

Stephen L. Martin

CFEI



1336 Sandhill Drive
Ancaster, ON L9G 4V5

TECHNICAL AFFILIATIONS

National Association of Fire Investigators (NAFI)
Canadian Association of Fire Investigators (CAFI)
Toronto Arson Task Force
Niagara Arson Committee

CERTIFICATIONS

Certified Fire Investigator, Office of the Fire Marshal and Emergency Management Professionalization process (2016)
NFPA 1033 Standard for Professional Qualifications for Fire Investigators, Ontario Fire College (2016)
Control of Hazardous Energy, Electrical Safety Authority (May 2015)
Certified Fire and Explosion Investigator, National Fire Protection Association NFPA 921 (February 2010)

PROFESSIONAL EXPERIENCE

Stephen has over 8 years of experience as a Fire and Explosion Investigator, in addition to 16 years of experience as a Collision Reconstructionist. He has led or assisted in over 140 fire and explosion investigations to determine the origin and cause, including the identification of factors relating to public fire safety. This entails the identification, collection, preservation and presentation of evidence for use in court, the documentation of scenes, and interviewing of witnesses.

October 2018 to present

Fire and Explosion Investigator, **Origin & Cause Inc.**
Ancaster, ON

2015 to October 2018

Fire Investigator, **Office of the Fire Marshal**
Ontario

- Responsible for the investigation of all fatal fires, fires that result in serious injuries to persons, explosions, incendiary fires, fires of provincial interest, and large loss fires.
- Coordinated fire/explosion scenes and determined origin and cause.
- Provided expert testimony on origin and cause of fires.
- Prepared investigative reports.

2013 to 2015

Homicide Investigator, **Halton Regional Police Service**
Halton, ON

- Responsible for the investigation and leadership of Homicide investigations utilizing Major Case Management protocols.
- Trained in interview and interrogation of witnesses and suspects.
- Supervised and facilitated the collection of Forensic evidence at crime scenes.
- Coordinated all Missing Person and Persons to Locate investigations.
- Assigned as a lead investigator on outstanding Cold Case investigations 1967 to 2015.
- 30-year Federal Exemplary Service Medal recipient.

2008 to 2013

Arson Investigator, **Halton Regional Police Service**
Halton, ON

- Responsible for the on-scene identification and collection of evidence for arson and suspicious fire investigations.
- Determined origin and cause of fires.
- Completed the interview of witnesses and suspects within the rules of evidence.

- Supported the OFMEM in fires/explosions involving death, serious injury and arson.
- Documented evidence and initiated criminal proceedings in arson related prosecutions.

2008 to 2013

Fraud Investigator – Commercial Crime Unit, **Halton Regional Police Service**
Halton, ON

- Responsible for the investigation of large scale Fraud and False pretense investigations.
- Trained in the collection and analysis of documentary evidence and preparation of complicated technical briefs for Criminal prosecution purposes.
- Experienced in preparing judicial authorizations for disclosure of documents.

1992 to 2008

Collision Reconstructionist, **Halton Regional Police Service**
Halton, ON

- Investigated and reconstructed in excess of 400 fatality and serious injury vehicle collisions.
- Coordinated scene investigations and supervised the identification, collection and analysis of evidence and exhibits.
- Initiated technical failure analysis to identify mechanical cause.
- Responsible for preparing technical reports and provided expert testimony at all levels of court.

1985 to 1992

Police Constable, **Halton Regional Police Service**
Halton, ON

- General patrol and enforcement duties.
- Criminal and Provincial statute enforcement.
- Breathalyzer and intoxilyzer technician and program coordinator.
- Marine patrol and Community liaison officer.

