representatives of the Office of Nuclear Reactor Regulation and the Office of Nuclear Regulatory Research regarding their views on the need for the confirmatory research program on high burnup fuel.

5) 1:45 - 2:45 P.M. Subcommittee Report (Open) (DAP/MWW)
Report by the Chairman of the ACRS Subcommittee on Reactor Fuels regarding the staff's draft Safety Evaluation Report on the Duke Cogema Stone & Webster application for a construction authorization for a proposed MOX Fuel Fabrication Facility that was discussed during the April 10, 2002 Subcommittee meeting, and other related matters.

2:45 - 3:00 P.M. *****BREAK*****

6) 3:00 - 6:15 P.M. Safeguards and Security Activities (Closed) (MVB/RPS)
(4:30 - 4:45 P.M. BREAK)
6.1) Remarks by the Subcommittee Chairman
6.2) Briefing by and discussions with representatives of the NRC staff regarding ongoing and planned NRC activities in the safeguards and security areas.

NOTE: The entire session will be closed to protect national security information and safeguards information.

6:15 - 6:30 P.M. *****BREAK*****

7) 6:30 - 7:15 P.M. Proposed ACRS Reports (Open)
Discussion of proposed ACRS reports on:
7.1) Brunswick Steam Electric Plant, Units 1 & 2 Core Power Uprate (GBW/JDS/PAB)
7.2) Expert Panel Recommendations on Source Term for High Burnup Fuel (tentative) (MVB/AWC/MME)
7.3) Confirmatory Research Program on High Burnup Fuel (tentative) (TSK/TJK/MME)

FRIDAY, MAY 3, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

8) 8:30 - 8:35 A.M. Opening Remarks by the ACRS Chairman (Open) (GEA/JTL/SD)

9) 8:35 - 11:30 A.M. PHEBUS-FP, PHEBUS-2K and PHEBUS-LOCA International
(10:00-10:15 A.M. BREAK) Projects (Open) (DAP/MME)
9.1) Remarks by the Subcommittee Chairman
9.2) Briefing by and discussions with representatives of the French PHEBUS-FP Project regarding the recent results of the PHEBUS-FP Project and plans for the PHEBUS-2K and PHEBUS-LOCA Projects.

11:30 - 11:45 A.M. *****BREAK*****

10) 11:45 - 12:30 P.M. Future ACRS Activities/Report of the Planning and Procedures Subcommittee (Open) (GEA/JTL/SD)
10.1) Discussion of the recommendations of the Planning and Procedures Subcommittee regarding items proposed for consideration by the full Committee during future ACRS meetings.

10.2) Report of the Planning and Procedures Subcommittee on matters related to the conduct of ACRS business, and organizational and personnel matters relating to the ACRS.

12:30 - 1:30 P.M. *****LUNCH*****

11) 1:30 - 1:45 P.M. Reconciliation of ACRS Comments and Recommendations (Open) (GEA, et al./SD, et al.)
Discussion of the responses from the NRC Executive Director for Operations to comments and recommendations included in recent ACRS reports and letters.

12) 1:45 - 7:00 P.M. Proposed ACRS Reports (Open)
Discussion of proposed ACRS Reports on:
12.1) Brunswick Steam Electric Plant, Units 1 & 2 Core Power Uprate (GBW/JDS/PAB)
12.2) Expert Panel Recommendation on Source Term for High Burnup Fuel (tentative) (MVB/AWC/MME)
12.3) Confirmatory Research Program on High Burnup Fuel (tentative) (TSK/TJK/MME)
12.4) PHEBUS-FP, PHEBUS-2K and PHEBUS-LOCA Projects (DAP/MME)

SATURDAY, MAY 4, 2002, CONFERENCE ROOM 2B3, TWO WHITE FLINT NORTH, ROCKVILLE, MARYLAND

13) 8:30 - 12:30 P.M. Proposed ACRS Reports (Open)
Continue discussion of proposed ACRS reports listed under Item 12.

14) 12:30 - 1:00 P.M. Miscellaneous (Open) (GEA/JTL)
Discussion of matters related to the conduct of Committee activities and matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

NOTE:

- **Presentation time should not exceed 50 percent of the total time allocated for a specific item. The remaining 50 percent of the time is reserved for discussion.**
- **Thirty-Five (35) copies of the presentation materials should be provided to the ACRS.**

APPENDIX V
LIST OF DOCUMENTS PROVIDED TO THE COMMITTEE
491ST ACRS MEETING
APRIL 11-13, 2002

[Note: Some documents listed below may have been provided or prepared for Committee use only. These documents must be reviewed prior to release to the public.]

