OCI Group

Matthew Obach

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Matt is a licensed professional engineer in the provinces of Manitoba, Saskatchewan, Alberta, BC, and Ontario, as well as the Northwest Territories and Nunavut. He is a certified fire and explosion investigator and certified vehicle fire investigator, specializing in mechanical related losses, and has conducted over 1000 investigations. Prior to working in forensic engineering consulting, Matt spent multiple years in the academic and research field studying various fire science topics at both the University of Waterloo and the University of Saskatchewan.

EDUCATION

University of Waterloo
Mechanical Engineering
Waterloo, Ontario, Canada
2011

University of Saskatchewan
Mechanical Engineering
Saskatoon, Saskatchewan, Canada
2009

PROFESSIONAL REGISTRATION/LICENSING

- Association of Professional Engineers and Geoscientists of Manitoba (APEGM) Professional Engineer since 2014
- Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) Professional Engineer since 2015
- Professional Engineers Ontario (PEO) Professional Engineer since 2014
- Association of Professional Engineers and Geoscientists of Alberta (APEGA) Professional Engineer since 2017
- Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG)
- Professional Engineer since 2016 Engineers Geoscientists British Columbia (EGBC)
- Professional Engineer since 2019

TECHNICAL AFFILIATIONS

- Member – National Association of Fire Investigators (NAFI) since 2012
- Member – Canadian Association of Fire Investigators (CAFI) since 2014

CERTIFICATIONS

- Certified Fire and Explosion Investigator (CFEI), NAFI – since 2012, recertification every 5 years
- Certified Vehicle Fire Investigator (CVFI), NAFI – since 2015
- Berla iVe Vehicle System Forensics

PROFESSIONAL EXPERIENCE

Forensic Engineer
OCI Group (Formerly Origin and Cause Incorporated)
April 2015 – Present

- Investigation of vehicle, truck, and heavy equipment fires, and structural fires with mechanical equipment involved
- Forensic investigation of failures involving mechanical equipment
- Digital data acquisition from vehicles using the Berla iVe and Bosch systems

Fire Investigator/Forensic Engineer
EFI Global
Ottawa, ON / Winnipeg, MB
June 2012 – April 2015

- Numerous fire investigations of residential, commercial, and vehicle/equipment fires
- Investigations conducted for various insurance clients

Applied Commercial and Industrial Sales
The Master Group
Ottawa, ON
2011 – 2012

- Aided engineering clients in selection and specification of HVAC components

M.A.Sc. Candidate
University of Waterloo
Waterloo, ON
2009 – 2011

- Conducted thesis research on manual suppression techniques in a compartment fire

Research Assistant
University of Saskatchewan
Saskatoon, ON
2008 – 2009

- Conducted literature review of wild land fire convection column theory and created a plume in the laboratory using salt-water modelling

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FURTHER TRAINING & EDUCATION

- Weber State University – EV (Electric Vehicle) Training (online), Phase I & II – 28 hours (2025)
- IAAI –NFPA Fire Investigator's Course (2022)
- Berla iVe Vehicle System Forensics Training Course (2018)
- Fire Findings: Investigation of Gas and Electric Appliance Fires Course (2016)
- SAFC Seminar – Inspecting Commercial Kitchen Systems (2014)
- CAFI Seminar – Overlooked Ignition Sources and Evidence Management (2014)
- Canadian National Advanced Fire, Arson and Explosion Investigation Training Program (2012)
- EFI Global Fire Training and Live Burn, Memphis, TN (2012)
- Advanced Fire Investigation Workshop with Dr. John DeHaan (2012)
- CFEI Trainer, 25 online courses (2012 – present)

PRESENTATIONS

- NFPA 921 Fire Investigator Course: Vehicle Fire Investigations, (November 6, 2024)
- CCATA Conference, Vehicle Fire Investigation Procedure, Winnipeg, Manitoba (June 5, 2024)
- NFPA 921 Fire Investigator Course: Vehicle Fire Investigation, Grimsby, Ontario (August 20, 2023)
- IAAI, Vehicle System Forensics, Ontario (June 8, 2023)
- Investigating Farm Machinery Losses, Online (May 31, 2023)
- IIBC, Vehicle Fire Investigation (Mar 30, 2023)
- NFPA 921 Fire Investigator Course: Vehicle Fire Investigation, Online (June 9, 2021)
- CCATA Conference, Vehicle Fire Origin Determination (2019)
- IAAI, Cause Determination in Vehicle Fires – Vehicle Fire Investigations (2017)

- Guest Lecture, Fire Dynamics – Oxygen Consumption Calorimetry, University of Waterloo (2009 and 2010)
- Teaching Assistant, Fire Safety Engineering, University of Waterloo (2011)
- Teaching Assistant, Ordinary Differential Equations, University of Waterloo (2010)

PUBLICATIONS

Obach, Matthew R. (2011) Effects of Initial Fire Attack Suppression Tactics on the Firefighter and Compartment Environment. M.A.Sc. Thesis, University of Waterloo.

Obach, M.R., E.J. Weckman, and A. Strong (2011) Effects of different suppression tactics on the firefighter and compartment environment, International Association of Fire Safety Science, Maryland.

Obach, M.R., and E.J. Weckman (2010) Comparing the heat release rate and heat flux of uniformly constructed wood cribs, Combustion Institute – Canadian Section, Ottawa.

Obach, M.R., D.A. Torvi, D. Sumner, and D.J. Bergstrom (2010) Salt-water modeling of a wildland fire's convection column, Combustion Institute – Canadian Section, Ottawa.

Robson, L.D., Torvi, DA, **Obach, MR** and Weckman, EJ, Effects of variations in incident heat flux when using cone calorimeter test data for prediction of full-scale heat release rates of polyurethane foam, Fire and Materials, Vol 40, 2016 pp 89-113.

Robson, L.D, **M.R. Obach**, J. Rigg, J.U. Ezinwa, D.A. Torvi, and E.J. Weckman (2011) Effects of polyurethane foam thickness on heat release rates measured in cone and furniture calorimeter tests, Fire and Materials, Wiley, MA.

Ezinwa, J.U., L.D. Robson, **M.R. Obach**, D.A. Torvi, and E.J. Weckman (2011) Evaluating models for predicting full-scale fire behaviour of polyurethane foam using cone calorimeter data, Fire Technology, Springer, NY.

Robson, L.D, **M.R. Obach**, J.U. Ezinwa, D.A. Torvi, and E.J. Weckman (2010) Effects of polyurethane foam thickness on flame spread and heat release rates in furniture calorimeter tests, Combustion Institute – Canadian Section, Ottawa.