

## **JEFFREY R. JOHNS**

## **Licensing Engineer**

### **EXPERIENCE SUMMARY**

Mr. Johns has 21 years of experience in the nuclear power industry, including 4 years as an officer in the U.S. Naval Nuclear Power Program and 17 years in nuclear licensing-engineering at Public Service Company of Colorado's (PSCo) Fort St. Vrain (FSV) nuclear power plant and ISFSI. He has been actively involved with ISFSI licensing work since plans were first formulated to license and construct the FSV ISFSI in 1990. Mr. Johns joined Stone & Webster recently as a permanent employee to assist in the licensing effort for the Private Fuel Storage Facility ISFSI.

Mr. Johns was Supervisor of PSCo Nuclear Licensing from 1981 to 1991. He was responsible for the performance of 10 CFR Part 50.59 safety evaluations, for maintaining the FSV plant SAR up-to-date to reflect plant modifications and the current safety basis, and preparing amendments to the facility technical specifications. He was instrumental in helping PSCo comply with major regulatory changes, such as those stemming from the accident at Three Mile Island and the environmental qualification and fire protection rules. Mr. Johns developed acceptance criteria specific to FSV and interfaced with the NRC to obtain their approval.

He was responsible for directing the reactor vendor in accident analyses, which were necessary to license major modifications and determine compliance with new regulations. Mr. Johns received a \$1,000 award for providing the analytical basis for the FSV plant symptom-oriented emergency operating procedures. He assisted in accident analyses for the ISFSI, was responsible for determining event classification of accidents assessed in the ISFSI SAR, and helped to prepare ISFSI emergency procedures.

Mr. Johns was PSCo's lead in developing the FSV decommissioning accident analyses and preparing major portions of the decommissioning plan (licensing basis for decommissioning). He chaired the Hazards Analysis Review of Decommissioning Committee, consisting of personnel with expertise in the areas of construction, nuclear safety, health physics and industrial safety. Mr. Johns served on the team appointed to revise station procedures to make the FSV ISFSI a "stand-alone" facility, in preparation for termination of the Part 50 license.

### **RELEVANT PROJECT EXPERIENCE**

**Private Fuel Storage Facility, Private Fuel Storage, LLC** - As Licensing Engineer, responsible for the preparation of the Safety Analysis Report (SAR), including accident analysis and radiation protection involving both of the selected storage system vendors.

**Fort St. Vrain ISFSI, Public Service Company of Colorado** - The FSV ISFSI is a Foster-Wheeler storage vault system. Mr. Johns assisted in licensing the FSV ISFSI under 10 CFR Part 72. He interfaced with the NRC on the ISFSI accident analysis, specifically resolving a licensing issue related to the source term and consequences of the ISFSI Maximum Credible Accident, postulated breach of a fuel storage container.

He was responsible for ISFSI SAR updates to maintain the ISFSI licensing basis up-to-date. He substantially revised the SAR to incorporate results of new analyses for reduced decay heat removal, following the occurrence of a natural convection cooling flow path blockage event in 1992 that exceeded the design basis.

He was also responsible for the performance of safety evaluations (per 10 CFR Part 72.48) on ISFSI design modifications, and prepared a safety evaluation concerning modifications which make the ISFSI cask load/unload port compatible with new spent fuel shipping casks. Mr. Johns

had the lead role in licensing the new spent fuel shipping casks, designed by Transnuclear Inc., to transport loaded fuel storage containers from the ISFSI without the need for transfer of fuel elements into a special cask liner.

He developed two amendment packages to the FSV ISFSI license. The first permitted installation of pipelines in the vicinity of the ISFSI that supply natural gas at high pressures to the combustion turbines used to repower the FSV plant. Mr. Johns directed analyses to determine natural gas plume dispersion under various meteorological conditions, pressures at the ISFSI resulting from postulated detonation of the natural gas cloud, and structural effects on the ISFSI. The second amendment permitted storage of low-level radioactive waste and radioactive sources for instrument calibration at the ISFSI. Mr. Johns prepared the safety analyses for both amendment packages. The safety analyses were reviewed and accepted by the NRC and their contractor without questions, and the NRC issued the license amendments.

Mr. Johns provided assistance to the FSV Emergency Planning Coordinator with ISFSI emergency procedures, event classification, and in creating realistic drill scenarios for the annual examinations of emergency preparedness, observed by the NRC.

### **EDUCATION**

B.S., Biological Science - Stanford University

### **LICENSES AND REGISTRATIONS**

Professional Engineer - Colorado