



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

ACNWS-0080

PDR 11/1/96

June 17, 1996

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

Dear Chairman Jackson:

SUBJECT: SUMMARY REPORT - EIGHTY-THIRD MEETING OF THE ADVISORY COMMITTEE ON NUCLEAR WASTE, MAY 15-16, 1996, AND OTHER RELATED ACTIVITIES OF THE COMMITTEE

During its 83rd meeting, May 15-16, 1996, held at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, the Advisory Committee on Nuclear Waste discussed several matters and completed the following report.

REPORT

Time Span for Compliance of the Proposed High-Level Waste Repository at Yucca Mountain, Nevada (Report to Shirley Ann Jackson, Chairman, NRC, from Paul W. Pomeroy, Chairman, ACNW, dated June 7, 1996.)

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

1. Meeting with the Director, Division of Waste Management, NMSS

Ms. Margaret Federline met with the Committee to discuss items of current interest. Topics discussed included: the licensing support system, waste-related research, the high-level waste issue resolution process, highlights from a recent Nuclear Waste Technical Review Board meeting, and an update on site characterization at Yucca Mountain.

060059

RS020/

409.55

DESIGNATED ORIGINAL

Certified By

*CMB*

Y C. 100

9611070055 960617  
PDR ADVCM NACNUCLE  
S-0080 PDR

### Conclusion/Action Items

This portion of the meeting was part of a regularly scheduled information exchange between the Committee and the Division of Waste Management.

#### 2. Zirconolite as a Natural Mineral Analog for Nuclear Waste Disposal

Dr. Reto Giere discussed his research work on zirconolite, an element of the synthetic mineral, synroc, which is being studied for its waste form properties. Dr. Giere discussed research results related to the ability of the mineral zirconolite to retain radioactive elements for millions of years. Dr. Giere is on leave from the University of Basel Mineralogy Petrology Institute, and is presently at the Carnegie Geophysical Laboratory in Washington, DC. His research was done in conjunction with the University of Basel, the Natural History Museum of London, and the Australian Nuclear Science and Technology Organization (ANSTO).

#### Proposed Schedule for the 84th ACNW Meeting

The Committee agreed to consider the following during the 84th ACNW Meeting, June 25-27, 1996:

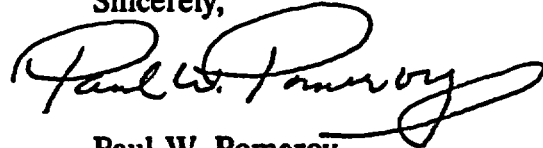
- Total System Performance Assessment 1995 - The Committee will review comments from the NRC staff on the Department of Energy's Total System Performance Assessment 1995.
- Meeting with the Director, NRC's Division of Waste Management, Office of Nuclear Materials Safety and Safeguards - The Director will discuss items of current interest related to the Division of Waste Management programs which may include progress at the Yucca Mountain site, the status of EPA's Yucca Mountain standards and NRC's high-level waste regulations, and the status of NRC draft technical guidance on expert elicitation.
- Meeting with the NRC Commissioners - The Committee will discuss items of mutual interest with the Commissioners. Potential topics include: Issues and NRC activities associated with the National Research Council's Report, "Technical Bases for Yucca Mountain Standards," ACNW comments on High-Level Waste Prelicensing Program Strategy and Key Technical Issues, ACNW Priority Issues, health effects of low levels of ionizing radiation, time span for compliance of the proposed high-level waste repository at Yucca Mountain, Nevada, and the use of expert judgment in nuclear waste licensing.

- Discussions with Dr. Dade Moeller, Moeller and Associates, Inc. - The Committee will discuss several topics of interest to the ACNW with Dr. Moeller, including the use of the linear no-threshold model of dose response to ionizing radiation, the open market trading rule which would allow the operator of a facility that is releasing contaminants into the environment the option of reducing its own discharges or those of other sources in the same geographical area, and defining a critical group to predict the anticipated effects of a waste repository.
- DOE's Program Budget - The Committee will meet with representatives of the Department of Energy and the NRC staff to discuss DOE's current program budget for developing a high-level waste repository.
- Specification of Critical Group and Reference Biosphere - The Committee will review options under consideration for specifying the critical group and reference biosphere to be used in a performance assessment of a nuclear waste disposal facility.
- Time of Compliance in Low-Level Waste Disposal - The Committee will discuss options for setting a regulatory time of compliance for a low-level waste disposal facility.
- Committee Activities/Future Agenda - The Committee will consider topics proposed for future consideration by the full Committee and Working Groups. The Committee will discuss ACNW-related activities of individual members.
- Preparation of ACNW Reports - The Committee will discuss proposed reports, including time frames for regulatory concern, the use of expert elicitation, elements of an adequate low-level waste program, Committee priorities and task action plans, and health effects from low levels of ionizing radiation. The Committee may also prepare reports on topics discussed during this meeting.
- Miscellaneous - The Committee will discuss miscellaneous matters related to the conduct of Committee activities and organizational activities and complete discussion of matters and specific issues that were not completed during previous meetings, as time and availability of information permit.

**OTHER RELATED ACTIVITIES OF THE COMMITTEE**

The Committee and an ACNW Member Selection Panel have sent nominations to the Commission for a vacancy on the Committee that will become open on July 1, 1996.

Sincerely,

A handwritten signature in cursive script, reading "Paul W. Pomeroy". The signature is fluid and extends to the right.

Paul W. Pomeroy  
Chairman