Savannah River Site
Citizens Advisory Board

Recommendation 190
Risk Based End State Vision Document

Background
The principles of the Department of Energy's (DOE) Top-to-Bottom Review have transformed the Office of Environmental Management (EM) purpose from simply managing risk to accelerating risk reduction by expeditiously cleaning up the Cold War legacy. A cornerstone of this effort is the development of a site-specific Risk-Based End State (RBES) Vision document for each DOE site, pursuant to DOE Policy 455.1, *Use of Risk-based End States*, and other associated guidance.

RBES and its documentation in an associated RBES Vision document depict appropriately protective and sustainable site conditions, by which current regulatory and other parameters can be described, evaluated, and contrasted. This is not a decision document; rather, it is intended to support informed decisionmaking regarding responsible site cleanup. The Program Performance Management Plan (revised), however, is a definitive decision "path" to the Savannah River Site (SRS) end state. Therefore, the two documents are closely linked. Development of a RBES Vision and identification of potential variances from a current end state do not signal an intent to perform less cleanup, nor to pursue shortcuts around current laws, regulations, or agreements. Furthermore, while a RBES approach may ultimately reduce cleanup costs, the RBES Vision is not driven by cost considerations.

The new vision for the end state at the Savannah River Site (SRS) when environmental cleanup is completed by 2025 is that all of SRS land will be federally owned, controlled and maintained in perpetuity. SRS is a site with an enduring mission and is not a closure site. Additional missions will continue under the National Nuclear Security Administration (NNSA) management. SRS has identified five RBES variances, which are defined as a significant different cleanup approach or different end state relative to the original August 2002 SRS EM Program Performance Management Plan (PMP). These variances include (1) future land use and exposure scenario modification, (2) area risk methodology and protocols, (3) alternate disposal for Pu-238 contaminated waste, (4) in situ decommissioning in lieu of demolition, and (5) "glass durability" waste acceptance criteria for high level waste (HLW) federal repository (Ref. 1).

Comment
The SRS Citizens Advisory Board (CAB) endorses the RBES concept and the SRS End State Vision. The SRS CAB supports the use of minimum risk based end states protective of human health and the environment as long as best engineering and science can support them. The SRS CAB realizes that SRS will have a degree of contamination remaining at specific sites after the cleanup is complete in 2025. However, the perceived risk to human health and the environment from these sites may be quite different from the actual risks. The SRS CAB is concerned that the general public's lack of information will negatively affect the public's ability to discern the difference. Any outreach education effort to the general public needs to be at an understandable level with clear "common sense" examples and avoid the use of technical jargon and acronyms.

The SRS CAB is also concerned about the potential barriers to RBES success and the five RBES variances. Of major concern is the HLW classification issue and alternative disposal for Pu-238 contaminated waste. Both issues present the site with significant risk challenges. The SRS CAB was interested in reducing this risk by adopting Recommendation #155, which requested alternative disposal paths to the Waste Isolation Pilot Plant (WIPP) that are environmentally acceptable and without increased risks to SRS workers or the public. Some

CAB members and the general public heard a brief discussion of these options at the National Academy of Science Committee on Risk Based Approaches for Disposition of Transuranic (TRU) and HLW on January 28, 2004, and think they are worth pursuing further. The SRS CAB, through individual committees, may later provide specific recommendations concerning these issues and variances.

Recommendation
The SRS CAB offers the following recommendations in an effort to strengthen the RBES process and expects a progress report on each recommendation on or before September 27, 2004:

1. SRS provide additional information about the risks, both human health and environment, associated with the end states proposed.

2. SRS clearly articulate the plan and approach for reaching public acceptance of the end state visions.

3. SRS develop a RBES outreach effort to educate the general public on the difference between perceived risks to human health and the environment and actual risks associated with SRS end states.

4. Regarding future land use, DOE-SR and DOE-HQ pursue Congressional Authorization to provide perpetual federal ownership and responsibility for SRS's fixed boundaries.

5. SRS include a discussion on how historic preservation, cultural resource management (CRM) goals, and continued National Environmental Research Park (NERP) designation are integrated into the SRS end state vision and how SRS will implement them.

6. SRS evaluate alternative disposal options for Pu-238 contaminated waste so that the risks associated with handling and shipments are protective of human health and the environment.

7. SRS continue to develop "area" risk assessment methodology and protocols protective of human health and the environment.

8. SRS determine and evaluate the risks of in situ decommissioning in lieu of demolition.

9. DOE-HQ request and work with the Nuclear Regulatory Commission to revise the HLW federal repository glass durability specifications to allow an increase in waste activity loading above the current specifications.

References

1. Risk Based End State Workshop, Strategic and Legacy Management Committee, April 13, 2004.

Agency Responses

Department of Energy-SR