MEETING HANDOUTS

AGENDA ITEM NO.	DOCUMENTS
1	Opening Remarks by the ACRS Chairman
	1. Items of Interest, dated April 11-13, 2002
2	Final Review of the Turkey Point License Renewal Application
	2. Turkey Point Plant License Renewal presentation by Florida Power & Light [Viewgraphs]
	3. Review of the Final Safety Analysis Report for License Renewal of the Turkey Point Nuclear Plant, Units 3 and 4 presentation by NRR [Viewgraphs]
3	Advanced Reactor Research Plan
	4. Advanced Reactor Research Plan presentation by F. Eltawila, RES [Viewgraphs]
	5. Advanced Reactor Research Plan presentation by J. Flack, RES [Viewgraphs]
	5a. Advanced Research Plan (Draft Predecisional)
4	CRDM Penetration Cracking and Reactor Pressure Vessel Head Degradation
	6. MRP Update to ACRS presentation by L. Mathews, Southern Nuclear [Viewgraphs]
	7. Reactor Pressure Vessel Head Degradation at the Davis-Besse Nuclear Power Station presentation by FENOC [Viewgraphs]
	8. Overview of NRC Staff Activities, Bulletin 2001-01 "Circumferential Cracking of VHP Nozzles" & Bulletin 2002-01 "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity" presentation by A. Hiser and K. Karwoski [Viewgraphs]
5	Westinghouse Owners Group (WOG) and Electric Power Research Institute (EPRI) Initiatives Related to Risk-Informed Inservice Inspection of Piping
	9. Results of the Augmented Inspection at Davis-Besse presentation by J. Grobe, Region III [Viewgraphs]
	10. Risk-Informed Inservice Inspection of Break Exclusion Region Piping presentation by NRR and RES [Viewgraphs]

8 General Electric (GE) Nuclear Energy Topical Report: "Constant Pressure Power Uprate"

11. GE BWR Constant Pressure Power Uprate Program presentation by General Electric [Viewgraphs]
12. GE Constrant Pressure Power Uprate, NRC Review of Licensing Topical Report presentation by J. Donoghue, NRR [Viewgraphs] (presentation includes GE proprietary information)

12a. GE Constant Pressure Power Uprate Topical Report - ACRS Consultant V. Shrock's Comments/Subcommittee Meeting Minutes

12b. Letter from GE Nuclear Energy, Subject: CLTR Presentation Material for ACRS— Meeting on April 12, 2002 Re: Open Session (Non-Proprietary) & Closed Session (Proprietary) dated April 10, 2002

9 Future ACRS Activities/Report of the Planning and Procedures Subcommittee

13. Future ACRS Activities/Final Draft Minutes of Planning and Procedures Subcommittee Meeting -Tuesday April 9, 2002 [Handout #9.1]

10 Reconciliation of ACRS Comments and Recommendations

14. Reconciliation of ACRS Comments and Recommendations [Handout #10.1]

MEETING NOTEBOOK CONTENTS

TAB DOCUMENTS

2 Turkey Point License Renewal Application
1. Table of Contents
2. Proposed Schedule
3. Status Report
4. Letter from Mr. John J. Barton to Dr. Mario Bonaca, "Turkey Point, Units 3 and 4 License Renewal Application," dated March 19, 2002
5. Letter from Mr. Mark P. Oncavage to Mr. Noel Dudley dated February 16, 2002

3 Advanced Reactor Research Plan
6. Table of Contents
7. Proposed Schedule
8. Status Report
9. Staff Requirements Memorandum, dated February 13, 2001
10. Advanced Reactor Research Plan, March 2002 [Draft Predecisional]
11. Dr. Dana Powers' Trip Report, October 2001
12. Memo from M. El-Zeftawy to the ACRS Members, dated March 19, 2002
13. Staff Requirements Memorandum dated April 1, 2002

