



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

ACNWS-0024

October 17, 1990

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

Dear Chairman Carr:

SUBJECT: SUMMARY REPORT - TWENTY FOURTH MEETING OF THE ADVISORY
COMMITTEE ON NUCLEAR WASTE, SEPTEMBER 19-20, 1990

During its 24th meeting, September 19-20, 1990, the Advisory
Committee on Nuclear Waste discussed the several matters and
completed the letter noted below.

Reports, Letters and Memoranda

- Proposed Letter to Mr. Guimond, Environmental Protection
Agency (See Attachment 1)

The Committee discussed and prepared a response to a letter
from Mr. Richard J. Guimond, Director, Office of Radiation
Programs, U.S. Environmental Protection Agency. Dr. Steindler
was not in attendance. His written comments were taken into
account during the report preparation.

Highlights of Matters Considered by the Committee

- EPRI Performance Assessment Methodology for a High-Level Waste
(HLW) Repository

The Committee was briefed by representatives of EPRI on their
performance assessment methodology for a HLW repository. The
project objectives are: 1) to develop an integrated
methodology for early site performance assessment, 2) to
establish priorities for addressing the crucial issues, and
3) to involve DOE in this methodology development and its
implementation.

This briefing was for information only. No Committee action
was taken.

- Draft Regulatory Guide: Format and Content For the License
Application for the High-Level Waste Repository (FCRG)

The Committee was briefed by the NRC staff on this draft
Regulatory Guide. This guide provides the licensee with
guidance as to what information should be included in a

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license application for a HLW repository. The draft Regulatory Guide also provides a guide for an acceptable, but not required, format for the license application.

The Committee reviewed the draft Regulatory Guide and offered suggestions to the NRC staff. [The meeting transcript provides a record of the Committee's comments.] The Committee agreed not to write a letter report at this time as they will have another opportunity to review the draft guide in the future.

• Strategy for Responding to Recent Requests to Review Technical Issues

a. Mixed Waste Strategy

The Committee discussed the strategy for responding to recent requests from Commissioner Curtiss to review technical issues involved in the disposal of mixed wastes, with an emphasis on determining if either NRC's or EPA's requirements could be modified to satisfy the other agency's regulations. The members discussed Commissioner Curtiss' suggestion that the Committee should focus its review at the technical policy level (not the technical details) and evaluate the degree to which EPA mixed waste regulations address NRC's concerns relative to low-level waste (LLW), and conversely, by evaluating the degree to which NRC regulations address EPA's RCRA concerns relative to toxic chemical wastes.

The Committee will hold a Working Group meeting on mixed wastes on December 10, 1990. Dr. Moeller will be the Working Group Chairman. Representatives of EPA and NRC will be invited to the Working Group meeting to present essential background information.

b. Subsystem Requirements Strategy

The Committee discussed the strategy for responding to the request by Commissioner Curtiss to examine the subsystem performance criteria of 10 CFR Part 60.113 to determine if there exists a technical nexus with the EPA HLW standards. The Committee agreed to schedule a Working Group meeting on this subject during January 1991.

c. NAS/NRC Report Strategy

The Committee discussed possible comments on the National Academy of Sciences/National Research Council's Board on Radioactive Waste Management's Report, "Rethinking High-Level Radioactive Waste Disposal." The Committee agreed to postpone

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had an opportunity to review the NRC staff's comments on this report.

- ACNW Future Activities

- a. Carbon-14 Working Group and 25th ACNW Meetings

The Committee agreed to shorten the 25th ACNW meeting to two days, October 24-25, 1990, and to schedule a Working Group meeting on October 26, 1990, to discuss migration of carbon-14. The Working Group will be briefed on the potential problems that could arise at a high-level repository in the event of carbon-14 release and subsequent migration to the environment. This will include a discussion of EPA release limits for this radionuclide. A report to the full Committee will follow.

- b. Human Intrusion Working Group Meeting

The Committee scheduled a Working Group meeting on October 23, 1990, to examine how human intrusion will be dealt with under 10 CFR Part 60 with consideration given to the guidance in 40 CFR Part 191, Appendix B.

Future Activities

Appendix A summarizes the tentative agenda items that were proposed for future meetings of the Committee and related Working Groups. This list includes items proposed by the Commissioners and NRC staff as well as ACNW members.

