

Now What?

Case Studies on How to be Successful as an Expert Witness

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Introduction

All too often safety professionals are asked to work as part of a legal proceeding without a full understanding of what is actually involved. Such was the case for me when I began my work as a designated Expert. Looking back, I can see that my initial exuberance to venture into areas where I was not appropriately prepared was similar to allowing employees to engage in activities for which they are not properly prepared and in which they are not properly trained.

So how does one go about becoming successful in the legal field? The answer is the same as other areas in which we work as Safety Professionals in helping to ensure that those we work with are adequately prepared to do their jobs. We first need to have adequate training on the issues involved in doing the work. The training programs should ensure that you have a full understanding of the role of the expert witness, the hazards involved in the process of working in the field, and procedures that can be used to help you gain confidence and success as you work.

The training that you get can be formal and include reading books and articles on the topics, taking classes such as those offered at the ASSE Professional Development Conferences (PDC), and thorough a review of case studies such as those presented later in this paper. Regardless of how it is done, this is not an area where one can simply jump into, and through a process of trial and error, somehow achieve success. This paper will provide an overview of the steps that can be used and will provide some case studies showing how the techniques developed by the author have led to success in this field.

Summary of Relevant Issues Within The Legal Process:

Many of those reading this paper will have already worked in the field of litigation and are familiar with the basic duties and responsibilities of the role of an Expert Witness. However, some may be totally new to the concepts and are exploring their potential to work in the field. Regardless, some background on the basic ground rules related to the legal aspects of the activities is helpful to all as either a primer or reminder to all who work in the field.

At the core of the process is the understanding of the role of a witness. A witness is someone who can provide testimony related to their involvement in a particular area. Witnesses are divided into two distinctively different groups and include the percipient witness and the Expert Witness. Most of us who have observed a trial have seen these two parties provide testimony in a

particular legal proceeding. Consider the recent case related to the death of Michael Jackson. In that case we heard from those who were present at the time around the death. They testified as to what they actually heard or observed while they were present. They were not allowed to speculate or to develop any sort of conclusions based on what they were party to. These witnesses are termed percipient witnesses and typically involve lay personnel who happened to be present and who testify only to those items that they directly witnessed.

At the Michael Jackson trial we also heard from physicians who had expertise in the areas related to the trial. These witnesses were not present at any point in the events leading to the death and only became involved after the fact that a death had occurred. They did not see or hear anything directly but were allowed to testify and provide opinions and conclusions based on information that was provided to them. The physicians testified on the basis of their known expertise and knowledge of the issues related to the case. These included issues involving the typical administration of the medications that were involved and those related to the dosages that were found in the post mortem. Their testimony as an Expert was allowed to be entered into the trial and provided considerable influence to the ultimate outcome. As Expert Witnesses, the physicians who testified could be asked questions related to hypothetical questions that had relevance to the case.

However, while the role of the Expert Witness is one that seems relatively straightforward, there are numerous ground rules that come into play and which can easily lead to pitfalls for less experienced Experts. One of these relates to the concept of Discovery. This is the process where everything that you do, everything that you relied upon to form your conclusions and opinions, and every note that you took is subject to review by all parties. And since most of the work takes place well in advance of the trial, all of that work is likely to be known, or discovered by, both sides in the litigation dispute, helping them to avoid trial if possible and come to some settlement. In fact, most of the cases that the typical Expert Witness is involved in never reach court. In prior sessions that were presented at the ASSE PDC, we termed going to court as playing “judicial roulette.” Many of us can recall the example of the case of the Cassie Anthony trial in Florida where what seemed to be an open and shut case of a mother accused of killing her daughter was ruled the opposite way than most thought. Because of the many variables related to going to trial, most attorneys in the field of civil litigation prefer to resolve their cases prior to the trial.

So the process of Discovery is simply getting everything out into the open so that everyone knows what everyone else has reviewed. Much like watching the Discovery Channel and learning new facts, attorneys and experts pour over the minutia of every detail, every written report, every picture, every record, every written safety program, and anything that might have relevance to the case. The process of Discovery may take years as new items are identified and evidence needs to be reviewed and analyzed. And part of that Discovery process includes a thorough review of all of the work that an Expert has done, including a comprehensive list of any and all items that were relied upon for the Expert to develop their conclusions and opinions that they will present in deposition or court testimony. Simply put, attorneys do not want to be surprised by anything so there is considerable work that is required to ensure that there are no bad surprises.

