Richard W. Englehart

EXPERIENCE SUMMARY

US Department of Energy: 1992-2008, Nuclear Engineer/Nuclear Safety Engineer, Office of Nuclear and Facility Safety Policy. Primary staff responsibility for the development of DOE-STD-1189, Integration of Safety into the Design Process, Documented Safety Analysis (DSA), Technical Safety Requirements (TSR), and Unreviewed Safety Question (USQ) nuclear safety requirements of 10 CFR 830, Nuclear Safety Management, and the Nuclear and Explosives Safety Design Criteria and System Engineer requirements of DOE Facility Safety Order 420.1B. In this capacity, Dr. Englehart has been responsible for advising on proper implementation of the nuclear safety rule, Orders and related standards. He has been responsible for representation of Department positions on these requirements and implementation guidance to the DNFSB and its staff. He is also has been a member of the Interagency Nuclear Safety Review Panel (NASA, DOE, DoD, EPA, and NRC) for the launch of Pluto New Horizons and Mars Science Lab NASA missions using plutonium 238 fueled radioisotope thermoelectric generators (RTGs). (Current DOE Q clearance)

Dr. Englehart has led or participated in the development of the following DOE directives:

- DOE-STD-1189, Integration of Safety into the Design Process
- DOE-STD-3009, (DSA (SAR) preparation guide) and updates
- DOE-STD-1104, (DSA (SAR) and TSR review guide)
- DOE-STD-3011 for limited-lifetime facility DSAs
- 10 CFR 830 Safety Basis Rule and Implementation Guides (DOE G 421.1-2, DOE G 423.1-1, and DOE G 424.1-1)
- Order 420.1 requirements and Implementation Guide for Nuclear and Explosives Safety Design Criteria, System Engineer Program requirements and Criticality Safety
- Design Considerations Handbook (DOE-HDBK-1132)
- DOE-STD-1186 for Specific Administrative Controls (see DNFSB Recommendation 2003-2)
- DOE-STD-3007 on Criticality Safety Evaluations
- DOE-STD-1183, Nuclear Safety Specialist Functional Area Qualification Standard

In the area of training, Dr. Englehart has prepared and presented course modules for Safety Basis rule implementation (presented at Oak Ridge, Albuquerque, LANL, LLNL, and DOE-HQ). He developed and taught course modules on Authorization Basis for NNSA Facility Representatives and for EM senior management qualification. He prepared and presented modules on integration of safety into the design process and on facility safety basis for DOE's Nuclear Executive Leadership Training program.

Dr. Englehart participated in Integrated Safety Management Systems (ISMS) verifications at Y-12, Pantex, LLNL, and INEEL (now INL) and was qualified as a team leader. He has been the DOE sponsor of the Energy Facility Contractors Group (EFCOG) Safety Analysis Working Group (SAWG). He is a member of the American Nuclear Society Nuclear Facility Standards Committee.

1990-1992, Acting Director, Office of Environment, Office of New Production Reactors. Responsible for three divisions, NEPA Compliance, Environmental Compliance, and Occupational Safety for New Production Reactors.

- Directed completion of the Program EIS for three reactor technologies at three sites (SRS, INEL, Hanford)
- DOE Hearing Officer at five public hearings in Idaho
- Served as a senior advisor to the Program's Chief Engineer

NUS Corporation: 1973-1990, Dr. Englehart served in the Environmental Services Division as a staff member of the Radiological Programs Department, as manager of the Department, and as Assistant General Manager of the Division. Responsible for providing technical direction of and consulting services for (safety and environmental) licensing of commercial nuclear power plants, uranium mills, and rare earth processing plants and for support of safety and risk analyses and launch safety support related to approvals for launch of Pu-238 RTGs on board NASA and military space missions.

- Business development for and technical supervision of a staff of 15 professionals and a radiological laboratory
- Directed major projects including an Environmental Impact Statement for a Maritime Administration nuclear ship program, an examination of the technical bases for EPA regulations on the nuclear fuel cycle
- Radiological analyses for Environmental Reports and accident analyses for Safety Analysis Reports for multiple commercial nuclear power plant license applications to the NRC
- Project manager and principle investigator for safety, environmental and launch support of all launches of RTGs aboard NASA and DoD space missions from 1976 through 1990; provided risk assessments and radiological emergency launch support for these missions (Vikings to Mars, Lincoln Experimental Satellites, Voyagers to the outer planets, Galileo to Jupiter, and Ulysses solar polar mission)
- Directed investigations by an Explosion Working Group for DOE after the Challenger accident regarding explosion risks for RTGs
- Prepared and delivered testimony for licensing hearings for commercial nuclear power plants
- Prepared and delivered Congressional testimony relating to risk analyses for launch of Pu-238 fueled RTGs for the Galileo mission to Jupiter (post Challenger)
- Technical direction of nuclear safety, occupational safety, and quality assurance support to DOE-SR, Savannah River Site (1986-87)

University of Florida: 1969-1973, Dr. Englehart was assistant professor of nuclear engineering and in charge of the University's research reactor.

- Taught graduate courses in shielding, reactor plant design, and reactor operations
- Carried out complete renovation of reactor facility, including redesign of core and coolant system, upgrade of the control system, and installation of new experimental facilities
- Senior Reactor Operators License from the NRC

EDUCATION

Ph.D., Nuclear Engineering, Pennsylvania State University
MS, Nuclear Engineering, Pennsylvania State University
BS, Mechanical Engineering, Carnegie-Mellon University