FURTHER TRAINING AND EDUCATION

- **Human Remains Recovery**
A four-day course on the identification and recovery of human remains from fire and crime scenes. Forensic Anthropologist G. Olson B.A., M.Sc. - Ontario Fire College, May 2017
- **Investigation of Gas and Electric Appliance Fires**
A four-day training seminar on how appliances and electrical components work, fail and cause fires. Including the examination of actual appliances and appliance components that have failed, causing fires and witness fire-causing demonstrations involving these products. Fire Findings Research Laboratory, Benton Harbour, Michigan, November 2016
- **General Investigative Techniques Course**
Police-led training on investigative resources and techniques, note taking, evidence collection and search warrants. Police Learning Centre, Durham College, Oshawa, Ontario, September 2016
- **Instructor NFPA 1033 Fire Investigations Course**
A one-week introduction to fire/explosion scene investigations to the standards of NFPA 1033. Supervised practical examination of eight cell burns and two vehicles for identification and interpretation of fire patterns, fire spread, and cause analysis. Provided lectures on documentation interviewing and report writing, debris removal and fire scene reconstruction, explosion dynamics, smouldering fires. Ontario Fire College, August 2016

- ***Certified Fire Investigator - National Fire Protection Association 1033***
Certification obtained through Office of the Fire Marshal upon successful completion of Advanced Fire Cause Determination Course (2016). Course independently accredited by I.F.S.A.C (International Fire Service Accreditation Congress). July 2016
- ***OFMEM Advanced Fire Cause and Determination Course***
OFMEM in-house, 10-day training course that included presentations on fire chemistry/behaviour of fire, elevated fires, post-flashover ventilation analysis, compartment fires, fuel configuration, smouldering combustion, self-heating of inorganics and organics, interviewing and statements, CVs and expert court testimony, fire dynamics of human remains, understanding electrical systems and appliances, fire protection systems, fire modeling, fuel systems, clandestine labs, explosion dynamics. Students assigned to complete a case law analysis, present a one hour lecture on an advanced fire dynamics topic, and to prepare and conduct a live demonstration burn. Testing included a 4-hour examination, defending their findings for a completed fire investigation, a 1-hour peer-reviewed presentation, and a completed 1,000 – 1,500 word essay. March 2016
- ***OFMEM Joint Fall Training***
A four-day in service training including lectures on Fall Arrest Training, Laser Mapping Systems, Exhibit Processes, Explosive Positive Pressure Ventilation Tactics, Home Sweet 3D software training, and Case Reviews of Explosion (Pahor) and Arson (Irish). Ontario Fire College- Gravenhurst, ON
November 2015
- ***Fire Scene Assessment***
A two-day training seminar on initial scene investigation and collection of evidence, the scientific method, scene safety and fire pattern analysis. Practical exercise: Assessment of four burn cells to identify/interpret fire patterns and determine origin, cause and ignition sequence for, 1) Ignition from smouldering cigarette on chair, 2) Incendiary ignition of contact cement with trailer, 3) Waste paper basket ignition progression to bedding material, 4) Incendiary ignition disguised as cooking fire. Toronto Arson Task Force - Toronto Fire Academy, September 2015
- ***NFPA 1033 Fire Investigations Course***
A one week introduction to fire/explosion scene investigations to the standards of NFPA 1033. Supervised practical examination of eight cell burns and two vehicles for identification and interpretation of fire patterns, fire spread, and cause analysis. Written examination at conclusion. Ontario Fire College, August 2015
- ***OFMEM – Fire Investigator Annual Training***
A five-day training seminar covering topics and practical exercise assessment of five burn cells to identify/interpret fire patterns and determine origin and cause. Peer Case studies of dryer fire, Sunrise Propane explosion scene. Practical testing/experiments in alternative ignition sources and sequences. Ontario Fire College, July 2015
- ***OFMEM Fire Investigator Training- Fire Code Training***
A one-day lecture on content and application of current Ontario Fire Code. Included tour of condo development and review of its fire safety systems. Midhurst, Ontario, July 2015
- ***International Association of Arson Investigators (IAAI)***
47 hours of accredited training in Fire investigation and related topics: Basic electricity and electrical safety; explosion dynamics; understanding fire through the candle experiments; fire investigator scene safety and fire protection systems; fundamentals of residential building construction; physical evidence at the fire scene; post-flashover fires; residential electrical and natural gas systems; a ventilation-focused approach to the impact of building

structures and systems on fire development; an analysis of the Station Nightclub fire. June 2015

