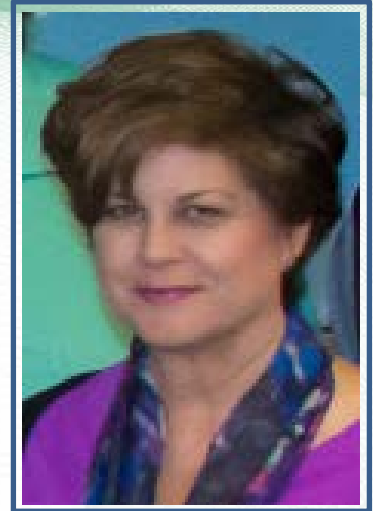# Rose Montgomery

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Rose Montgomery came to ORNL in 2016 after spending more than 23 years in the civilian nuclear industry as a nuclear fuel designer and nuclear shipping and storage container designer. She has extensive experience in the development and testing of fuel designs for commercial power reactor operation and fuel cycle applications.

Rose is the lead investigator for the "Sister Rod" project, a part of the High Burnup Spent Fuel Data Project sponsored by the US Department of Energy (DOE) Office of Nuclear Energy (NE). The Sister Rod project is focused on post-irradiation examination of 25 high burnup (HBU) commercial spent fuel rods. The detailed examinations will provide essential information on the physical state of the HBU rods and the fuel contained in the rods and any changes in the properties of the fuel rods resulting from interim dry storage and transportation to a final repository.

Rose has personally inspected hundreds of nuclear fuel assemblies at poolside, including taking detailed measurements of the mixed oxide lead assemblies operated in the Catawba Nuclear Power Station. She has been instrumental in the development of methods and fixturing used to measure irradiation-induced damage using remote handling equipment and has performed sensor research, development, and design related to pressure, dimensional, surface texture, eddy current, temperature, visual, thermal and ultrasonic techniques. Her research and development activities range from theoretical analysis to hands-on fabrication and testing.

Rose also has extensive management experience with highly innovative technical projects. She has commercial-industrial experience in addition to her R&D experience at Oak Ridge National Laboratory. Prior to moving to ORNL, Ms. Montgomery worked most recently for the Tennessee Valley Authority, one of the largest nuclear power producers in the U.S. She has also worked for each of the three primary domestic nuclear providers in the areas of thermo-mechanical fuel design, design testing, and post-irradiation examinations. She developed post-irradiation predictive models for rods and assemblies and provided input to new fuel rod and assembly designs. Ms. Montgomery also spent many years as a consultant in nuclear packaging design. She has been active in several DOE development initiatives, include the development of accident tolerant fuel, the Consortium for Advanced Simulation of LWRs (CASL), Electric Power Research Institute Fuel Reliability Program, and American Nuclear Society Top Fuel program.

Rose received her undergraduate degree in Mechanical Engineering from the University of South Carolina, and is a registered professional engineer in the state of Tennessee.