At the conclusion of this paper there is a sample of a system that has been used successfully to track the information reviewed and formulate opinions.

Case Studies

With the background material behind us, we now will look at two actual cases where the process of discovery and the formulation of opinions from the materials were used successfully to reach conclusions that led to settlement or victory in trial. Each of the cases presented have been significantly pared down to provide the major aspects of the case in the interest of time.

1. *Bored to Death*

The first of the case studies for review is a very easy case where the facts were obvious and little development of opinions was required. The basic facts related to the incident, which resulted in a fatality, were as follows:

- Party A (victim) was hired by the City of X to provide full-time monitoring/inspection of the rough grading operations at a construction project site.
- At the time of the incident holes were being dug by the drilling company, Company B. The holes were expected to be approximately eight foot in diameter and approximately 60 feet deep. At the time of the incident, it is reported that the auger used to excavate the hole had drilled approximately 40-43 feet into the ground.
- During the lunch hour, the crew conducting the work left the area where work was being performed and left the auger outside the hole. The auger was located above the opening to the hole, thus creating an opening that employees at the site would be exposed to. The hole was unguarded and unprotected for a period that is reported to be approximately 20 minutes or more according to the reports and testimony received in the Discovery process.
- After lunch, the drilling crew returned to the site and restarted their drilling operation. The operation was quickly stopped when they observed a hard hat and a shoe (with foot inside) coming up in the spoils from the auger.
- The body of the victim was removed later but the exact cause of death was undetermined given its condition.

The facts discovered led to the obvious conclusion that there were clear violations of regulations that occurred that directly led to the victim falling into the hole. While it is unclear if the victim died before falling into the hole, such as from a heart attack, those facts are largely irrelevant given the violations that occurred that would have likely resulted in the death of the victim. As an Expert it is easy to cite the following in developing conclusions and opinions related to this case.

- 8 CCR Section 1540 defined an excavation as “*any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.*” Such excavations are subject to a series of other Cal-OSHA regulations inclusive of 8 CCR Sections 1539, 1540, and 1541 inclusive of the appendices.
- 8 CCR Section 1541 (l) states the following:
 - “(l) *Fall protection.*
... *Adequate barrier physical protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration and other similar operations, temporary wells, pits, shafts, etc., shall be backfilled.*”

While numerous other issues such as those associated with a multi-employer worksite are also involved and were presented in the course of declarations and statements from the Experts, the mere fact that there were violations of regulations was sufficient to lead those involved in the case to establish that the boring company was negligent in their failure to cover the opening and

that their actions ultimately lead to the death of the inspector. The case settled before going to trial.

2. The importance of being well grounded

The second case study is considerably more complex in that there are several factors involved and those factors took years to develop. As an Expert, it is important to establish a broad perspective of the issues involved and not to focus in on a single item or form any opinion in advance of seeing the entire picture. The broader field of vision, or perspective, is critical to lead to the appropriate conclusions relative to this case. Following is a summary of the facts of the case.

