



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

January 29, 1991

The Honorable Kenneth M. Carr
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Chairman Carr:

SUBJECT: SUMMARY REPORT - THREE HUNDRED SIXTY NINTH MEETING
OF THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS,
JANUARY 10-11, 1991

During its 369th meeting, January 10-11, 1991, the Advisory Committee on Reactor Safeguards discussed several matters and completed the report and letter notes below. In addition, the Committee did not raise any objection to Dr. Shewmon's proposal to provide the memorandum identified below.

REPORT TO THE CONGRESS

- Annual ACRS Report to the Congress on the NRC Safety Research Program (Report to J. Danforth Quayle, President of the Senate, and Thomas S. Foley, Speaker of the House, dated January 15, 1991.)

The Committee completed its report to the Congress on the NRC Safety Research Program as required by Section 29 of the Atomic Energy Act of 1954, as amended by Section 5 of Public Law 95-209. The Committee transmitted to the Congress several of its reports to the Commission related to various elements of the NRC Safety Research Program.

The Committee stated that it expects to continue to review various elements of the NRC Safety Research Program and provide reports to the Commission as warranted.

LETTER TO THE EDO

- Proposed Resolution of Generic Safety Issue 29, "Bolting Degradation or Failure in Nuclear Power Plants" (Letter to James M. Taylor, EDO, dated January 14, 1991.)

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MEMORANDUM BY AN INDIVIDUAL ACRS MEMBER

- Comments on Draft Regulatory Guides 7001 and 7002 (Memorandum from P. G. Shewmon, ACRS member, for L. C. Shao, Office of Nuclear Regulatory Research, dated January 11, 1991.)

The Committee decided not to review/comment on the following Regulatory Guides, but offered no objection to Dr. Shewmon's proposal to provide comments on the technical adequacy of these Guides as an individual member of the ACRS:

- Draft Regulatory Guide, DG-7001, "Fracture Toughness Criteria for Ferritic Steel Shipping Cask Containment Vessels with a Maximum Wall Thickness of Four Inches (0.1m)"
- Draft Regulatory Guide, DG-7002, "Fracture Toughness Criteria for Ferritic Steel Shipping Cask Containment Vessels with a Wall Thickness Greater than Four Inches (0.1m)"

HIGHLIGHTS OF CERTAIN MATTERS CONSIDERED BY THE COMMITTEE

- Proposed Resolution of Generic Safety Issue-29, "Bolting Degradation or Failure in Nuclear Power Plants"

The Committee heard presentations by and held discussions with representatives of the Office of Nuclear Regulatory Research (RES) and of the Office of Nuclear Reactor Regulation (NRR) regarding the proposed resolution of Generic Safety Issue (GSI)-29.

The Committee has agreed with the staff that NUREG-1339, "Resolution of Generic Safety Issue 29: Bolting Degradation or Failure in Nuclear Power Plants," provides a satisfactory basis for the proposed resolution of GSI-29.

Since RES and NRR have not selected a mutually agreed upon method for implementing the resolution of this issue, the Committee has deferred its final comments until the staff has chosen a specific method of implementation.

The Committee provided a letter to the EDO on this matter.

- Proposed Final Rule - 10 CFR Part 55, Fitness for Duty Requirements for Licensed Operators

Representatives of the NRC staff briefed the Committee regarding the public comments received on the proposed 10 CFR Part 55 and the associated staff responses. Comments were provided by NLMARC, utilities and contractors, individual

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licensed operators, employee organizations, and universities. A majority of the commenters seems to feel that:

- The proposed 10 CFR Part 55 is unnecessary.
- The proposed rule singles out the operators; it will have a detrimental effect on their morale.

The staff plans to submit the proposed final version of 10 CFR Part 55 for ACRS consideration during March or April 1991.

This was an information briefing - the Committee took no action.

• Meeting with the RES Director

Mr. Beckjord, RES Director, briefed the Committee on the following:

- Impact of the \$2.1 million budget reduction on the FY 1991 NRC Safety Research Program.
- Impact of the FY 1992 budget reduction proposed by the Office of Management and Budget on the NRC Safety Research Program.
- Advanced Reactor Initiatives.
- Nuclear Safety Research Review Committee's Report on the Research Strategy and Contents of the NRC Research Program.
- Status of Aging and Human Factors Research Program.
- Current Emphasis in the Severe Accident Research Program.

