SRS Citizen's Advisory Board

Recommendation No. 67

September 29, 1998

Disposal of Low-Level Radioactive Waste from SRS CERCLA Sites in Trenches of SRS Low Level Waste Disposal Facility

Background:

Low-level radioactive waste (LLW) can result from remediation of Savannah River Site (SRS) CERCLA sites. The Low Level Waste Disposal Facility (LLWDF) in the center of the 300-square mile SRS is designed and permitted by the Department of Energy to dispose of low level waste (LLW). The LLWDF operations have been independently reviewed by the Defense Nuclear Facilities Safety Board (DNFSB) (a scientific board chartered by Congress with oversight authority for DOE facilities) and the U.S. Environmental Protection Agency (EPA). Performance Assessments (PAs) of the LLWDF and a Composite Analysis (CA) of the LLWDF and nearby facilities have been done to ascertain that disposal of low level wastes in the facility is protective of the environment, the public, and future users of the water into which surface water and groundwater from the disposal facility drain. The Performance Assessment provides the basis for developing Waste Acceptance Criteria (WAC) for the trenches and vaults in the LLWDF.

In August 1996, EPA, Region IV approved disposal of low-level radioactive CERCLA off-site waste of the Operable Unit (OU) at the E-Area slit trenches (letter, Green to Hennessey, Aug. 8, 1996). Disposal of contaminated CERCLA soils that meet the Waste Acceptance Criteria in E-Area trenches would be as protective as the laws require. It would ensure no risk to an individual standing on the closed trenches; there would be no releases above maximum contaminant levels at the 100 meter point of assessment; provisions are in place to act on the unlikely event of exceeding the Waste Acceptance Criteria; and monitoring data will be available for EPA and SCDHEC review. It would be less expensive and require less transportation (with real risks) than most other remedies that could be developed for SRS CERCLA wastes.

Since 1995, the three agencies (DOE-SR, EPA, Region 4, and DHEC) have had discussions about combining waste in the context of a soils consolidation facility. During discussions last year of the remedial options for the SRL Seepage Basins, the possibility of disposal of those CERCLA wastes in the LLWDF was accepted for consideration by the regulatory agencies. However, upon review of the documentation prepared to support that alternative, the two regulatory agencies (EPA and DHEC) rejected that option.

The CAB would like to further investigate the possibility of safely and cost-effectively disposing of low-level radioactive wastes from CERCLA sites in the LLWDF. We present the following observations as evidence that this option should be considered by the three agencies.

1. Because the CAB is interested in pursuing options that are protective of the public, workers and the environment, but are also cost-effective, EPA and SCDHEC agreed at the Environmental Remediation and Waste Management Subcommittee meeting on July 27, 1998 to continue discussions of the possibility of using the LLWDF as a viable option for future remediations. In return, the CAB agreed to support the preferred alternative for the SRL Seepage Basin soils, which had not yet been selected. At that time, no conditions were

attached to the discussions, but since then EPA has stated that such discussions should be pursued only if (1) there is a waste unit identified for which the E-Area trenches are a viable disposal option or (2) the CAB wants to reconsider the need for a soil consolidation facility at SRS (e-mail, Corkran to ER&WM Subcommittee via Villasor, September 2, 1998). The CAB does not consider it appropriate to tie further discussions to these conditions.

The first discussions were held for a specific waste unit (the SRL Seepage Basins). Initially, the agencies agreed that disposal in the LLWDF was one of the best options and they did not object to disposal of the contaminated vegetation in the LLWDF. Based on that feedback, SRS spent considerable resources developing that option for contaminated soils disposal only to have it rejected by the agencies. It seems likely that SRS could identify another appropriate unit, get the agencies to agree in theory that the option is reasonable, expend considerable resources developing the option, and have the agencies again reject the alternative out of hand. Operable unit managers at SRS may not be willing to sacrifice limited resources and compromise schedules to develop an option that the agencies have a history of rejecting.

It was determined several years ago that the soil consolidation facility was not necessary to be protective of the environment or the public (CAB Recommendation Number 34). Additional monitoring data and research have not produced any information that would invalidate that decision. Therefore, the CAB sees no reason to discuss disposal of contaminated soils in the context of constructing a soils consolidation facility.

2. During past discussions on the SRL Seepage Basins, EPA Region IV implied that its reluctance to consider disposal of CERCLA soils in a DOE-regulated facility was due, at least in part, to its reluctance to set a precedent. The CAB understood at the time that EPA Region IV did not want to set a national precedent. On July 29, 1998, the ER&WM Subcommittee learned that both Fernald and Rocky Flats have been disposing of CERCLA soils at a DOE-regulated disposal facility on the Nevada Test Site, therefore, the SRL Seepage Basins would not be setting a national precedent.

   In a recent e-mail, EPA Region IV stated that it felt that "disposing of the SRL soils in the SRS E-Area trenches could only set a precedent for the universal use by SRS to always dispose of CERCLA remedial wastes, without evaluating the required nine criteria set forth in the National Contingency Plan [40 CFR 300]. In other words, a little money saved in the SRL Seepage Basin decision could in fact create a situation where regulatory input and concurrence would no longer be necessary for DOE-SR to make any CERCLA decisions" (e-mail, Warren to ER&WM Subcommittee via Villasor, September 1, 1998).

   The CAB agrees that EPA and the State of SC must concur on an operable unit by operable unit basis in any such decisions. DOE is not considering disposing of any wastes without the proper concurrence by the regulatory agencies.

   The CAB understands the regulatory agencies reluctance to dispose of wastes they are responsible for in a facility that they do not regulate. However, given the levels of contamination in the soils (the waste must meet the trenches waste acceptance criteria), both absolutely, and in relation to the total curie amounts already disposed at the LLWDF, given that EPA Region IV gave approval for use of the trenches in 1996, and given recent technological advances that make it much easier to locate sources of contamination moving through the vadose zone, the CAB feels strongly that jurisdictional sensitivities should not determine the decision on whether or not CERCLA low-level waste can be disposed in the E-Area trenches. EPA and SCDHEC have provided no evidence that external regulation by the Nuclear Regulatory Commission (NRC) of SRS waste disposal in Utah will be more protective than the current DOE waste regulation policies (see Recommendation Number 68.)

This disposal issue is likely to come up again at SRS. The CAB wants to settle the use of the trenches for LLW from CERCLA sites now. We do not want the agencies to repeat the endless debate that has occurred over the SRL Seepage Basin soils.

Recommendation:

The Savannah River Site Citizens Advisory Board recommends that EPA Region IV and SCDHEC determine under what conditions they would approve disposal of CERCLA wastes that meet the appropriate waste acceptance criteria in an SRS-operated, DOE-regulated waste disposal facility, and particularly if they would approve disposing of CERCLA soils in the E-Area trenches.

If the agencies will not consider such approval, provide the CAB with technically valid reasons for such a decision. The CAB expects to be advised of the conditions for approval by the January 1999 CAB meeting.

TVC: 9/28/98

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Agency Responses

Department of Health and Environmental Control

United States Environmental Protection Agency