- An unlicensed landscaping contractor was hired by a landfill operation to regularly work on the landscaping and irrigation at a site operated by the landfill company. For identification, the landscaping contractor will be listed as Mr. F., and the landfill operator as Company A.
- Several years before the incident, Company A had leased the land from the property owner identified as Company B. Company A had purchased a portable toilet facility from Company B and had it placed on the landfill site.
- Company B employees assisted Company A with installation of the facility including installing electrical and plumbing connections to the structure.
- After installation, a City inspector noted the presence of the building and requested that the operator of the landfill obtain permits for the installation of the structure. Permits were requested but were not closed and no final inspection was ever done.
- The electrical installation to the new building involved installing an underground service from the main building electrical panel to a sub-panel on the portable building. The electrical installation for the main building included an electrical ground. The electrical service to the portable building did not include either a tie-in to the existing ground on the main panel nor the installation of its own ground system.
- Several years following the installation of the facility, a non-working outside light fixture on the building was replaced by a licensed electrical contractor who worked at the site doing various electrical projects as requested. The electrical contractor, who will be identified as Company C, purchased a light fixture from Manufacturer X. It was later revealed that the light fixture was not UL listed.
- Approximately one month following the installation of the light fixture by Company C, Company A asked the electrician to install a photocell onto the fixture. Instead of purchasing the new fixture from Manufacturer X with the photo cell already installed, the original fixture was modified with the installation of a photocell from a third party, not Manufacturer X. The third party photocell was adapted to the light fixture to allow it to work automatically when it got dark.
- During the course of the installation of the photocell to the fixture, the electrician from Company C pinched a wire inside the fixture damaging the insulation on the wiring and allowing bare wire to connect the metal building to the wire.
- Several months following the installation of the photocell, a water leak was discovered under the building. Believing it was from an irrigation line, Company A hired Mr. F. to come and repair the water line.
- The electrical power to the toilet facility was fed from an electrical line in conduit that went under the toilet building and originated from the main electrical panel on an adjacent building. The power to the toilet facility was not shut off during the activities that followed.

- Company A used some of its staff to assist Mr. F in excavating the area. They used a backhoe to remove asphalt that was leading up to the edge of a building. They used site personnel to help Mr. F., who was aged, dig under the building to attempt to locate the leak.
- After a large excavation was dug, Mr. F. got on his hands and knees and continued to dig into the hole, which now had filled with water from the leading pipe. As he dug with his hands and a trowel, he suddenly tightened up causing people in the area to believe that he had been electrocuted. They used a wooden shovel handle to help pull him from the excavation and began CPR. Resuscitation efforts were not effective and Mr. F. ultimately died from an electrocution.
- The investigation of the cause of the electrical hazard revealed that Mr. F. had touched a metal pipe of other metal component of the building that was now electrically hot due to the installation of the photocell to the light fixture. The estate of Mr. F. successfully sued the involved parties and won several million dollars in damages.
- Following the awarding of damages, the involved parties all counter sued each other regarding their share of payments as it related to their involvement that created the conditions leading to the death of Mr. F. The involved parties in this suit were Company A, the operator of the site; Company C, the electrical contractor who had installed the light fixture that was reportedly the source of the electrical hazard; and Manufacturer X who had provided the non-listed light fixture. Company B was not held responsible for any of the actions and was released from the suit.

Other relevant, although not directly related facts include the following:

- Company A did not have an effective Injury and Illness Prevention Program (IIPP). During the deposition of the person responsible for implementing and overseeing the IIPP, it was determined that he was not even aware of his responsibility in this area.
- As part of the IIPP requirements, workplace inspections were required to be performed and included checklists that required that all electrical systems would be inspected and that all electrical panels would be identified as to the area served. The electrical panels did not have the required labels and there was no evidence presented in Discovery that the inspections were done.
- During Discovery, which included a site visit by all of the Experts and attorneys involved in the case, it was also noted that the electrical contractor, Company C, had installed other electrical service to areas of the site that were not compliant with applicable codes. This included supplying power via a flexible cable that ran along the ground to a Conex container that was used as a break room for site personnel. Additionally, during the course of installing the photocell, the electrician from Company C reported that he did not shut down the power at the electrical panel and did not lock it out.

So, who is responsible in this case and what should the Experts evaluate in their development of opinions and conclusions? Are all three parties, the operator of the site who originally installed the building, the electrical contractor who did the improper electrical installations, and the manufacturer of the light fixture, equally responsible? Should you assign one as overall responsible since their actions were most contributory? Should you determine a percentage of responsibility for each based on some formula?

The answer is considerably complex and the solution that ultimately prevailed in court involves the use of some basic safety concepts. Here is a short summary of how it was explained logically to a jury who reached an 11 to 1 decision in less than thirty minutes.

There were three factors that were each a substantial factor that led directly to the death of Mr. F. The presence of all three factors were all necessary to cause the death. The absence of any one factor would have prevented the electrocution of Mr. F.

