

Brian E. Beatty, P.E.

Consulting Engineer in Mechanical Engineering, specializing in plant design and construction, plant operations and maintenance, equipment and product safety, and materials. Knowledge in OSHA regulations, Boiler Pressure Vessel Code, National Electric Code, and building code compliance. Experience in power generation, operation and maintenance of rotating machinery, power industrial vehicles, combustion engines, lifts, cranes and rigging, power tools, machine guarding, piping, instrumentation and controls, electrical power distribution equipment, pollution control, fire protection, plant retrofits, project management, plant management, health and safety programs, human performance, environmental regulations and compliance, and root cause analysis.

PROFESSIONAL ENGINEER: Pennsylvania, 2000 ♦ New Jersey, 1991

EDUCATION:

Bachelor of Science Degree in Mechanical Engineering, Rutgers University, 1984
Master of Science Degree in Mechanical Engineering, Drexel University, 1989

PROFESSIONAL BACKGROUND

2019-Present – Fleisher Forensics – Ambler, Pennsylvania:

Mechanical Engineer responsible for evaluating product liability, failure analysis, equipment and workplace safety, walkway surfaces and professional liability matters. Consulting in health and safety compliance; industrial and construction codes; standards and safety; product and material applications; process and control methods; and evaluation of project health and safety compliance.

2017-2019 – North American Energy Services – New Castle, Delaware:

Plant Manager, Eagle Point Power LLC - Managed daily operation and maintenance of a 270-megawatt combined cycle facility. Responsible for site safety processes and procedures, environmental compliance, maintenance and reliability of plant equipment, plant operations, employee performance and training. Performed forensic investigation on liquid fuel piping contamination. Investigated lock out/tag out violations, audited lock out/tag out, confined space and hot work permits. Performed stairway and ladder safety inspections. Implemented program to correct machine guarding deficiencies on plant pumps and motors.

Director of Engineering Services - Supervised corporate engineering team to support power plants. Lead engineer responsible for piping inspection and maintenance programs, troubleshooting methods, machinery lubricating oil predictive maintenance program, and installation of a steam vent shutoff valve. Reviewed piping and hanger inspection reports. Performed operational analysis of steam piping. Provided corporate engineering guidance on pipe failure modes, boiler pressure vessel code requirements, pipe weld inspection methods and priorities. Developed plant equipment FMEA.

2016-2017 – Dominion Energy – Glen Allen, Virginia:

Consulting Engineer - Managed commercial and technical requirements on service agreements for the combustion turbine fleet. Evaluated combustion turbine manufacturer proposals. Evaluated planned outage work scope, turbine parts lifecycle, and gas turbine enhancements. Project Manager for installation of a combustion turbine air mass-flow measuring system.

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2014-2016 – PSEG – Newark, New Jersey:

System Engineering Manager - Supervised corporate engineering team in the support of the power plant portfolio on equipment reliability, troubleshooting, planned outages, upgrade projects and plant emergencies. Member of corporate technical advisory team on standardization of engineering best practices. Managed the corporate engineering programs and the plant system health program. Project Engineering Manager for development of a new monitoring and diagnostic center. Member of root cause analysis teams on vertical pump bearing failures, boiler feed pump excessive vibration, and electric generator fault. Performed technical review of pipe weld repair plans. Evaluated gas valve testing in accordance with API standards. Recommended improvements to the corporate confined space procedure to comply with OSHA standards. Performed safety risk assessment of continued operation of turbines with low remaining useful life.

2002-2014 – NextEra Energy Resources – Marcus Hook, Pennsylvania:

General Manager - Responsible for managing daily operation and maintenance of a large combined cycle power plant, a separate steam cogeneration plant and a solar photo-voltaic farm. Responsible for employee performance and plant goals for safety, environmental compliance and reliability. Lead on corporate safety tactical team responsible for improving corporate safety culture through processes, procedures, new technology, training and plant assessments.

Production Manager - Developed operating qualification procedures. Implemented equipment preventative and predictive maintenance processes, safety management program. Trained plant technicians. Coordinated and oversaw execution of planned maintenance outage activities. Observed contractor work practices and behaviors to ensure safety compliance. Responsible for asset optimization projects including erection of a boiler access platform, installation of evaporative cooling system, control room air purification system and process water discharge piping system. Performed investigations on combustion and steam turbine failures, generator breaker arc flash failure, environmental exceedances and OSHA recordable injuries. Managed inspection and preventative maintenance programs for plant safety equipment, ladders, fire extinguishers, combustion engine fire pump, forklift trucks and manlifts. Member of corporate safety team responsible for evaluation of plant culture and processes against corporate and OSHA standards.

Senior Plant Leader - Responsible for plant design, construction and commissioning activities for new combined cycle plant. Performed plant construction inspections, equipment testing and commissioning, and plant startup and shutdown operational testing. Performed inspections and tests on combustion and steam turbines, feedwater and condensate pumps, boiler fans, steam drums, heat recovery steam generators, condensers and cooling towers. Responsible for reliable operation and maintenance of plant instrumentation and control systems. Troubleshot instrumentation, controls and electrical distribution equipment. Developed and implemented plant quality initiatives.

1995-2002 – Exelon Power – Eddystone, Pennsylvania:

Senior Engineer - Supported daily plant operations and maintenance a facility with supercritical coal fired units and conventional oil and gas drum type units. Performed equipment inspections, outage planning and execution, implemented preventive maintenance routines and supported unit start-ups. Troubleshot plant equipment. Executed several control system upgrade projects. Responsible engineer on the Ash handling system, Coal conveyor and transport system, Instrumentation and Control systems and Station air compressors.

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1989-1995 – Stone & Webster Engineering Corp. – Cherry Hill, New Jersey:

Electrical/Controls Engineer – Project Engineer responsible for design, installation and commissioning of a new control system for a generating station gas conversion project. Developed instrument and electrical installation packages, reviewed control narratives, process and instrument drawings, electrical drawings and control logic drawings. Responsible for oversight of control system installation and startup. Tuned control loops, trained operators and I&C technicians. Supported control system upgrade projects for PEPCO power plants: Proposal evaluation, instrument data sheet and loop diagram development.

1986-1989 – Factory Mutual Engineering Association – Bala Cynwyd, Pennsylvania:

Loss Prevention Engineer – Engineering consultant to business property insurance companies. Inspected manufacturing facilities, office buildings, shopping plazas, warehouses, etc. for fire and explosion hazards and for compliance with Factory Mutual and NFPA standards. Inspected and tested fire sprinkler protection systems, halon fire extinguishing systems, electric and combustion engine fire pumps. Evaluated facility fire prevention processes and procedures. Developed loss prevention reports with risk analysis and recommendations to reduce or eliminate fire hazards. Performed initial facility inspections for new clients. Reviewed and approved fire protection system design plans.

1984-1986 – Grumman Aerospace Corp. – Calverton, New York:

Flight Test Engineer - Responsible for monitoring aircraft system health during live flights and ground tests. Subject matter expert for aircraft hydraulic, environmental control system and emergency power unit. Developed flight test plans, evaluated test results, wrote test reports and participated in flight test debriefs with pilot and test team.

PROFESSIONAL ORGANIZATIONS

American Society of Mechanical Engineers, ASME

American Society for Testing and Materials, ASTM

- Committee D20 on Plastics
- Committee F15 on Consumer Products

Pennsylvania Society of Professional Engineers, PSPE

CERTIFICATIONS

Root Cause Analysis – Think Reliability

Six Sigma Black Belt – BMI/NextEra