Report writing likely rates as the least enjoyable aspect of any fire investigator’s job. Most men and women involved in fire fighting and fire investigation have extensive training in the unique skills and techniques required to succeed at their profession. However, post-investigation and documentation is rarely high on the list of training requirements. Usually, report writing is treated more as a necessary nuisance than an inherent element of the job.

NFPA 921, the Guide For Fire and Explosion Investigation, denotes an entire chapter to documenting an origin and cause investigation in Chapter 16, *Documentation of the Investigation*, NFPA 921, 2014 Edition, states:

16.1.1 The goal in documenting any fire or explosion investigation is to accurately record the investigation through media that will allow investigators to recall and communicate their observations at a later date. Common methods of accomplishing this goal include the use of photographs, videotapes, diagrams, maps, overlays, tape recordings, notes and reports.

16.1.2 Thorough and accurate documentation of the investigation is critical because it is from this compilation of factual data that investigative opinions and conclusions can be supported and verified. . . .

Chapter 16 proceeds to provide detailed guidance to the investigator with respect to photographs, note taking, diagrams and drawings, and report writing. Chapter 16 also refers the investigator to Chapter 12, *Legal Considerations*, in recognition of the critical connection between the investigation documentation and the investigators ability to testify as an expert as to his or her conclusions. However, NFPA 921 does not mandate a specific format for a report.

16.5 Reports. The purpose of a report is to effectively communicate the observations, analyses, and conclusion made during an investigation. The specific format of a report is not prescribed. For guidance on Court – Mandated Reports, see Chapter 12.
Investigators rarely appreciate the significance of their written report relative to their overall investigative skills until that report becomes the focus of a trial in which the credibility of the investigator’s opinions and conclusions are tied directly to the written report which the investigator generated following the initial investigation. For the investigator sitting in the witness stand and explaining words he or she used in a report, written several years earlier when there was no contemplation of litigation, the experience can be humbling and frightening. Seeing your own words projected on a screen or blown-up on 4’ X 6’ poster boards in order to question your credibility, competency, and objectivity, is intimidating.

Until someone goes through the experience of defending his or her report in a litigation setting, the report is rarely treated as more than a clerical function or bureaucratic responsibility. This approach to report writing ignores the fact that the report itself is frequently the single, most-essential document which will determine the outcome of a trial in which the origin or cause of a fire is the central issue. Therefore, report writing should be approached with the same degree of care and thoroughness with which you conduct the investigation itself.

There are three key components to any good report: accuracy, objectivity, and thoroughness. To the extent a report fails to meet any of these criteria, the shortcoming is attributed directly to the investigator, and the investigator’s credibility as an expert is undermined. The manner in which the information is presented and the words used to communicate that information will influence the jury’s opinion of the expert’s qualifications and credibility.

Reports should be written in multiple parts. These parts should be clearly separated and designated by content. For example, there should be a summary of information regarding observations at the fire scene itself. A separate heading should summarize information obtained from responding firefighters and eyewitnesses providing information at the scene. A third section should summarize information provided by the owners, residents, or occupants of the property. A separate section should designate information obtained by other experts associated with the investigation. This could include analysis of debris samples, engineering opinions, or information provided by utility company representatives. If appropriate, the report could contain a separate section outlining additional work to be performed before the investigation will be concluded. However, be certain that you follow through on performing the work if you are going to document the need for it in the report. Finally, and most-importantly, the report should contain a section designated as “Conclusion”. This section will succinctly state the expert’s opinion regarding the origin and cause of the fire or any other issues upon which the expert has been asked to provide an opinion or conclusion.

The report should also contain attachments which provide documentary support for the facts enumerated within the report. These attachments would include the initial response report, the 911 record, the post-action fire report, photographs, reports from
other experts which are relied upon, diagrams, courthouse or government records obtained and relied upon in the investigation, and documentation establishing physical evidence removed from the scene and showing the chain of custody associated with this evidence. When attaching these documents to the report, be alert for any inconsistencies with regard to any facts or information outlined in the attached reports which differ from that information which you obtained from other sources or have incorporated in your own report.

