

# Robson Forensic

Engineers, Architects, Scientists & Fire Investigators

## DARYL JAMES SMITH, P.E. Facilities Management/Building Systems

Senior mechanical facilities engineer with over 25 years of facilities project management experience in the semiconductor, consumer products, pharmaceutical, health care, and education industries. Experienced in the planning, engineering/design and construction of industrial, health care and educational facilities, including cleanroom and cGMP process, manufacturing/production, packaging, laboratory, distribution/warehousing, utility, administrative and educational spaces, mechanical, HVAC, plumbing, fire protection, exhaust, utility and process piping, building automation and electrical systems, project, design and construction management and commissioning, qualification, validation, operation and maintenance of same.

### PROFESSIONAL EXPERIENCE

2008 to present **Robson Forensic, Inc.**  
*Associate*

Provide technical investigations, analysis, reports, and testimony toward failure analysis and the resolution of commercial and personal injury litigation involving all aspects of HVAC, plumbing, fire protection and process systems for buildings and facilities including design, project management, construction, testing, operation and maintenance. Areas of expertise include:

#### HVAC

- Supply, return and exhaust systems; constant volume, variable air volume, 100% outside air systems; hot deck / cold deck, heating and cooling, humidification and dehumidification systems.
- Heating equipment: hydronic and steam heating systems, gas and oil-fired burners, furnaces, boilers, flues, air separators, expansion tanks, strainers, safety relief valves, heat exchangers, cabinet unit heaters, fin tube radiation and radiant heat systems, steam, hot water and electric heating coils, heat pumps, heat recovery systems.
- Cooling equipment: chillers, cooling towers, DX and split systems, condensing units, closed circuit fluid coolers, “free” cooling systems.
- Controls: electric, pneumatic and electronic, DDC/PLC BAS/BMS systems; HVAC airflow, temperature and humidity controls, HEPA filtration and particulate control, pressurization control; fan coil units, VAV boxes, VFDs and energy management systems, modulating and balancing valves, safety and freeze protection systems.
- Distribution: air handlers, economizers, ductwork, dampers, control boxes, outlets and return systems; pumps, circulators, piping, valving systems; vibration and noise control.
- Ventilation/exhaust systems: ventilators, exhaust fans, minimum outdoor air levels, indoor air quality, exhaust and fume hoods, battery room ventilation, carbon filtration and odor control systems.
- TAB: testing, adjusting, and balancing of air and hydronic systems.

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### Plumbing

- Domestic hot and cold water systems: water heaters, temperature controls, mixing valves, pumps, circulators, water hammer / surge suppression, water treatment and filtration systems.
- Sanitary and storm drainage systems: gravity and pumped, grease interceptors, lift stations, chlorination, sand filters, overflows.
- Fuel oil storage, pumping and delivery systems.
- Heat trace systems.

### Fire Protection

- Thermodynamics, heat transfer, fluid mechanics, combustion, fire safety.
- Wet, dry, and double interlock preaction sprinkler systems, in-rack and ESFR systems, Halon suppression systems, fire pump systems and jockey pumps, water storage tanks and municipal water supply systems, hydraulic analyses.
- Supervisory and addressable fire detection and alarm systems, heat, smoke and carbon monoxide detectors, flow and pressure switches, pull stations.

### Process/Industrial Systems

- Reverse Osmosis and De-Ionized process water systems.
- Natural gas, compressed air, O<sub>2</sub>, N<sub>2</sub>, H<sub>2</sub> and process gas piping, regulators, appliances; medical gas systems.
- Process chemical storage, delivery and drainage systems.
- High pressure steam, high temperature hot water and jacket cooling water systems.
- Thermal oxidizer systems.
- Explosion-proof equipment and systems.
- Emergency generator systems.

### Construction and Work Place Safety

- Construction safety procedures and requirements: right-to-know, material safety data sheets, personal protective equipment, confined space entry, lockout/tagout, ladder, scaffolding and elevated work surface fall protection, asbestos abatement, training, policies, inspections and OSHA requirements.

### Sports, Fitness, Athletic Training and Coaching

- Baseball
  - Active baseball manager/coach for over 15 years in all levels of play, including Little League, Senior League, American Legion, High School, Men's Adult/Senior and presently Youth Travel baseball leagues.
  - Coach/Instructor/Counselor at baseball camp and participation in numerous coaching and instructional clinics over 15 years.

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- Active baseball player for over 30 years in all levels of play, including Little League, Senior League, American Legion, High School, College and presently Men's Adult/Senior baseball leagues.
- Well versed in practice and training methodology, proper equipment, applicable rules and regulations.
- Soccer
  - Soccer coach for over 10 years in all levels of play, including Youth Recreation, Youth Travel and Men's Adult soccer leagues; presently inactive.
  - Soccer player for over 25 years (Youth, High School, College and Men's Adult soccer leagues; presently retired).
  - New Jersey State Youth Soccer Association "F" Coach's License (inactive).
  - Rutgers University Youth Sports Safety Clinic Attendee.
- Running
  - Adult running coach for over 10 years (presently inactive).
  - Competitive adult road and track runner and racer for over 25 years (presently retired).
  - Ten-time Boston Marathon finisher.