1. The building was installed by Company A in November 2000. In the course of installation of the structure, the electrical system was not properly grounded. However the lack of an electrical ground did not pose a problem for several years until other factors came into play.
2. The electrical contractor, Company C, wired the new light fixture on the building in January 2006. Later a photocell was added to the then existing fixture. Sometime in the process of installing that photocell to the light fixture, the wire insulation was damaged resulting in an exposed electrical wire contacting the building. The lack of a ground wire made the circuit breaker protection ineffective so they did not trip. This resulted in parts of the building becoming energized.
3. An illegally conducted excavation conducted and supervised by Company A on September 19, 2006, placed Mr. F. in water under the building. He made contact with the water and part of the building that was energized. This caused an electrocution that proved to be fatal.
Note: Parties stipulated to a violation of 1518 (a) in the Cal-OSHA citations.

There was no liability on the part of the manufacturer of the light fixture. They were released from the case.

Now What?

What the provided background information and the case studies presented should show is that it is essential for an Expert Witness to be well versed in the process of Discovery and have an organized approach to getting the necessary information that is required to formulate strong and defensible conclusions and opinions. Remember that it is easy for two people to look at exactly the same thing and see it completely different. So having an effective strategy and process to explain what you conclude as well as how you reached those conclusions is something that will help you become successful.

Perhaps one of the most foundational aspects to being successful is also your ability to step back and see the total picture without drawing conclusions until you have reviewed all of the information that is going to be presented. It is well understood that we tend to prove ourselves right rather than proving ourselves wrong. Human nature often dictates that we see what we believe and miss seeing what is there. Two key terms come into the discussion when we look at how we see things and what we see when we look. The two terms are perspective and perception. And while they sound similar, they are clearly different.

While perspective can be defined in a number of ways, the general meaning that applies in this situation is to identify from where you are looking at the issues. Your perception of something is often dependent on where you are standing. The phrase, “one can’t see the forest for the trees” is illustrative to the fact that sometimes where we stand limits how we view what we see. From a distance, one can see both the forest and the trees. When one is too close, one only sees the trees. In this case, a successful Expert needs to step back and gain full perspective and yet have the ability to hone in to see the details of what is also present.

Perception, on the other hand, tends to be more subjective in that it is often the individual’s vision and interpretation of what is present. Many Safety Professionals have worked with Safety Perception Surveys to help see things that others see and which they see in a totally different way. Sometimes the results of these surveys cause angst among those who review them because they

just don't see things the same way and wonder how anyone could not see the situation the way that they see it. It is after all, obvious to them and so it should be seen as the same to others.

Putting these two concepts together helps the Expert in gaining a big picture view of the facts and issues related to the materials presented to them for review. Starting off with a broad perspective is a good place to begin. Then we can ensure that we don't miss something that could be an outlier that could be missed. Once we see the big picture and have everything identified in the Discovery process, we can start to sharpen our perspective down to see the details and gather the minutia that might be relevant once we step back and put the pieces together.

Much like the case study of the electrocution where a minor oversight that occurred years earlier was a major contributor to the death. One needs to look at everything from all angles including the angle of time. While it is easy to "Monday morning quarterback" once you have the luxury of time, a good Expert will take into account what perspective was in play for the involved parties at the time of the incident. We need to see things from their perspective at the time.

Once we have perspective understood, we then need to look at the concept of perception and how it played into the events at the time of the incident. Did others see things the same way that you do now? What did they see, how did they see it, and what was their interpretation of things at that time? A good Discovery process will involve considerable disclosures of information through deposition testimony of all involved parties and a good attorney will help to explore the mindset of the parties involved.

Ultimately, the Expert will be asked to consolidate the things that they have developed into conclusions and opinions. The basis for those conclusions, the facts and information that was relied upon to develop them, and all other materials that were provided and reviewed must be disclosed. And this is the point in the process where many Experts get into trouble. They formulate opinions that are not consistent with the information provided. This failure may have been caused by having a limited perception of the incident, having looked at it from only one side and not the other. Or, it might be tainted by pre-conceived notions, or the perception that the Expert holds on a personal level. In either case, the consequences will be less than favorable and the Expert will not have done the job for which they were hired.

