Dr. Stephen G. Johnson

Director, Space Nuclear Systems & Technology Division, Idaho National Laboratory

Currently Director of the Space Nuclear Systems and Technologies Division in the Nuclear Science and Technology Directorate of the Idaho National Laboratory, Dr. Stephen Johnson oversees the Engineering Development Laboratory and manages the Radioisotope Power Systems Program. Most recently this program fueled, tested and will deliver the MMRTG for NASA's Mars Scientific Laboratory mission to the planet Mars. During his tenure, the laboratory successfully pursued involvement in the Radioisotope Power Systems Program and following that involvement the fueling and testing of space and terrestrial power systems operations were transferred from Mound Laboratory to the Idaho National Laboratory (formerly Argonne National Laboratory-West). Further involvement in this program has led to the laboratory being considered for the consolidation of all Pu-238 operations in the DOE complex. Dr. Johnson has over 15 years of experience working with radioactive materials and the analysis of such using either chemical or material science techniques and methods and has extensive knowledge of analytical chemistry spectroscopic methods of analysis and analysis related to characterizing high-level waste for geologic disposal.

Prior to his current position, he served as facility manager for the Electron Microscopy Laboratory and manager of the Nuclear Waste and Materials section of the Engineering Technology Division of Argonne National Laboratory-West. In this capacity Dr. Johnson oversaw the operations of the Electron Microscopy Laboratory, which includes metallography, scanning electron microscopy and transmission electron microscopy capabilities in a radiological facility. He also oversaw the waste qualification efforts for the two high-level waste forms generated by the electrometallurgical treatment of the EBR-II fuel. He served on the High-level Waste sub-committee for the American Society of Testing and Materials and chaired the task group for revising the product consistency test for applications beyond radioactive glass. He is also a member of the American Chemical Society and the Material Research Society. Dr. Johnson has been affiliated with Purdue University as an Adjunct Professor of Health Sciences and was co-major professor for two students who received their MS degrees in Health Physics. He has also advised a student at Idaho State University to obtain his MS in engineering with emphasis in nuclear engineering. He holds a B.S. degree with a double major in Mathematics and Chemistry from Lake Superior State University of Michigan (1984) and a Ph. D. in Physical Chemistry from Iowa State University (1990). His doctoral research applied low-temperature high-resolution laser spectroscopy to study energy transfer in photosynthetic species. His post-doctoral appointment at Los Alamos National Laboratory involved the study of resonance ionization mass spectrometry for analysis of thorium at low levels for use as a geo-chronological dating method.