



## Recommendation No. 83

March 23, 1999

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### Chemicals, Metals, And Pesticides (CMP) Pits

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#### **Background:**

An Interim Action under CERCLA is planned for the Chemicals, Metals, and Pesticides (CMP) Pits Operable Unit (Ref. 1). This motion addresses the proposed actions.

The CMP Pits are located in the central portion of the Savannah River Site (SRS) in the Pen Branch watershed. The seven pits are 10 to 15 ft. wide, 45 to 70 ft. long, and 10 to 15 ft. deep. The CMP pits began operations in 1971 to receive pesticide (2pits), chemical (4pits), and metal wastes (1pit). However, no formal disposal records were kept, and the pits were closed and back-filled in 1979. With the concurrence of South Carolina Department of Health and Environmental Control (SC-DHEC), SRS initiated a remedial action in 1984 to excavate the wastes. Pesticides, drums of buried chemicals, and contaminated soil containing more than 100 parts per million of volatile organic compounds or more than 25 parts per million of pesticides were removed and stored in the permitted hazardous waste storage facility at SRS. However, elevated levels of some contaminants remained in the pits. Filter fabric, crushed aggregate, and manholes were installed to allow soil venting of organics and then the pits were back-filled with clean soil and a foot of top soil.

Beneath the CMP pits there is significant contamination remaining in the unsaturated soil (the vadose zone) and in the groundwater. There is a "hot spot" of contamination in the groundwater under the pits but contaminated groundwater is also reaching Pen Branch Stream about 1,250 ft. North of the pits. There is no evidence of outcropping in Pen Branch, but measurable contamination below drinking water standards has been found in the stream from what is assumed to have been an underground pathway.

There is an adjacent area known as the Ballast Area where fluorescent light ballasts containing polychlorinated bi-phenyls (PCB's) were disposed in 1979. The ballast's were removed during the characterization activities in 1995. Although PCB's have been detected in the Ballast Area, pesticides are the contaminants most prevalent in the soil at this location. It is believed that these remaining pesticides came from the 1984 CMP pit removal action. In 1996, 6 inches of clean soil were added and seeded, then perimeter drainage, riprap, and an erosion-protection fabric were installed.

The Proposed Plan (Ref. 1) selects institutional control to protect future residents after the loss of institutional control. In addition, it is planned to:

- Remove the Ballast Area soils, then treat, and dispose them off site (\$2,866,000)
- Perform soil vapor extraction and install an asphalt cover over the CMP pits to provide infiltration control for the vadose zone (\$1,143,000)
- Perform air sparging (pumping air into the groundwater to volatilize the organics) and extract the vapors with the soil vapor extraction system. This groundwater treatment is necessary to reduce concentrations in the "hot spot" under the vadose zone (\$3,218,000).

The costs include 5 years of operation for the soil vapor extraction and air sparging systems. The action for the Ballast Area soils is a final remedial action that will be protective of industrial workers and the environment. The actions for the vadose zone and groundwater are interim remedial actions with annual evaluation of the progress.

#### **Recommendation:**

1. The SRS Citizens Advisory Board supports the proposed actions as a reasonable choice among the alternatives. We are particularly pleased with the following aspects of the proposed plans:

- The Agencies are showing flexibility by using institutional controls even though the CMP area is not a part of the industrial zones on the SRS land-use maps. The CMP site is in the central area of SRS, away from heavy industrial areas, but in an area to be protected for future residents after the loss of institutional controls.
  - The plan provides for annual reviews of progress; this has not always been specified in remedial action plans.
  - The plan actually defines "a point of diminishing returns" for the soil vapor extraction system (i.e., when the removal rate reduces to 10 percent of the initial contaminate removal rate). Thus, a criterion is established for deciding when it is cost effective to discontinue operations of the system.
  - Construction is scheduled to start in late 1999.
  - The proposed plan is the least expensive of the alternatives, except for the no action alternative.
2. We also recommend that the three agencies develop a plan to implement similar criteria to establish the point of diminishing returns in order to determine when a remediation can be completed for all of the sites at SRS that are undergoing remediation or will be remediated, and to present this response to the CAB by September, 1999.
  3. We are concerned that remediation costs are escalating rapidly. We recommend that SRS provide to the CAB annually an estimate of future remediation costs for five out-years including an estimate of the maximum remediation costs for operable units with Records of Decision and when the maximum can be expected to occur as well as a plan to minimize these costs over the five out-years. We ask that the first presentation of this plan occur in January 2000.

#### References

1. Interim Action Proposed Plan for the Chemicals, Metals, and Pesticides (CMP) Pits Operable Unit, Westinghouse Savannah River Company, Report WSRC-RP-98-4130, Revision 1, March 1999.

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#### **Agency Responses**

[Department of Energy-SR](#)  
[U.S. Environmental Protection Agency](#)