From past participants

"The demonstrations are the key to learning and made the class even more enjoyable. They're extremely effective for seeing results."

"It's a must-attend seminar if you want to become more professional in the business."

"The lab setting is very conducive for learning."

"The best part of the seminar? For me, all of it!"

"Prepared, thought-out and experienced seminar."

"Very informative with excellent demos and other examples."

"Great explanations for what to look for during failures."

"I especially liked the staff's ability to demonstrate actual failures."

"The instructors were very open to questions."

"Very enlightening, both from basic education and from the discussion of ways people cause accidental and intentional damage."

FIRE FINDINGS

It's not too soon to sign up! Class sizes are limited.

Investigation of Gas and Electric Appliance Fires

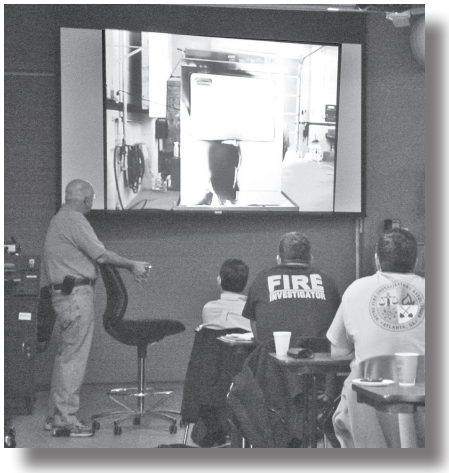
An intensive in-lab program for fire investigators.

Now in its 28th year! Twice annually by popular demand.

April 23-26, 2019 or November 5-8, 2019

Optional testing toward CFI certification available (30 hours) and continuing education credits (2.8 CEUs) available.

- ✔ Learn how appliances and electrical components work, fail and cause fires.
- ✔ Spend four days with experts on-site at Fire Findings' laboratory.
- ✔ Examine actual appliances and appliance components that have failed, causing fires.
- ✔ Witness fire-causing demonstrations involving:
  - Gas furnaces
  - Gas water heaters
  - Gas and electric clothes dryers
  - Dishwashers
  - Ranges and microwave ovens
  - Refrigerators
  - Toasters, space heaters and other small appliances



Video projection of artifacts allows everyone in the class to see exactly what instructors are discussing.

(Note: The appliance fires class concentrates only on appliances, how they work and how they fail. For discussions about high resistance connections, floating neutrals, causes of electrical failures, etc., join us for the three-day session, "Residential Electricity for Fire Investigators." Next session is September 11-13, 2019. How about joining us for both classes?)

Held on-site at Fire Findings' laboratory testing facility,
2026 Plaza Drive, Benton Harbor, Michigan, 49022.

Just 40 minutes from South Bend (Indiana) or Kalamazoo (Michigan) airports and 2 hours from Chicago airports.
St. Joseph/Benton Harbor is located along the southern shores of Lake Michigan — a gorgeous area to visit and home of the 2018 and 2020 Senior PGA Championship!

Tuition is still **$895** per person for the four-day session.

Who should attend?

- ✔ In-the-field fire investigators.
- ✔ Fire and police department investigators.
- ✔ Insurance investigators and attorneys responsible for origin and cause determinations.

This course is practical, hands-on learning for fire investigators.

Why attend?

"Investigation of Gas and Electric Appliance Fires" is different from traditional fire schools because you see dozens of actual demonstrations of fire-causing failures in a laboratory setting.

Then, you apply your new-found knowledge by examining items from fires, photos and background histories to test your ability to reason out the cause of each fire.

Course background

"Investigation of Gas and Electric Appliance Fires" is a hands-on learning experience conducted in the Fire Findings laboratory. You'll learn how appliances work, fail and cause fires, as well as how to examine them.

Jim Finneran and Jack Sanderson, experts in fire origin and cause, created this investigation course 28 years ago to satisfy the need for hands-on technical experience that can't be achieved in a traditional classroom setting. They developed the curriculum, wrote and illustrated the course notebook and designed and built more than 25 product-failure demonstrations.

Displayed artifacts recovered from actual fire scenes or preserved from testing illustrate instructors' lessons.

During the 4-day course, you'll test yourself by examining normal, failed and tampered-with components and appliances to gain practical experience for field examinations. You'll analyze actual case studies from your instructors' files and see how X-ray examinations provide an introduction to nondestructive testing.

Optional test credits toward CFI certification are available along with continuing education credits.

About your instructors

Nathan P. Dwyer, *Fire Findings'* electrical expert, is a certified fire investigator (CFI) specializing in electrical fire investigation and fire-involved appliance analysis. He has been a speaker at various regional seminars and International Association of Arson Investigators (IAAI) conferences. As an instructor, he is known for making complicated subjects easier to understand.

Jack L. Sanderson, *Fire Findings'* founder and CFI, is a nationally recognized speaker, author and expert with more than 30 years of in-the-field experience. He specializes in appliance failures and product testing / analysis and has completed Honeywell, Whirlpool, Maycor and National Propane Association factory training. Dwyer and Sanderson also team up to present the widely acclaimed seminar, "Residential Electricity for Fire Investigators," in our lab.

James M. Finneran, of ElectroTek Consultants, Inc., specializes in electrical failures and fires and has been involved in several product recalls by the U.S. Consumer Product Safety Commission (CPSC). He has testified in product failure fire cases throughout the United States and serves on the National Fire Protection Association (NFPA) 921 Technical Committee on Fire Investigations.

