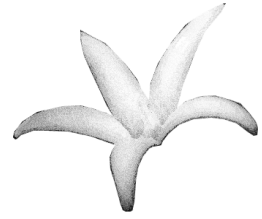


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# Executive Summary



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**T**he Savannah River Site Environmental Report for 2011 (SRNS-STI-2012-00200) is prepared for the U.S. Department of Energy (DOE) according to requirements of DOE Order 231.1 B, "Environment, Safety and Health Reporting.

*The annual SRS Environmental Report has been produced for more than 50 years. Several hundred copies are distributed each year to government officials, universities, public libraries, environmental and civic groups, news media, and interested individuals. The report's purpose is to*

- *present summary environmental data that characterize site environmental management performance*
  - *describe compliance status with respect to environmental standards and requirements*
  - *highlight significant programs and efforts*
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## Minimal Impact

The Savannah River Site (SRS) maintained its record of environmental excellence in 2011, as its operations continued to result in minimal impact to the public and the environment. The site's radioactive and chemical discharges to air and water were well below regulatory standards for environmental and public health protection; its air and water quality met applicable requirements; and the potential radiation dose from its discharges was less than the national dose standards.

The largest radiation dose that an offsite, hypothetical, maximally exposed individual could have received from SRS operations during 2011 was estimated to be 0.21 millirem (mrem)–0.032 mrem from air pathways plus 0.084 mrem from liquid pathways other than air, and 0.092 from irrigation pathways (mrem is a standard unit of measure for radiation exposure). The 2011 SRS dose is just 0.21 percent of the DOE all-pathway dose standard of 100 mrem per year, and far less than the natural average dose of approximately 300 mrem per year (according to Report No. 160 of the National Council of Radiation Protection and Measurements) to people in the United States. This 2011 all-pathway dose was approximately 9 percent more than the 2010 dose of 0.11 mrem. The newly reported irrigation pathway dose contributed to an 84% increase.

## Extensive Monitoring; Documented Compliance Rate of 100 Percent

Environmental monitoring is conducted extensively within a 2,000-square-mile network extending 25 miles (mi) from SRS, with some monitoring performed as far as 100 miles from the site. The area includes neighboring cities, towns, and counties in Georgia and South Carolina. Thousands of samples of air, rainwater, surface water, drinking water, groundwater, food products, wildlife, soil, sediment, and vegetation are collected by SRS and state authorities and analyzed for the presence of radioactive and nonradioactive contaminants.

Compliance with environmental regulations and with DOE orders related to environmental protection provides assurance that onsite processes do not impact the public or the environment adversely. Such compliance is documented in this report.

SRS had a National Pollutant Discharge Elimination System (NPDES) compliance rate of 100 percent in 2011, with zero of the 5,176 sample analyses performed exceeding permit limits – a compliance record that has been attained only two other times (2007 and 2010). The NPDES program protects streams, reservoirs, and other wetlands by limiting the release of nonradiological pollution into surface waters. Discharge limits are set for each facility to ensure that SRS operations do not negatively impact aquatic life or degrade water quality.