So how can you keep from missing important information, not seeing the whole picture, or by becoming tainted due to your personal bias or perceptions of issues? One system that has proven successful is having a method of capturing all of the information that was reviewed in an organized manner and cross checking your conclusions and opinions against all of the information. Following is an example of that system which is broken into several areas or sections. It has been significantly edited both in identification of the involved parties as well as shortened.

Section A. Log

This section is used to capture key information for quick review and to track the work that you did on the case. The log should be complete and include a list of all activities that were conducted

Plaintiff Name v. Defendant(s) name
Attorney who retained you

Date/Time of Incident: 9/19/06 @ 0935

Location of the incident

\$ Hourly rate for the case

Date	Time	Work
9/7/10	0.25	Phone call to state he was hiring and would set up time to talk. Initial discussion on case.
9/9	1.25	Review of materials and phone conference regarding case and schedule.
9/16	1.0	Review of materials in preparation for phone conference.

Section B. Materials Received/Reviewed

This section identifies all of the items that were received and reviewed. It is critical that it contain lists of any items that were provided to you and items on which you relied upon for your testimony.

Batch 1: 1/22/08.

Cover letter dated 1/18/08

Cal OSHA bound packet with investigation information, documents requested/received, and citation information.

Batch 2: 7/3/08

Cover letter dated 7/1/08

Deposition of Fred Bloggs

Reviewed Materials

8 CCR, §1540. Excavations

8 CCR, §1541. General Requirements

8 CCR, §1509 (3203). Injury and Illness Prevention Program

8 CCR, §336.10. Multi-Employer Worksites

8 CCR, §336.11. Multi-Employer Worksites

8 CCR, §2500.8. Uses Not Permitted

8 CCR, §2320.4. Electrical Safety Orders – Work Procedures

8 CCR, §3314. Control of Energy

Government Code 4216 - excavations

National Electric Code (NFPA 70) 2008 Edition

Section C. Key Parties

This section is used to list the various parties involved in the case as well as their affiliation. It is helpful in deposition or trial testimony to have this available to remind yourself of the various persons involved in the case.

Person	Affiliation
Mr. F.	Deceased landscaper
Attorney A	Attorney for Mr. F.
Attorney B	Attorney for Mr. F.
Steve Smith	Electrical Expert for plaintiff.
Dr. Frank Jones	Mr. F. physician

Company A	Defendant
Steve V.	Foreman for Company A on site during incident.
Sam D.	Site Supervisor for Company A
Dan S.	Area Safety Manager
Dennis S.	Safety staff for Company A who went to site on day of incident
John S.	Attorney present at closing conference and site after incident. Also at depositions
Paul B.	Electrical expert called by Company A to review electrical system
Company C	Co-defendant
Mike S.	Electrician/owner – Company C
Ken B.	Attorney for Company C
Tom G.	Cal OSHA investigator

Section D. Notes and Information:

This section is used to take notes on what was reviewed. Some experts will highlight documents or write in the margins. If that is done, copies of all of those notes and highlights will need to be provided during the Discovery process. Using this electronic format for note taking limits the amount of materials that have to be carried to depositions etc. since the source of the materials are identified and the notes are electronic on the table.

The table has four sections as you can see. Column 1 is a numerical list that identifies the notes by number. That number is cross-referenced into Section E where the conclusions and opinions are listed.

The second column identifies the source where the information was found. This could be a specific written document such as an Injury and Illness Prevention Program (IIPP), deposition testimony that was reviewed, regulatory citations, etc.

The third column is the actual information that was found in the material. These are random notes that are taken as you review the materials. Some of these will be helpful while others are simply just facts that you wish to recall or may use later.

The fourth column refers to the conclusion/opinion number that is found in Section E.