4 CRDM Penetration Cracking and RPV Head Degradation
14. Table of Contents
15. Proposed Schedule
16. Status Report
17. NRC Information Notice 2002-13: Possible Indicators of Ongoing Reactor Pressure Vessel Head Degradation, April 4, 2002
18. Note to All Davis-Besse Communications Team Members, RE: Davis Besse Question of Quarantine, April 3, 2002
19. Note to All Davis-Besse Communications Team Members, RE: Control Rod Relocation with Briefing Slides, April 2, 2002
20. Memorandum from Brian Sheron to Samuel Collins, Subject: "DRAFT Vessel Head Penetration Nozzles Cracking Action Plan
21. Union of Concerned Scientist Issue Brief, Subject: "Davis-Besse: The Reactor with a Hole in its Head," March 29, 2002
22. Reactor Vessel Head Degradation References

5 Westinghouse Owners Group and Electric Power Research Institute Initiatives Related to Risk-Informed Inservice Inspection of Piping
23. Table of Contents

24. Proposed Schedule
25. Status Report
26. Letter to W. Travers, EDO, dated September 15, 1999, from D. Powers, ACRS, Subject: Safety Evaluation Report Related to Electric Power Research Institute Risk-Informed Methods to Inservice Inspection of Piping (EPRI TR-112657, Revision B)
27. Letter to Travers, EDO, dated November 20, 1998, from R. L. Seale, ACRS, Subject: Safety Evaluation Report Related to Westinghouse Owners Group Application of Risk-Informed Methods to Inservice Inspection of Piping Topical Report (WCAP-14572, Revision 1)

8 GE Constant Pressure Power Uprate Licensing Topical Report

28. Table of Contents
29. Presentation Schedule
30. Project Status Report
31. Excerpt from Certified Minutes of January 16-18, 2002, Thermal-Hydraulic Phenomena Subcommittee Meeting Discussing GE Presentation on CPPU Licensing Topical Report, dated April 3, 2002
32. Memorandum from J. Zwolinski, NRR, to J. Larkins, ACRS, Transmitting Revised Draft Safety Evaluation for GE Constant Pressure Power Uprate Licensing Topical Report, dated February 27, 2002 (Draft Predecisional)

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

APRIL 11, 2002
Today's Date

NRC STAFF PLEASE SIGN IN FOR ACRS MEETING

PLEASE PRINT

NAME	NRC ORGANIZATION
WILLIAM BURTON	NRR/DRIP/RLEP
M Hartzman	NRR/DE/EMEB
R. Emch	NRR/DRIP/RLEP
B. Elliot	NRR/DE/EMCB
Steven Arndt	RES/DET/ERAB
John Flack	RES/DSARE
Jose Ibarra	RES/DSARE
Shana Browde	RES/DSARE
Jocelyn Mitchell	RES/DSARE
Joel Kramer	RES/DSARE
J Persensky	RES/DSARE
H. Graves	RES/DET/ERAB
N P Kadambi	RES
Donald E. Carlson	RES/DSARE
JOSEPH MUSCARA	RES/DET
SYED ALI	RES/DET
ALAN RUBIN	RES/DRAA
Stephen Koenick	NRR/NRLPO
FRANCIS J. GROBEL	NRR/DE/EMEB
Jhuan D Rubin	RES/DSARE
FAROUK ELTAWILA	RES/DSARE
EUGENE TRAGER	RES/DSARE/REAHFB

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

APRIL 11, 2002
Today's Date

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NAME	NRC ORGANIZATION
ALAN LEVIN	OCM/RAM
Amy Cubbage	NRR/NRLPO
Charles Ader	RES/DSARE
Tomoko Jensen-Ofsu	RES/DRAA/PRAB
ANTHONY J. MENDIOLA	NRR/DLPM/PD III
FRANK ORR	NRR/DSSA/SRXB
Mike Switzer	RES/DET/MEB
Les Cupidon	RES/DSARE/REAHFB
ED HACKETT	RES/DET/MEB
Steve Long	NRR/DSSA/SPSB
SINGH BAJWA	NRR/DLPM/PD III
JIN CHUNG	NRR/DSSA/SPSB
Bill Bateman	NRR/DE/EMCB
ANDREA LEE	NRR/DE/EMCB
KEITH WICHMAN	" " "
Ken Karwoski	" " "
V. STRASNIGER	NRR/DE
Jim Davis	RES/DET/MEB
JACK GROBE	NRC/RIII
Allen Hiser	NRR/DE

