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LOOK CLOSELY, IT MAY NOT BE WHAT YOU THINK

By Donald F. Peak, C.F.I.

In recent months, Phoenix has handled several cases where the cause was not what it initially appeared to be. It can be tempting to jump to conclusions when the investigation cause appears to be obvious. NFPA 921 states:

“The basic methodology of the fire investigation should rely on the use of a systematic approach and attention to all relevant details. The use of a systematic approach often will uncover new factual data for analysis, which may require previous conclusions to be re-evaluated. With few exceptions, the proper methodology for a fire or explosion investigation is to first determine and establish the origin (s), then investigate the cause: circumstances, conditions, or agencies that brought the ignition source, fuel, and oxidant together.”

Being systematic and thorough in our investigations and eliminating other available causes has dramatically changed some of the initial findings and outcomes following our investigations. The following are some examples of these findings.

Case Study #1: An extensive fire occurred in a new home and the initial investigation placed the fire's origin in the electrical breaker panel. The initial investigation found fire burned a “V” pattern starting at the center of the breaker panel on the basement wall and extended up into the basement ceiling causing extensive damage to the main level floor and in-floor radiant heat system. The subsequent investigation found a gas leak occurred on the exterior of the home and penetrated the basement foundation wall through the electrical panel service entry. The fugitive gas was ignited by a pump pressure switch, burned up behind the breaker panel causing the “V” pattern, and caused fire damage that appeared to originate in the electrical breaker panel. These findings changed the potential liable parties and required several reexaminations of the scene.

Case Study #2: A fire was reported to the insurance company as an electrically caused fire in the master bedroom closet of a new home. The subsequent investigation determined the fire was intentionally set with gasoline. This determination not only eliminated any potential subrogation for the insurance company, it resulted in criminal charges against the insured.

Case Study #3: A fire in a small hair and massage salon was reported as a fire caused by a toaster oven. Research and the follow up investigation determined the owner placed a basket of freshly dried towels below the toaster oven on a table. The towels, prior to being washed, contained massage oils that were comprised of olive oil, safflower oil, and sesame seed oil. All of these materials are subject to spontaneous combustion and have resulted in numerous fires after being taken from a dryer and placed in baskets or carts.



Breaker panel mounted on basement wall



Breaker panel removed showing gas entry and burning through main electrical service feed

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These are a few illustrations that show what can occur when an investigation is not conducted by an experienced investigator in a systematic manner directed towards a scientific method of investigation. This means a complete layer search, determining the area of origin, examination of all physical evidence, and once the cause is determined, the elimination of all other potential fire causes.

Too many times, because of low manpower, inadequate budgets, improperly trained personnel, or improperly conducted scene investigations, the insurance company is put in an awkward or compromised position. Make sure you know the investigators and engineers you use and the procedures they use in conducting your investigations.

We do fire origin and cause examinations in the following states:

**Idaho Colorado Kansas Montana Nebraska Nevada
North and South Dakota Utah Wyoming**



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Based in Denver, Colorado, Phoenix Investigations, Inc., conducts investigations throughout the western United States and Rocky Mountain region. We are licensed as required.

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