TC of the Stabilize Tanks Alternative. The preferred Option, Fill with Grout, would result in the least risk of a fatal cancer of all the
TC options under the Stabilize Tanks Alternative.

TC Model results show some adverse impacts to aquatic and terrestrial organisms under the No Action Alternative, but much smaller exposures under the options of the Stabilize and Tanks Alternative.

TC To assist in addressing cumulative impacts, SRS prepared a report, referred to as the Composite Analysis, that calculated the potential cumulative impact to a hypothetical member of the public over a period of 1,000 years from releases to the environment from all sources of residual radioactive material expected to remain in the SRS General Separations Area, which contains all SRS waste disposal facilities, chemical separations facilities, HLW tank farms, and numerous other sources of radioactive material. The impact of primary concern was the increased probability of fatal cancers. The *Composite Analysis* also included contamination in the soil in and around the HLW tank farms resulting from previous surface spills, pipeline leaks, and Tank 16 leaks as sources of residual radioactive material. The Composite Analysis considered 114 potential sources of radioactive material containing 115 radionuclides.

From a land use perspective, the F- and H- Area Tank Farms are zoned Heavy Industrial and are within existing heavily industrialized areas. The alternatives evaluated in this EIS are limited to closure of the tanks and associated equipment. They do not address other potential sources of contamination co-located with the tank systems, such as soil or groundwater contamination from past releases or other facilities. Consequently, future land use of the tank farm areas is not solely determined by the alternatives for closure of the tank systems. For example, the Environmental Restoration program may determine that the tank farm areas should be capped to control the spread of contaminants through the groundwater. Such decisions would constrain future use of the tank farm areas. Any of these options under the Stabilize Tanks Alternative would render the tank farm areas least suitable for other uses, as the closed filled tanks would remain in the ground. The Clean and Remove Tanks Alternative would have somewhat less impact on future land use because the tank systems would be removed. However, DOE does not expect the General Separations Area, which surrounds the F- and H-Area Tank Farms, to be available for other uses.

S.9 Comments Received on Draft EIS

DOE summarized the comments received on the Draft EIS and grouped them in seven major categories, as discussed below.

Alternatives

Several comments questioned DOE's choice of alternatives for analysis or suggested additional alternatives that DOE should have considered. Specific topics included requests for clarification of the intent of the No Action Alternative, consideration of offsite disposal of tanks under the Clean and Remove Tanks Alternative, and a suggestion that DOE should cut up some of the tanks and place the components inside other intact tanks before grouting them. Several comments expressed concern or requested clarification about specific elements of the alternatives, including how transfer lines would be treated under the various alternatives and whether removed tank components would be disposed of in the SRS E-Area vaults under the Clean and Remove Tanks Alternative. EC

Response:

DOE finds that the suggested new and modified alternatives either are not reasonable or were effectively addressed by the analysis presented in the EIS. Therefore, DOE did not change the alternatives considered in the EIS (other than modifying the Clean and Stabilize Tanks Alternative). However, clarifying information was added to the EIS as a result of several of these comments, as described in the responses to individual comments in Appendix D.

Use of Oxalic Acid

Several comments questioned the use of oxalic acid in cleaning tanks: whether other products could be used to remove residual material in the tanks and whether DOE expects to use oxalic acid in view of technical concerns, particularly about the potential for nuclear criticality. Comments pointed out apparent contradictions between statements that oxalic acid cleaning would be used in the Clean and Stabilize Tanks Alternative and other statements that oxalic acid cleaning would not be practical in the context of the Clean and Remove Tanks Alternative.

Response:

DOE revised the EIS to clarify DOE's position regarding the use of oxalic acid. DOE recognizes that cleaning operations, such as oxalic acid cleaning, may be required to meet performance objectives for some of the tanks that contain first-cycle reprocessing wastes. A thorough, tank-specific evaluation for criticality would need to be done before using chemical cleaning, such as with oxalic acid, in any tank and may result in the identification of additional tank-specific controls to ensure prevention of criticality. As discussed in the EIS, DOE identified oxalic acid as the preferred chemical cleaning agent, after studying numerous other potential cleaning agents. Concerns about the effect of oxalic acid on the quality of the DWPF waste feed would be resolved by special handling of batches of waste feed that contained oxalates resulting from tank cleaning activities.

