APPENDIX I

MEMBERS OF TRISO FUEL PIRT PANEL

Robert N. Morris

R. N. Morris received his Bachelor of Science degree in Electrical Engineering from Wayne State University in 1978, his Masters Degree in 1979 from the Georgia Institute of Technology and continued on to receive his Ph. D. in Nuclear Engineering from the Georgia Institute of Technology in 1984. His research efforts were in the field of fusion energy and computational plasma physics. The Oak Ridge National Laboratory has employed Robert Morris since the spring of 1984 and his job experience has included a wide variety of tasks from plasma physics computational modeling to nuclear fuel post irradiation examination (PIE). Past work has included computational and theoretical analysis of the Advanced Toroidal Facility and other three dimensional magnetic fusion candidate configurations. Topics included stellarator magnetic configurations, neutral beam heating, and plasma equilibrium and stability. Recent work has concentrated on irradiated fuel examination, irradiated capsule measurements, and High Temperature Gas-Cooled Reactor (HTGR) fuel accident behavior. This experience has included both HTGR program (New Production Reactor, Civilian HTGR, and Gas Turbine Modular High Temperature Gas-Cooled Reactor (GT-MHR)) and Mixed Oxide (MOX) LWR (Fissile Materials Deposition Program (FMDP)) irradiated fuel examinations and analysis. He has authored and co-authored over 60 technical reports, proceedings, and journal articles.

Current work is focused on participation in the FMDP, both the LWR MOX fuel and the Russian Federation GT-MHR program. Domestic work is involved in the post irradiation examination of LWR MOX test fuel containing weapons grade plutonium and the Russian effort is technical support of coated particle fuel development, also containing weapons grade plutonium. He is also currently involved with the Advanced Gas-Cooled Reactor program in the areas of coated particle fuel PIE planning and fuel accident behavior.

David A. Petti

Dr. Petti is currently an Engineering Fellow in the Advanced Nuclear Energy Directorate at the Idaho National Engineering and Environmental Laboratory. He has fifteen years of experience at the INEEL where he has worked in programs that have dealt with issues related to nuclear materials, nuclear safety, and radiological source term behavior in high temperature applications.

Dr. Petti is currently a Principal Investigator for gas cooled reactor research at INEEL. related to coated particle fuel modeling and material properties development. He is an INEEL technical lead for Advanced Gas Reactor Fuel Qualification and Development Program focusing on irradiation testing and fuel modeling. He was recently named Chief Scientific Investigator for the United States by the DOE to participate in IAEA Coordinated Research Program on Coated Particle Fuel Technology. He has directed and been personally involved in INEEL research related to reactor safety issues for gas cooled reactors..

Dr. Petti was also heavily involved in the development of SiC-coated gas reactor fuel and targets for the New Production Modular High Temperature Gas Reactor (NP-MHTGR). His areas of responsibility included the technical development and execution of the fuel and fission product development qualification program, the development of the technical bases for irradiation and safety testing required to support the NP-MHTGR tritium target demonstration and qualification program and the modeling of TRISO-coated particle fuel and targets, and the radiological source term for the NP-MHTGR. He has served on technical committees for the Department of Energy. He has received a number of awards including two Literary Awards from the Materials Science and Technology Division of the American Nuclear Society. He is the author or co-author of more than 50 technical publications.

Dana A. Powers

D. A. Powers received his Bachelor of Science degree in chemistry from the California Institute of Technology in 1970. He received a Ph.D. degree in Chemistry, Chemical Engineering and Economics in 1975 from the California Institute of Technology. His research for this degree program included magnetic properties of basic iron compounds, catalyst characterization and the rational pricing of innovative products. In 1974, Powers joined Sandia National Laboratories where he worked in the Chemical Metallurgy Division. His principal research interests were in high temperature and aggressive chemical processes. In 1981, he became the supervisor of the Reactor Safety Research Division and conducted analytic and experimental studies of severe reactor accident phenomena in fast reactor and light water reactors. These studies included examinations of core debris interactions with concrete, sodium interactions with structural materials, fission product chemistry under reactor accident conditions, aerosol physics, and high temperature melt interactions with coolant. In 1991, Powers became the acting Manager of the Nuclear Safety Department at Sandia that was involved in the study of fission reactor accident risks and the development of plasma-facing components for fusion reactors. Powers has also worked on the Systems Engineering for recovery and processing of defense nuclear wastes and has developed computer models for predicting worker risks in Department of Energy nuclear facilities. Dr. Powers was promoted to Senior Scientist at Sandia in 1997. Dr. Powers is the author of 103 technical publications.

From 1988 to 1991, Dr. Powers served as a member of the Department of Energy's Advisory Committee on Nuclear Facility Safety (ACNFS). In 1994, he was appointed to the Advisory Committee on Reactor Safeguards (ACRS) for the U.S. Nuclear Regulatory Commission. He was Vice Chairman of the ACRS in 1997 and 1998. He was elected Chairman in 1999 and 2000. In 2001, Dr. Powers received the Distinguished Service Award from the US Nuclear Regulatory Commission. Dr. Powers has served on committees for the National Research Council involved with the safety of Department of Energy facilities and the nuclear safety of reactors in the former Soviet Union. He has been an instructor for courses on reactor safety and accident management held by the International Atomic Energy Agency in several countries.