- **OFMEM – Fire Investigator Annual Training**
A five-day training seminar covering topics such as practical and theoretical training in basic fire chemistry, fire dynamics and explosion dynamics; scientific method; origin and cause determination; flashover and ventilation. Ontario Fire College, June 2015
- **OFMEM Fire Investigation New Recruit Training Program**
Topics included: Corporate orientation; district office administration; vehicle administration; practical and theoretical training in basic fire chemistry; basic fire and explosion dynamics; scientific method; origin and cause determination; flashover and ventilation; scene management; fire scene safety; note taking; report writing; digital photography; fire protection and prevention act; Ontario fire code; fire safety issues; predominant purpose and incident command. Lessons were presented both in a classroom and on-scene at fire grounds. May 2015
- **Certified Fire and Explosion Investigator – NAFI**
A one week course and examination on fire investigation, origin and cause to the standards of NFPA 921. February 2010

INVESTIGATIVE TRAINING

- Death Investigations - Ontario Police College/Ontario Coroner's Office, 2014
- Homicide Investigations Course - Ontario Police College, 2013
- Canadian Securities Course - CSI, 2013
- Major Case Management Course - Ontario Police College, 2014
- Investment Fraud - Canadian Police College, 2011
- Internet Investigations - Ontario Police College, 2011
- Fraud Investigators Course - Ontario Police College, 2009
- International Niagara Counterfeit Seminar - Bank of Canada, 2008
- Financial Investigations Course - Canadian Police College, 2008
- Collision Reconstruction Seminar - Peel Regional Police, 2007
- Investigative Interviewing Techniques - Ontario Police College, 2006
- Crime Zone Drawing Course - Ontario Police College, 2006
- Pedestrian Collision Reconstruction Course - 2006
- Motorcycle Crash Investigation - Institute of Police Technology and Management, University of Florida, 2006
- Geodometer Total Station Mapping - Robotics Training, Trimble Canada, 2005
- Expert Evidence in Criminal Proceedings - Osgoode Hall, 2005
- Feeney Warrant Seminar - HRPS In-Service Training, 2004
- Advanced Patrol Training Course - Ontario Police College, 2004
- Reid Interview and Interrogation - Reid & Assoc., 2002
- Reid Advanced Interview and Interrogation, Reid & Assoc., 2002
- Vericom Instruments - York Region Police, 2002
- Traffic Investigators Seminar - Charles O. Bick College, 2002
- Search Warrant Course - Ontario Police College, 2001
- Geodometer System 600 Total Station Mapping Course - Trimble Canada, 2001
- General Investigative Techniques - Ontario Police College, 2000
- Collision Reconstruction Course - Canadian Police College, 1999
- Commercial Vehicle Enforcement - Ministry of Transportation, 1999
- Total Station Laser Mapping Device - SOKKIA Canada, 1998
- Intoxilyzer Technician Course - Centre of Forensic Sciences, 1996
- AutoCAD - Halton Board of Education, 1996
- Advanced Collision Analysis - Canadian Police College, 1995
- Coach Officer's Training Course - Halton Police, 1991

- Advanced Patrol Training Course - Ontario Police College, 1991
- Traffic Law and Collision Investigation - Ontario Police College, 1989
- Probationary Constable's Course - Ontario Police College, 1986

