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# Executive Summary



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**T**he Savannah River Site Environmental Report for 2010 (SRNS-STI-2011-00059) is prepared for the U.S. Department of Energy (DOE) according to requirements of DOE Order 231.1A, “Environment, Safety and Health Reporting,” and DOE Order 5400.5<sup>1</sup>, “Radiation Protection of the Public and Environment.”

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

SRS maintained its record of environmental excellence in 2010, 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 2010 was estimated to be 0.11 millirem (mrem)—0.05 mrem from air pathways plus 0.06 mrem from liquid pathways. (An mrem is a standard unit of measure for radiation exposure.) The 2010 SRS dose is just 0.11 percent of the DOE all-pathway dose standard of 100 mrem per year, and far less than the natural average dose of about 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 2010 all-pathway dose of 0.11 mrem was about 8 percent less than the 2009 dose of 0.12 mrem.

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<sup>1</sup> Requirements of DOE Order 5400.5 in effect through 2010, but subsequently incorporated into and superseded by DOE Order 458.1 on February 15, 2011

## Extensive Monitoring; Documented Compliance Rate of 100 Percent

Environmental monitoring is conducted extensively within a 2,000-square-mile network extending 25 miles 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 2010, with zero of the 5,059 sample analyses performed exceeding permit limits—a compliance record that has been attained only one other time (2007). 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.

## **One NOV/One NOAV**

Issued by the U.S. Environmental Protection Agency or the South Carolina Department of Health and Environmental Control, Notices of Violation (NOVs) or Notices of Alleged Violation (NOAVs) are the formal

regulatory notices that allege potential violations of an organization's permits, or of environmental laws or regulations. SRS received one NOV and one NOAV in 2010—both under the Clean Air Act.