THE EXPERTS
Robson Forensic

JOHN G. GREEN II, P.E.
Mechanical Engineer – Industrial Machinery Expert

Experienced in the specification, installation, start-up, testing, operation, maintenance, demolition, and facilities management of process plant systems and associated equipment, diagnosing equipment faults, conducting root cause failure analysis, construction management, OSHA Standards CFR 29 – 1910 for General Industry and 1926 for Construction, MSHA Certified Surface Miner.

ENGINEERING AND TECHNICAL EXPERIENCE

- Experience with the operation, maintenance, demolition, and facility management of various manufacturing processes and industrial equipment including large gas and steam turbine\generator sets and process steam turbines; centrifugal, horizontal, vertical, and piston style pumps; high speed rotary and piston compressors; centrifugal and axial fans; induction and synchronous AC motors; variable speed DC Motors and AC Variable Speed Drives (VFD); spur, bevel, helical, and worm type gearboxes; material handling belt, screw, and pneumatic conveyors; gantry, overhead and mobile cranes; coal crushers and pulverizers; supercritical once through and subcritical drum type boilers; shell and tube, plate and tube, and plate fin type heat exchangers, mechanical and natural draft cooling towers; electric arc, heat treatment, reheat and blast furnaces; slab and billet casters; various hot and cold rolling mills, including two and four high mills, sendzimir rolling mills; stationary (vat) pickling, grit blasting, and steel conditioning chipping, grinding, and scarfing methods to remove surface scale and imperfections; and various shaping, shearing, and straightening machines used in metal (steel) industries.
- Knowledge of Power Piping Code ANSI/ASME B31.1, ASME Section I – Power Boilers, ASME Section VIII – Pressure Vessels, ASME, ANSI, API, NFPA and NSC Standards and Guidelines, as they relate to industrial equipment safeguarding and process plant (industrial) facilities and construction site safety.
- Application of the ANSI, ASME, and OSHA Standards for both General Industry and Construction related to confined spaces, fall protection, equipment guarding, asbestos and lead abatement, multi-employer workplace, personal protective equipment, electrical equipment, hand tools, crane operations, hazardous materials and communications, hazard analysis and risk management, scaffolding, walking/working surfaces, and Lock Out Tag Out.
- Responsible for the specification development, design review, and technical/economic evaluation of site projects involving all types of rotating equipment, material (coal) handling, and fire protection systems.
- Investigate process machinery failures, involving the analysis of laboratory data, the review of design specifications, purchasing documents, Operating/Maintenance Manuals, rebuild requirements and repair history to determine the "root cause" problem, and develop solutions to prevent re-occurrences.
- Developed appropriate operation and maintenance strategies for process equipment using the Reliability Centered Maintenance process and related concepts.
- Well versed in all Predictive Maintenance Technologies, especially proficient with using a variety of vibration analysis equipment and the interpretation of vibration data for the diagnosis of machinery faults, critical speeds, and natural frequencies.

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SUPERVISION AND MANAGERIAL EXPERIENCE

- Maintenance Manager responsible for all mechanical and electrical maintenance for the site including budgets and expenditures as well as the coordination of the Unit Outage activities with the Station Project Manager.
- Station Project Manager and Outage Manager responsible for all on-site construction activities, craft labor coordination and contractor services activities, including all planning and scheduling activities for Unit Outages ($30M to $50M) as well as the installation of all capital projects ($5M to $40M) requiring contracted labor support. This also includes the involvement with the largest EPC contract ($730M) in the Station's history. As Project/ Outage Manager was the owner's interface with the imbedded maintenance contractor on site.
- Supervised craft personnel and other professionals in the installation, inspection, maintenance, and troubleshooting of process equipment, including pumps, fans, motors, turbines, compressors, and generators.
- Coordinated management activities for the Homer City Station Emergency Response Team (SERT), such as annual full scale plant evacuation drills and HAZWOPER Operations emergency response training exercises in compliance with OSHA 29 CFR 1910.120 regulations. These drills and exercises included the accounting of all personnel present at the facility, coordination of both internal and external emergency medical technicians (EMT), paramedics, fire fighters, and Hazmat Level 1 & 2 personnel.