This was an information briefing - the Committee took no action.

• Nuclear Power Plant Operating Experience

Representatives of the NRC staff briefed the Committee regarding the following operating events:

- Reactor scram on a Hi-Hi intermediate range monitor scram signal at Quad Cities, Unit 2, October 27, 1990.
- Loss of automatic and manual actuation of engineered safety features system capability while at power at Ginna, Unit 1, December 12, 1990.

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This was an information briefing - the Committee took no action.

- Proposed Final Revision to 10 CFR Part 20, Standards for Protection Against Radiation

Representatives of RES briefed the Committee regarding the proposed final revision to 10 CFR Part 20, including a comparison of the provisions between the existing and the revised versions of 10 CFR Part 20. The staff plans to develop several new regulatory guides and revise applicable existing guides to provide guidance to the industry in implementing the provisions of the revised 10 CFR Part 20.

This was an information briefing - the Committee took no action.

- Licenses and Radiation Safety Requirements for Large Irradiators

Representatives of RES briefed the Committee regarding large gamma irradiators. They provided information on several matters related to large irradiators, including the following:

- Most Significant Potential Radiation Hazards.
- Incidents Involving Overexposures.
- Access Control Requirements.

The staff stated that a proposed new rule, 10 CFR Part 36, "Licenses and Radiation Safety Requirements for Large Irradiators," that prescribes licensing and radiation safety requirements for large irradiators was published for public comment on December 4, 1990.

This was an information briefing - the Committee took no action.

- Containment Design Criteria for Future Plants

The Committee discussed a draft report to the Commission regarding containment design criteria for future plants and agreed to continue the discussion of this matter during the February 7-9, 1991 ACRS meeting.

- Appointment of ACRS Members

The Committee discussed the qualifications of candidates for appointment to the ACRS for the position that will open on May 9, 1991, and agreed to continue the consideration of

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additional candidates during the February 7-9, 1991 ACRS meeting.

- Meeting With the NRC Commissioners

The Committee was informed that a pre-scheduled meeting between the ACRS and the Commissioners has been scheduled for March 7, 1991. Containment Design Criteria for Future Plants has been identified as one item for discussion during this meeting. Other topics for discussion will be identified by the Committee and the Commissioners as appropriate.

SUBCOMMITTEE MEETINGS

Since the last summary report of ACRS activities, the following Subcommittee/Working Group meetings have been held:

- Working Group of the Containment Systems Subcommittee, January 9, 1991

A Working Group of the Containment Systems Subcommittee developed a proposed report to the Commission on Containment Design Criteria for future plants for consideration by the full Committee during the January 10-11, 1991 ACRS meeting.

- Materials and Metallurgy, January 9, 1991

The Subcommittee discussed the proposed resolution of Generic Safety Issue 29, "Bolting Degradation or Failure in Nuclear Power Plants."

- Auxiliary and Secondary Systems, January 17, 1991

The Subcommittee discussed the fire protection and mitigation features in nuclear power plants.

- Defueling/Fuel Pool Storage, January 29, 1991

The Subcommittee discussed the proposed Standard Review Plan for reviewing Safety Analysis Reports for dry metallic spent fuel storage casks.

PLANT VISIT

ACRS members I. Catton and C. Michelson visited the St. Lucie Nuclear Power Plant on December 13, 1990 to look at the fire protection and mitigation features.

FUTURE ACTIVITIES

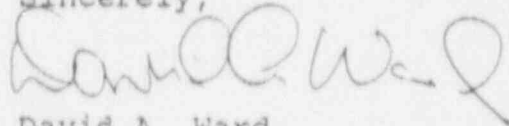
The Committee agreed to consider the following items during the 370th, February 7-9, 1991, ACRS meeting:

