



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

ACNWS-0104

PDR

May 20, 1999

The Honorable Shirley Ann Jackson
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: SUMMARY REPORT—108TH MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE, MARCH 23–25, 1999, AND OTHER RELATED COMMITTEE ACTIVITIES

Dear Chairman Jackson:

During its 108th meeting on March 23–25, 1999, at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, the Advisory Committee on Nuclear Waste (ACNW or the Committee) discussed several matters and approved the following reports:

- Comments on the Department of Energy's Viability Assessment for the Proposed High-Level Radioactive Waste Repository at Yucca Mountain, Nevada (Report to Shirley Ann Jackson, Chairman, NRC, from B. John Garrick, Chairman, ACNW, April 8, 1999)
- 1999 Update on the Review of the NRC Safety Research Program Concerning Waste-Related Work (Memorandum to Dana Powers, Chairman, Advisory Committee on Reactor Safeguards, from B. John Garrick, Chairman, ACNW, April 13, 1999)
- Advisory Committee on Nuclear Waste Metrics and Self-Assessment Evaluation for Fiscal Year 1998 (Report to Shirley Ann Jackson, Chairman, NRC, from B. John Garrick, Chairman, ACNW, April 29, 1999)

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

(1) Low Levels of Ionizing Radiation

In this portion of the meeting, the ACNW was given the latest information with respect to the research and debate regarding the linear non-threshold (LNT) model.

After a keynote address by Commissioner Dicus, the ACNW heard presentations on (1) the National Council on Radiation Protection and Measurement's (NCRP's) Scientific Committee 1-6 draft report, "Evaluation of the Linear Nonthreshold Dose-Response Model;" (2) the Department of Energy's current low-dose research efforts; (3) an

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overview of the National Cancer Institute's radiation epidemiology studies; (4) the National Academy of Sciences (NAS)/Biological Effects of Ionizing Radiation (BEIR) VII Phase I report and NAS recommendations for the Phase II committee; (5) the Office of Nuclear Material Safety and Safeguards (NMSS)-sponsored hormesis database development project at the University of Massachusetts; (6) the International Council on Radiation Protection's perspective on LNT; (7) comments regarding NCRP's draft report from an NMSS representative; (8) and the Health Physics Society's policy statement regarding the expenditure of public funds for conducting studies on the health effects of ionizing radiation. The ACNW held a panel discussion to identify potential gaps in the research. A representative of Radiation, Science, and Health, Inc., and several other stakeholders presented their comments regarding the NCRP's draft report. At the close of this portion of the meeting, experts invited by ACNW gave their impressions on this session and made recommendations to the Committee.

Conclusions/Action Items

The ACNW will continue to follow this topic since it is fundamental to risk-informed, performance-based (RIPB) regulation. The ACNW is looking forward to continuing discussions on the DOE's low-dose research program and the NAS/BEIR VII Phase II report. At the 109th ACNW meeting, the Committee will prepare a letter containing its recommendations to the Commission on this topic.

(2) Progress of a Clearance Rule for Materials and Equipment Having Residual Radioactive Contamination

Messrs. F. Cardile and T. Huffert, NMSS, discussed current developments on this draft rule. After presenting a brief history and background of the proposed rule, Mr. Cardile and Mr. Huffert discussed the following:

- The four facilitated public hearings currently scheduled for different geographical locations between August and November 1999.
- The four principal issues to be raised in the issues paper (scheduled for release in April 1999), potential alternate courses of action, and previous Commission efforts to address the release of solid materials.
- The direction provided by the Commission in the development of the technical basis document.

Among questions asked by the Committee that resulted in significant discussion were the use of the collective dose concept as applied to the definition and application of the clearance rule and how the staff will determine the cutoff value for the clearance rule. The application of the risk-informed, performance-based concept was also raised. It was

noted that one purpose of such an approach is to simplify regulations. The agency RIPB philosophy should also apply to the clearance rule.

Conclusions/Actions

The Committee indicated that it had a continuing interest in the proposed rule and intends to follow its progress closely. The ACNW will review the progress in the development of this rule following upcoming public meetings.

(3) Progress in the Development of the Decommissioning Standard Review Plan

Mr. N. Orlando, NMSS, updated the current status of the Standard Review Plan (SRP) for Decommissioning. Messrs. R. Abu-Eid, R. Nelson, and M. Thaggard aided in responding to questions.

After briefly reviewing the Commission's July 7, 1998, staff requirements memorandum, Mr. Orlando discussed the following:

- staff SRP development progress to date,
- comments received to date from the three meetings of public stakeholders held at NRC headquarters,
- future SRP development milestone dates, and
- the remaining issues requiring resolution.

The Committee was particularly interested in the development of the DandD and RESRAD screening codes and the anticipated stakeholder acceptance of (or difficulty with) these codes. The proper use of the screening codes is the biggest challenge being faced in the development of the SRP. Also of interest were the discussions on partial site release and the problems associated with such a concept.

Conclusions/Action Items

The Committee indicated its appreciation of the staff's status report and said it was looking forward to another status report once the public workshops and comment period were complete. The next briefing was tentatively scheduled for fall 1999.

PROPOSED SCHEDULE FOR THE 109th ACNW MEETING

The Committee agreed to consider the following issues at its 109th meeting on May 11–13, 1999:

- **ACNW Planning and Procedures** — The Committee will hear a briefing from ACNW staff on issues to be covered during this meeting. The Committee will also consider topics proposed for consideration by the full Committee and working groups. The Committee will discuss ACNW-related activities of individual members.
- **Risk Communications** — The Committee will begin to prepare for a working group meeting scheduled for October on this topic with a number of lead-in presentations. Presentations are anticipated with people representing other government agencies and private industry and on risk communication initiatives underway at NRC.
- **Yucca Mountain Review Plan** — The NRC staff will discuss the strategy for converting the Issue Resolution Status Reports for the proposed high-level waste repository at Yucca Mountain into a review plan for the repository license application.
- **Meeting With NRC's Executive Director for Operations (EDO)** — The Committee will meet with the EDO to discuss items of mutual interest.
- **Preparation of ACNW Reports** — The Committee will discuss planned reports, including reports on biological effects of low levels of ionizing radiation, a white paper on repository design issues at Yucca Mountain, and other topics discussed at this and previous meetings.

OTHER RELATED ACTIVITIES OF THE COMMITTEE

The 110th ACNW meeting has been rescheduled for June 28–30, 1999, to be held at the Center for Nuclear Waste Regulatory Analyses in San Antonio, Texas.

Sincerely,



B. John Garrick
Chairman