

February 14, 2001

The Honorable Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: SUMMARY REPORT — 124TH MEETING OF THE ADVISORY COMMITTEE ON
NUCLEAR WASTE ON JANUARY 16–18, 2001, AND OTHER RELATED COMMITTEE
ACTIVITIES

Dear Chairman Meserve:

During its 124th meeting, January 16–18, 2001, 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:

- NRC High-Level Radioactive Waste Key Technical Issue Resolution Process (Report to The Honorable Richard A. Meserve, Chairman, NRC, from B. John Garrick, Chairman, ACNW, February 8, 2001).
- Comments on Improvements in NRC Staff's Capability in Performance Assessment (Report to The Honorable Richard A. Meserve, Chairman, NRC, from B. John Garrick, Chairman, ACNW, February 7, 2001).
- Update to Advisory Committee on Nuclear Waste Report on Nuclear Waste-Related Research (Report to The Honorable Richard A. Meserve, Chairman, NRC, from B. John Garrick, Chairman, ACNW, February 5, 2001).

HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE

1. Planning and Procedures

The ACNW approved issues to be considered during the 125th ACNW meeting on March 21–23, 2001. Topics to be discussed will include the following:

- **Planning and Procedures** —The Committee will review items under consideration at this meeting and consider topics proposed for future ACNW meetings.

- **DOE's Status Report on Key Technical Issue (KTI) Resolution** — A Department of Energy (DOE) representative will give an update regarding the current status of the KTI resolution.
- **Key Technical Issues—Vertical Slice Report** — The Committee members will present a report on their assigned KTIs.
- **Partial Release of a Reactor Facility or Site for Unrestricted Use** — The Committee will hear presentations by the NRC staff regarding the partial release of a reactor facility or site for unrestricted use.
- **License Termination Plan Review—Lessons Learned** — The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding lessons learned from experience obtained from the License Termination Plan.
- **Commission Meeting Preparation** — The Committee will discuss the topics scheduled for its March 22, 2001 meeting with the Commission.
- **Discussion of Proposed ACNW Reports** — The Committee will discuss proposed ACNW reports on entombment, partial release of reactor site for unrestricted use, lessons learned-license termination plan, and high level-waste chemistry.
- **Meeting with the NRC Commissioners** — The Committee will meet with the NRC Commissioners to discuss the ACNW's integrated strategy to evaluate the staff's overall license review capability and the Staff's sufficiency review of DOE's site recommendation considerations report (SRCR).
- **Proposed Revisions to 10 CFR Part 71, "Packaging and Transportation of Radioactive Material"** — The Committee will hear presentations by and hold discussions with representatives of the NRC staff regarding proposed revisions to 10 CFR Part 71.
- **ACNW 2001 Action Plan** — The Committee will finalize the ACNW Action Plan for CY 2001 and other activities relevant to the conduct of Committee business.
- **Meeting Reports** — The Committee will hear reports from its members and staff on meetings attended since the 124th ACNW Meeting, including Waste Management Symposium 2001, February 2001, NWTRB Meeting, and ACRS/ACNW Joint Subcommittee meeting on Integrated Safety Assessment, January 19, 2001.

2. Progress on ACNW's Sufficiency Review Application Task Action Plan

The ACNW reviewed agreements from the discussion of vertical slice reviews during the last ACNW meeting and discussed the general objectives and approach to the reviews. Each ACNW member briefly described the status of his assigned KTI. Vertical slice reviews will be conducted on the following KTIs: container life and source term, total system performance assessment,

saturated zone, and thermal effects on flow. In response to a question about schedule, NRC staff indicated that it was now initiating its formal sufficiency review, which is a 45-day review. The DOE's schedule for its Site Recommendation Considerations Report has slipped. The NRC staff said it will consider the May–June 2001 deadline to be the target completion date for its review comments until it hears otherwise from DOE.

Conclusions/Action Items

The Committee members agreed that in the March ACNW meeting, each member would give a formal presentation on the status of his review.

3. Entombment Option for Decommissioning Power Reactors

The Committee met with representatives of the Office of Nuclear Material Safety and Safeguards (NMSS) to discuss several issues related to the entombment option. In addition, representatives from the Nuclear Energy Institute and Public Citizen provided the views of their organizations on this proposed option for decommissioning power reactors. The differing views of each organization were plainly and succinctly stated.

The Committee appreciated the willingness of the staff to return to the Committee to candidly discuss several issues that the ACNW had identified as requiring clarification. Among the issues discussed were the handling of greater-than-Class C waste, engineered barriers, the need for changes in 10 CFR 50.82, the acceptability of waste concentration averaging, and the need for monitoring during the entombment period.

