



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
ADVISORY COMMITTEE ON NUCLEAR WASTE  
WASHINGTON, DC 20555 - 0001

ACNWS-0149

November 16, 2004

The Honorable Nils J. Diaz  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: SUMMARY REPORT—154<sup>TH</sup> MEETING OF THE ADVISORY COMMITTEE  
ON NUCLEAR WASTE, OCTOBER 19–21, 2004, AND OTHER RELATED  
COMMITTEE ACTIVITIES

Dear Chairman Diaz:

During its 154<sup>th</sup> meeting on October 19–21, 2004, the Advisory Committee on Nuclear Waste (ACNW) discussed several matters and completed the following reports to Nils J. Diaz, Chairman, U.S. Nuclear Regulatory Commission (NRC):

**REPORTS**

- C The 2005 Recommendations of the International Commission on Radiological Protection (ICRP), dated November 3, 2004
- C Working Group on the Evaluation of Igneous Activity and Its Consequences for a Geologic Repository at Yucca Mountain, Nevada, dated November 3, 2004

**HIGHLIGHTS OF KEY ISSUES CONSIDERED BY THE COMMITTEE**

**1. Working Group Review of the ICRP Recommendations**

The ACNW held a working group meeting (WGM) on the most recent draft ICRP recommendations. The Committee is preparing a letter as input to the agency's review of the ICRP recommendations. The Committee heard presentations and discussions by members of the NRC staff and representatives of the Environmental Protection Agency, Oak Ridge National Laboratory, the State of California, the Mayo Clinic, and the Advisory Committee on Reactor Safeguards. The draft ICRP recommendations cover eight areas: (a) radiation quantities, (b) biological aspects, (c) ICRP's general system of protection, (d) ICRP's quantitative recommendations, (e) concepts of optimization, (f) exclusions from the recommendations, (g) medical exposures of patients as a separate issue, and (h) a proposal for protection of the environment. There are various incremental changes in the first seven areas (including radiation- and tissue-weighting factors), new definitions for dosimetric quantities, and further discussion of the ICRP's concepts of justification of practices, source constraints, and dose limits. An important point about these draft recommendations is that ICRP's quantitative recommendations for workers and members

of the public have not changed since the 1990 recommendations, as published in ICRP Publication 60. ICRP characterizes this update as a "simplification and elaboration" of its previous recommendations.

The Committee and the NRC staff cannot completely review the draft ICRP recommendations since the five comprehensive "foundation documents" (with the scientific bases for the recommendations) are not yet available. Some of these foundation documents are expected soon. Others were reported by expert panel members to be still in progress. The unanimous view of the WGM expert panel was that adopting these draft ICRP recommendations would not significantly improve the protection of worker and public health and safety.

### **Conclusions/Action Items**

The Committee's views on the draft ICRP recommendations were transmitted to the Commission in a report dated November 3, 2004.

## **2. Update on the Status of the License Termination Rule**

The Committee heard an update on the application of the license termination rule (LTR) to NRC's decommissioning programs. Recent accomplishments and future plans were discussed.

In mid-2005, the ACNW will hold a WGM to review LTR-related guidance on institutional controls, onsite disposal, realistic disposal scenarios, and intentional mixing of contaminated soils.

### **Conclusions/Action Items**

The Committee will continue to monitor the staff's progress in this area. It will also review NRC inspection and enforcement procedures for operating sites. The Committee will convene a WGM on this subject in 2005 and will invite NRC staff and various stakeholders to participate in the meeting.

## **3. Consolidated Issue Resolution Status Report**

The Integrated Issue Resolution Status Report (NUREG-1762) documents the technical bases for the NRC staff positions taken during key technical issue (KTI) resolution meetings with the U.S. Department of Energy (DOE) on the Yucca Mountain geologic repository program. NUREG-1762 follows the outline of the Yucca Mountain Review Plan (the YMRP), NUREG-1804, and relies on the review methods and acceptance criteria outlined in the YMRP to judge the extent of closure (i.e., issue resolution) with DOE at the staff level on data needs and analytical approaches necessary to ensure a complete and high-quality license application. In anticipation of a December 2004 license application submittal to construct the repository, the NRC staff decided to update NUREG-1762 prior to its submittal to reflect recent DOE progress in addressing the information requests for the 293 DOE/NRC KTI agreements and the NRC staff reviews thereof. NUREG-1762

identifies the information the staff considered important in formulating its positions, including the results of earlier reviews of DOE and DOE contractor reports expected to support the license application. NUREG-1762 also reflects the independent confirmatory investigations by the NRC staff and its technical assistance contractor, the Center for Nuclear Waste Regulatory Analyses, and other publicly available information. In the 2004 update, NUREG-1762 will also reflect the independent work of the NRC's 2002–2003 High-Level Radioactive Waste (HLW) Risk Insights Initiative.

The staff will use the YMRP, the latest update of the Integrated Issue Resolution Status Report, and the results of the HLW Risk Insights Initiative to review DOE's license application.

#### **Conclusions/Action Items**

This briefing was intended for information only. At the time of this briefing, the 2004 update to NUREG-1762 was not publicly available.

#### **4. ACNW 2005 Action Plan**

The Committee began a detailed review of the draft fiscal year (FY) 2005 Action Plan and the associated transmittal letter due to the Commission in December 2004. The Committee reviewed the goals and objectives and linked them to NRC's Strategic Plan for FY 2004–2009. The Committee then reviewed highest priority topics (Tier 1) and considered other topics (Tier 2 topics) which the Committee may address as time and resources permit. The Committee has made substantial progress in identifying and clarifying priority areas.

#### **Conclusions/Action Items**

Committee members agreed to refine three priority topics: (a) low-level radioactive waste, (b) waste incidental to reprocessing, and (c) transportation of radioactive materials. Additionally, at the next ACNW meeting, the Committee will add the proposed WGMs for FY 2005 and finalize its Action Plan.

#### **6. Proposed Agenda for the 155<sup>th</sup> ACNW Meeting**

The Committee agreed to consider the following topics at its 155<sup>th</sup> meeting on November 16–18, 2004:

- C Office of Nuclear Material Safety and Safeguards Division Directors' Semiannual Briefing
- C International Transportation Meetings
- C Content and Format of the U.S. Department of Energy Yucca Mountain License Application
- C ACNW 2005 Action Plan

- C Working Group Planning Session
- C Preparation of ACNW Reports

Sincerely,

**/RA/**

Michael T. Ryan  
Chairman