eBook

Lighting Up Your Subrogation Investigation

Recovering Following Lighting System Fires at Marijuana Grow Facilities

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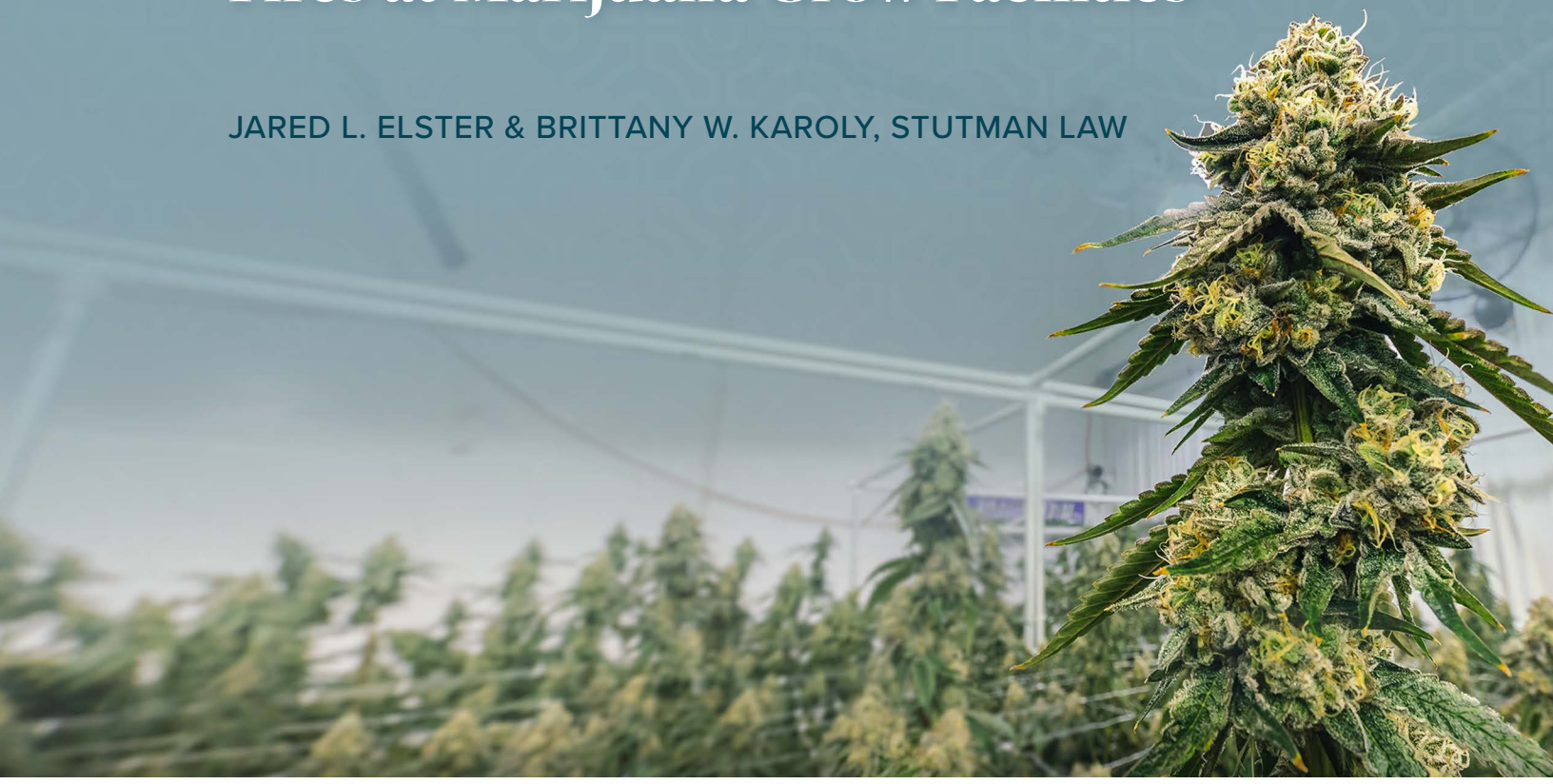

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Over the course of the last decade, an increasing number of states have legalized the manufacture, distribution and sale of marijuana in at least some form. As of early 2022, at least 37 states permit the use of marijuana for medical purposes, and 18 have legalized marijuana for non-medical use. Federal legislation has also been introduced to decriminalize use of marijuana at the federal level.[1] The evolving laws concerning marijuana use have resulted in a booming market for marijuana products and a lucrative industry involved with growing and distributing marijuana.