Many experts designate a section “Findings of Fact” prior to drafting the Conclusion portion of the report. In my opinion, this is a dangerous practice since there is a tendency to summarize the facts for the sake of brevity. This frequently results in an incomplete outline of all of the facts. Moreover, if one of the designated “Findings of Fact” turns out to be untrue or misstated, the result is that the entire conclusion or opinion is subject to dispute, even if the fact is deemed of minimum importance or the misstatement is of negligible significance in the overall value of the investigation. Furthermore, experts ultimately rely upon the totality of circumstances and facts discovered during the investigation when arriving at their opinion. Rarely does a single fact provide the conclusive evidence upon which the expert can base his conclusion.

There is no specific list of information which the report must contain in order to be viable. However, the report must contain all of the facts upon which the expert is going to base his conclusion or opinion regarding the origin and cause of the fire. Also, the expert’s conclusion will be deemed more credible to the extent there is a thorough disclosure of all facts which might pertain to the investigation, even if those facts are not critical to the ultimate conclusion itself.

Since the report is a primary source of information for lawyers, parties, judges, jurors, subsequent experts, and others interested in the fire which is the subject of your investigation, the report should be drafted with a primary consideration of documenting details regarding sources of information and observations so that this information can later be presented in a court. Because of the Rules of Evidence, it becomes necessary for attorneys to know the identities of witnesses who have provided the information to the expert. Without first introducing the actual witness who can establish the fact, the expert may not have the luxury of testifying about that fact as part of the basis for his opinion. Since the ultimate trial of a case usually is several years after the event itself, accurate documentation and recording of this information becomes essential to the overall value of the report itself. As you collect the information upon which you will rely in the drafting of the report and arriving at your opinion, be certain to identify the individuals who are providing you with this information.

As an investigator, also consider that others may be interested in your work-product beyond the limited scope of your assigned responsibility. For example, the investigator for the fire department may have a primary responsibility of determining only whether or not the fire was intentionally set or accidental. Upon concluding that the
fire cause cannot be categorized as “intentional”, the public investigator may conclude his investigation. However, a private sector investigator investigating the same fire loss may arrive at a different conclusion that a fire was intentionally set or conclude that there is specific responsibility for the fire which results in a product liability lawsuit, negligence lawsuit, or some related civil action. The public investigator’s investigation then becomes a critical element of the overall case, although the investigator’s official responsibility may be more limited in its scope.

The following list outlines general areas of inquiry which should be documented within the report either directly or through the pertinent attachments. This “laundry list” is not designed to be all inclusive, since ultimately the investigator must use his own judgment in following up leads, considering facts observed, and other factors unique to each scene. Any report should include the following information:

- When the fire department received notice of the fire.
- When the fire department arrived at the scene.
- The first fireman at the scene, including name and unit.
- The names of any individuals who were at the fire scene prior to the arrival of the fire department. Whenever possible, addresses and telephone numbers should be provided for these witnesses.
- The time when the fire was extinguished.
- When utility service to the structure was terminated from the exterior of the building. If possible, identify the individual fireman or utility company personnel performing this function. This applies to electrical and natural gas service providers.
- The name, address, and telephone number of any individual who entered the building between the moment when the fire was discovered and when it was extinguished. This includes spectators who may have attempted to rescue or determine if individuals were in the structure, as well as firemen who initially entered the structure to determine the scope of the fire. These individuals will have critical and unique knowledge which cannot be duplicated by any other witness following the fire loss.
- From the individuals at the scene or those who initially entered the structure, records should be made regarding the condition of the entrances (locked or unlocked), the specific location of flame and
smoke, the color of flame or smoke, and any unusual odors which may have recognized.

- Firemen should be questioned as to the technique and approach by which the fire was attacked and extinguished. Attention should be given to evidence of flashbacks, rollovers, unusual burning characteristics, and flame travel pattern. The investigator should be prepared for questions regarding specific firefighting techniques used to extinguish a blaze, including the volume of water used, the water pressure for specific nozzles, the use of overhead equipment, the use of foam or chemical extinguishment method, or other methods utilized by the fire department attacking the blaze.