2007 to 2008 **The University of Medicine & Dentistry of New Jersey**, Somerset, NJ  
*Senior Project Manager, Facilities Planning & Construction Department*  
Responsible for management of facilities capital projects at the University's Central & Southern Campuses.

2006 to 2007 **Johnson & Johnson**, Morris Plains, NJ  
*Senior Project Manager, Facilities Project Management Department*  
Responsible for management of facilities capital projects at Johnson & Johnson's Consumer Healthcare Division campus.

2001 to 2006 **Pfizer Incorporated**, Morris Plains, NJ  
*Senior Project Manager, Global Operations Facilities Solutions Department*  
Responsible for management of facilities capital projects at Pfizer's Consumer Healthcare Headquarters complex that housed consumer health care and pharmaceutical research and development laboratories, corporate data center, offices and administrative support areas.

1993 to 2001 **Pfizer Incorporated**, Parsippany, NJ  
*Project Engineering Manager* 1996-2001  
Directed site's Project Engineering Department and managed associated capital and operating budgets. Supervised professional/technical project management employees; responsible for management of all facility capital projects for Pfizer's Consumer Healthcare site that contained consumer health care research and

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development laboratories, corporate data center, offices, consumer product manufacturing and pharmaceutical packaging operations, and product distribution facility.

*Maintenance Manager, Engineering Department* 1994-1996

Directed site's Maintenance and Operations group and managed associated operating budget for Pfizer's Consumer Healthcare site. Supervised maintenance engineering and maintenance supervisory employees, trade craftsman and technicians, and contract maintenance, buildings & grounds and security vendor personnel. Responsible for proper reliable and efficient maintenance, operation and upgrade/modification of all site building & grounds components and utility systems.

*Senior Project Engineer, Engineering Department* 1993-1994

Responsible for management of facilities capital projects at the in the Engineering Department for Pfizer's Consumer Healthcare site. Duties included all aspects of facilities design and construction project management, responsibility for upgrading and maintaining optimal performance of all building mechanical utility systems.

1983 to **IBM Corporation**, East Fishkill, NY

1993 *Associate Engineer, Staff Engineer, Advisory Engineer*

Held engineering positions of increasing responsibility in the Facilities Engineering organization responsible for IBM's large semi-conductor manufacturing and development facility. Duties included all aspects of facilities design and construction project management, responsibility for upgrading and maintaining optimal performance of all building mechanical utility systems.

## PROFESSIONAL CREDENTIALS

Licensed Professional Engineer: New Jersey and New York

## EDUCATION

B.S., Mechanical Engineering, Summa Cum Laude, The University of Notre Dame, Notre Dame, Indiana, 1983

Member, Tau Beta Pi, Engineering Honor Society

*Representative Continuing Education:*

Smoke Detection in Challenging Environments, Fire Protection Engineering, 2012  
National Association of Subrogation Professionals (NASP) – Commercial Kitchen Fires, 2012

Design of Potable Water Plumbing Systems, 2012

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HVAC – Hydronic Systems, 2011  
Petroleum Storage Tank Design, Maintenance and Inspection, October, 2011  
HVAC – Boiler Systems, 2010  
Dry Pipe, Deluge & Pre-Action Sprinkler Systems, Chubb Loss Control University, 2010  
The Subsurface Engineering Process, 2009  
Failure Appraisalment, 2009  
Technology and Applications for Subsurface Imaging in Construction, 2009  
Construction & Workplace Safety, 2009  
Failure Analysis of Water Main Breaks, Bronze Valves and Shaft Caps, 2008  
LEED for New Construction Technical Review Workshop, U.S. Green Building Council, 2007  
The Business Savvy Project Manager, PMI Management Solutions Group, 2006  
OSHA 10 hour Construction Safety Class & Certification, 2004  
Industrial Dehumidification System Course, Munters Inc., 2003  
Improving Managerial Effectiveness Seminar, American Management Association, 2000  
Manufacturing Plant Layout Seminar, Wright State University, 1997  
Clean Room Technology Course, The Institute for Applied Pharmaceutical Sciences, Center for Professional Advancement, 1995  
ASHRAE Operating and Maintaining Buildings for Health, Comfort and Productivity IAQ Seminar, 1993  
Leadership through Communication Seminar, IDEA, 1993  
Improvement of On-site Construction Productivity Seminar, K.E. O'Brien Associates, 1991  
Project Management for Engineers short course, ASME, 1988  
Leading Project Teams short course, ASME, 1988  
IBM Corporate Contamination Control Technology Seminar, 1987  
Fundamentals of Industrial Measurement and Control Class, The Instrument Society of America, 1986  
Project Management Seminar, American Management Association, 1985

## **PROFESSIONAL MEMBERSHIPS**

American Society of Mechanical Engineers (ASME)  
National Society of Professional Engineers (NSPE)

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## **PUBLICATIONS**

Non-Destructive Testing of High-Purity Gas Piping Systems, 1984.

## **PRESENTATIONS**

Mechanical and Plumbing Systems, New Jersey Building Codes, Lorman, Cherry Hill, NJ, 2009

EXPERT NOT RETAINED