#	Source	Information	Comments
1	IIPP for Company A	Not designed for construction activities. Does not include PRCS program or trenching safety. See list of programs on page 7.	2
2	IIPP - Reference L4 on page 13 and T1 on page 16 and H on page 12.	Facility required to be inspected regularly (monthly) in accordance with IIPP. No records provided that this was done.	2
3	IIPP – page 4	Inspection program is generic in nature and does not	2

		fully comply with requirements for a facility such as present.	
4	Facility Inspection Form – Section H8 and L4	Requires inspection to ensure all disconnects “clearly labeled and legible.” “Are electrical circuit breakers . . . identified and labeled...” Not done according to other information reviewed.	2
5	Cal-OSHA Citations	Company A was cited for numerous violations. The site was determined to be a multi-employer worksite. Citation 1, Item 1: Serious – 2340.22 (a). Failure to identify electrical circuits. Citation 2, Item 1: Serious – 1541 (h). Failure to protect employees in trenches from hazards associated with water. Citation 3, Item 1: Serious – 3385 (a). Failure to provide appropriate footwear. Citation 4, Item 1: Serious – 1518 (a). Failure to provide required protective equipment near electricity. Total citations \$38,250.	2, 3, 4
6	CO Investigation Summary	Worker in trench near a construction site trailer that contained water. Working on 1” pipe inside trench that supplied water to bathroom for trailer. The trench was approximately 4’ deep by 4’ wide (also noted as 4X3). Temporary laborer was helping. Operations were being supervised by job foreman from COMPANY A. Water was approximately 18” deep in the trench at some points. Electricity was traced back to circuit breaker #3 located inside breaker box on job trailer wall.	3, 4
7	CO Field Documentation Worksheet	9/28/06: Electrician found a faulty or improperly installed outside light fixture and removed it. Also installed a ground wire from restroom breaker panel to main breaker panel.	2, 3, 6
29	Deposition of Mr. Smith p. 108	Was not aware of the correct title of the document and referred to it as “protection program”	2
30	Deposition of Mr. Smith p114	He has no knowledge that he was responsible for the IIPP implementation.	2
31	Deposition of Mr. Smith p119	The excavation was dug by the contractor under their supervision. In effect, their employee. He was not aware of his/COMPANY A responsibility to ensure safety.	2, 3
32	Deposition of Mr. Smith p124	No knowledge of hazard assessment or conditions.	2
33	Deposition of Mr. Smith p126	Limited knowledge of records and where they are kept.	2
34	Pictures attached to Deposition of Mr. Smith	Worksite poorly maintained. Poor housekeeping, trash around, blocked eye wash station, breakers not marked, LOTO center not maintained, MSDS binder was thin, there are programs for LOTO/PRCS.	2, 5

Section E. Conclusions, Issues & Opinions

Section E is where the actual conclusions and opinions that you will provide are noted. In using the format we can see that the opinions are numbered in the first column, spelled out specifically in the second column, and the location of the note by number that was relied upon to form that conclusion or opinion is listed in the final column. By doing this, you have a linkage to the actual items that you used to formulate the conclusions and opinions and can easily answer questions during deposition or trial testimony. Additionally, declarations and reports are much easier to develop using this cross-check system.

If called on to testify I expect to discuss the following areas and offer the following opinions:

#	Item	Note #
1	The site was a multi-employer worksite. Company A was listed as the Controlling Employer with the overall responsibility for H&S on the site by Cal-OSHA. Additionally, Company A was the Creating and Correcting Employer based on the operations involved in creating the hazard and in correcting it once it was identified.	5, 8, 9
2	<p>The Company A safety programs and safety systems at the site were limited in scope, poorly implemented, and did not adequately address all of the site hazards. Much of it was focused on vehicle operations as noted and testified to by various persons. There was also limited involvement of safety professionals to supplement the site personnel who did not know their safety responsibilities nor were qualified to perform them. This relates to the training that was provided, the lack of required inspections, the lack of understanding of the organization's IIPP by personnel, the general condition of the site as observed and noted by others, and to the lack of follow up with personnel involved following the incident.</p> <p>Failure of the safety programs at the site contributed to creating conditions that led to the incident. This includes the fact that the required inspections of the electrical systems on the site were not conducted as mandated by COMPANY A's own documents and IIPP.</p>	1, 2, 3, 4, 5, 7, 14, 15, 16, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 39, 41, 42, 44, 52, 53, 57, 58, 60, 63, 64, 68, 69, 73, 77, 80, 81, 87
3	<p>A hazard was created by the site employer (COMPANY A) that exposed another employee to a condition that they would not reasonably be expected to be aware of, that they would not readily recognize, and from which they were not protected. That hazard was electricity likely due to a defective and non-compliant electrical system in the restroom building.</p> <p>The restroom building at the site was not installed in compliance with applicable Codes and regulations as is required. The permits for the installation were applied for months after the building was placed onto the site and only after being required by a City Inspector. The actual permit applications that I reviewed referenced only light fixtures. The only reference to the electrical panel installation was found on a map. There was no evidence provided that the permits were ever approved.</p> <p>Based on considerable testimony, that system was not properly installed in that it was not provided with the required electrical ground and may have had other related issues such as a defective installation of an electric light</p>	5, 6, 7, 8, 9, 10, 11, 12, 18, 19, 20, 21, 22, 26, 31, 56, 62, 63, 64, 68, 70, 71, 73, 77, 79, 81, 82, 93, 94

