

RANDALL L. BEATTY**Distinguished Research and Development Staff, ORNL**

Prior Assignment highlights:

Project Manager, IAEA International Project on Innovative Reactors and Fuel Cycles (INPRO)

ORNL Nuclear Security Technologies Group

Senior International Program Manager

Science Advisor to the Department of State, Office of Proliferation Threat Reduction

International Program Specialist to the Department of Homeland Security

United States Deputy Executive Director at the International Science and Technology Center, Moscow Russia

Technical Advisor DOE/NN-1

NIS IPP Program Manager

Inter-Laboratory Board Chairman (IPP Program)

Oak Ridge Centers for Manufacturing Technology

AVLIS Uranium Senior Program Manager

Vice President for R&D and Marketing (SAIC)

Experience: Mr. Beatty has a wide range of managerial, business development, **international science cooperation**, and technical expertise developed during over 40 years of government and private sector experience. He has extensive training and skill in **project management, international program development**, export control, policy analysis and development, people management, organizational analysis, **government research and applied technology, business and proposal development**, marketing, equipment specification, and engineering design. He has specific technical expertise in **international proliferation threat reduction (policy and program development)**, international scientific cooperation, systems analysis, **export control policy, reactor safety and safeguards**, process optimization, **uranium chemistry, uranium fuel elements and subassemblies**, uranium enrichment equipment and services, strategic and site development planning, RAM, systems engineering, **project management and control**, and hierarchical requirements allocation.

Current Assignment: Mr. Beatty is currently a distinguished research and development staff member in the Nuclear Security and Isotope Technology Division at Oak Ridge National Laboratory. He is an international specialist with technical expertise in export control, scientific cooperation and nuclear fuel cycle and uranium processing with an emphasis on chemical aspects. He is the NNSA International Nuclear Export Control Program Country Lead for China and the DOE-NE Laboratory Lead for China Cooperation.

Employment History: Mr. Beatty returned to Oak Ridge and ORNL in 2012 after five years in Vienna Austria where he was the INPRO Program Manager at the International Atomic Energy Agency (IAEA). INPRO is the IAEA's International Project on Innovative Nuclear Reactors and Fuel Cycles for the 21st Century. Prior to his appointment to the IAEA in March of 2008, Mr. Beatty was a Senior International Program Manager, in the ORNL Nuclear Security Technologies Group, and shared his time between being the Science Advisor to the Department of State, Office of Proliferation Threat Reduction where he specialized in policy support and initiating scientific cooperation programs between Eurasian (FSU) and US scientists for the purpose of reducing proliferation risk, and support to the Department of Homeland Security (DHS) as the **Senior Advisor for International Programs** within the Science and Technology Directorate, where he developed a strategy for international technology assessment and implementing the infrastructure to enable international cooperation in the areas important to the DHS mission.

Mr. Beatty was previously the **United States Deputy Executive Director (DED) for the International Science and Technology Center** headquartered in Moscow, Russia for six years (Oct 1997 until June 2002). He lived with his family in Moscow and served as a senior diplomatic representative from the Department of State (rank equivalent to Minister Counselor for Science). The International Science and Technology Center (ISTC) is an intergovernmental organization dedicated to the nonproliferation of weapons, expertise, and technologies of mass destruction. The ISTC achieves its objective by funding peaceful scientific and technical research by former weapons scientists in Russia and Commonwealth of Independent States (CIS) countries. Since 1994, the ISTC has provided over US\$500 Million to hundreds of projects employing over 35,000 scientists and engineers at nearly 350 institutes. These projects cover a broad range of science and technology areas, many of which address problems of energy sufficiency and other issues of global urgency.

In particular the United States DED is nominated by the United States Government (Department of State) and approved by the ISTC Governing Board (GB). He had overall responsibility for the activities of the Secretariat to accomplish the specific goals and objectives as established by the GB, **with particular attention to scientific and non-proliferation objectives** but also ensuring the adequacy and prudent utilization of financial and other resources available to the ISTC.

