

### **Summary of Qualifications**

**Radiation Protection Manager, Health Physicist, Radiological Engineer and Licensing Engineer.** Extensive experience in all aspects of health physics, including: radiological engineering, decommissioning, licensing, regulatory interface, dose assessment and ALARA; radioactive waste management; emergency preparedness; chemistry; and related training programs. Highly skilled in development, implementation and integration of programs and services with facility operational requirements and objectives. Strengths lie in analysis and evaluation, planning, organizing and managing implementation of cost effective, customer-oriented programs within a team environment. Excellent verbal, writing and computer skills.

### **Experience Summary**

- Senior Licensing Engineer for the Westinghouse Hematite Decommissioning Project (**2008 - present**). Duties included development, preparation and writing the Decommissioning Plan and supporting documents. Documents developed and written include: Characterization Report, DCGL Report, Historical Site Assessment and Surrogate Report. Other licensing duties included: review and evaluation of policies, plans and procedures for compliance with regulatory and license requirements; development of responses to NRC requests for additional information (RAIs); development of proposed license amendment requests; evaluations of reportability; and, serving as Acting Licensing Manager during absence of the Licensing Manager.
- Dose Reconstruction Health Physicist for the NIOSH Dose Reconstruction Project (**2005 - 2007**). Performed complex internal and external dose reconstruction calculations for numerous DOE facilities and job functions, for claimants under the Energy Employees Occupational Illness Compensation Program Act. Provided detailed reports for each dose reconstruction case, including: internal and external dose calculations, data analysis, dose reconstruction methodology and assumptions, dose reconstruction results and calculation of probability of causation.
- Senior Radiological Engineer for the “3–Building” (K-29, K-31 and K-33) DOE decommissioning project at Oak Ridge (**2004**). Duties included: design, implementation, and evaluation of characterization, remedial action support, investigative and MARSSIM-based final status surveys; development of plans, procedures, and technical basis documents; shift support and management of survey personnel; and, performance of quality control reviews of survey data.
- Consulting Health Physicist and Radiation Protection Manager (RPM) Mentor at Perry Plant (BWR) (**2003**). Development, assessment and review of all health physics functions, activities and programs at Perry; including detailed review and evaluation of operational chemistry operating programs. Successful in leading and mentoring the RPM to accomplish development and implementation of significant management and program changes, and to achieve significant improvement in operational and regulatory performance.
- Manager, Radiation Protection, Health and Safety for the Mallinckrodt CT Facility decommissioning project (**2002**). Managed radiological and industrial safety aspects of the demolition, decontamination, disposal and MARSSIM-based final status surveys for a chemical and radioisotope processing facility. Managed site characterization involving alpha, beta and gamma emitting isotopes. Managed the Health Physics organization and laboratories, including serving as Project Director in the Director’s absence.

- Site Health Physicist and Radiological Engineer for the Westinghouse Hematite Fuel Manufacturing Facility (1999 –2001). Provided operational Health Physics and Radiological Engineering services in the areas of: program assessment and development; dose assessment; software development; ALARA; instrumentation and calibration programs; response to and reporting of plant occurrences/events; procedure assessment and development; emergency preparedness; and radiation worker training. Routine interaction with and response to the Nuclear Regulatory Commission (NRC) and State regulators.
- Manager, Nuclear Services and Principal Health Physicist for Callaway Plant (PWR) (1985 –1998). Provided development, review, evaluation and assistance in implementation for all Health Physics and related programs; including Chemistry, Radioactive Waste Management, Emergency Planning and Training. Managed the Health Physics line organization during plant outages. Routine interaction with and response to the Nuclear Regulatory Commission (NRC) and State regulators. Served as a principal member of the Nuclear Safety Review Board (NSRB) and the Senior Executive Staff (SES).
- Managed Health Physics, Chemistry, Radioactive Waste Management and Emergency Planning programs and organizations at Grand Gulf (BWR) (1983 –1985). Served as Plant Radiation Protection Manager (ANSI-qualified, NRC Region 2), and managed all Health Physics, Chemistry and Radioactive Waste Management functions and organizations; and, managed the planning, coordination and conduct of site emergency planning drills and activities. Routine interaction with and response to the Nuclear Regulatory Commission (NRC) and State regulators. Served as a principal member of the Plant Safety Review Committee (PSRC).
- Served as Radiation Protection Manager (ANSI-qualified, NRC Region 4) at Comanche Peak (PWR) (1980 –1983). Developed, implemented and managed health physics programs, in the areas of: bioassay; personnel dosimetry; health physics computer systems (hardware & software); ALARA; radioactive waste management; respiratory protection; emergency preparedness; and training. Routine interaction with and response to the Nuclear Regulatory Commission (NRC) and State regulators.
- Manager, Radiological Engineering at Hanford's 'N' Reactor (PWR) (1975 –1980). Managed programs for: personnel exposure control; ALARA; dosimetry; radioactive waste management; personnel and equipment decontamination; and emergency planning. Responsible for development, design, cost/benefit justification and implementation of plant projects to reduce operating costs and improve plant efficiency and personnel safety. Routine interaction with the Energy Research and Development Administration (ERDA; predecessor to DOE).
- Health Physicist and Health Physics Supervisor at Oconee (PWR) (1973 –1975). Supervised Health Physics staff and technicians in providing: shift HP coverage; dosimetry; radioactive waste management; HP computer systems; instrumentation; decontamination; emergency planning and training (technician and general plant employees). Managed the health physics line organization during plant outages. Routine interaction with and response to the Nuclear Regulatory Commission (NRC).

