

PDR 5/13/92



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

April 13, 1992

MEMORANDUM FOR: James M. Taylor
Executive Director for Operations

FROM: *Raymond F. Fraley*
Raymond F. Fraley
Executive Director, ACNW

SUBJECT: 41ST ACNW MEETING FOLLOW-UP ITEMS

Based on discussions regarding methods for improving implementation and follow-up of ACNW recommendations, a summary of "Actions, Agreements, Assignments, and Requests" made during each ACNW meeting is sent to your office following each meeting.

Attached is a summary of the "Actions, Agreements, Assignments, and Requests" made at the 41st ACNW meeting, March 12-13, 1992, that deal with requests made of the NRC staff or matters that are pertinent to NRC staff activities.

Attachment: As stated

- cc: H. L. Thompson, EDO
- J. L. Blaha, EDO
- D. Martin, OCM/IS
- S. G. Bilhorn, OCM/KR
- J. Kotra, OCM/JC
- R. R. Boyle, OCM/FR
- K. Whitfield, OCM/GD
- S. J. Chilk, SECY
- E. L. Jordan, AEOD
- R. M. Bernero, NMSS
- T. E. Murley, NRR
- E. S. Beckjord, RES
- A. L. Eiss, NMSS
- C. M. Abbate, NRR
- W. D. Travers, NRR
- D. M. Crutchfield, NRR

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**SUMMARY OF ACTIONS, AGREEMENTS, ASSIGNMENTS, AND REQUESTS
41ST ACNW MEETING - MARCH 12-13, 1992**

During its 41st meeting, March 12-13, 1992, the Advisory Committee on Nuclear Waste discussed several matters and completed the letter noted below. A copy of the letter is attached.

LETTERS

- Indicators for Evaluating the Quality or Effectiveness of Low-Level Radioactive Waste (LLW) Programs (Letter to Virgil Autry, South Carolina Department of Health and Environmental Control, dated March 18, 1992)

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

1. Systems Approach to Review the Overall High-Level Waste (HLW) Program

The Committee continued its deliberations on the feasibility of applying a systems approach to the analysis of the overall high-level waste program, including the short and mid-range technical milestones for handling high-level waste. The Committee intends to provide recommendations on the proposed scope of such a review and the advisability of undertaking it.

The Committee plans further discussion of this matter during the 42nd ACNW meeting.

2. Report on Visit with Dr. John Bartlett, Director, Office of Civilian Radioactive Waste Management, U.S. Department of Energy (DOE)

Drs. Moeller and Steindler met on March 11, 1992, with Dr. John Bartlett, Director, Office of Civilian Radioactive Waste Management, DOE, and two Deputy Directors, to discuss items of mutual interest, including the performance assessment and systems analysis for the proposed HLW disposal facility. This meeting was for information only. No action was taken by the Committee.

3. Geologic Dating of Quaternary Volcanic Features and Materials

Drs. Hinze and Pomeroy met on March 11, 1992, with representatives of the NRC staff to discuss the staff's response to the ACNW report, dated December 24, 1991, on geologic dating of Quaternary volcanic features and materials. The Committee members and NRC staff discussed the issues that are of concern. No further action by the Committee is anticipated at this time.

4. Elimination of Burdensome Regulatory Requirements That Do Not Impact on Safety

Mr. Edward Jordan, Chairman, NRC's Committee to Review Generic Requirements (CRGR), briefed the members on the special review of NRC regulations being conducted by the CRGR. This briefing was for information only. No action was taken by the Committee.

During the discussion, Dr. Moeller asked about the development of possible indicators of performance for the LLW management and disposal program. Information exists on occupational exposures at waste disposal facilities, events at materials licensees, and transportation events which might form the basis, in part, for a performance indicator system. Mr. Jordan agreed to determine what information is available.

5. High-Level Waste Research Program Plan

The Committee was briefed by the NRC staff on the HLW research program plan contained in draft NUREG-1406. The Committee plans to prepare a report to the Commission regarding this matter during the 42nd ACNW meeting.

6. Regulatory Impact Survey for Fuel Cycle and Major Materials Licensees

The Committee discussed the content of SECY-92-005, Regulatory Impact Survey for Fuel Cycle and Materials Licensees, dated January 3, 1992. Currently, the NRC staff is responding to a decision by the Commission that a proposal for such a survey be prepared. A staff proposal is expected on or about April 10, 1992. The Committee would like to be kept informed on this matter by the NRC staff.

7. Federal Register Notice on New Storage Casks

The Committee discussed the proposed Federal Register Notice on the use of two new spent fuel storage casks (10 CFR 72.214). It was agreed that this review is in the purview of the Advisory Committee on Reactor Safeguards and should be referred to it.

8. Transmutation/Partitioning

The Committee was asked by the National Research Council to comment on the usefulness of transmutation/partitioning as a means for the management and disposal of HLW. Dr. Steindler gave a brief description of the transmutation process and benefits that can accrue from it. In view of its limited review of this technology, the Committee decided not to provide comments to the National Research Council.

9. ACNW Future Activities

The 44th ACNW meeting is tentatively scheduled to be held on June 23-25, 1992, in Richland, Washington. The ACNW staff will confirm the meeting dates and agenda with representatives of Pacific Northwest Laboratories and the DOE.

The Committee agreed to schedule a Working Group meeting on the Phase 2 Iterative Performance Assessment Program Plan for the proposed HLW repository. The Working Group meeting is tentatively scheduled for September 23, 1992.

Drs. Moeller and Hinze requested that a meeting be scheduled with Mr. Edward Jordan, Director, AEOD, on April 22, 1992, to discuss items of mutual interest.

