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

ACNWR-0232

December 23, 2005

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

SUBJECT: WEST VALLEY DEMONSTRATION PROJECT (WVDP) - ACNW WORKING GROUP MEETING

Dear Chairman Diaz:

The ACNW held a working group meeting on the WVDP on October 19, 2005. The meeting was held in Ellicottville, NY, a location close to the site. Three experts[1] on performance assessment and the decommissioning of complex sites participated at the invitation of the Committee. Members of the Committee and two of the invited experts toured the site on October 18. The meeting was attended by representatives of several New York State agencies, including the New York State Energy Research and Development Authority and the New York State Departments of Health and Environmental Conservation, the NRC staff, stakeholders, and the general public.

The purpose of the meeting was to receive an update on the status of decommissioning activities at the site and to hear about DOE's and NRC's approaches to the WVDP site performance assessment. The performance assessment work is still in the early stages and many decommissioning activities are ongoing.

The Committee has the following observations:

- The WVDP is an important case study that provides a useful model for the decommissioning of complex sites. Decommissioning activities at WVDP will need to address spent fuel, disposition of vitrified high-level waste, drummed and grouted supernatant, tanks containing very high levels of residual radioactive material, various buildings, NRC and NY State-licensed landfills, and soil and groundwater contamination.

- The decommissioning is especially complicated because the site is owned by two parties and because several Federal and State agencies are responsible for the remedial activities.

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[1] The invited experts were Dr. David C. Kocher, Senior Scientist, SENES Oak Ridge, Inc. (a consultant to the Committee); Dr. Frank Parker, Distinguished Professor of Environmental and Water Resources Engineering, Vanderbilt University; and Mr. Thomas Nauman, Vice President and Northeast Regional Director, Shaw, Stone & Webster, Inc.

- Ongoing erosion adjacent to the landfills raises concerns about potential exposure of buried waste. Erosion modeling and analysis will be critical to decisionmaking concerning long-term protection.

- DOE and NRC are taking different approaches to performance assessment for the WVDP. Whereas DOE's approach is primarily deterministic, the NRC staff will use a probabilistic approach that will enable a risk-informed review. The Committee believes that the staff approach to performance assessment is technically sound and commends the staff for taking a risk-informed approach.

- Further characterization of the subsurface strontium plume is needed to provide a better basis for decisionmaking. Existing strontium data can be used to verify the groundwater modeling and build confidence in the modeling predictions.

The Committee offers the following recommendations:

- The erosion analysis will be critical to the choices of remedial technology for the landfills. The Committee recommends that the staff be well prepared to review the DOE erosion modeling.

- Subsurface characterization data, including groundwater monitoring data for strontium, while not yet sufficient for remedial technology evaluation, can be used to verify groundwater modeling and build confidence in the modeling predictions. The Committee encourages the staff to use these data in its performance assessment.

The Committee looks forward to hearing the results of the performance assessments and the associated environmental impact statement and to having further interactions with the staff on this very complex site evaluation.

Sincerely,

/RA/

Michael T. Ryan
Chairman

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Chairman

* See previous concurrence.

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