Large greenhouses and indoor grow facilities with sophisticated lighting systems are utilized to meet the continually increasing demand for marijuana products in states where marijuana has been legalized. Unfortunately, the lighting systems included within these facilities have a tendency to fail and cause fires. Lighting failures may lead to property damage, including damage to the facilities themselves, machinery utilized in the course of grow operations, and ruined marijuana plants. In this vein, fires at grow facilities can lead to large insurance claims. If investigated properly, these losses may also lead to sizable subrogation recoveries.

1. See, https://www.cnet.com/news/politics/legal-weed-what-do-new-federal-marijuana-laws-mean/ and https://www.usnews.com/news/politics/articles/2022-04-01/house-passes-bill-to-decriminalize-marijuana. The Marijuana Opportunity Reinvestment and Expungement Act (known as the "MORE" Act) passed in the United States Senate in April 2022.

LIGHTING SYSTEMS AT MARIJUANA GROW FACILITIES: TRADITIONAL TECHNOLOGIES, WITH A TWIST

At the outset, it should be noted that the types of lighting systems and components used in modern marijuana growing facilities are not necessarily new. A number of similarities exist between the types of lighting systems used in grow facilities and other common lighting systems, including but not limited to, the metal halide systems that have regularly failed – and led to many subrogation recoveries – for decades. What is new is the end-use application for these lighting systems and recent trends in how investigators are seeing these systems fail.

One positive difference when it comes to investigating losses caused by lighting systems at grow facilities, as opposed to other types of lighting failures, stems from the unique way marijuana grow facilities tend to be created. When constructing a new facility, the owner/operator often purchases a package service. Consequently, lighting components – including lamps/bulbs, sockets and controllers – are often labeled with the same brand name, and/or come from the same manufacturer or distributor. The packages are also typically installed by a single electrician who handles all of the onsite connections. This is beneficial from a subrogation standpoint as it considerably narrows the list of potential subrogation targets. By contrast, in a typical warehouse fire caused by a failure in a metal halide light, a thorough subrogation analysis may require the investigation of different manufacturers and distributors for light bulbs, fixtures, fixture covers and controllers.

COMPONENTS OF GROW FACILITY LIGHTING SYSTEMS

When investigating a fire involving the lighting system at a marijuana grow facility, there are three main categories of items that are of particular interest: the control system (also known as the controller), lamps and containment barriers.

1. The Control System

Marijuana growers strive to provide optimal conditions for photosynthesis and growth to occur. This may involve, among other things, varying the facilities' lighting conditions. A control system, which is essentially a computer, is used to interact with the ballasts on a large number of lights in a facility. The control system may be used to dim lights, set lighting schedules or rotate lighting settings to optimize plant growth. The control system should be inspected, and potentially collected and preserved, from a fire scene even if investigators do not believe it caused a fire. The control system may contain critical data regarding the lighting schedules and routines at the facility at the time of the fire, which may prove helpful during the investigation.

Controllers are used to manipulate lighting conditions and may contain historical data regarding the lighting cycles and routines at a facility.

2. Lamps

The light bulbs utilized in a grow facility lighting system are typically referred to as lamps. At their center, each of these lamps contain an arc tube made of a quartz or ceramic material. Electrodes are located on either end of the lamps. Some of the lamps screw into a fixture similar to a residential light bulb. Others have wire terminals on each end, allowing the bulbs to slide into a contact prior to operation. Lamps vary in size from 8"- 12" long.

The two most common lamp designs differ in the way the bulbs are attached to the fixtures.

3. Containment Barriers

Containment barriers are lighting system components that are intended to prevent hot quartz or ceramic from cascading down and igniting nearby combustibles in the event of an explosion or non-passive failure within the lamp. Underwriters Laboratories ("UL") requires the existence of containment barriers on the types of lamps utilized at grow facilities.

