



Recommendation No. 37

May 13, 1997

L Area Oil & Chemical Basin and L Area Acid/Caustic Basin

Background

The L-Area Oil & Chemical Basin and L-Area Acid/Caustic Basin are within 400 feet of L-Area. They were used as unlined earthen basins for disposal of liquid waste. The L-Area Oil & Chemical Basin (LAOCB) was used from 1961 to 1979 and the L-Area Acid/Caustic Basin (LAACB) was used from 1955 to 1968. Both are located in an area of SRS designated for Industrial Use by the CAB1 and other Stakeholders. The stakeholders recommended and the DOE-SR plans on DOE maintaining control of all of SRS indefinitely. The LAOCB covers about 0.5 acre, is 12 feet deep and the contamination is confined to approximately the top 2 feet of the soil in the basin bottom. Although some volatile organics and tritiated water probably moved deeper, complete characterization of groundwater contamination has not been done.

Analysis of the risks indicate concern for a future hypothetical onsite resident or onsite industrial worker in the immediate vicinity of the LAOCB only. These risks are associated largely with direct radiation from Co-60 and Cs-137. However, there are also risks via ingestion and inhalation pathways. The LAOCB pipelines (about 1000 ft.) contain radioactive materials which could reach the soil after the pipe disintegrates. Because the pipeline is buried under four feet of soil, there is no risk to the occasional visitor. There are no risks associated with the LAACB.

The preferred alternative is a good engineering solution for remedial action. It includes in situ stabilization, backfilling and capping for the LAOCB, in situ stabilization of the radionuclides in the pipe, and removal of the pipe and its disposal in the LAOCB. Total costs (not including expenditures for reports and regulatory approval) are estimated at \$4.6 million for the preferred alternative. The risk analysis indicates that no remedial action is needed for the LAACB.

Recommendation

The preferred alternative negotiated by DOE, EPA, and DHEC be implemented.³ This alternative includes in situ grout stabilization, backfill and capping and may reduce the future remediation costs for the groundwater.

Minority Report on Recommendation 37

Two recommendation alternatives were presented to the full Board on May 13, 1997, regarding remedial activities at the L Area Oil & Chemical Bas

Because there is no significant risk under the current L-Area industrial operations, because there is some risk to workers implementing the preferred clean up action, because the area is designated as industrial 1,2, because DOE-SR intends to maintain control of the SRS for the indefinite future^{1,2}, because the dominant radiological hazard is associated with radionuclides with half lives of 30 years or less, because groundwater remediation is to be considered later for the whole L-Area, and because the SRS budget continues to decline, the SRS Citizens Advisory Board recommends that:

- The LAOCB be only backfilled with clean dirt at this time. This will provide direct radiation shielding and eliminate possible inhalation and ingestion of contamination by humans. It will also significantly reduce exposure of wildlife to contaminated soil. Costs should be less than the \$1.4 million estimated for backfilling and capping.
- Money saved by implementing this recommended action instead of the preferred action should be used to mitigate risks at higher risk sites.
- Deed restrictions be placed on the land records now to avoid potential conflicts during possible future land disposal action by the Federal Government.
- Groundwater remediation be considered as part of the general L-Area groundwater
- assessment. If necessary, the LAOCB should be capped with a low permeability barrier later.

Board members in favor of this alternative stated they were concerned that although the L Area Oil & Chemical Basin is listed as the second highest risk in the Federal Facility Agreement which addresses the Environmental Restoration Program, the basin is not the second highest risk at SRS. Comments were that in light of budget reductions, funding for this activity may be more appropriately allocated to other SRS programs which pose higher risks.

Agency Responses

[Department of Energy-SR](#)

[Department of Health and Environmental Control](#)