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# LONGENECKER & ASSOCIATES

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## Dan Wilkinson

### EXPERIENCE SUMMARY

Dan Wilkinson has over 40 years of professional experience in nuclear power. This experience was obtained in various consulting, engineering, and project management positions at GE, SAIC, EPRI, INPO, and as President of CDW Corp. This included activities in human factors engineering (HFE), instrumentation & controls (I&C), systems design and analysis, project management, plant operation, R&D, nuclear safety and analysis, as well as overall management of CDW Corp. He organized and led industry conferences and technical sessions and has published and presented papers extensively in the nuclear utility industry.

### DETAILED EXPERIENCE

Two years experience in developing HFE documents related to COL applications for ESBWR and ABWR for submittals related to NRC SRP Chapter 18. This included preparation of licensing topical reports (LTRs) on implementation plans for overall HFE Programs, OER, BRR, SFRA, AOF, TA, S&Q, HRA, Procedures, Training, HSI Design, HF V&V, Design Implementation, and HPM. Also, prepared responses to NRC RAIs, and completed technical verification of implementation plans to assure compliance with applicable NRC requirements.

Twelve years experience in developing and leading I&C and plant process computer planning and implementation projects to support nuclear utilities in the US, Japan and South Korea. Developed industry guidelines for planning and implementing digital technology upgrades and overall life cycle management for I&C systems. Organized and supported projects at US and foreign nuclear plants to demonstrate the application of I&C upgrade guidelines. Dr. Wilkinson served as a consultant to the DOE on improving safety of Soviet designed nuclear plants and recommending US technology transfer for plant upgrades, as well consultant to IAEA on an international guideline for I&C upgrades.

Five years experience in assisting nuclear utilities evaluate, plan, license and implement post-TMI backfits in the areas of I&C, SPDS/process computers, emergency response facilities, and other plant information systems. Developed system specifications, managed projects and served on technology and bid evaluation teams. Conducted independent verification and validation, and real-time operator-based validation testing of SPDS and human factors assessments. Developed strategy for NRC licensing and prepared submittals.

Four years working in utility industry response to the TMI accident. Organized and led projects with utilities, equipment vendors, NRC, and others to develop and assess potential modifications to improve plant safety in the areas of I&C and computer-based monitoring systems. Developed a basis for depiction of overall plant safety using real-time displays of 20-30 plant parameters. Managed the development of the first set of SPDS displays for utility operator evaluation. Developed guidelines for implementing Reg. Guide 1.97 for accident monitoring instrumentation in BWRs. Developed or managed development of industry guidelines for plant emergency response systems, including safety parameter displays, post-accident instrumentation, emergency procedure guidelines, and control room design reviews. Managed the development of a demonstration SPDS used for utility and NRC Human Factors evaluations.

Nineteen years experience in various positions of increasing responsibility in plant operation,

nuclear safety analysis, I&C engineering, plant systems and radiological analysis and TMI evaluation task force leader.

## **EDUCATION**

B.S., EE; M.S., NucE; PhD., ME

## **PROFESSIONAL ASSOCIATIONS/AREAS OF RELEVANCE**

- Professional Engineer Registrations in CA: Nuclear and Mechanical
- IEEE-Life Fellow (Fellow grade awarded for concept and implementation of SPDS)
- ANS-Member
- Eta Kappa Nu-Life Member (Honorary EE society)
- Author of over 65 technical papers
- Extensive experience in organizing and chairing technical society meetings, industry conferences and workshops for IEEE, ANS, EPRI, INPO, and ISA.
- Patent disclosures for neutron radiography process, containment modular electrical penetrations, high sensitivity nuclear detectors, and nuclear fuel shipping containers.