COMMON FAILURE MODES INVOLVING GROW FACILITY LIGHTING SYSTEMS

When a lighting system causes a fire, there are three main failure modes to consider and investigate: non-passive arc tube failures, connection failures and ballast failures.

1. Non-Passive Arc Tube Failures

A byproduct of the production of light is the production of heat, and excessive heat within a lamp may cause its arc tube to shatter or burst. This phenomenon is known as a non-passive arc tube failure. Typically, fires involving non-passive arc tube failures occur when arc tubes explode and hot quartz or ceramic lands on and ignites nearby combustibles. Common combustibles in grow facilities include hydroponic tables or pots, both of which are often made of or contain plastic, and the marijuana plants themselves.

Shattered arc tube following a non-passive arc tube failure

2. Connection Failures

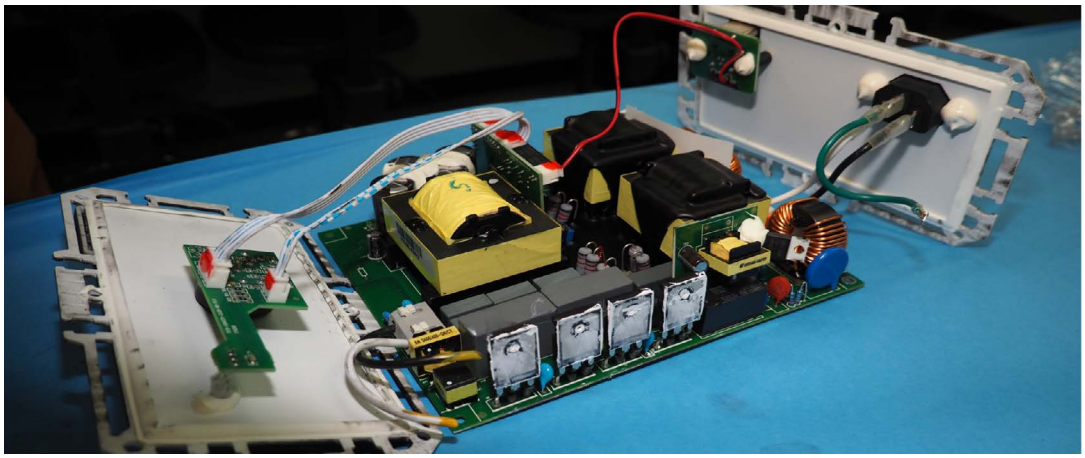
As noted above, many lamp designs involve wire terminals that connect into a fixture. With such a design, the lamp installer must ensure that the terminals are securely and correctly fitted, otherwise heat at the connection point may ignite a fire. When a fire is caused by a connection failure, the connection generally shows evidence of electrical arcing.

Wire Connection

Wire connection that has been properly secured

3. Ballast Failures

Ballasts are critical with respect to the operation and functionality of lighting systems. Responsible for distributing energy throughout the lamps, ballasts generally include circuit boards, transformers and other electronics enclosed within aluminum casing. These electronic components are capable of malfunctioning and causing fires.



Interior view of a ballast

When investigating a potential ballast failure, it is critical to determine whether the ballast was compatible and appropriate for the lamp it was being used with prior to the fire. It is also important to determine whether the ballast was being operated within the manufacturer's specifications. Collecting and examining exemplar ballasts is helpful with respect to both tasks.

SUBROGATION CONSIDERATIONS

In every subrogation investigation, the loss scene must be preserved and potentially responsible parties must be placed on notice of the loss. When losses involve fires caused by lighting failures at grow facilities, these general principles still hold true. However, in order to ensure the proper parties are notified, understanding the possible failure modes and ignition sources is critical. Retaining a knowledgeable expert who is prepared to thoroughly investigate the fire is essential to these tasks.

1. Notifying Appropriate Parties

Parties who should be quickly notified of a lighting fire at a grow facility would typically include product manufacturers, installers and those responsible for the lighting system's maintenance.