PLANNING AND DEVELOPMENT EXPERIENCE

- Prepared detailed engineering studies, estimated job costs, developed equipment and construction specifications, and selected vendors for capital projects, planned overhauls and maintenance repair activities.
- Developed and implemented new equipment training programs for operations and maintenance personnel.

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PROFESSIONAL EXPERIENCE

2015 to present **Robson Forensic, Inc.**
Associate
Provide technical investigations, analysis, reports, and testimony toward the resolution of commercial and personal injury litigation involving all types of industrial process systems and associated equipment failures.

1986 to 2015 **NRG Energy Services - Homer City Generation**, Homer City PA
(formerly EME, GPU\Genco, Pennsylvania Electric Company)

Outage Manager – Station	2013-2015
Maintenance Manager – Station	2012-2013
Project Manager – Unit 1&2 Scrubbers	2011-2012
Project Manager – Station	2008-2011
Engineer Senior I – Station (Rotating Equipment)	1986-2008

1984 to 1986 **Enduro Stainless Inc.,** Massillon, OH, (formerly Enduro Div. of Republic Steel Corp.)
Supervisor – Mechanical Department
Provided engineering support services and supervision to various production areas such as 2 and 4 high cold rolling mills, sendzimir mills and heat treatment furnaces.

1980 to 1984 **Republic Steel Corporation,** Canton, OH
Technical Associate – Mechanical Department
Provided engineering support services and supervision to various production areas such as electric arc furnaces, slab and billet casters, bar and slab mills, heat treatment furnaces, grinding and conditioning equipment and various straightening and shaping equipment.

PROFESSIONAL CREDENTIALS

Professional Engineer: NCEES, Alabama, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Kansas, Kentucky, Maryland, Michigan, Minnesota, Missouri, Nevada, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Vermont, West Virginia, Wisconsin

EDUCATION

Bachelor of Science, Mechanical Engineering Lafayette College, Easton, PA, 1979

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CONTINUING EDUCATION AND TRAINING

Winds of Change-Electric Transmission, 2022
The Role and Responsibility of Professional Engineers in Ensuring Safety of our Nation's Infrastructure, 2022
Saint Joseph Water Crisis-Lessons Learned in the Age of Deteriorating Water Infrastructure, 2022
Ethics, Forensics, and the PE, 2022
Engineering Ethics for New York Professional Engineers, 2022
Cooling Tower Key Components and How to improve Water Efficiency, CED Engineering, 2021
A Guide to Combustible Dusts, CED Engineering, 2021
Risk Assessment 101: Building Blocks for Risk-Based Decision Making, NSPE-PA, 2021
Overview of Foundry Processes and Technologies: Manufacturing Metal Castings, CED Engineering, 2021
Fall Protection in Construction, CED Engineering, 2021
Overview of Electric Overhead Traveling (EOT) Cranes, CED Engineering, 2021
Overview of Gas Turbines, CED Engineering, 2021
Mindfulness in Action, NSPE, 2021
Climate Action for Engineers Series: Structural and Infrastructure Mitigation, NSPE, 2021
Leading Project Teams: Emerging Technologies and Smart Design, NSPE, 2021
Introduction to the 2018 EJCDC Construction Series Documents, NSPE, 2021
Engineering Ethics: Conflicts of Interest and the Protection of the Public Health, Safety and Welfare, NSPE, 2021
Incident Investigations: Finding and Eliminating Root Causes, NSC Webinar, 2021
H-150-SH-01 Sexual Harassment and Respectful Workplace Essentials, 2021
H-150-SH-02 The Special Role of Supervisors, 2021
H-150-SH-04 Abusive Conduct, 2021
Ethics and Dispute Resolution, NSPE-PA, 2021
NASA Independent Verification and Validation (IV&V) Facility in Fairmont, WV, NSPE Online, 2021
Distributed Energy Resources (DERS) Grid Impact-Part I, Continuing Education & Development, Inc., 2021
Improving Incident Investigations, Vector Solutions, 2021
The ABC's of Fall Protection, Honeywell, 2021
Elevate Your Fixed Ladder Safety, Honeywell, 2021
Engineering Ethics: Serving as an Engineering Expert and Performing Forensic Engineering, National Society of Professional Engineers, December 2020
Walking and Working Surfaces, OSHA Compliance, December 2020
OSHA 10-Hour General Industry, December 2020
Basics of Engineering Mechanics, Continuing Education & Development, Inc., December 2020
Fundamentals of Fluid Power, Continuing Education & Development, Inc., December 2020

