



Experience:

U.S. Nuclear Regulatory Commission, 1990-Present

2006 – Present      Aging Management of Structures, Electrical, and Systems Branch,  
Division of License Renewal, Office of Nuclear Reactor Regulation

Conducted safety review audits consisting of numerous technical reviews including preparing audit reports, and the safety evaluation inputs for the license renewal applications submitted for Farley, Brunswick, Palisades, Vermont Yankee, Pilgrims, Fitzpatrick, Wolf Creek, Indian Point, Three Mile Island, Beaver Valley, Susquehanna, Cooper, Duane Arnold, Kewaunee, Palo Verde, Prairie Island, Salem, Hope Creek, Crystal River, Diablo Canyon, Seabrook, Davis-Besse, South Texas, Limerick, and Grand Gulf. Participated in the staff's presentations at the Advisory Committee on Reactor Safeguards (ACRS) subcommittee and full committee on license renewal applications. Developed interim staff guidance on certain aging management programs including ISG 2007-02, Change to GALL AMP XI.E6, Electrical Cable Connections Not Subject to Environmental Qualification Requirements.

Assisted in the update of the 2010 version of NUREG-1801, Revision 2 (Generic Aging Lesson Learned (GALL) Volume 2, Revision 2), as related to aging management reviews (AMRs), aging management programs (AMPs), and time limiting aging analysis (TLAA) for the electrical and instrumentation and control systems. Also updated the Standard Review Plan (SRP) corresponding sections for these AMRs, AMPs, and TLAA (NUREG-1800, Revision 2).

1993-2006      Electrical Engineering Branch, Division of Engineering, Office of Nuclear  
Reactor Regulation

Conducted safety reviews and preparing safety evaluation inputs for license renewal applications submitted by the applicants for Calvert Cliff, Arkansas Nuclear One (ANO-1), Oconee, McGuire and Catawba, Turkey Point, St. Lucie, and V.C. Summer.

Assisted in the updated of the 2005 version of GALL Revision 1, as related to AMRs, AMPs, and TLLA for electrical and I&C systems. Also updated SRP corresponding sections for these AMPs, AMRs, and TLAA (NUREG-1800, Revision 1).

Managed Brookhaven National Lab (BNL) contract (JCN J-2831) entitled "Aging Management of Safety-Related Fuses Used in Low-and Medium Voltage Application in Nuclear Power Plants. Responsibility included development of statement of work (SOW), monitoring performance of contract including cost expenditures, timeliness in meeting schedule milestone, and technical adequacy and quality of deliverables. Issued NUREG-1760 and developed interim staff guidance on fuse holders for license renewal based on recommendations of NUREG-1760.

Performed evaluations supporting safety evaluation reports for license amendment reviews. These reviews included emergency diesel generators (EDGs), license amendment for power uprates, technical specifications of electrical power systems, 125 Vdc vital instrumentation and control power systems, under voltage protection, extended power uprate (EPU), Class 1E 250 Vdc battery load profiles, on line testing of EDGs, battery surveillance requirements, inverter extended allowed outage time, alternate source term technical specifications, setpoint of offsite power instrumentation and voltage controls..

Conducted safety reviews and provided safety evaluation input for the Department of Energy's (DOE's) tritium product core (TPC) topical report. This topical report addressed the safety and licensing issues associated with incorporating a full complement of tritium producing burnable absorber rods in a representative commercial light water reactor. Efforts resulted in the issuance of NUREG-1672, "Safety Evaluation Report Related to The Department of Energy's Topical Report on The Tritium Production Core," in May, 1999.

Developed an action plan for resolving charging/discharging issues involving flooded lead acid batteries. The purpose of this action plan was to investigate a potential generic issue related to the ability of safety-related batteries at nuclear power plants to power their intended function when the battery has been recharged after a discharge. The action plan discussed the scope, included major milestone and proposed schedule for completion of each milestone, estimated the staff full time employment and contractor dollars needed to complete of the action plan.

Performed a study on the effect of test equipment harmonic distortion on under-voltage relay functionality. The settings of under-voltage protection relays were out of calibration due to test equipment harmonic distortion. Issued Information Notice (IN) 95-05 that clearly defined the problem and solutions.

Issued IN 97-45 and IN 97-45 Supplement 1 entitled, "Environmental Qualification Deficiency for Cables and Containment Penetration Pigtails." The IN was issued to alert licensees of erratic indication of high range radiation monitors as a result of a problem with their coaxial cables. High temperature in the containment could produce a temperature-induced signal that could result in erratic indication of high range radiation monitors.

Was the primary author in preparation of an information notice titled "Possible Defects in Busman KWn-R and KWN-R Fuses." Numerous inquiries from the industry were received on the information notice. All inquiries were responded successfully.

Participated in the Y2K inspection at several nuclear power plants to ensure a safe year 2000 transition in the nuclear industry and was recognized by the Executive Director of Operations for a significant contribution to the agency mission. Received an Achievement Award for this activity.

Co-authored an American Society of Mechanical Engineering (ASME) paper on the NRC review of the Time Limiting Aging Analyses.

1990-1993

Intern, Office of Nuclear Reactor Regulation

Completed a rotational assignment in Region I. While on rotation, conducted numerous inspections. These inspections included Fire Protection Inspections, Instrumentation and Controls Inspections, and Electrical Distribution System Inspections.

Completed a rotational assignment as a resident inspector at Beaver Valley Nuclear Power Plant. Conducted numerous inspection activities such as: engineered safety feature of the EDGs; surveillance and maintenance activities including limited condition of operation maintenance on the offsite switchyard. Performed numerous independent system walk downs including reactor protection systems and Class 1E electrical systems.

Completed a rotational assignment as a project engineer in Project Directorate (PD) I-2 and PD IV-1. Responsible for licensing activities of nuclear power plants within PD I-2 as well as other plants in PD IV-1. The activities include: (1) reviewing of licensing amendment on several different technical specification amendments and preparing safety evaluation reports (SERs); reviewing exemption requests, relief requests, license response to generic letters (GLs) and bulletins and

preparation of correspondence; participation in NRC Region I enforcement conference calls on several different safety issues); and participation in license activities (i.e., management safety review committee meeting, licensee preparation on the risk of a steam generator (SG) rupture event).

Completed a rotational assignment as an electrical engineer in Instrumentation and Control Branch. Performed safety reviews and preparing safety evaluation reports to support technical specification amendments in instrumentation and controls area.

1989-1990

System engineer  
IBM, Manassas Virginia

Responsible for testing AN/BSY-1 Submarine Sonar System. Developed software program to plot and analyze beam pattern for AN/BSY-1 submarine sonar high frequency active functions and an associated interface to remotely control sonar system test equipment from a personal computer.