Mr. Beatty also developed and presented policy, staffing, program, and budgetary recommendations to the GB and supervised the implementation of the policy, staffing, program, and budgetary decisions of the Board. During his six years with the ISTC and under his direct guidance and leadership the funding and participation with USG agencies and companies from the United States more than doubled, and in 2002 the US contributions from all sources were greater than \$80M.

He was one of the **principal representatives of the Center** in interactions with representatives of the Governmental Parties to the ISTC Agreement, other governments especially from the funding parties the EU, Canada, South Korea and Japan, the recipient countries Russia, Ukraine, Belarussia, Kazakhstan, Armenia, Georgia, Kyrgyzia, Uzbekistan, Turkmenistan, Tajikistan, and Azerbaijan. and other

governmental, inter-governmental and non-governmental organizations in particular the IAEA located in Vienna.

In addition to helping develop and implement systems for financial and technical monitoring of all projects and activities funded through the ISTC, Mr. Beatty was responsible for developing methodology and **performing evaluations related to the effectiveness of the ISTC** in facilitating and encouraging CIS weapons scientists and engineers to redirect their talents from military to civilian pursuits and recommending Programs that encourage sustainability.

Mr. Beatty was previously the Chairman of the Inter-Laboratory Board (ILAB) and ORNL Program Manager for the New Independent States Industrial Partnering Program (NIS IPP now called the Initiatives for Proliferation Prevention) which was designed to **establish collaborations and perform technology assessments with NIS countries** and US scientists and engineers that can become the basis for commercial ventures in the evolving private sector economy within the NIS and have potential for private sector deployment within the US. He also served a one-year assignment as a Technical Advisor to the United States Department of Energy, Office of Nuclear Non-proliferation and National Security and relocated to Washington DC reporting to Ken Baker Acting Director NN-1. In this assignment he provided analysis and assessment of proliferation programs and energy policy and provided support to the Nuclear Nonproliferation Office as it **developed and implemented a strategy for DOE nonproliferation programs in the Interagency and International Community.**

Until the end of fiscal year 93 Mr. Beatty was the AVLIS Uranium Processing Program Manager, responsible for experimental and design programs that **demonstrated technologically advanced economical processes for preparing AVLIS Feed Rods** and for integrating these technologies with the private sector Uranium industry.

Before joining MMES/Y-12 Oak Ridge Site in February of 1992, Mr. Beatty was a Vice President with Science Applications International Corporation (SAIC), **providing onsite technical support and strategic planning assistance to the Y-12 Complex 21 Reconfiguration Program Office (RPO)**. His responsibilities included developing specific planning methodologies, performing tradeoff and cost benefit studies, and providing strategic planning methodologies and support. He also provided research, writing and technical support to the preparation of MMES expansion opportunity proposals.

As **SAIC Vice President for Business Development**, Mr. Beatty was responsible for managing The Corporate Marketing and Proposal Center that enjoyed an amazing 70% success rate on 100M of proposals annually. This assignment **also involved the preparation of strategic business plans** and specific acquisition plans for key opportunities.

As Director of the National Public Presentations Program, **Mr. Beatty managed all aspects of the DOE Public Information Program**, including developing Public Information Programs, directing the American Museum of Science and Energy (AMSE), preparing all types of information products, Transportation Systems, Health and

Environmental Information, Hazardous Materials Analysis Support, and the operation of traveling and educational exhibit programs.

Mr. Beatty served as a Process Engineer in SAIC's Systems Analysis Division. As Project Manager for engineering support services to NLO, Inc. at Fernald, Ohio he was in charge of **uranium systems safety analyses, criticality studies, uranium handling equipment design studies, and strategic and advanced planning to support the Defense Programs 2020 Facilities Study**. Mr. Beatty was a member of the team that developed the code to model initial time and optimum method for pumping centrifuges down to vacuum for the Gas Centrifuge Enrichment Project startup. While supporting the SAIC safety analysis task for AETF and CPDF at the Oak Ridge K-25 Plant, he prepared system descriptions and accident analysis for key uranium handling facility systems.