An investigator obtaining the foregoing information relating to the discovery and extinguishment of the fire may identify witnesses who provide differing testimony regarding facts which may ultimately be key to the investigation. As part of the investigative process, the investigator should carefully determine whether inconsistencies in information are the result in differing methods of communication, differing positions or locations during the event, or different observations of the same event. In other words, do the inconsistencies in any reported information result from different vantage points, or in sincere disagreements over what was observed or done? Compare the physical evidence to the witnesses’ observations to insure consistency.

Once the investigator obtains access to the structure, the report should memorialize the conditions observed, many of which will form the basis for the conclusion. Moreover, these observations will likely be considered by subsequent experts, and their interpretation of these facts may also be allowed by a court. There is no truer statement than “a picture is worth a thousand words” with regard to fire investigations. Therefore, as you consider this list of facts which should be investigated and documented in your report, the picture is a more effective attachment than a lengthy written description unsupported by photographic evidence. In some form or fashion, the report should document:

- The condition of exterior entrances into the structure. This includes door jams, deadbolt locks, and doorknob locks.

- All sides of the exterior of the structure, looking at and away from the structure. This provides information regarding the surrounding area, its accessibility, visibility, and general conditions in the area. Exterior burn and smoke patterns are important.

- The scope of damage in the structure. This should be documented not only in the areas of greatest damage, but in all areas, including those with no damage.
• Photographs or descriptions of the contents in the structure. This description should include the quality as well as the quantity of items. Closets, drawers, and other storage areas should be documented. Particular attention should be paid to personal or sentimental items such as pictures, photograph albums, baby items, jewelry, silver, and guns. In a commercial loss, the report should document inventory levels, records, and bookkeeping information.

• Determine whether or not interior doors were open or shut during the course of the fire.

• Were windows open, shut, and/or locked at the time of the fire?

• Were attic stairs open or shut?

• Were attic or ceiling fans left operating?

• What is the condition of the glass in windows and doors? Does there appear to have been an explosion? If the glass is broken, is glass on the interior or exterior of the structure? Could entry have been gained as a result of a broken window or door? Is there smoke residue on the glass which might be indicative of the cause of the fire as well as the time which it burned prior to notification?

• All burn patterns must be photographed.

• All smoke lines indicating heat level in various rooms should be photographed.

• Any unusual containers or clustering of combustibles such as newspapers, clothing, or other items which may have been used as trailers must be photographed.

There are several areas which require special attention and should be addressed in the report. First, if possible, the scene should be documented prior to overhaul being conducted by the fire department. In the event this is not possible, the investigator needs to document the scene prior to the investigator’s disturbance of the debris. This should be done through photographs. The investigator should also document the scene after debris removal or cleaning of the floors and critical areas has been performed. This will establish and document the burn patterns, as well as the fact that the investigator did, in fact, remove the debris as part of the process of conducting a thorough investigation.

It is also critical to document the location and the method by which debris samples are taken for subsequent testing. The container in which the debris is placed should be
photographed in the location from which the debris was removed. Most investigators use latex gloves which are thrown away after each sample is collected to insure there is no cross-contamination. Documenting the latex gloves on the floor next to the container holding the debris sample is also a good idea. As previously stated, the report from the lab analyzing these samples should be attached to the report.

Particular attention should be paid in the written report to the investigator’s analysis and determination that other potential causes of the fire have been ruled out. This means a detailed description of all appliances, circuits, or other causes which were affirmatively ruled out as potential origins or causes of the fire. Photographs verifying the damage to these items will provide supporting evidence that the investigator did, in fact, analyze these potential fire causes. Electrical panels are frequently examined by investigators, and ruled out as causes of a fire. However, the investigator should take the examination of the electrical panel a step further and, if possible, determine how many breakers tripped or fuses blew. This frequently becomes a critical issue in a dispute between experts over the cause of a fire. When possible, the particular circuit controlled by the tripped breaker or blown fuse should be identified. Examination of this circuit for possible evidence of arcing or malfunction should be performed and documented.