PRESENTATIONS

- **OFMEM Fall Training** - Large scale swine barn fire investigations. Joint presentation with London Fire Prevention J. Marshall. Ontario Fire College, November 30, 2017
- **Instructor NFPA 1033: 8-Hour Lecture** - Interviewing and reporting, explosion dynamics, smouldering fires, cause analysis, debris removal and fire scene reconstruction. Supervised live cell burns and scene investigation. Ontario Police College, October 23-27, 2017
- **Large Scale Swine Barn Fire Investigations** - Niagara Arson Committee October 5, 2017
- **NFPA 1033 Course: 6-Hour Lecture** - Interviewing and reporting, explosion dynamics, smouldering fires, debris removal and fire scene reconstruction. Supervised live cell burns and scene investigation. Ontario Fire College, August 2016
- **Factors Affecting Self-Heating: 1-Hour Lecture** - Ontario Fire College, July 2016
- **Toronto Arson Task Force Seminar** - Fire Scene Assessment course - 1 hour Lecture Scene excavation and safety, Supervised pattern analysis of compartment test burning. Toronto Fire Training Centre, September 30, 2015
- **Proctor NFPA 1033 Course** - Supervised pattern analysis of compartment test burning, 4 hours. Ontario Fire College, August 31, 2015
- **Proctor NFPA 1033 Course** - Supervised pattern analysis of compartment test burning, 4 hours. Ontario Fire College, July 6, 2015

FIRE TESTING

- **OFMEM Fall Training** - Diesel and gasoline ignition and suppression, deployment of dry chemical extinguishers. Ontario Fire College, December 1, 2017
- **Instructor NFPA 1033** - Six test cell burns, two vehicle burns, smouldering cigarette on chair, electrical ignition, incendiary ignition, appliance failure, fuel trailer. Ontario Police College, October 23-27, 2017
- **1033 Course** - Eight test cell burns, smouldering ignition, electrical ignition, elevated ignition, fuel trailer, vehicle fires. Ontario Fire College, August 29-September 2, 2016
- **OFMEM Spring Training** - Smouldering (on flat newspaper, trash bin, laundry basket, pile of clothes, potting soil, top of mattress, PVC cushion chair, leather chair, open flame to PVC Cushion, leather chair, wood lumber, wood furniture, VIL on linoleum vs. clothing on linoleum vs. PUR on linoleum. Ontario Fire College, June 6-10, 2016
- **Four Cell Burns (8'x8' compartments)** - 4 separate ignition sequences to flashover. Toronto Fire Training Centre, September 30, 2015
- **Eight Cell Burns (8'x8' and 10'x10' compartments, 1 vehicle)** - Four separate ignition sequences to flashover. Ontario Fire College, August 31, 2015
- **Vehicle Fire** - Facilitate OPP investigative test burn of pickup truck. Ontario Fire College, June 16, 2015
- **Four Cell Burns (8'x8' and 10'x10' compartments)** - Four separate ignition sequences to flashover. Ontario Fire College, July 6, 2015
- **Four Cell Burns (8'x8' and 10'x10' compartments)** - Four separate ignition sequences to flashover. Two vehicle fires. Ontario Fire College, May 25, 2015

- *Ontario Court of Justice, Judge alone, 2008*
Regina vs Rainville- Fire/explosion origin and cause, butane extraction

EXPERT TESTIMONY – COLLISION RECONSTRUCTION

- *Superior Court, Judge and Jury, Milton, 2006*
Regina vs Ramsoondar – Fatality: Evidence collection/analysis, speed from skid
- *Provincial Offences Court, Burlington, 2005*
Regina vs Pellerin – Fatality: Cyclist vault, speed from skid, time/distance analysis
- *Coroner’s Inquest, Burlington, 2005*
Janik Forklift Death Inquiry – Fatality: Mechanical failure analysis, evidence collection/analysis
- *Provincial Offences Court, Burlington, 2000*
Regina vs Sherwood Trucking - Commercial vehicle rollover: Evidence collection/analysis, conservation of momentum
- *Provincial Offences Court, Burlington, 1999*
Regina vs Bedeir – Fatality: Time/distance analysis, speed from skid, pedestrian vault equation
- *Provincial Offences Court, Milton, 1998*
Regina vs Martin - Time/distance analysis, speed from skid.
- *Provincial Offences Court Milton, 1997*
Regina vs Williamson - Evidence collection/analysis
- *Provincial Offences Court, Milton, 1996*
Regina vs Park - Time/distance analysis, speed from skid