EC

Cleaning of Tank Annulus

Several comments asked about the status of and plans for efforts to remove waste found in the annuli of some tanks, including the status of waste removal from the annulus of Tank 16.

Response:

In Chapter 2, a new paragraph was added on cleaning of the secondary containment, stating that waste would most likely be removed from the annulus using water and/or steam sprays, possibly combined with a chemical cleaning agent, such as oxalic acid. The Summary and Appendix A have been revised to clarify the status of waste removal from the Tank 16 annulus, specifically to state that some waste has been removed from the annulus, although some waste still remains.

Residual Waste

Several comments requested information on the residual waste inventories assumed for individual tanks or asked how DOE would measure or estimate the quantity and characteristics of residual waste remaining after tank cleaning is complete. Several comments requested additional discussion of the process by which the DOE determines that residual waste is "incidental to reprocessing."

Response:

In response to these comments, a table listing the assumed volume of residual waste if the tanks are cleaned that would remain in each closed HLW tank has been added to Appendix C. These volume estimates are based on previous experience with cleaning of Tanks 16, 17, and 20 and on judgments of the efficacy of the cleaning method. Also, additional information on the approach used to estimate residual waste characteristics has been provided in Appendix A. For modeling purposes, the EIS assumes that the physical and chemical composition of the residual waste would be approximately the same as the sludge currently in the tanks. Before each tank is closed, DOE would collect and analyze samples of the residual waste remaining after bulk waste removal and would conduct camera inspections to obtain visual evidence of the volume of residual waste in that tank. DOE has expanded the discussion of the three criteria for determining that waste is incidental to reprocessing and is to be managed as LLW, as specified in DOE Manual 435.1-1, *Radioactive Waste Management*.

EC

Institutional Control and Future Land Use

Several questions addressed institutional controls and future land use. Commenters said that DOE should not assume that institutional

controls would be retained for the entire duration of the modeling analysis or that the land around the tank farms would remain in commercial/industrial use. Some expressed concern about whether the selected alternative for HLW tank closure would restrict potential future land uses.

Response:

No changes were made to the EIS as a result of these comments. DOE's *Savannah River Site Future Use Plan* and the *Land Use Control Assurance Plan* call for the land around the F and H Areas (i.e., between Upper Three Runs and Fourmile Branch) to remain in industrial use indefinitely. This future use designation would not be affected by the choice of a tank closure alternative. Although DOE does not envision relinquishing control of the area, it does recognize that there is uncertainty in projecting future land use and effectiveness of institutional controls. Therefore, in this EIS, DOE assumes direct physical control in the General Separations Area, where F and H Areas are located, only for 100 years. In addition to reporting estimated human health impacts based at a regulatory point of compliance at the seepline, DOE has provided estimates of human health implications of doses that would be received by persons obtaining drinking water from a well directly adjacent to the boundaries of the tank farms.

EC

Regulatory Standard and Point of Compliance

Several comments questioned the regulatory point of compliance (i.e., the seepline) or the application of the EPA drinking water standard of 4 millirem/year at that location. One viewpoint was that the seepline should not be used as the point of compliance unless institutional controls prevent groundwater use at locations closer to the tank farms. Another viewpoint was that the seepline point of compliance is overly conservative because people would obtain water from the nearby stream rather than at the seepline. Several commenters stated that the 4 millirem/year limit is overly conservative and suggested adopting a less stringent standard. Another concern expressed was that a more stringent standard might be applied under a future RCRA/CERCLA regulatory process.

Response:

The performance objective of 4 millirem/year at the seepline was established by SCDHEC, after discussions with DOE and EPA Region 4 and following an evaluation of all applicable or relevant and appropriate requirements.

EC

EIS Summary

Several comments specifically addressed the EIS Summary, often requesting clarification on topics that were covered in the EIS text or appendices but not in the EIS Summary. Some commenters suggested that the Summary should be made an integral part of the EIS instead of being published as a separate volume.

Response:

In response to these comments, DOE incorporated additional information from the EIS into the EIS Summary. As allowed and encouraged in the Council on Environmental Quality NEPA implementing regulations (40 CFR 1500.4), DOE publishes the Summary separately as a service to readers.