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Basic Machines Part 2, Continuing Education & Development, Inc., December 2020
H-150-01 Sexual Harassment & Respectful Workplace Essentials, October 2020
H-150-02 The Special Role of Supervisors, October 2020
Role of the PE in Federal Waters, National Society of Professional Engineers, October 2020
Vibration Isolation Optimization, Continuing Education & Development, Inc., October 2020
Introduction to Refrigeration Systems, Continuing Education & Development, Inc., October 2020
MSHA 2020 Refresher Training, U.S. Department of Labor, January 2022, September 2020
An Introduction to Industrial Compressed Air Systems, Continuing Education & Development, Inc., June 2020
Principles of Hydraulic and Pneumatic Systems, Continuing Education & Development, Inc., June 2020
Engine Cooling and Lubrication Systems, Continuing Education & Development, Inc., June 2020
Basic Machines Part I, Continuing Education & Development, Inc., June 2020
Engineering Ethics: The PE as an Expert Witness, National Society of Professional Engineers, December 2019
Prevention through Design, National Society of Professional Engineers, December 2019
Navigating Successful Project Delivery, National Society of Professional Engineers, December 2019
Fuel and Combustion Systems Safety - Combustion Basics, RedVector, September 2019
Fuel and Combustion Systems Safety - Controlling Combustion Risk in Equipment, RedVector, September 2019
MSHA Annual Refresher Training, U.S. Department of Labor, July 2019
Enhance Human Performance by Mitigating Brain-Centered Hazards, NSC-DEKRA webinar, June 2019
Leading Edge SLRs and Fall Clearances, NSC and MSA webinar, May 2019
Thermodynamics – M08-001, Continuing Education & Development, Inc., February 2019
Fluid Flow – M06-001, Continuing Education & Development, Inc., January 2019
Heat Exchangers – M02-001, Continuing Education & Development, Inc., January 2019
Florida Ethics – FL2-002, Continuing Education & Development, Inc., January 2019
Lockout Permits: Driving Accountability When Procedures are not Enough, Master Lock Webinar, October 2018
How to Implement a High Energy Piping (HEP) Program to Prevent Catastrophic Damages and Minimize Unplanned Outages, POWER, July 2018
Behavior-Based Safety: The Controversy Continues, CORITY Webinar, May 2018
Principles of Scaffolding, OSHA 3085, National Resource Center for OSHA Training, May 2018

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Calibration: Process Control Meets Reliability, POWER, April 2018
Optimizing Level Control for Maximum Reliability and Efficiency in Combined Cycle and Coal Plants, POWER, April 2018
11 Tips for Implementing a Contractor Management System, BROWZ Webinar, April 2018
Condenser Tube Cleaning: Essential for Reliable Power Generation, POWER, April 2018
Rapid Generator De-Gassing: Improving Personnel Safety in Power Plants, POWER, March 2018
U.S. Department of Labor Mine Safety and Health Administration (MSHA) Surface Miner Refresher Course, Tri-State Safety Training, February 2018
Finding and Closing the Gaps in Your Lockout/Tagout Program, BRADY, February 2018
Raising the Bar on Contract Safety: Beyond Prequalification, Veriforce Webinar, February 2018
Construction Arbitration: An Introduction – Beginner, RedVector, February 2018
Making the Case for Contract Management, BROWZ Webinar, January 2018
Licensure Under Attack, National Society of Professional Engineers, January 2018
Ethical Decision Making for Engineers #2, RedVector, November 2017
Ethics for the Practicing Engineer – An Introduction, RedVector, November 2017
Avoid the Three Main Failure Modes of Electrical Power Critical Assets, Power and Emerson, August 2017
Fall Hazard Awareness for the Construction Industry, OSHA #7405, West Virginia University National Resource Center, May 2017
Power and Sure ID Webinar
Giving Insiders Access: Make Sure Front and Back Doors are Locked
March 2017
U.S. Department of Labor, Mine Safety and Health Administration, Uniontown, PA
MSHA Surface Miner 8 Hour Refresher Training
January 2017
Health and Safety Magazine/Browz Webinar
The 'Why' of Contractor Management
January 2017
National Safety Council Congress and Expo, Anaheim, CA, October 2016
Make Building a Safer Workplace a Reality
Executive Forum: The Art and (Neuro)science of Safety
NFPA 70E- Educating Parties on Shared Responsibilities: Owner-Contractor
Human Performance: Adding the Human Element in Risk Assessment
Certification Exams: Study Tools and Techniques
Keynote: "The Human Side of Injury Prevention"
OSHA's Top 10 Cited Violations
You Can't Hand Over Your Safety Responsibility!
OSHA's "Most Interesting": Four Cases Presented by the Lead Investigator
Keynote: "Who Killed Lindsey's Father?"
Preventing Slips, Trips and Falls

