



Brian D. Sealy, P.E.
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Skills

- Viper Valve Diagnostics
- Teledyne QSS Strain Gages
- Ultracheck SPT II
- Duke Energy's Super Trend Database (Trending and Analysis)
- Kalsi Engineering Torque Test Bench Testing
- GL 89-10 Motor Operated Valve Setup Calculations
- IN 92-18 MOV Design review
- EPRI Performance Prediction Methodology (PPM)
- Miscellaneous Motor Operated Valve Calculations
- Joint Owners Group (JOG) Testing
- Keowee Emergency Power Testing
- 24 Month Fuel Cycle PM Reviews
- EQ Requirement review and update for License Extensions
- Root Cause Evaluations
- Procedure Writing
- Computer Programming (Visual Basic, Access, Excel)
- Internet Web page development and maintenance
- 10CFR50.59 Screening and Evaluation (preparation and review)
- Modification development

Experience

10/98 – current

Engineering and Diagnostics Support

Sealy Engineering, LLC

Routine activities at the Oconee, McGuire and Catawba Nuclear Stations include:

Engineering Support

- Super Trend Database Analysis validation
- Motor operated valve calculations (PPM, GL 89-10 Setup calculations, GL 96-05 updates, IN 92-18 Impact)
- Calculation development and checking (new valve and actuator designs)
- Analysis and Trending of diagnostics test data (air and motor operated valves) using a variety of sensors for gate, globe and butterfly valves.
- Sensitivity calculations: QSS, c-clamp w/TCF, etc.
- Verification of Design Basis calculations through test data feedback. Trending to identify valve degradation in design basis capabilities.
- Design and setup requirements for new GL 89-10 valves,
- 24 month fuel cycle PM reviews.
- EQ Requirements review and update for License Extension
- Mentoring other engineers
- Program assessments

Diagnostics Support

- Preparation of test plans including: maintenance and modifications, current torque data (Kalsi Torque Test bench data and other sources), transducer sensitivities, and special testing requirements.
- Technical (field) support for data acquisition and analysis
- Support of Joint Owners Group (JOG) differential testing and analysis.
- Data conversion (VOTES/MPM to VIPER) and archiving.
- Refueling Outage preparation
- Procedure development and review
- Database development and maintenance

11/94 - 6/98

Engineer - Oconee Nuclear Station

Lead engineer for valve diagnostics at the station.

Routine work included:

- Reviewing and analyzing data acquired using VOTES (Valve Operator Testing and Evaluation System) and Motor Power Monitor Diagnostics System. The analysis is to verify the motor operated valves are setup to perform as required during design basis events (accidents) and to validate assumptions made in the setup calculations.
- Preparing setup calculations for motor operated valves (MOV). The calculations were primarily for butterfly valves. They evaluate friction losses, system requirements, determine the minimum required torque for valve operation, and maximum allowable torque to prevent damage to the valve.
- Preparing diagnostics procedures to be used by test technicians.
- Evaluation of MOV failures.
- Provide technical support for testing activities in the field.
- Coordinating the activities of up to 5 consulting engineers during refueling outages.

10/92 - 11/94

Engineer - Oconee Nuclear Station

Lead engineer for valve minor modifications at the station.

Routine work activities included:

- Acting as accountable engineer for 100+ mechanical modifications per refueling outage. This consisted of preparing: modification packages, nuclear safety evaluations, post modification test requirements, and special craft instructions. During the modification implementation: provided technical support for implementation personnel, tracked progress of modifications, and reviewed completed documentation to assure the modification was implemented as specified.
- Coordinating the efforts of 4 other engineers/technicians to assure modifications were completed correctly and within the limits specified by Station Management.

11/91 - 10/92

Associate Engineer - Oconee Nuclear Station

Routine work activities included:

- Investigating events (accidents and license violations) reportable to the Nuclear Regulatory Commission (NRC).
- Preparing Licensee Event Reports. These reports were submitted to the NRC to document the root causes of the events and the Station's corrective action. Developing the report required interfacing with all departments and levels of management.
- Performing in-plant review/verification activities which are essentially the same as listed below.

10/85 - 11/91 Associate Engineer - Oconee Nuclear Station
Responsible for assuring station activities were in compliance with all regulatory requirements (including the Duke Power QA Program, ASME Boiler and Pressure Vessel Codes, ANSI Standards, 10CFR, and NRC Regulatory Guides). Reporting was in the form of interviews and written reports which were distributed to all levels of management. Routine work included:

- Developing and scheduling verification activities based on industry concerns and previously identified problems.
- Review of station procedures to assure they accurately reflect information from their source documents and to assure they were adequate to perform their intended tasks. The review also assured equations and expected Station conditions were accurate.

06/78 - 09/85 Various positions within Duke Power including:
Quality Assurance Technician, Designer, Mechanical Technician, and Draftsman

Education

9/85 - 5/90 Clemson University - Clemson, SC
BS Degree - Mechanical Engineering

10/76 - 5/78 York Technical College - Rock Hill, SC
AS Degree - Engineering Graphics Technology

Miscellaneous Information

Professional Engineer NC # 17354
SC # 19044