Dwyer, Sanderson and Finneran have instructed thousands of investigators, attorneys and insurance representatives. The Bureau of Alcohol, Tobacco, Firearms & Explosives (ATF), the CPSC and numerous state chapters of the IAAI have called on them to present training sessions.

Course outline

Gas appliance topics

High- and low-order explosion demonstrations
Natural vs. LP gases
Potential gas piping failures
Gas regulator functions with demonstration of cut-a-way regulators
Excessive and inadequate pressure demonstration
Operation of combination gas valves
Safety shutoff demonstration
  Ignition of gas leaking through shutoffs
Operation of water heaters
  Demonstrations of water heater failure modes
  How to examine failed water heaters
  Investigation of possible water heater fires
Operation of standard and high-efficiency furnaces
  How to examine components (high limits, fan switches, thermostats)
Demonstrations of furnace failure modes
  How to examine failed furnaces
  What to look for in suspected furnace fires
Water heaters and furnaces as incendiary devices
Operation of clothes dryers
  Examination of components (high limits, heating elements, timers)
  Role of lint
  Failure modes
  Examination of failed dryers – what to look for
  Investigation of suspected dryer fires
  How to identify a dryer's manufacturer

... and more!

Electric appliance topics

Lots of pertinent material!

Ranges: Did the range come on by itself or did someone leave it operating?
  Infinite control switches – how they work and how to examine them post-fire
  Fire-causing failure modes: unzipping a range's heating elements, control panel fires
Refrigerators: Too cold to burn? Obviously not.
  Examination and identification of components – where and what they are
  Appreciation of a refrigerator's contribution to a fire: fuel!
  Fire-causing failure modes
Dishwashers: What was that about not combining electricity and water?
  Examination and identification of components – where and what they are
  Heating element, timer, limit and float switches
  The role of rinse-aid
  The dangers of mixing electricity and water
Microwave ovens: What's inside? Examination and identification of components
  Fire-causing failure modes
  Incendiary devices
Small appliances fires
  As time permits, fans, toasters (today's toaster is not the same as your mother's appliance), clothes irons (they seem like obvious fire causes but maybe not), space heaters and coffeemakers, etc.
What is and isn't a fuel when it comes to appliances
Using fire investigation principles on a macro-scale – adapting arc-mapping to appliance fire analysis
Avoiding spoliation claims using nondestructive methodology
Does a product recall make a fire cause? Doesn't no recall mean the appliance didn't start the fire?

Hot coffee or tea, juice and continental breakfast at 8 a.m. daily.
Snacks and sodas throughout the day. Friday lunch included.

Classes start at 8:30 a.m. and end at 4:30 p.m. daily,
except the last day
when the seminar ends promptly at 2 p.m. with the presentation of certificates.

Visit the Fire Findings Web site for photos, seminar details and on-line registration.
www.firefindings.com

What you get

Your $895 tuition to "Investigation of Gas and Electric Appliance Fires" includes:

- ✔ 4 days of intensive, in-lab, hands-on instruction, case histories and live demonstrations.
- ✔ Deluxe continental breakfasts and snack breaks all days; snacks and sodas anytime.
- ✔ Lunch on the last day.
- ✔ Answers to your questions about appliance failures and investigating appliance fires.
- ✔ A certificate recognizing your participation.
- ✔ Optional CFI test credits and CEUs available.

Easy registration for 'Investigation of Gas and Electric Appliance Fires,' Apr. 23-26, 2019 or Nov. 5-8, 2019

Fax

your completed enrollment and credit card or government voucher number to 269-925-2204.

Phone

for information and openings, 269-925-2200.

Mail

this completed enrollment to:
Fire Findings LLC
2026 Plaza Drive
Benton Harbor, MI 49022-2212.

On-line registration available at www.firefindings.com.

Who will attend?

Name _____

Title _____

Organization _____

Street _____

City/State/ZIP _____

Ph _____ FAX _____ E-mail _____

Years of experience in fire investigation _____

Number of hours of origin/cause investigation classes _____

Brief description of your present career responsibilities _____

_____

Just two sessions in 2019!

❒ April 23-26, 2019 ❒ November 5-8, 2019

How do you prefer to pay your tuition?

❒ Check enclosed ❒ Government voucher or purchase order enclosed
Please make payable to Fire Findings, LLC (Fed ID # is 38-3282454)

❒ Bill my credit card *(check one)* ❒ MasterCard ❒ Visa ❒ Discover ❒ AmEx

Card # _____ Code _____ (security code) Exp. date _____

Cardholder name *(please print)* _____

Cardholder signature _____

Hurry! Both sessions are limited to the first 48 registrants.
For more information and seminar openings, call (269) 925-2200 or fax (269) 925-2204. Check seminar availability before making hotel, auto or flight reservations.

Special lodging rates are available.
Call Fairfield Inn & Suites, Stevensville, Michigan, (269) 429-1111, for a special rate of $89 per night for double-queen or king rooms. All rooms have microwave ovens and refrigerators. Enjoy hot breakfast buffet, also fitness center and indoor pool. This is a "first-come, first-serve" special rate, so make your reservations early. To get this rate, mention Fire Findings when making a reservation.

For a free visitor information packet and area maps, call the Southwestern Michigan Tourist Council at (269) 925-6301.