

# **RADIOLOGICAL IMPACT OF 1996 OPERATIONS AT THE SAVANNAH RIVER SITE**

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## **ABSTRACT**

This paper presents the radiological effluent monitoring data and potential doses to offsite individuals and the surrounding population from 1996 Savannah River Site (SRS) operations. The methods used to calculate the potential doses are described and the potential doses from special-case exposure scenarios (such as deer meat, fish, and goat milk consumption and crops irrigated with Savannah River water) are documented.

For 1996, the potential dose to a hypothetical maximally-exposed-individual from liquid releases of radioactivity to the Savannah River was estimated to be 0.14 mrem (0.0014 mSv). Approximately 43% of the dose resulted from the ingestion of cesium-137, mainly from the consumption of fish, and about 41% resulted from the ingestion (via drinking water) of tritium oxide. The 1996 collective dose from liquid releases was estimated to be 2.2 person-rem (0.22 person-Sv).

The potential dose to a hypothetical maximally-exposed-individual from 1996 airborne releases of radioactivity to the environment was estimated to be 0.05 mrem (0.0005 mSv). Tritium oxide releases accounted for about 68% of the dose. The 1996 collective dose from airborne releases was estimated to be 2.8 person-rem (0.28 person-Sv).

**Prepared for the U.S. Department of Energy in connection with work under contract #DE-AC09-89SR18035**