An integral part of any report is the diagram of the scene. Although it is not essential that the diagram be drawn to scale, accuracy regarding the layout is critical. The location of entrances, windows, receptacles, large pieces of furniture, potential locations of the cause of the fire, and other factors should be accurately drawn on the diagram. If possible, the diagram should be supplemented with photographs of a reconstructed scene in which key items have been put in their original location. Due to the significance of the diagram, it should not be prepared in its final format until the investigator has interviewed and confirmed the critical factors relating to the layout with the owner or resident of the structure or some other individual familiar with the pre-fire structure. The diagram inevitably will be blown up to a 4’ x 6’ poster for presentation to a jury, as well as an exhibit in multiple depositions.

The report should reference the security of the scene prior to the investigator’s examination of it. Has the scene undergone overhaul? Was it released to the building owner or resident prior to the investigator’s inspection? How much time passed between the date of loss and the date of inspection? Did there appear to be any alteration of the scene which might impact the credibility of the scene examination? If necessary, the investigator should confirm with responding personnel that there has been no significant alteration of the scene, particularly the assumed area of origin, before conducting the investigation.

In commercial losses, heavy equipment must be utilized frequently in order to remove debris which has collapsed. The report should document precautions taken to insure that the heavy equipment has not contaminated or altered the scene. If possible, debris samples should be taken prior to the use of heavy equipment. However, the fuel
source for the heavy equipment should be documented so that there is no potential confusion as the source of any flammable liquid which might be identified as being present on the premises.

Surprisingly, the most frequently mishandled portion of any report is the section dealing with the interviews of non-governmental personnel. This category of witness would include neighbors, bystanders, non-residents, employees, or similar types of witnesses. These individuals generally provide background information which relates not only to the potential cause and origin of the fire, but also any suspect’s opportunity to set the fire or motive for doing so. As a consequence, there is a tendency to improperly categorize or utilize the information obtained from these witnesses.

First, the report should clearly segregate this information in a separate section. It is important to keep the determination as to the cause and origin of the fire separate from any opinions regarding responsibility for the fire. If the investigator’s primary assignment is to determine if the fire is of incendiary origin and this information is not critical to reaching that conclusion, the information should be contained in the report, but not described as critical to reaching that key conclusion. Too often, the credibility or accuracy of the witnesses interviewed following a loss becomes a key issue subsequently in the litigation. The expert does not want the credibility of witnesses whose information is unrelated to the origin and cause of the fire to undermine a conclusion regarding the incendiary origin of the fire.

The manner in which the information is obtained from witnesses also becomes an issue with regard to the report. If the witness is interviewed with a tape recorder, the investigator will ultimately be required to disclose the entire recorded interview and the tape. Therefore, great care should be taken when summarizing the information to be sure that it is done accurately. Frequently, what you believe you heard may be interpreted differently, once the tape is transcribed.

Written statements prepared by witnesses are generally of little use unless the written statement is designed to establish a single key fact. Witnesses tend to be very brief in their written statements, whereas examination of these witnesses tends to bring into question the information in the statement and develop much more evidence.

Interviews of witnesses which are neither recorded nor written are the most frequent tool. An investigator needs to carefully record the information, since he or she will likely be required to recall details relating to these interviews. Interviews with potential suspects become admissible since the statements by the interviewee could constitute admissions against interest. Of course, this fact will not be known until weeks, months, or, perhaps, years later when a comparison is made between statements obtained immediately after the loss to those statements subsequently given. Even witnesses who are not suspects can have information provided by them to an investigator used as a basis to impeach their credibility at a subsequent point in the investigation or trial. Therefore,
accurate recording of these interviews and the facts obtained become critical. The more important the information to your overall conclusion, the more you should consider use of a recorded statement to preserve and insure the documentation of the information. Recorded statements and written statements should be included as attachments to the expert report. Notes summarizing any interview should be preserved, but not necessarily attached to the report.

The report should not include language which will be interpreted as indicative of a pre-deposition of the investigator to assign blame or responsibility to an individual. Avoid references to an individual’s race, sexual preference, beauty, or apparent intelligence. The use of slang words or vulgarity is not appropriate. However, this is not to suggest it would not be appropriate to describe a person’s appearance when observed at the scene or their willingness to cooperate with efforts to obtain information. The key is to present personalized information in a way which is non-judgmental.