Sincerely,

Dade W. Moeller

Dade W. Moeller
Chairman

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APPENDIX A. FUTURE AGENDA

Working Group Meeting October 23, 1990 (Tentative Agenda)

Human Intrusion (Open) - A Working Group will examine how human intrusion will be dealt with under 10 CFR Part 60 with consideration given to the guidance in 40 CFR Part 191, Appendix B. This will include discussion of the WIPP experience and will be designed to explore the range of current thinking from various groups. A report to the full Committee will follow.

25th Committee Meeting October 24-25, 1990 (Tentative Agenda)

Technical Assessment Review (TAR) (Open) - The Committee will discuss developments related to the Technical Assessment Review (TAR) of the geologic and geophysical evidence pertaining to structural geology in the vicinity of the proposed exploratory shaft.

NRC's Waste Management Research Program (Open) - The Committee will be briefed by the NRC staff on the HLW and LLW management research programs.

HLW Performance Assessment (Open) - The Committee will be briefed by the NRC staff on the "Phase I Demonstration of the Nuclear Regulatory Commission's Capability to Conduct a Performance Assessment for a HLW Repository." This presentation will be for information only.

Sandia National Laboratories' Report (Open) - The Committee will be briefed on a recent report by Sandia National Laboratories regarding the conclusion that there is reasonable confidence that the WIPP facility will comply with the EPA standards. Specific attention will be addressed to the implications of this assessment relative to Yucca Mountain.

Human Intrusion (Open) - The Committee will be briefed on the results of the Working Group meeting that examines how human intrusion will be dealt with under 10 CFR Part 60 with consideration given to the guidance in 40 CFR Part 191, Appendix B.

NRC's Radioactive Waste Research Program (Open) - The Committee will be briefed by a member of NRC's Nuclear Safety Research Review Committee on their conclusions regarding the NRC's radioactive waste research program.

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LLW Performance Assessment (Open) - The Committee will hear a briefing by the NRC staff on performance assessment methodology for a LLW site. This presentation will be for information only.

LLW Disposal Facilities (Open) - The Committee will discuss the complexities and problems associated with licensing a LLW disposal facility, particularly with respect to siting and the NRC-state interface.

Committee Activities (Open/Closed) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda (including next year's meeting schedule), and organizational matters (nomination of next year's officers), as appropriate.

Working Group Meeting October 26, 1990 (Tentative agenda)

Migration of Carbon-14 (Open) - A Working Group will be briefed on the potential problems that could arise at a high-level repository in the event of carbon-14 release and subsequent migration to the environment. This will include a discussion of EPA release limits for this radionuclide. A report to the full Committee will follow.

Working Group Meeting December 10, 1990 (Tentative Agenda)

Mixed Wastes (Open) - A Working Group will be briefed on the technical issues involved in the disposal of mixed wastes with an emphasis on the resolution of conflicts between NRC's and EPA's regulations. A report to the full Committee will follow.

Working Group Meeting December 11, 1990 (Tentative Agenda)

Expert Opinion (Open) - A Working Group will be briefed on the use of expert judgment in conducting performance assessments for the proposed HLW repository and LLW sites. In addition potential problems that could arise with the use of expert judgment will be considered.

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26th Committee Meeting December 12-14, 1990 (Tentative Agenda)

Meeting with Commissioners (Open) - The Committee is tentatively scheduled to meet with the Commissioners to discuss items of mutual interest.

DHLWM Study Plans (Open) - The Committee will be briefed by the DHLWM staff on the results of their reviews of the Study Plans for the characterization of volcanic features and mineralogy, petrology and chemistry of transport pathways.

Reports from the Working Groups (Open) - The Committee will be briefed on the results of the Working Group meetings on carbon-14 release and migration, expert opinions, and mixed wastes. The development of formal reports on these subjects will be initiated, as appropriate.

DOE Study Plans (Open) - The Committee will be briefed on the proposed revisions to current NRC staff review procedures for its review of DOE study plans associated with the site characterization for the proposed HLW repository.

Technical Position on Repository Design Thermal Loads (Open) - The Committee will be briefed by the NRC staff on the Technical Position on Repository Design Thermal Loads.

Committee Activities (Open/Closed) - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate. The Committee will also elect officers for the calendar year 1991.

Working Group Meeting (Date to be determined)

DOE/USGS White Paper (Open) - An ACNW Working Group will have discussions with the NRC staff on their review of and comments on the DOE/USGS white paper on integration of the geophysical aspects of the repository SCP. This report is important as it relates to a major central theme of the SCA comments on integration.

Subsystem Requirements Strategy (Open) - An ACNW Working Group will discuss the performance criteria of 10 CFR Part 60.113 to determine the interface with the EPA HLW standards.