

John D. Waddill, P.E.
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Employment History

Civil/Mechanical Engineering Lead—North Anna 3 Project Consulting Engineer

2005-Present, Dominion Generation, Glen Allen, VA

- Technical reviews of assigned systems and structures for the proposed new power station at North Anna. Primary responsibility for seismic and water consumption issues.
- Engineering support for licensing activities for the Early Site Permit (ESP) and Combined Operating License (COL). Testified before the Atomic Safety and Licensing Board on Water Issues for the North Anna 3 ESP.
- Provided technical input and leadership for the conceptual design of a hybrid cooling system for the new nuclear unit. Work with the Environmental group and represent the project before state agencies, industry groups, and the public on issues of water supply and consumption, and permitting.
- Provided guidance for developing the cooling tower concept through requests for proposal and contract award to remain compliant with the stringent environmental constraints of the applicable permits while improving station output.
- Lead responsibility for ensuring engineering support during COLA (FSAR) development. Primary responsibility for technical coordination of all seismic activities from geotechnical and seismic risk assessment to structural analysis and qualification.
- Assisted Quality Assurance audits of design control as a Technical Specialist.
- Provided review and support for financial and economic aspects of decision making for the new unit.

Mechanical Engineer / Nuclear Engineer III

1987 - 2005, Dominion Generation, Glen Allen, VA

- Lead Mechanical Engineer and project engineering responsibilities on capital projects for modifications to North Anna and Surry Power Stations.
- Corporate engineer performing engineering studies, analyses, and conceptual designs for North Anna and Surry Power Stations. Produced design changes for Surry including the Service Water Pipe Repair Project requiring a temporary change to technical specifications and license condition to provide access to the piping for repair while maintaining the operating unit in operation.
- Performed evaluations of plant cooling systems and participated in heat exchanger analysis and performance testing for Surry Power Station. Led a team that developed a demonstration on-line heat exchanger monitoring system. The system was subsequently used to defer maintenance and monitor the Component Cooling Heat Exchangers to support a station modification. Performed spent fuel pool cooling system capability testing and analysis.
- Corporate mechanical engineering representative on safety system functional inspections performed by the NRC.

Nuclear Production Engineer

1985 - 1987, Duke Power Company, Charlotte, NC

- Technical and economic evaluation of system and equipment modifications for radioactive waste processing systems at Duke's three operating nuclear power stations.
- Developed a demonstration mass balance program for a fluidized bed incinerator/dryer system.

Engineer Assistant / Associate / Design Engineer I

1978 - 1985, Duke Power Company, Charlotte, NC

- Licensing engineer responsibilities for obtaining Operating Licenses for McGuire and Catawba Nuclear Stations and the Construction Permit for Perkins Nuclear Station.
- Analysis of pipe stress and support design for Catawba Nuclear Station during original construction of the units.
- Design engineer for modifications to Oconee Nuclear Station.
- Analysis of cooling systems in support of the re-rack of the McGuire Spent Fuel Pool.
- Prepared modification packages for installation of mechanical and electrical equipment and systems for a new radioactive waste processing facility on a client's site.

Education

- Bachelor of Science, Mechanical Engineering (Nuclear Option), Virginia Polytechnic Institute & State University, 1978
- Masters in Business Administration, Queens University of Charlotte, 1986

Other

- Registered Professional Engineer in North Carolina

Publications

- "Thermal Issues and a Hybrid Cooling Technology in Siting North Anna Unit 3", Jud White, PhD., and John Waddill, P.E., presented at the Second Thermal Ecology and Regulation Workshop (EPRI), October 2007.
- "Application of Hybrid Cooling Technology for North Anna Unit 3", John D. Waddill, P.E., and Douglas A. Kemp, P.E., presented at the International Congress on the Advancement of Nuclear Power Plants (ICAPP '08), June 2008.