



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

ACNWR-0208

June 9, 2004

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

SUBJECT: DECOMMISSIONING THE WEST VALLEY SITE AND THE APPLICATION OF PERFORMANCE ASSESSMENT TO DEMONSTRATE COMPLIANCE WITH THE LICENSE TERMINATION RULE

Dear Chairman Diaz:

During its 149th meeting April 20–22, 2004, the Advisory Committee on Nuclear Waste met with the NRC staff to discuss plans for the decontamination and decommissioning of the West Valley Demonstration Project (WVDP). Representatives of the U.S. Department of Energy (DOE) and the New York State Energy Research and Development Authority (NYSERDA) participated through a videoconference link. The NRC staff has encouraged the Committee to review the work being done to support the decommissioning process for this complex site, which is likely to employ all of the options outlined in the Commission's License Termination Rule (LTR).

Many factors contribute to the complexity of the West Valley site. Land surrounding the WVDP, which is owned by the State of New York, may be available for unrestricted use, and parts of the site may be appropriate for restricted release with institutional controls to limit exposures. By contrast, the WVDP burial sites, which contain long-lived radioactive materials (including actinides) may require a long-term license. Whether the material in the bottom of the high-level waste tanks can be classified as "waste incidental to reprocessing," and disposed in place remains an open question. Groundwater has been contaminated by a process line that leaked during reprocessing operations, thereby resulting in a ⁹⁰Sr plume. Monitoring and treatment of the plume is underway. An airborne release during reprocessing resulted in cesium contamination (extending beyond the property owned by the State of New York). The lagoons used for low-level waste treatment are also contaminated. Low-level waste stabilized in concrete filled drums are stored on site awaiting disposal. The stainless steel canisters containing vitrified high-level waste are stored in the process building and await the opening of a geologic repository.

It is anticipated that the DOE will demonstrate compliance with the LTR using a performance assessment (PA). The PA will also serve as the technical basis for the Decommissioning Plan (DP) and the Environmental Impact Statement (EIS). Producing the PA models and writing the EIS and DP will be an iterative process, among DOE, the State of New York, the NRC staff and other stakeholders. Although details of the PA are still developing, the Committee was informed that DOE intends to mix deterministic, bounding and probabilistic analyses in various parts of the assessment. The Committee believes the Commission and staff should encourage DOE to use a risk-informed approach in the PA to the extent practical.

The staff informed the Committee that it is likely to develop an independent PA model for the West Valley site. The staff's model will be probabilistic in nature and the intent is to use realistic assumptions. We strongly encourage and support such a parallel PA effort by the staff. We wish to be kept informed of the staff's progress in producing an independent PA and we stand ready to assist the staff in this effort.

The Committee intends to meet with representatives of the DOE West Valley staff, NYSERDA, and other stakeholders in the future to obtain their perspectives on the decommissioning plans for the West Valley site. The Committee intends to follow decommissioning activities at WVDP and to periodically report on progress to the Commission.

Sincerely,

/RA/

B. John Garrick
Chairman

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