

Exponent®
Engineering & Scientific Consulting

Walter Bak, P.E.

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Professional Profile

Mr. Bak has over 25 years of management experience with engineering, engineered products, and consulting organizations in the electric power industry. He also has a strong background in strategic planning, sales and marketing, engineering analysis, root cause investigation, project management, personnel management, and profit/loss responsibility.

Mr. Bak has conducted performance assessments at six electric utility clients over the past several years as well as managing a group responsible for the maintenance and asset management assessments of over twenty utility (both generation and electric transmission and distribution) clients. These assessments included a thorough review of management, technology, work management, and operational processes; and on several occasions have led to the performance of root cause evaluations.

Mr. Bak has served as a regulatory compliance and technical officer for the design, licensing, and supplier of nuclear spent fuel storage systems in response to NRC concerns over the management of the license. He led the major root cause investigation and corrective action initiatives for the company response to NRC concerns, including engineering analysis (vessels, concrete structures, and support equipment), license submittals, and public meetings. This spent fuel storage system was the market leader during this period.

Mr. Bak has provided the design and analysis of nuclear and fossil plant pressure components, included nuclear reactor vessel and piping components (piping, vessels, tanks, values, pumps, and miscellaneous components). Mr. Bak has performed ASME B&PV Code (Section III) code compliance analysis, finite element analysis, heat transfer analysis, and fracture mechanics analysis for over twenty utility and manufacturing clients.

Mr. Bak has also served as project and contract manager for a variety of electric power projects, including major nuclear plant piping replacement programs, SCADA / EMS installations, major design and engineering projects, and the supply of nuclear spent fuel systems.

Academic Credentials & Professional Honors

M.S., Civil Engineering, University of California, Berkeley, 1978

B.S., Civil Engineering, University of Notre Dame, 1977

Licenses and Certifications

Professional Engineer Civil, California, #31430

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Prior Experience

Vice President, Generation and T&D; EPRIsolutions, Inc. 2001-2006

Director SCADA/EMS; ABB Systems Control, 1999-2001

Vice President Engineering & Licensing, Transnuclear West (acquired VECTRA), 1998-1999

Director Engineering (Fossil Generation and T&D), VECTRA (acquired ABB Impell), 1994-1998

Director Engineering (Fossil Generation and T&D), ABB Impell 1991-1994

Various Engineering & Management Positions, Impell Corp., 1978-1991

Publications

Hau G, Stwniczy G, Bak W. Piping stress—strain correlation for seismic loading. Journal of Pressure Vessel Technology 1988 Nov.

Ratiu M, Hau G, Bak W. Suitability for steady-state vibration of piping fillet welds—a fracture mechanics approach. ASME Pressure Vessels and Piping Conference, June 1988.

Hau G, Pandya D, Bak W. Energy balance approach for piping under seismic load. ASME Pressure Vessel and Piping Conference, November 1987.

Eidinger J, Bak W. Analysis and modification of pipe-mounted valves. Presented at ASME Energy Conference, August 1988.

Ratiu M, Bak W. Operability qualification of mechanical equipment by analysis. American Nuclear Society Transactions, June 1983.

Project Experience

Provided engineering and design process consultation for an electric utility (T&D) that included assessment of current engineering and design process for major capital projects, facilitation, and development of new process, and implementation activities (mentoring, training, and improvement lessons learned). Provided leadership in identifying metrics to track performance and to pilot process changes.

Led the root cause assessment of an electric system outage for an electric utility (T&D). The assessment included site inspection, interviews, laboratory and field testing, simulation, and analysis leading to identification of the root cause and the definition of corrective actions.

Participated in a seismic assessment of generating plant and electric system substations for an electric utility. The assessment consisted of performing field site inspections of the facilities to identify potential seismic risks.

Led and participated in an overall reliability, maintenance, and asset management assessment of an electric utility (T&D) to assess current performance versus industry best practices. Developed a plan for improvement based on review of current practice and gap analysis to best practice.

Led and participated in a risk assessment for a gas utility to identify specific operational and financial benefits of planned major capital projects as part of business and project planning process. The risk assessment included review of various events from the event reporting system and evaluating the

potential impacts of major projects to have detected, prevented or mitigated these events.

Led and participated in a root cause assessment of repeated oil pipeline events (releases) to identify the cause of the events as well as the procedural and organizational root causes that failed to detect and prevent the multiple events.