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ASME Power and Energy/ICONE Conference, Charlotte, NC
- ICONE Keynote Address
- Regulatory, Codes, and Standards Compliance
- Operating & Maintenance Committee Meeting
- Generator Operations, Maintenance, and Trends
- Power Plenary Session - Advances in Steam Turbine & Generators
- Steam Turbine Component Design Analysis and Performance
- Power Plant Pumping Systems Optimization – Tutorial
- Power Plant Pumping Systems Optimization - Panel Session
- Power Plenary Session - Advances in USC & AUSC Boilers
- Optimizing Power Plant Efficiency and Flexibility
- Plant Operation and Maintenance Challenges and Solution (Session Chair)
- Advances in Plant Dispatching, Scheduling, and Decision Making
- June 2016

DiVal Safety Summit, Niagara, NY
- June 2016

Health and Safety Magazine Webinar
- Lockout Tagout, Arc Flash and Hazard Communication: What Actions to Take Now in Your Programs, June 2016

West Virginia University Safety and Health Extension, Morgantown, WV
- OSHA #7405 Fall Hazard Awareness for the Construction Industry
- May 2016

Meritas Capability Webinar
- The Benefit of Becoming an OSHA Whisperer: Speaking the Language of Regulators
- February 2016

Power Magazine Webinar
- Navigating Coal-Fired Power Plant Fire and Safety Standards
- September 2015

Titan Continuing Education
- Construction Claims, August 2015

Titan Continuing Education
- OSHA – Fatal Facts: Fatalities Caused by Improper Work Practices
- August 2015

U.S. Department of Labor, Mine Safety and Health Administration, Homer City, PA
- MSHA Surface Coal Miner 8 Hour Refresher Training
- July 2015

University of Pittsburgh School of Social Work, Harrison City, PA
- Recognizing and Reporting Child Abuse: Mandated and Permissive Reporting in Pennsylvania, Meets ACT 31 2014 requirements, May 2015

ASME Power Division Conference, Baltimore, MD
- Operating & Maintenance Subcommittee Member and Student Paper Judge
- July 2014

U.S. Department of Labor, Mine Safety and Health Administration, Homer City, PA
- MSHA Surface Coal Miner 8 Hour Refresher Training
- June 2014