- Containment Design Requirements - The members will continue preparation of a proposed report to the NRC on the containment design criteria for future plants.
- EPRI-ALWR Requirements Document - Briefing by and discussion with representatives of the NRC staff on the status of their review of the EPRI-ALWR Requirements Document and on staff plans to review the EPRI "roll-up" document on requirements for evolutionary and passive nuclear power plants.
- Individual Plant Examination for External Events (IPEEE) Program - Review and comment on the NRC staff's proposed revised Supplement 4 to Generic Letter 88-20, Severe Accident Vulnerabilities Due to External Events and its supporting guidance document, NUREG-1407. Representatives of the NRC staff and the nuclear industry will participate, as appropriate.
- Primary Systems Integrity - Briefing by representatives of the NRC staff regarding test results on the stability/instability of flawed pipes.
- Fitness for Duty Requirements for Licensed Operators - The members will discuss proposed NRC requirements for fitness for duty for licensed operators.
- Future ACRS Activities - Discuss anticipated Subcommittee activities and items proposed for consideration by the full Committee.
- ACRS Subcommittee Activities - Briefings and discussion regarding the status of assigned ACRS Subcommittee activities.
- Appointment of New Members - Discuss the qualifications of candidates proposed for appointment to the Committee.
- Formulation of a Large Release Definition and Supporting Rationale - Review and report on proposed formulation of a large release definition and supporting rationale, SECY-90-405.
- Spent Fuel Storage - Review and report on proposed Standard Review Plan for dry metallic spent fuel storage casks. Representatives of the NRC staff and the nuclear industry will participate, as appropriate.
- Training and Qualification of Civilian Nuclear Plant Personnel - Review and report on proposed rulemaking regarding training and qualification of civilian nuclear power plant personnel. Representatives of the NRC staff and the nuclear industry will participate, as appropriate. (NOTE: This item has been deferred to the March 7-9, 1991 ACRS meeting.)
- Performance Indicator Program - Briefing by representatives of the NRC staff regarding the status of the NRC Performance Indicator Program. (NOTE: This item has been deferred to the March 1991 ACRS meeting.)

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- Implementation of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident" - Briefing by representatives of the NRC staff regarding the status of the implementation of Regulatory Guide 1.97, and associated problems.
- Miscellaneous - Discuss matters that were not completed during previous meetings as time and availability of information permit.

Sincerely,

A handwritten signature in dark ink, appearing to read "David A. Ward". The signature is fluid and cursive, with the first name "David" being the most prominent.

David A. Ward
Chairman



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

January 14, 1991

Mr. James M. Taylor
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Taylor:

SUBJECT: PROPOSED RESOLUTION OF GENERIC SAFETY ISSUE 29, "BOLTING DEGRADATION OR FAILURE IN NUCLEAR POWER PLANTS"

During the 369th meeting of the Advisory Committee on Reactor Safeguards, January 10-11, 1991, we reviewed the NRC staff's proposed resolution of Generic Safety Issue 29, "Bolting Degradation or Failure in Nuclear Power Plants." Our Subcommittee on Materials and Metallurgy also reviewed this matter during its meeting on January 9, 1991. During this review, we had the benefit of the documents referenced and of discussions with representatives of the NRC staff.

The proposed resolution deals with implementation of a plant-wide bolting integrity program with emphasis on safety systems. The staff's basis for the proposed resolution is described in NUREG-1339. This program has several parts. Some parts involve NRC actions, but most stem from an industry program that is summarized in Electric Power Research Institute report EPRI NP-5769, Volumes 1 and 2.

We agree with the staff that NUREG-1339 provides a satisfactory basis for the proposed resolution of this Generic Safety Issue. The NRC staff has not yet agreed on the method of implementation for this resolution. We withhold final comment on this issue until it is clear what path the NRC staff chooses to follow.

Sincerely,

David A. Ward
Chairman

References:

1. Memorandum dated December 4, 1990 from Warren Minners, Office of Nuclear Regulatory Research, to Raymond F. Fraley, Advisory Committee on Reactor Safeguards, Subject: Proposed Resolution of GSI-29, "Bolting Degradation or Failure in Nuclear Power Plants."

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Mr. James M. Taylor

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2. U.S. Nuclear Regulatory Commission, NUREG-1339, "Resolution of Generic Safety Issue 29: Bolting Degradation or Failure in Nuclear Power Plants," June 1990.
3. Electric Power Research Institute, EPRI NP-5769, Volumes 1 and 2, "Degradation and Failure of Bolting in Nuclear Power Plants," April 1988.