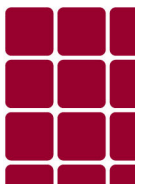

Ken Macfarlane, P.Eng., CFEI

B.Sc. Mechanical Engineering, University of New Brunswick
Fredericton, NB

Areas of Practice

- Client Service
 - Project Management
 - Authority Relations
 - Design and Construction Services
 - Inter-discipline Fire Protection Design Coordination
- Mechanical Engineering
 - Water Supply and Hydraulic Network Testing and Analysis
 - Heat Transfer Analysis
 - Hazardous Ventilation System Design
 - Pressure Boundary Design Review
- Forensic Investigative Engineering
 - Fire and Explosion
 - Freeze-up
 - Flooding
 - Fire Protection System Failures
 - Accidents
- Computer Modeling
 - CFD Fire Models
 - Zone Fire Models
 - Hazardous Material Release Blast and Dispersion Modeling
 - Hydraulic Network Modeling (EPANet)
- Fire Protection Engineering
 - Fire Protection Systems Design
 - Special Hazards Suppression Design
 - Building Code Review
 - Fire Code Review
 - Specialized Codes Review
 - Process Hazard Assessments
 - Emergency Power
 - Electrical Hazardous Area Classifications
 - Smoke Control Analysis and Design
 - Performance-Based Solutions
 - Explosion Prevention
 - Explosion Venting
 - Flammable and Combustible Liquids Storage and Use
- Industrial Fire Protection
 - Power Generation and Transmission
 - Oil and Gas
 - Mining
 - Chemical Plants
 - Manufacturing
 - Freezer Storage
 - Bulk Material Handling and Storage
 - Grain and Food Storage and Production
 - Solvent Extraction Facilities
 - Aircraft Hangars
 - Ammonium Nitrate Storage
 - Plant Oil Extraction Facilities
 - Paint Spray Operations
 - Terminals, Ports, and Naval Facilities
- Dangerous Goods, Hazardous Materials, and Pesticides
 - Storage and Use Reviews
 - E2 Environmental Planning, RSMP Reviews



Professional Experience

RJ Bartlett Engineering Ltd, Fredericton, NB, 2001 to present

- Forensic Investigation
- Building and Fire Code Review
- Designer
- Project Manager

Power Generating Station, Student Employment 2000

- Mechanical maintenance team member
- Concrete growth measurement
- Turbine unit alignment and bearing modifications
- General mechanical system maintenance.

Education

- Bachelor of Science in Mechanical Engineering, 2003, University of New Brunswick, Fredericton, NB.
- National Association of Fire Investigators, Certified Fire and Explosion Investigator (CFEI) training, 2011 and 2016.

Additional Experience

- Registered Professional Agricultural Producer (NB), 2001 – present
 - Sales and customer relations
 - Bookkeeping and accounting
 - Heavy equipment operation, maintenance, and repair
 - Metal fabrication (welding, cutting, machining)
 - Building construction and repair
 - Licensed Private Agricultural L1 Pesticide Applicator (NB)
 - Nutrient management planning
 - Environmental farm plan preparation
 - GPS/computer-based recordkeeping
- Licensed Septic System Designer and Contractor (NB), 2006 – 2009

Affiliations

- Registered Professional Engineer with the APEGNB
- Certified Fire and Explosion Investigator with NAFI

January 2022