Mr. Beatty served as systems engineering task leader on the Integrated Equipment Test (IET) Facility Task Force Evaluation effort that examined in detail the status of the base program; particular attention focused on **the integration of first-of-a-kind production equipment for an advanced fuel reprocessing plant test facility**. He also provided systems engineering support to the Breeder Reactor Engineering Test (BRET) Project, Hot Examination Facility (HEF), and the Fuels and Material Examination Facility (FMEF).

As a member of an SAIC safety analysis team, Mr. Beatty identified and **analyzed accident scenarios and safety systems in the Enriched Uranium Recovery Facilities** at the Oak Ridge Y-12 plant. He was Task Leader for a contract effort to prepare the Generic Environmental Impact Statement for a Waste Repository. His specific duties included design analysis and identification of safety issues associated with the alternative disposal schemes.

As a Chemical Engineer for DOE/ERDA/AEC in Washington, D.C., Mr. Beatty provided technical management of the Thermal Reactor Processing Program at the Savannah River Laboratory and technical coordination of fuel cycle programs that generate characterizations and evaluations in support of the **Non-Proliferation Alternative System Assessment Program (NASAP) and the International Nuclear Fuel Cycle Evaluation (INFCE) Program**.

While working as a Chemical Engineer for Oak Ridge National Laboratory on an intern assignment from AEC, Mr. Beatty assisted in **light-water reactor fuel dissolution studies**. These studies focused on refinement of ORIGEN decay code and the formulation of theoretical calculations of constituents of spent fuel.

As a Reactor Engineer for the ERDA FFTF Project Office in Richland, Washington, Mr. Beatty **wrote specifications and procured fuel assembly hardware and fuel pins**. He also developed procedures in the Fuel Assembly Development Program and reviewed Safety Analysis Reports.

Education: Kennedy-Western University, PhD Engineering Management, 2004
University of Tennessee: M.Sc. Engineering Administration, 1979
George Washington University: B.Sc., Chemistry and Drama, 1974

Security Clearance: DOE Top Secret Q, SCI (since 1974)
ORNL Badge Number #034720; Nuclear Security and Isotope Technology Division

Professional Activities:

American Chemical Society
American Nuclear Society
American Institute of Chemical Engineers, Board of Directors
American Society for Engineering Management
Institute of Industrial Engineers
Arrangements Chair, Fifth Topical Meeting on Robotics and Remote Systems

Community Activities:

Leadership Oak Ridge	Scoutmaster
Big Brothers Volunteer of the Year 1985	Arts Council of Oak Ridge
Memorial Methodist Lay Volunteer	Rotary Club
North American Hunting Club (Life)	Oak Ridge Community Playhouse

References (contact points available on request):

Peter Lyons ,Assistant Secretary of Nuclear Energy USDOE
John Kelly , Deputy Assistant Secretary for Reactor Technology USDOE
Ed McGinnis , Deputy Assistant Secretary for International Programs and Policy USDOE
Anne Harrington, Director of NNSA, USDOE
Alexander Bychkov, Deputy Executive Director for Nuclear Energy, IAEA
Holger Rogner, Director, Planning and Economic Assessment, IAEA
Ambassador Ron Lehman, LLNL, Chairperson of the ISTC Governing Board
Ambassador Jean Pierre Contzen, Scientific Advisory Committee of the ISTC
Ambassador Alexander Vershbow, US Ambassador to the Russian Federation
Ambassador James Collins, US Ambassador to the Russian Federation
Laura Schmidt-Williams, Chem-Bio Engagement Director, Department of State
Andy Hood, Senior Science Center Coordinator, Department of State
Didier Gambier, Non-proliferation and Science Cooperation Director at the European Union in Brussels
First Deputy Minister Lev Ryabev, Ministry of Atomic Energy, Moscow RF
Ken Baker, Deputy Director Office of Nuclear Nonproliferation, NNSA/DOE

Personal:

Mr. Beatty has been married for 35 years to Cynthia an English and Drama Teacher and has a son Brent who is a Nuclear Engineer at ORNL and a daughter Kate who is a Veterinarian.