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IUP Division of Emergency Services Training, Indiana, PA
HAZWOPER Operations Level Refresher as defined by 29 CFR 1910.120
June 2014
Energy-Tech Magazine Webinar
Performance & Reliability Improvement of Power Generating Assets
December 2013
Titan Continuing Education
Centrifugal Pumps: Basic Knowledge & Concepts
September 2013
Titan Continuing Education
OSHA – Asbestos Standard for Construction Industry
September 2013
Titan Continuing Education
Cost Engineering
September 2013
U.S. Department of Labor, Mine Safety and Health Administration, Homer City, PA
MSHA Surface Coal Miner 8 Hour Refresher Training
July 2013
ASME Power Division Conference, Boston, MA
Operating & Maintenance Subcommittee Member
July 2013
IUP Division of Emergency Services Training, Indiana, PA
HAZWOPER Operations Level Refresher as defined by 29 CFR 1910.120
June 2013
U.S. Department of Labor, Mine Safety and Health Administration, Homer City, PA
MSHA Surface Coal Miner 8 Hour Refresher Training
July 2012
IUP Division of Emergency Services Training, Indiana, PA
HAZWOPER Operations Level Refresher as defined by 29 CFR 1910.120
June 2012
ASME Assessment Based Course
ASME Standards
April 2012
Miller Training Programs, Homer City, PA
Fall Prevention & Protection Competent Person Refresher Training
March 2012
IUP Division of Emergency Services Training, Indiana, PA
HAZWOPER Operations Level Refresher as defined by 29 CFR 1910.120
August 2011
U.S. Department of Labor, Mine Safety and Health Administration, Homer City, PA
MSHA Surface Coal Miner 8 Hour Refresher Training
July 2011
ASME Power Division Conference, Denver, CO
Operating & Maintenance Subcommittee Member
July 2011

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Miller Training Programs, Homer City, PA
Fall Prevention & Protection Competent Person Refresher Training
October 2010
IUP Division of Emergency Services Training, Indiana, PA
HAZWOPER Operations Level Refresher as defined by 29 CFR 1910.120
August 2010
U.S. Department of Labor, Mine Safety and Health Administration, Homer City, PA
MSHA Surface Coal Miner 24 Hour New Miner Training
July 2010
ASME Power Division Conference, Chicago, IL
Operating & Maintenance Subcommittee Member
July 2010
IUP Division of Emergency Services Training, Indiana, PA
HAZWOPER Operations Level Refresher as defined by 29 CFR 1910.120
August 2009
Miller Training Programs, Homer City, PA
Fall Prevention & Protection Competent Person Training
June 2009
Utility Pump Troubleshooting Symposium, Philadelphia, PA
Dr. Elemer Makay, ERCO
March 1995
Vibration Institute 16th Annual Meeting, Williamsburg, VA
Vibration Institute
June 1992
Practical Solutions to Machinery and Maintenance Vibration Problems, Pittsburgh, PA
Update International, Inc.
July 1991
Machinery Failure Analysis and Prevention, Boca Raton, FL
Center for Professional Advancement
April 1990
Applied Pump Technology, Brunswick, NJ
Center for Professional Advancement
July 1988
Ultrasonic Examination - Level II, Johnstown, PA
Gilbert Associates
July 1987
Rotor Dynamics and Advanced Balancing, Syria, VA
Vibration Institute
May 1987
Vibration Analysis I, New Orleans, LA
Vibration Institute
August 1986
Statistical Process Control, Canton, OH
Republic Steel Corporation,
March 1985
Basic Balancing and Diagnostics, Canton, OH
IRD Mechanalysis, Inc.
February 1982

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PROFESSIONAL MEMBERSHIPS

ASME Power Division (Active)
Operating & Maintenance Subcommittee Member since 2010
Vibration Institute, Western Pennsylvania Chapter (Inactive)
Founding member
Program Director (former)
Chairman (former)

SPEAKING ENGAGEMENTS

ASME Power Division Conference, Denver, CO
Operating and Maintenance Subcommittee
Predictive Maintenance Panel Discussion Member
July 2011
SMRP 5th Annual Conference, Pittsburgh, PA
Society of Maintenance and Reliability Professionals
Streamlined RCM Process at the Homer City Power Station
October 1997
EPRI Streamlined RCM Workshop, Columbus, OH
Electric Power Research Institute
Streamlined RCM Process at the Homer City Power Station
May 1997
EPRI Plant Maintenance Optimization Conference, Eddystone, NJ
Electric Power Research Institute
Reliability Centered Maintenance for a Coal Mill Pulverizer
December 1996
EPRI 6th Predictive Maintenance Conference, Philadelphia, PA
Electric Power Research Institute
Bearing Failure Analysis of a Large Axial Flow Fan
May 1994

PUBLICATIONS

"Detection and Analysis of a Main Bearing Failure in an Induced Draft Fan," *Vibrations*, Vol. 9, No. 1, March 1993.

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