	<p>fixture that was later discovered following the incident. Additionally, it is unclear if the required electrical permits were ever obtained and closed.</p> <p>Failure to properly install and maintain the site in a compliant manner resulted in COMPANY A becoming the Creating and Correcting employer under the multi-employer worksite regulations/system. Had they maintained the appropriate level of protection related to the electrical installation, the incident would not have occurred.</p>	
4	<p>The excavation at the site that was performed on the day of the incident should have been conducted in compliance with 8 CCR, §1541. While they were not required to call USA before digging, as the Controlling Employer at the site, COMPANY A, did have an obligation to ensure the safety of all employees engaged in that operation including those involved on the multi-employer worksite.</p> <p>There was conflicting testimony related to whether the electrical power was ever turned off prior to the work being performed. Likely it was not. Regardless, to safely excavate in the area should have required a review of the electrical hazards in the area and should have included opening the breakers for the subpanel at the main panel, thus eliminating the potential for wires to be hit during the excavation.</p> <p>COMPANY A failed in their duty to protect workers, including their own, engaged in excavation activities at the multi-employer worksite. Additionally, those involved in the project did not have the proper training as required for this type of work. There were no trained personnel conducting the work nor was there a Competent Person to oversee the work as required.</p>	5, 6, 8, 9, 10, 11, 12, 13, 18, 19, 25, 36, 39, 40, 46, 66, 89
5	<p>The electrical work performed by Company C at the site in areas other than the restroom was not done in compliance with applicable Code requirements for the type of work performed. This includes both the installation activities as well as the final work product. Two examples are noted:</p> <ol style="list-style-type: none"> 1. The installation of the flexible cord that was used to provide power to an area where a storage container/lunch room was present did not comply with the requirements for such an installation. In fact, the NEC prohibits the use of such cords for this application and requires permanent wiring to be used. This work was done by Company C as noted by his invoices and testimony that I reviewed. The cord was also still present during the site walk through that I attended so it was not a temporary installation and should never have been used. 2. In the course of installing the light fixture, no Energy Control (Lock Out/Tag Out) procedures were used as required by §3314 and others. This would have required him to go to the panel, identify the circuit providing power, open the circuit breaker, apply a lock and tag, and verify that the procedures had in fact removed the energy from the area of the work. This is a basic requirement that should be known by all personnel engaged in electrical work of this type. Failure to follow LOTO procedures is often a 	14, 15, 16, 34, 55, 57, 97, 101, Invoices found in deposition of Davis

