NEWS from
The Savannah River Site

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SAVANNAH RIVER NATIONAL LABORATORY RESEARCHER HONORED FOR LIFETIME ACHIEVEMENT IN SOLVING NUCLEAR WASTE CHALLENGES

AIKEN, S.C. (Feb. 27, 2008) – Dr. Carol Jantzen, internationally recognized ceramics expert at the U.S. Department of Energy's Savannah River National Laboratory, was honored this week at the international Waste Management '08 Conference in Phoenix, Arizona, for more than three decades of outstanding contributions to nuclear waste management. Dr. Jantzen is this year's recipient of the Wendell D. Weart Lifetime Achievement Award, which is sponsored by Sandia National Laboratories to recognize long-term commitment to solving significant nuclear waste management issues.

In nominating Dr. Jantzen for the award, colleague Dr. Ned Bibler pointed to her development of the process and product quality models that have supported the successful operation of the Savannah River Site's Defense Waste Processing Facility, which has been converting the Site's high-level radioactive waste to a stable glass form for permanent disposal for over a decade. He also pointed out her role in one of the first successful closures of a radioactive waste site in the U.S.; her research led to the conversion of the mixed (radioactive and hazardous) waste to a glass form, making closure of the waste site possible.

Recently, she has been studying the application of Fluidized Bed Steam Reforming, which uses moderate temperatures to produce a mineral waste form, to the disposition of the waste in SRS' Tank 48. This tank's waste had posed a particularly difficult challenge, because certain organic compounds in it are incompatible with the SRS waste treatment facilities. Her work has shown that this innovative technology could be suitable for the Tank 48 waste, as well as wastes at other sites.

Letters supporting her nomination came from across the U.S. Department of Energy complex, as well as the University of Aberdeen, Scotland, and the Australian Nuclear Science & Technology Organization. Supporting her nomination, SRNL Laboratory Director Dr. G. Todd Wright said "I consider the lifetime work performed by Dr. Jantzen to have had a profound impact on nuclear waste management and represents impacts only a few have been able to achieve."

She is a Fellow of American Ceramic Society (ACerS), and was the society's first female president (1996-1997). She was named the 2003 winner of the D.T. Rankin Award for outstanding contributions to the ACerS Nuclear and Environmental Technology Division and was also named the Citizens for Nuclear Technology Awareness's Distinguished Scientist for 1997. Dr. Jantzen has authored over 250 publications and has been awarded eleven U.S. Patents.

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Dr. Jantzen holds a Ph.D. in Materials Science and Engineering from the State University of New York at Stony Brook and completed a 3 year post-doctoral fellowship at the University of Aberdeen, Department of Chemistry, in Aberdeen Scotland. She has 30 years experience in glass formulation and solidification technology and 25 years experience in waste disposal, with extensive research and development expertise in vitreous, crystalline ceramic, mineral, and cementitious waste form development.

SRNL is the applied research and development laboratory at the U.S. Department of Energy's Savannah River Site. The Laboratory puts science to work supporting DOE and the nation in the areas of energy security, national and homeland security, and environmental management, including serving as the DOE Office of Environmental Management's corporate laboratory, supporting engineering and technology for cleanup and waste management across the DOE complex. The Laboratory is operated for DOE by Washington Savannah River Company, a subsidiary of the Washington Division of URS Corporation.

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