

LONGENECKER and ASSOCIATES

EXPERIENCE SUMMARIES FOR KEY PERSONNEL

Ralph L. Phelps

EXPERIENCE SUMMARY:

Mr. Phelps has over 33 years experience in all phases of the commercial nuclear power industry, and has recently provided Quality Assurance and Integrated Safety Management program support for DOE at Los Alamos National Laboratory. He retired in 2005 as Division Manager of Engineering for Omaha Public Power District's Fort Calhoun Station where he provided, over a 16 year career, senior management direction over design, systems, projects and fuels engineering, provided division level leadership over construction management, procurement, computer engineering, risk analyses and PRA, and directed Nuclear Licensing. Mr. Phelps has extensive management and project engineering experience from his 12 years with Southern California Edison's three unit PWR San Onofre Nuclear Generating Station, where he performed project engineering and licensing to bring two units through construction and startup during and following TMI and to help put all three units into stable and reliable operation. Mr. Phelps has experience with reactor safety and protection systems, transient analyses and setpoints from Combustion Engineering PWR designs, and has training to the level of certified senior reactor operator.

DETAILED EXPERIENCE:

From 2005-2006, Mr. Phelps provided senior project manager consulting services to Los Alamos National Laboratory (LANL), in direct support of the environmental restoration commitments to clean up legacy waste sites from the post war era that LANL and DOE have made with the state of New Mexico. Mr. Phelps was part of the team to re-build processes for quality assurance, work management and ISMS for the Environment and Remediation Support Services Division at LANL.

Prior to this assignment, Mr. Phelps career from 1989 to 2005 was with Omaha Public Power District (OPPD) at their PWR nuclear plant, Fort Calhoun Station (FCS). In his capacity as Division Manager of Engineering, Mr. Phelps has had direct experience with most aspects of commercial power generation, from operations support to major equipment replacements. His specific experience includes managing a Division staffed with approximately 112 engineers, supervisors and managers, with an annual budget of approximately \$25M, reporting directly to the Chief Nuclear Officer. The functional groups included Design Engineering, System Engineering, Fuel Management, and Licensing, with the mission to provide direct Engineering support to plant Operations and Maintenance functions, and to maintain responsibility for the plant design basis and equipment material condition. Mr. Phelps was responsible for all plant configuration changes and documentation.

During his tenure as Division Manager at FCS, Mr. Phelps was an integral part of the team which achieved the following notable accomplishments:

- Completion of ten refueling outages, one of which was the shortest in FCS history;
- Transitions through three fuel suppliers, one to end a leaking fuel problem that established industry standards for mitigating such fuel events;
- Developing the programs to maintain the longest successfully operating mill annealed Inconel tube Steam Generators in the USA;
- Prepared the application for a successful 20 year license renewal;
- Achieved an INPO 1 rating for the first time at FCS;

- Established rebuilt engineering design procedures which are still in use today;
- Established programs to manage industry issues on primary system weld cracking, which bridged the planning period for replacing the steam generators, pressurizer and reactor vessel head;
- Successful completion of many large modifications and digital upgrades to plant systems;
- Industry leadership in use of Risk-Informed Analysis to support plant operations.

Mr. Phelps has received extensive management, leadership and teambuilding training, and is experienced in organizational planning, strategic planning, budget administration, salary, personnel and organization planning, training, and senior level interfacing with Corporate Directors, NRC and INPO Managers. Mr. Phelps has served as Emergency Director for the Emergency Response Organization, has held Chairman and other leadership roles on many industry organizations, and was a member of the FCS independent safety review board.

Prior to becoming Division Manager, Mr. Phelps held management positions at OPPD which were responsible for contracting outside services for ISI/IST inspections and repairs and modification designs, core reload analyses, equipment reliability studies, and licensing strategies for major generic industry issues. Mr. Phelps led the team which performed the first overall feasibility study for power uprate of Fort Calhoun Station.

In his 13 years of experience at Southern California Edison's (SCE) San Onofre Nuclear Generating Station (SONGS), from 1976 to 1989, Mr. Phelps provided engineering leadership for all aspects of plant engineering and operation, for an older operating Westinghouse PWR and two new Combustion Engineering PWRs. Mr. Phelps has direct experience in all aspects of taking a plant from construction, through initial licensing in the post-TMI environment, into the first few cycles of successful operation. His experience includes project management as Nuclear Project Group Leader, managing contractors, both large and small, and supervisory level interfacing with the California State Public Utility Commission on rate regulation practices for the San Onofre station.

Mr. Phelps has led Nuclear Systems Engineering at SONGS, including performing special projects in equipment qualification, setpoints, etc. and for all safety evaluations (USQs) and NRC licensing support for all three reactors.

At Combustion Engineering, from 1973 to 1976, Mr. Phelps participated at the local and national levels in developing the analog and digital setpoint methodology for reactor protection systems. This included extensive NRC (NRR) interactions on groundbreaking methodology.

EDUCATION:

- M.S.N.E (Nuclear Engineering), University of Virginia.
- B.E.E. (Electrical Engineering), Manhattan College.
- Plant Management Certification, Fort Calhoun Station, Omaha Public Power District

MILITARY SERVICE:

Serving in the U.S. Air Force, from 1969 to 1972, Mr. Phelps was Project Officer responsible for nuclear weapons effects research, using laser enhanced focused plasma devices. Honorably discharged with rank of Captain.

OTHER ACTIVITIES:

- Member, Utility Advisory Board for the Idaho National Laboratory (INL)
- Member of the Los Alamos County Utilities Board of Directors