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

APRIL ~~12~~ 11, 2002
Today's Date

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NAME	NRC ORGANIZATION
Steve Bloom	NRR/DE
Stephen Dinsmore	NRR/DSSA
Y.C. (Rene) Li	NRR/DE
Sarah Malik	NRR/DSSA
TERENCE CHAN	NRR/DE
Michael Johnson	NRR/DSSA/SPSB
MARK KIRK	REG/DET/MCB
Beth Wetzel	NRR/DE/EMCB
Eileen McKenna	NRR/DRIP/EPRP
Andrea Keim	NRR/DE/EMCB

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

April 11, 2002
Today's Date

ATTENDEES PLEASE SIGN IN FOR ACRS MEETING

PLEASE PRINT

NAME	AFFILIATION
Kurt Cozens	NEI
Shana Browde	RES/DSARE/REAHFB
~~Tom~~ H. Fontecilla	Dominion
John Wood	FENOC
Cheryl Boggess	Westinghouse Owner's Group
Phil Kotwicki	Westinghouse Elec
Dennis Wenslawd	FENOC/WOG
David Grabski	FENOC
Deann Raleigh	LIS, scientech
Paul Gunter	NIRS
David Lockwood	FENOC
Charles Brinkman	Westinghouse
Frank Miraglia	Self
Jack Roe	Scientech
Bob Herman IV	SI
Roy Lessy	Firstenergy
Steve Fyfitch	FRA-ANP
Robert Huston	Licensing Support Services
Daniel Horner	McGraw-Hill
Ken Balkey	Westinghouse
Patrick O'Regan	EPRI

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

April 11, 2002
Today's Date

ATTENDEES PLEASE SIGN IN FOR ACRS MEETING

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NAME	AFFILIATION
Y.C. (Renee) Li	NRR/DE/EMEB
Hans Ashar	NRR/DE/EMEB
David Terao	NRR/DE/EMEB
GOUTAM BAGCHI	NRR/DE
Raj Anand	NRR/DRIP
PETER J KANG	NRR/DRIP/RLEP
Greg Galletti	NRR/DIPM/IEHB
MICHAEL HENIG	DOMINION
BILL CORRIN	DOMINION
LUCKY WEANIEWICZ	DOMINION
Alan Nelson	NEI
JOSE CALVO	NRR/EEIB
Bob Youngblood	ISL
Jeff LaChance	SNL
John Lehner	BNL
E.C. Lin	BNL
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Larry Mathews	Southern Nuclear
Jim Powers	FENOC
Mark McLaughlin	FENOC

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

APRIL 12, 2002
Today's Date

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NAME	NRC ORGANIZATION
JOE DONOGHUE	NRR / DLPM
Stan Dembek	NRR / DLPM
Tad Marsh	NRR / DLPM
Lee Banic	NRR/DLPM
RALPH CARUSO	NRR/SRXB
Jared Wermiel	NRR/DSSA/SRXB
S. SINGH BAJWA	NRR/DLPM/PD III
BOB PETTIS	NRR/DIPM
Cheng-Ih Wu	NRR/DE/EMEB
Mohammed Shuaibi	NRR/DLPM
Anne Passarelli	NRR/DSSA
GEORGE THOMAS	NRR/DSSA
Michelle Hart	NRR/DSSA
STEVEN JONES	NRR/DSSA
RALPH LANDRY	NRR/DSSA
N. TREHAN	NRR/DE/EEIB
David Desaulniers	NRR/DIPM
Donnie Harrison	NRR/DSSA/SPSB
George GEORGIEV	NRR/DE/EMCB
Dale Thatcher	NRR/DIPM/IEHB
JIM WIGGINTON	NRR/DIPM/IRSB
Tai Huang	NRR DSSA/SRXB
Ed Kendrick	NRR DSSA/SRXB

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

491ST FULL COMMITTEE MEETING
APRIL 11-13, 2002

April 12, 2002
Today's Date

ATTENDEES PLEASE SIGN IN FOR ACRS MEETING

PLEASE PRINT

NAME	AFFILIATION
HOA HOANG	GE
DAN PAPPONE	GE
Fran Bolger	GE
Israel Ni	GE
George Strambeck	GE
BEN GITNICK	ISL