Investigators from the private sector should never prepare a written report until first consulting with their client regarding their findings and conclusions. First, many clients do not want to incur the expense associated with the preparation of a written report. However, if a written report is necessary, the client may request that the report be provided directly to counsel, thereby creating an attorney-client privilege and establishing that the report is prepared in anticipation of litigation. This will be a huge advantage in the event of subsequent litigation since the client will have the option of protecting the report from disclosure, if it chooses to do so.

Public investigators do not have this luxury. They are generally required by the nature of their job to prepare reports. Often times, these reports are prepared on pre-printed forms which require the investigator to respond with information which he or she may not be prepared to respond to or may fail to contain adequate room to disclose all related information. The printed form is generally a nightmare, since rarely is the investigator finished with the investigation by the time the form must be completed. The initial impulse is to indicate that the origin and cause of the fire is “undetermined” until the investigator is prepared to commit to specific findings on these critical points.

Of course, these reports are discoverable and the initial finding of “undetermined” may be used to impeach the investigator. The investigator must be prepared to explain what additional information was discovered between the completion of the initial report and the subsequent determination as to a specific finding of origin and cause. A safer approach is to insure that all forms contain a box indicating that the investigation is ongoing, rather than checking the “undetermined” box relating to origin and cause.

Many preprinted forms provide “arson” as an option for the investigator. My preference would be that the “arson” box be replaced with a box indicating that the fire is of “incendiary” origin. I believe more investigators would be inclined to find a fire was of incendiary origin than arson. More importantly, incendiary origin is just one
element in an ultimate determination of arson. In order to establish civil or criminal “arson”, the investigator must identify certain individuals, and then develop evidence which links that individual through opportunity and motive to the ignition of the fire. This is a much broader and more challenging investigation than a determination solely as to the origin and cause of the fire. Usually, determination of the other elements of arson besides incendiary origin requires a much longer, thorough, and patient investigation than simply an examination of the scene. Collaboration with detectives, special unit investigators, independent adjusters, and others is frequently required before a determination as to arson is made.

Prior to drafting your report, carefully analyze and consider the information which you have developed. Assuming your facts are true and your observations are accurate, is there more than one reasonable interpretation of these facts? Is your conclusion limited to facts which you have developed, or are you relying on hearsay information and assumptions which may subsequently be proven wrong? Is your analysis objective or has it been tainted by personal attitudes towards the owner or resident of the structure? Is more investigation needed before a finding regarding the origin and cause of the fire should be determined? Accuracy, not speed, must be the primary goal of the investigator before documenting his conclusions in writing.

Although there may be efforts to protect the report from discovery to third parties, an investigator must operate under the assumption that his or her file, including the report and all related notes, will ultimately be disclosed to third parties with an interest in its findings. Once a document has been made part of an investigator’s file, it is extremely difficult to discard that document. Prior to including written information in your file, examine the document and consider its substance. If the document contains extraneous information which is irrelevant to the overall investigation, perhaps it should be summarized and discarded.

Drafting of the report should be done in multiple stages. This might include outlining the critical facts developed during the investigation and categorizing the manner in which they will be introduced in the report. Separate sections of the report might be prepared before drafting the entire document. Particular attention to the conclusion section should be paid to insure that the conclusion is direct, succinct and accurate. Generally, the longer the conclusion section, the more likely it will contain aspects that will be challenged and attacked in subsequent litigation. Drafts of the report or any portion of it should be discarded, once the final product has been completed. Drafts provided to any third parties will likely require preservation of those drafts for future discovery in the event of litigation.

Although technical language may be necessary and appropriate in many instances, clear, concise writing is preferable. After you have written the report, let it sit for twenty-four hours and then reread it quietly. Does the report communicate what you wish it to say? Does it contain all of the information which is critical to your opinion? If your
spouse or a non-expert read your report, would they understand what you are trying to communicate? Would they believe you had thoroughly, accurately, and objectively investigated and reported on the origin and cause of this fire? That is the question which you will ultimately have answered for yourself by a jury.