### **Selected Professional Experience and Accomplishments**

- Independent Assessment Team Leader for Connecticut Yankee (CY) (2004). Led an independent team in a broad-scope assessment of the License Termination Plan (LTP) and MARSSIM-based Final Status Survey (FSS) Plan. The team assessed implementing procedures, documents and field implementation; including the following areas: implementation of LTP requirements; adequacy of FSS procedures and their implementation; quality of FSS technical support documents; management of FSS data and records; training and qualification of FSS personnel; and, instrument selection, calibration, inventory, maintenance and control. Developed, drafted and wrote the final assessment team report, identifying numerous deficiencies and opportunities for improvement.

- Consulting Health Physicist for the Connecticut Yankee (CY) decommissioning project (**2003**). Performed detailed assessment of radiation protection program, procedures, responsibilities, equipment, personnel and other resources; and developed a comprehensive plan for their transfer from a contractor organization to the utility. The actual transfer was accomplished successfully within the scheduled time, without regulatory issues or concerns, and with minimal disruption of radiological work.
- Consulting Health Physicist for (n,p)Energy, Inc. (**2002**). Performed complex ALARA cost/benefit analysis, associated with utilizing PRC-01 technology, across multiple nuclear operating plants and utilities. This analysis was utilized for marketing services associated with reactor shutdown processes and chemistry-related technologies. Presented analytical results to industry technical and professional forums.
- Health Physics Expert for the International Atomic Energy Agency (IAEA), providing consulting to the Korean Institute of Nuclear Safety (KINS) (**1999**). Performed ALARA analysis of operational programs at Korean nuclear power plants, including design analysis for “next generation” plants. Performed site ALARA assessment at the KORI plant, including both internal and external dose, and associated exposure mechanisms. Presented ALARA analysis results to plant personnel and KINS staff as a formal seminar, and results and recommendations were documented in the IAEA report “Implementation of ALARA in Korea with Emphasis on Reduction of Internal Exposure to Ionizing Radiation”.
- As Manager, Nuclear Services (**1985 –1998**) reporting to the Sr. Vice President, Nuclear of AmerenUE (Callaway), managed special projects for the Nuclear Division and functioned as a personal representative for the Sr. Vice President in various public and industry forums, including: special presentations for company officers, shareholders and the public; and, evaluation and response to “Differing Professional Opinions” (“whistle blower” issues) submitted to the Nuclear Regulatory Commission (NRC), on behalf of the company. Routine preparation of documents, memos and briefing papers for the Senior Vice President, the Executive Vice President, and the President/Chief Executive Officer of the company.
- As a principal member of Plant Safety Review Committees and Safety Review Boards, responsible for detailed analysis, review and approval of plant licensing changes and submittals to the Nuclear Regulatory Commission. Responsibilities included detailed assessment of regulatory requirements and evaluation of facility and programmatic compliance, and qualification as a 50.59 reviewer.
- Provided personal testimony in formal hearings, to: multiple State Public Utility Commissions; the Nuclear Regulatory Commission’s Advisory Committee on Reactor Safeguards (ACRS); and the Federal Energy Regulatory Commission (FERC).
- Response to, and interaction with NRC and state regulatory agencies during fuel manufacturing and reactor facility reviews, evaluations, inspections and investigations; including preparation of written responses as required. Preparation and submittal of requests for licensing changes to NRC.
- Evaluation, review, field response, technical support and regulatory support for special occurrences/events at fuel manufacturing and reactor facilities, including: improper release and shipment of contaminated equipment; assessment of unanticipated transuranics in effluent pathways; inadequate high radiation area controls; unplanned personnel exposures; and other events. Required significant interaction with the Nuclear Regulatory Commission (NRC) and State regulators, including formal and informal meetings, formal reports and detailed responses to requests for information.
- Developed technical basis documents and presented a draft submittal to DOE requesting supplemental limits for the 3–Building (K-29, K-31 and K-33) DOE decommissioning project at Oak Ridge. Developed methodology to determine alpha and beta fractions for various Uranium enrichments, and application of those fractions to varying mixtures of enriched Uranium and Tc-99, for calculation of instrument efficiencies. Participated formal meetings with DOE representatives and response to requests for additional information (RAIs).
- Provided public relations representation and interface on behalf of multiple companies, regarding radiation protection issues, including: school/educational programs; response to shareholders; media tours; and response to media inquiries and questions.