In addition, the staff presented its most current schedule for release of related documents. Of most relevance to the Committee's future considerations on this topic is the Advance Notice of Proposed Rulemaking (ANPR) and the staff's rulemaking plan.

Conclusions/Action Items

The Committee restated its desire to see the ANPR as soon as it is available. It will then consider providing comments on the entombment issue.

4. Institutional Control Status

Robert L. Johnson, Project Manager, NMSS, provided an update of the status of institutional controls for an NRC licensee's restricted release site. After explaining the institutional control issue, Mr. Johnson discussed the institutional control requirements and initiatives to resolve the issue, including a request for stakeholder views.

He noted that the requirements of the License Termination Rule specify that for license termination under restricted conditions, legally enforceable institutional controls are required. Thus far, the NRC has been unable to obtain an acceptable third party to assume responsibility. No governmental entity (Federal, State or local) has indicated a willingness to accept responsibility for long-term institutional control for NRC licensees. It was pointed out that DOE is authorized to assume such a responsibility under provision 151(b) of the Nuclear Waste Policy Act (NWPA).

The NRC is currently seeking to obtain a memorandum of understanding with DOE under NWPA 151(b). Mr. Johnson indicated that DOE acceptance of long-term institutional control is discretionary—not mandatory.

Conclusions/Action Items

The Committee will continue to follow this issue and provide advice to the Commission as requested.

5. National Research Council Report, “Long-Term Institutional Management of U. S. Department of Energy Legacy Waste Sites”

Dr. Thomas M. Leschine, Chairman, Committee on Remediation of Buried and Tank Waste, National Research Council (or Academies), presented a summary of the subject report. (It was noted that ACNW member Raymond G. Wymer also was a member of that Academies’ committee.) The timing of this presentation was fortuitous since the NMSS staff had just discussed considerations associated with providing long-term institutional controls over NRC licensees.

Dr. Leschine noted that his Committee’s conceptual framework focused on three complementary elements of waste site disposition—waste reduction, waste isolation, and stewardship. He stated that the report indicates that completely eliminating unacceptable risks to humans and the environment will not be achieved at most DOE’s sites now or in the foreseeable future.

The bottom line of the Academies’ report is that “long-term institutional management will require an integrated/systems approach that is tailored to the conditions of the site and is revisited over time.”

Conclusions/Action Items

The Committee thanked Dr. Leschine for his presentation and indicated its intent to continue to follow this subject. The ACNW will monitor the Academies’ open forum on the report currently scheduled for April 2001.

6. ACNW 2001 Action Plan

The ACNW began to develop its 2001 Action Plan and self-assessment. The Committee members discussed letter reports they had written over the past year and the impact of the reports. The results of a stakeholder survey were discussed.

The Committee met with William Kane, Director, NMSS, to discuss items of mutual interest. The discussion focused on identifying areas in which Committee reviews and recommendations could be the most help to NMSS. Discussions included the following items:

- HLW repository and regulatory issues — 10 CFR Part 63, Yucca Mountain Review Plan, and Key Technical Issues
- Decommissioning — institutional control, entombment, and West Valley
- Fuel cycle issues — integrated safety assessments and the Standard Review Plan for 10 CFR Part 70
- Transportation and HLW cask issues — Part 71 rulemaking and the package performance study
- Spent-fuel storage issues — dry cask certification and relicensing, and independent spent fuel storage
- Low-level waste — study by the Academies, greater than Class-C waste, mixed-waste, and assured isolation

Conclusions/Action Items

The Committee intends to formulate a new Action Plan by its 125th meeting, March 21–23, 2001. Procedural items in the current Action Plan section on operational effectiveness will be covered in the ACNW operating plan. The Committee's self-assessment will be sent to the Commission by May 31, 2001. The ACNW and Mr. Kane expressed stated that they both would like to meet more frequently, including informal discussions with individual Committee members.

7. Preparation for Meeting With the NRC Commissioners

The Committee discussed the following topics for its March 22, 2001 meeting with the Commission and developed a draft set of viewgraphs:

ACNW's Strategy for Evaluating the Staff's Overall Licensing Review Capability and the Staff's Sufficiency Review of DOE's SRCR

- Integrated Strategy—Introduction

- Vertical Slice Review of SRCR and the Staff's Sufficiency Strategy
- Evaluation of Issue Resolution of KTIs
- Evaluation of PA Tools—Total Performance Assessment and Preclosure Safety Assessment Codes
- Alloy 22 Corrosion Studies

Conclusions/Action Items

It was agreed that the ACNW staff would develop a draft final viewgraph package in February 2001 for consideration by the ACNW members.

Sincerely,

/RA/

B. John Garrick
Chairman