The Committee discussed DOE's invitation to review their Early Site Suitability Evaluation (ESSE). This evaluation uses existing data to determine whether the Yucca Mountain site is suitable for the disposal of high-level waste. This baseline site evaluation will be used to focus and prioritize future data acquisition. The Committee requested that a briefing by the NRC staff be scheduled after the staff has completed its review of the ESSE to coordinate the agency's response on this evaluation.

The Committee discussed the proposed amendments to 10 CFR Part 72 to establish emergency preparedness licensing regulations for independent spent fuel storage installations and a monitored retrievable storage facility. The NRC staff is expected to brief the Committee during the 43rd ACNW meeting.

Appendix A summarizes the items 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.

APPENDIX A. FUTURE SCHEDULE

42nd ACNW Committee Meeting April 22-24, 1992 (Tentative Schedule)

On-Site Storage of LLW (Open) - The Committee will discuss the proposed expedited rulemaking concerning on-site storage of LLW. This rule will apply to fuel cycle facilities, materials licensees, and nuclear power plants.

Pathfinder Nuclear Power Plant (Open) - The Committee will be briefed by the NRC staff and licensee on the Pathfinder Nuclear Power Plant decontamination and decommissioning activities and lessons learned. Also the status of decommissioning activities at the Rancho Seco, Fort St. Vrain, and Shoreham Nuclear Power Plants will be discussed.

Systems Analysis Approach to Reviewing the Overall High-Level Waste Program (Open) - The Committee will discuss the feasibility of using a systems analysis approach to review the overall high-level waste program including the short and mid-range technical milestones for handling high-level waste.

Meeting with the NRC Commissioners (Open) - The Committee will meet with the NRC Commissioners to discuss items of mutual interest. Possible items include:

- A status report on the feasibility of a systems analysis approach to the transportation, interim storage, and final disposal of HLW
- The ACNW report to the Commission on the NRC staff technical position on "The Identification of Fault Displacement and Seismic Hazards at a Geologic Repository"
- The ACNW memorandum to Richard Bangart on the standard review plan for the review of a license application for an LLW facility (NUREG-1200), dated January 23, 1992
- The ACNW memorandum to Robert Bernero regarding proposed rulemaking on EPA high-level waste standards, dated February 25, 1992

ACNW Four-Month Plan (Open) - The Committee will prepare its next four-month plan to the Commission for the period May-August 1992.

Notice of Proposed Rulemaking from EPA (Open) - The Committee will discuss the current status of the Notice of Proposed Rulemaking version of the EPA HLW standards and NRC staff comments regarding this document (Tentative).

Louisiana Energy Services (Open) - The Committee will be briefed by representatives of Louisiana Energy Services on their plans for a private uranium enrichment facility.

Technical Position on Alternate Concentration Limits for Uranium Mill Tailings Sites (Open) - The Committee will review a technical position on alternate concentration limits for uranium mill tailings sites.

New York State Challenge to the LLW Policy Amendments Act (Open) - The Committee will receive a status report on the New York State legal challenge to the LLW Policy Amendments Act of 1985.

Working Group Meetings

Phase 2 Iterative Performance Assessment Program Plan, September 23, 1992, 7920 Norfolk Avenue, Bethesda, MD (Gnugnoli) - The Working Group will discuss the Phase 2 Iterative Performance Assessment Program Plan for the proposed HLW repository.

Methods for Assessing the Presence of Natural Resources at the Proposed HLW Repository Site, October 21, 1992, 7920 Norfolk Avenue, Bethesda, MD (Larson) - The Working Group will discuss methodologies for the assessment of the potential for natural resources at the proposed high-level waste repository site at Yucca Mountain. The relationship between natural resources and the potential for human intrusion will be emphasized.

The Impact of Long-Range Climate Change in the Area of the Southern Basin and Range, November 18, 1992, 7920 Norfolk Avenue, Bethesda, MD (Gnugnoli) - The Working Group will discuss the historical evidence and the potential for climate changes in the Southern Basin and Range and the associated impacts on the anticipated performance of the proposed high-level radioactive waste repository at Yucca Mountain.



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March 17, 1992

Mr. Virgil R. Autry, Director
Division of Radioactive Materials
Licensing and Compliance
Bureau of Radiological Health
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Dear Virgil:

Currently there is no established list of "indicators" for evaluating the quality or effectiveness of programs for the management and disposal of low-level radioactive wastes. We believe such a list would be useful to the industry. By this letter, we seek your views, comments, and suggestions on this topic.

As we recall from your appearances before our Committee, you have a system in operation in South Carolina by which you track waste shipments into the State. You, as do other regulators of low-level radioactive waste disposal facilities, also have onsite inspectors to check on operations at the disposal facility. If you could share with us a listing of the specific items that you monitor in order to know how the system is operating, this would be helpful. Of equal importance would be information on the effectiveness of individual indicators as measures for evaluating the performance of the disposal system.

Although we have not examined the matter in detail, certain indicators appear to us to be worthy of consideration for evaluating disposal system performance. Examples include data that reflect trends in the following:

1. Volumes and composition of wastes coming from specific sources;
2. Curie content of wastes coming from specific sources, with specific data on the quantities of certain critical radionuclides, as appropriate;
3. Mishaps in waste shipments, including data on the frequency of occurrence of leaks in shipping containers and the number of waste packages returned to shippers;

Mr. Virgil R. Autry

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4. Doses to workers at low-level waste disposal facilities, including data both on individual and collective doses; and
5. Evidence of possible migration of radionuclides from low-level waste disposal sites through the groundwater, with specific attention to certain key radionuclides.

We trust this gives you an idea of the types of information we have in mind. Undoubtedly you will be able to suggest alternatives. Thank you in advance for your comments, suggestions, and thoughts.

Sincerely,

A handwritten signature in cursive script that reads "Dade W. Moeller".

Dade W. Moeller
Chairman