In some circumstances, the owner/operator of a grow facility should also be given formal legal notice of a potential subrogation claim. Such circumstances include exposure cases, where a neighboring property is damaged following a fire that started at a grow facility, as well as situations where a building owner leases property to the owner/operator of a grow facility and the building is damaged as a result of a fire.

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In any case, it is important to understand how marijuana grow facilities should operate in order to explore whether the facility bears some culpability for the cause of the fire. Even when the insured is the grow facility itself, and thus is not a target requiring notice of a potential subrogation claim, determining whether the facility operated consistent with industry standards of care is relevant to evaluating the facility's comparative fault or contributory negligence, issues that a sophisticated product manufacturer will undoubtedly raise in the event that litigation is filed.

2. Collecting Electronic Data and Witness Statements

The preservation of data, including lighting schedules and video footage, is critical in losses at grow facilities. Although surveillance video in any type of warehouse is becoming more common, it is practically a given that grow facilities will be equipped with comprehensive surveillance systems. Video footage can help investigators piece together a timeline of the relevant events; provide key evidence about where a fire originated; and assist in ruling out potential causes.

Video footage and other data should obviously be preserved from the date of the fire, but it is also important to obtain and save footage and other data, including lighting schedule information, which pertain to conditions within the facility before the fire. Pre-fire video footage and control system data can provide helpful information regarding how the lights were cycled, whether they were ever turned off, and/or whether they may have been impacted by any other parts of the growing operation, such as water.

Another important aspect of data collection and the preservation of nontangible evidence involves obtaining detailed witness statements shortly after the fire. If a facility is badly damaged so that it will be out of business for an extended period of time, many of the facility workers may move on to other employment opportunities and be difficult to locate and speak with later. Consequently, it is imperative to get all witness' statements as soon as possible after the fire, as well detailed contact information in case deposition or trial testimony becomes necessary at a later date.

...data collection and the preservation of nontangible evidence involves obtaining detailed witness statements shortly after the fire

3. Collection, Preservation and Analysis of Physical Artifacts

The next steps in a successful subrogation investigation involve inspection of the loss scene, collection of artifacts and then a laboratory examination. Beginning with the scene inspection, subrogation professionals and experts must ensure that all relevant evidence is collected.

Relevant evidence includes not only what investigators believe may have caused the fire, or contributed to the cause of a fire, but also exemplars and other items that need to be ruled out as having caused or contributed to the cause of the fire.

A Note on Exemplars

Exemplars of lighting system components are particularly important because the commonly employed lighting systems in grow facilities are continually changing. The best opportunity to obtain an exemplar component is from the same facility where the fire occurred. This prevents a problem that could arise months or years after the fire, where investigators want to perform testing on an exemplar and find that a particular bulb or fixture is no longer readily available.

Unique challenges arise with respect to the collection of evidence at grow facilities due to the nature of the products grown and stored there. Large fire scenes are often investigated – and evidence is collected – using a grid system. When "gridding" a scene, all debris within a particular grid area is collected and retained for future examination in a laboratory setting. Evidence is often transported from a loss scene to a storage facility, and then potentially to a lab for examination, before being sent back to the storage facility. Sometimes the loss location, storage facilities and/or laboratories are located in different states.

The complication with respect to debris from grow facilities is that marijuana plants – or the remnants of marijuana plants – are commonly included within the fire debris that investigators may want to collect, store and then analyze. State laws regarding the possession of marijuana vary. Consequently, prior to collecting and transporting marijuana plants, even damaged marijuana plants, investigators and subrogation professionals should educate themselves on state laws regarding the possession of marijuana for any state where the debris may be transported or stored. Varying state laws may influence decisions regarding the retention of experts, labs or evidence storage companies.

CONCLUSION

EXECUTING A SUBROGATION STRATEGY

Although fires caused by lighting systems in marijuana grow facilities are similar to those experienced in other commercial and industrial applications, the lighting systems in grow facilities tend to be more complex and the technologies are continually evolving. Moreover, different considerations exist with respect to evidence and data collection, evidence retention, investigative practices, and even the legal landscapes affecting grow facilities. Given the foregoing, employing an effective subrogation strategy after a fire at a marijuana grow facility requires subrogation professionals and experts to stay up to date on legal and technological changes within the industry.

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