



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

ACNWS-0029

PDR  
5-30-91

April 10, 1991

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

Dear Chairman Carr:

SUBJECT: SUMMARY REPORT - TWENTY NINTH MEETING OF THE ADVISORY  
COMMITTEE ON NUCLEAR WASTE, MARCH 20-22, 1991

During its 29th meeting, March 20-22, 1991, the Advisory Committee  
on Nuclear Waste completed the activities noted below and the  
memorandum listed.

MEMORANDUM

- Staff Technical Position on "Regulatory Considerations in the Design and Construction of the Exploratory Shaft Facility" (Memorandum to Mr. Robert Bernero, Director, Office of Nuclear Material Safety and Safeguards, dated March 26, 1991. A copy has been provided to you.)

HIGHLIGHTS OF MATTERS CONSIDERED BY THE COMMITTEE

- Staff Technical Position (STP) on "Regulatory Considerations in the Design and Construction of the Exploratory Shaft Facility" (ESF)

The Committee was briefed by representatives of the NRC staff on the draft final version of the STP on "Regulatory Considerations in the Design and Construction of the Exploratory Shaft Facility." The purpose of the STP is to provide guidance to the U.S. Department of Energy (DOE) on ESF design and construction.

The Committee issued a report on its review as noted above.

- Strategic Plan for Low-Level Waste Disposal in Massachusetts

The Committee met with Ms. Carol Amick, Executive Director, Commonwealth of Massachusetts Low-Level Radioactive Waste Management Board, to hear about the development of the Commonwealth's strategic plan for low-level waste (LLW) disposal. Ms. Amick described Massachusetts's plan to meet

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the requirements of the Low-Level Radioactive Waste Policy Amendments Act. This briefing was for information only. No Committee action was taken.

- NRC Oversight and Monitoring of Existing Low-Level Waste Disposal Facilities through the Agreement State Program

The Committee was briefed by representatives of the Office of Governmental and Public Affairs (GPA) on NRC oversight and monitoring of existing LLW disposal facilities through the Agreement State Program.

Mr. Harold Denton noted that NRC is conducting its biannual review of South Carolina's Agreement State program, including the LLW site at Barnwell. Members of the Committee expressed interest in meeting with the inspection team upon their return to discuss certain issues, such as groundwater protection, and to explore issues for a possible Working Group meeting on LLW site monitoring activities. A meeting is planned in May, 1991.

- Meeting with the NRC Commissioners

The Committee met with the Commissioners to discuss items of mutual interest, including:

- Regulation of mixed wastes
- Guidance on dose limits and risks to individuals
- Stringency of EPA high-level waste repository standards
- Part 60.113 Subsystem Performance Criteria

- Leaching Resistance of Waste Form

The Committee considered a response to a recent Staff Requirements Memorandum (SRM) concerning proposed revision of Part 61 with regards to leaching resistance of the LLW form. The representatives from the Division of Low-Level Waste Management and Decommissioning (LLWM) informed the Committee that they have met with the Office of Research to formulate plans to examine this issue. The Committee requested that it be kept informed of these plans.

Based on the discussion, the Committee concluded that, at this time, there is no compelling need to initiate revisions to Part 61 to explicitly include a requirement for waste performance that enhances groundwater protection. However, the Committee believes that groundwater protection remains an issue of sufficient importance to warrant further study.

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The Committee is pursuing this issue by requesting additional background information on safeguards already in the regulatory system which provide protection against the potential for groundwater contamination from LLW disposal sites. This study will be conducted with all deliberate speed. Recommendations will be offered to the Commission upon completion.

• ACNW Future Activities

The Committee agreed to change the date for the 32nd ACNW meeting from June 19-21 to June 20 (one day only). The Committee is tentatively scheduled to meet with the Commissioners on June 20, 1991. (A Working Group on the Use of Expert Judgment in Performance Assessment will meet on June 18-19, 1991.)

The Committee was advised that its visit to the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas, has been set for June 26-28, 1991. The Committee will be briefed on the status of the Systematic Regulatory Analysis program and will receive an update on other activities of the Center, such as PRA computer codes and tectonic modelling. The Committee will further define areas of interest during the 30th ACNW meeting. The Committee decided not to visit with Texas LLW officials at this time.

