

Dr. B. John Garrick, Chairman
Advisory Committee on Nuclear Waste
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

May 8, 2001

SUBJECT: ADVISORY COMMITTEE ON NUCLEAR WASTE LETTER REPORT ON
WASTE-RELATED RESEARCH, DATED FEBRUARY 5, 2001

Dear Dr. Garrick:

In its letter report dated February 5, 2001, the Advisory Committee on Nuclear Waste (ACNW) provided the Commission with its observations and recommendations on the scope of radioactive waste-related research presently sponsored by the U.S. Nuclear Regulatory Commission's (NRC's) Office of Nuclear Material Safety and Safeguard (NMSS) and the Office of Nuclear Regulatory Research (RES) staff. In summary, the ACNW recommended ways in which the scope of the staff's respective programs could be improved. The staff's response to these recommendations is as follows:

ACNW Observation and/or Recommendation

The ACNW judges CNWRA's work on Yucca Mountain to be of very high quality. The RES-supported research that the ACNW reviewed this year involves excellent scientists, is timely, and of high quality.

Staff Response

The ACNW observation is noted. NMSS and RES will continue to keep the Committee apprised of the staff's efforts in this area.

ACNW Observation and/or Recommendation

Although the partitioning of the high-level waste (HLW) work in NMSS and the non-HLW work in RES generally causes no major problems, more coordination between the two offices is needed on issues that overlap the HLW and non-HLW areas.

Staff Response

The staff agrees that the current level of communication and coordination between the two offices could be improved. NMSS and RES will explore how the communication and coordination can be improved, particularly as it relates to the coordination of the results of ongoing work and to the identification of future potential research needs. As part of an improved dialogue, RES has developed a comprehensive research plan for radionuclide transport in the environment. This plan is being coordinated with NMSS and will be made available for public comment. In addition, the staff will brief the Committee on this plan in the near future. NMSS plans to include RES in annual reviews of CNWRA work.

ACNW Observation and/or Recommendation

The HLW program needs to be expanded to have a modest, long-term “anticipatory” research component, perhaps through collaboration between NMSS and RES.

Staff Response

NMSS and RES agree with this recommendation and will explore how such potential future research areas can be identified. The staff recognizes that for the longer-term phases of repository construction and operation, there may be some areas for which NRC may need to undertake some form of “anticipatory” research. Such anticipatory research may be necessary because of the unique, first-of-a-kind nature of geologic disposal and the more limited availability of relevant operational experience and performance data, than is generally the case with the power reactor program.

ACNW Observation and/or Recommendation

The Analytical Hierarchy Program used by RES to prioritize projects fails to account properly for the importance of waste-related research; the prioritization method should be revised to overcome this failure.

Staff Response

RES recognizes the ACNW’s concern that RES’ current prioritization method may not account for the importance of waste-related research. Under the auspice of the Research Effectiveness Review Board, efforts are currently underway to evaluate the user-need process, as well as short-term and long-term research needs. Prior to next year’s budget development process, RES will work with NMSS to reevaluate the RES prioritization process as it relates to waste-related research. RES will report back to ACNW on the revised process once it is completed

ACNW Observation and/or Recommendation

The RES waste-related program is not large enough to support the full spectrum of NRC needs. The RES staff should develop a comprehensive plan, including realistic budget estimates, to support the case for either increasing the size of the program, and/or focusing the program. Strong leadership is needed to ensure that the program is coherent and integrated.

Staff Response

As discussed earlier, RES has completed development of a comprehensive research plan for issues related to radionuclide transport in the environment. This plan will be used to identify priorities, resource needs, and will help ensure integration of the NMSS and RES programs as well as provide a more coherent basis for future budget planning.

Dr. B. John Garrick

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Once again the staff thanks the ACNW for its recommendations and welcomes the members' monitoring of the staff's continuing efforts in the area.

/RA by Carl J. Paperiello Acting For/

William D. Travers
Executive Director
for Operations

cc:

Chairman Meserve
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan
Commissioner Merrifield
SECY

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