- Developed, designed and supervised construction of a calibration source-well facility at Comanche Peak. Designed, procured and personally installed a 5,000 Ci Cs137 calibration source in the well. Prepared regulatory license submittals to both the State regulatory agency and the Nuclear Regulatory Commission, for source licensing, procurement, installation of the source, and operation of the calibration facility.
- Responsible for the day-to-day field application and implementation of federal and state laws and regulations at fuel manufacturing and reactor facilities, regarding: occupational health and safety; security; health physics; radioactive waste management, shipping and handling; environmental monitoring; and emergency preparedness programs. Responsible for interpretation and application of federal codes and regulations, regulatory guidance and information in the daily conduct of the above programs.
- Filled and maintained qualifications for multiple positions in emergency organizations at PWR, BWR, DOE and Fuel Manufacturing Facilities. These positions included: Dose Assessment Coordinator; Radiological Assessment Coordinator; and Controller for drills and exercises. Participated in numerous emergency drills and exercises, in on-site and off-site emergency organizations, including interaction with State and Federal drill and exercise participants. Participated in numerous critiques of drills and exercises.
- Assessment and Operational Review of Health Physics procedures, programs, and training at fuel manufacturing, commercial nuclear power and Department of Energy (DOE) facilities, for: technical adequacy; regulatory compliance; continuous improvement; and cost effectiveness.
- Utility company's expert on radiological and financial decommissioning issues. Member of NEI's Task Force for development of radiological decommissioning standards and criteria for cleanup.

### **Education/Credentials**

Completed 39 Hours Graduate Work toward an MBA (3 courses remaining), with an emphasis in Management  
Webster University, St. Louis, MO

BS, Nuclear Engineering – Texas A & M University  
Scholastic Scholarship; Dean's Honor Roll; Distinguished Student

Registered Professional Engineer (PE) - Texas

ANSI - Qualified Radiation Protection Manager (RPM)

**Selected Training:**

40 – Hour Hazardous Waste Operations (HAZWOPER)  
DOE Radiation Worker II  
FEMA Emergency Preparedness Evaluator Course (IS-00331)  
Westinghouse PWR Systems Course - TXU  
General Electric BWR Systems Course - Entergy  
PWR Operational Chemistry – NWT Corporation  
Mitigation of Core Damage – RCS Corporation  
Human Performance Evaluation System (HPES) – Performance Improvement International  
INPO Observer Training – INPO/Entergy  
Behavioral Reliability Supervisory Training - Entergy  
Quality Improvement Process (QIP) – AmerenUE  
Team Leader - Quality Improvement Process (QIP) - AmerenUE  
Facilitator - Quality Improvement Process (QIP) - AmerenUE  
Leadership for Managers - Quality Improvement Process (QIP) – AmerenUE  
Managing For Excellence – TXU  
Business Process Analysis & Decision Making – AmerenUE  
Competitive Advantage Through Strategic Leadership – McCausland Associates, Inc.  
Dimensional Management Training – AmerenUE  
Advanced Managerial Strategies – AmerenUE  
The Managerial Grid – Scientific Methods, Inc.  
Certificate, General Management – American Management Association

**Security Clearances:**

DOE “Q” Clearance - Inactive  
NRC Commercial Nuclear Facility Clearance (PADS) - Current

**Employment History:**

Independent Consultant – Self-Employed	1998 – Present
AmerenUE - Union Electric Company (Callaway)	1985 – 1998
Mississippi Power & Light Company (Grand Gulf)	1983 – 1985
Texas Utilities Generating Company (Comanche Peak)	1980 – 1983
UNC Nuclear Industries – United Nuclear Industries, Inc. ('N' Reactor)	1975 – 1980
Duke Power Company (Oconee)	1973 – 1975