The Committee agreed to schedule a Working Group meeting on the monitoring activities at LLW disposal facilities, particularly the closed sites at Maxey Flats, Sheffield and West Valley.

The Committee agreed to invite representatives from EPA and NRC to brief the Committee on various aspects associated with post-closure monitoring of a HLW repository and other related issues.

Dr. Pomeroy will visit the West Valley Demonstration Project site on or about June 3-4, 1991 for familiarization regarding activities at the site.

The Committee agreed to schedule a Working Group meeting at the Waste Isolation Pilot Plant site. Possible subjects for discussion may include mineral exploration and human intrusion.

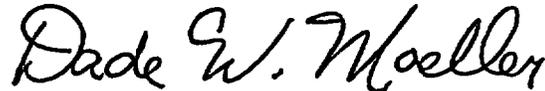
The Committee agreed not to review SECY-90-268, "Proposed Final Environmental Protection Agency Title I Ground-Water Protection Standards."

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Appendix A summarizes the proposed items 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,

A handwritten signature in cursive script that reads "Dade W. Moeller". The signature is written in black ink and is positioned above the typed name and title.

Dade W. Moeller  
Chairman

APPENDIX A. FUTURE AGENDA

**30th ACNW Committee Meeting April 23-24, 1991 (Tentative Agenda)**

Staff Technical Position on the High-Level Waste Repository Design for Thermal Loads - The Committee will review and comment on a draft NRC Staff Technical Position on the High-Level Waste Repository Design for Thermal Loads.

Individual vs. Collective Doses - In response to a staff requirements memorandum, the Committee will discuss the advantages and disadvantages of using collective dose criteria versus individual dose criteria when determining risk posed to the public health and safety from a potential release from a HLW repository.

Uncertainties in Implementing the EPA's HLW Radiation Protection Standard - The Committee will be briefed on the HLWM staff's approach to dealing with uncertainties in implementing the EPA's HLW radiation protection standard, 40 CFR Part 191. This briefing is for information only.

Decommissioning Activities - The Committee will be briefed on decommissioning activities at selected (non-reactor) sites to be determined. This briefing is for information only.

Human Intrusion - The Committee will discuss ongoing projects concerning human intrusion for a HLW repository.

Leaching Resistance of Waste Form - The Committee will continue to discuss its response to a recent staff requirements memorandum regarding a revision of 10 CFR Part 61 relative to attention to leaching resistance of the low-level waste form.

ACNW Four-Month Plan - The Committee will prepare its next four-month plan to the Commission for the period May-August 1991.

Working Group Report - The Committee will hear a report from its Working Group on the integration of geophysics into site characterization of a HLW repository.

Committee Activities - The Committee will discuss anticipated and proposed Committee activities, future meeting agenda, and organizational matters, as appropriate. The members will also discuss matters and specific issues that were not completed during previous meetings as time and availability of information permit.

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### Working Group Meetings

Integration of Geophysics into Site Characterization of a High-Level Waste Repository April 22, 1991, 7920 Norfolk Avenue, Bethesda, MD, 8:30 a.m., Room P-110 - The Working Group will focus on the role of geophysical testing in the characterization of a HLW repository site. The Working Group will discuss the importance and advantage of and potential results from geophysical testing methods as those methods apply to identification of potentially adverse conditions at an HLW site.

Expert Judgment in Performance Assessment of a Geologic Repository June 18-19, 1991, 7920 Norfolk Avenue, Bethesda, MD, 8:30 a.m., Room P-110 - The Working Group will continue the examination of methods for eliciting expert judgment. The meeting will focus on the actual mechanics of elicitation. This includes questions on who will identify and select the experts, as well as how the selected experts are trained and how their opinions are aggregated. Human intrusion will serve as the reference example in relating the elicitation process to a real and useful application. Participants will include normative experts, as well as NRC and DOE staff and consultants involved with Yucca Mountain and WIPP.

Geologic Dating (Date to be determined) - The Working Group will review and discuss the problems and limitations associated with the various quaternary dating methods to be used in site characterization of a HLW repository.