	sign of hurrying and/or taking short cuts.	
6	<p>The electrical work performed by Company C to install the light fixture and/or the photocell likely contributed to creating the electrical hazard that ultimately led to the death of Mr. Fuentes. His workmanship likely created power to be fed into the building that was not grounded causing a condition that in combination with other factors previously listed (water, excavation operations, lack of PPE) provided the electricity to be present near the excavation.</p> <p>The source of the electrical fault was likely the light fixture based on direct evidence of arcing and the lack of other electrical problems. The GFCI units in the restroom were checked the following day by an electrical expert and found to be operating normally.</p> <p>Based on this, Company C would have also been a Creating Employer and Correcting Employer at this multi-employer worksite. The hazards created by Company C most likely contributed to the conditions that lead to the death that occurred.</p>	7, 8, 9, 20, 21, 47, 74, 75, 77, 91, 93, 94, 98
X	<p>The incident was a direct result of three factors, all of which had to be present in order for the death to occur. Other factors that were also present and were also contributory to the death of Mr. F. Examples of those that were contributory included:</p> <ol style="list-style-type: none"> 1. COMPANY A did not have an effective IIPP. It was more designed for construction activities and did not address issues related to the operation of the facility as required. (Parties stipulated to a violation of failure to inspect electrical as evidence.) 2. The person listed as being responsible (Mr. Smith) for implementing the IIPP was not aware of his responsibilities and likely did not carry them out. 3. Other non-compliant electrical issues existed at the site at the time or after the incident. 4. Company C installed non-compliant electrical service to other areas of the site including the Conex and did not follow required procedures for protection during the installation of the light on the restroom. 5. Company C did not have records of employees who may have worked with him in his business and was not sure if they were electricians. 6. Permits to install the building were not obtained prior to starting the installation as required. Permits were requested but may never have been closed out. <p>The three factors that were each a substantial factor that led directly to the death are:</p> <ol style="list-style-type: none"> 4. The building was installed by COMPANY A in 11/00. In the course of installation of the structure, the electrical system was not 	<p>1-5, 26-30, 32-34, 39, 41, 42, 53, 58</p> <p>28-30, 32</p> <p>14-16, 22, 35</p> <p>14-16, 55, 57, 96, 97</p> <p>96, 97</p> <p>60, 63, 68, 69</p> <p>7, 21, 62-64, 68, 70, 71, 73, 75, 79,</p>

	<p>properly grounded. The lack of a ground did not pose a problem for several years until other factors came into play.</p> <p>5. Company C wired the new light fixture on the building in 1/06. Later a photocell was added to the then-existing fixture. Sometime in the process of installing that photocell to the light fixture, an exposed electrical wire made contact with the building. The lack of a ground wire made the circuit breaker protection ineffective so they did not trip. This resulted in parts of the building becoming energized.</p> <p>6. An illegally conducted excavation conducted and supervised by COMPANY A on 9/19/06 placed Mr. F. in water under the building. He made contact with the water and part of the building that was energized. This caused an electrocution that proved to be fatal. Note: Parties stipulated to a violation of 1518 (a) in CO citations.</p>	<p>81, 82, 94, 98</p> <p>21, 77, 84, 85, 91, 94, 96, 99,</p> <p>5, 6, 8-13, 18, 24, 25, 31, 36, 37, 40, 45, 46,</p>
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Summary and Conclusion:

The role of the Expert Witness in either criminal or civil litigation is an important one. Unlike the percipient witness who can only testify as to what they actually observed or heard, the Expert has considerable flexibility in that they can offer conclusions and render opinions based on hypothetical questions and a review of materials that was presented to them. Because of this increased latitude, there are significant rules that apply including the need to document all information that was reviewed, identify the basis of the opinions, and produce all notes and materials in the process of Discovery or during deposition testimony.

In order to be effective, a good Expert will develop systems that can be used to keep the materials that they follow organized and in a manner that will help them form their opinions. The two case studies that were provided show examples of a simple and a complex case. In simple cases, an Expert could rely on their memory and likely get by. However, as the complex case study pointed out, cases with multiple parties, multiple events, and complicated causes that lead to the incident demand that we develop a system that can organize the volumes of information that is received.

An example of a system that has proven to be effective was presented. The system helps the Expert to organize the work into sections which include a log of activities conducted, a listing of materials received or reviewed, a listing of the involved parties including names of attorneys for each party, a section where notes are listed that may be relevant to the case with a cross listing of where the information was located, and finally a section that identifies the areas of conclusions and opinions that will be expounded in deposition or trial. Using an organized system has shown to be effective in providing the professional level of testimony that is required for a successful Expert Witness.