
FIVE UNFORESEEN CONSEQUENCES OF FIRE IN YOUR COMPANY



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FIVE UNFORESEEN CONSEQUENCES OF FIRE IN YOUR COMPANY

A FALSE SENSE OF SAFETY

The consequences of a fire incident in your company can be devastating. Both people and property can be at risk when a fire occurs. The cost related to fire can reach unforeseen heights and sometimes a fire could even mean end of business.

Despite the importance placed on fire safety today, business owners are often convinced that a fire is unlikely to happen in their company. Arising from a false sense of safety, they place themselves at risk by failing to understand the seriousness of not having a fire safety plan that is adequate and sufficient to protect their business and employees.

When we think of the consequences of fire, the first things that come into mind are human casualties and fire damage. Indeed, these will always be the priorities of fire safety. However, there is much more at stake than that. Company owners are often confronted with a number of unexpected costs that come with a fire incident and that pose a serious threat to the continuity of their business.

In this eBook, **we discuss five important, yet often overlooked consequences of a fire incident in your company.**



FIVE UNFORESEEN CONSEQUENCES OF FIRE IN YOUR COMPANY

1/ SMOKE AND WATER DAMAGE

Fire is potentially the most damaging and disruptive event that any business can face. Fire can destroy all of your company's valuable property and assets on its way. But a more common danger is around another corner: smoke and water damage.

SMOKE DAMAGE

You don't always need a high-rise fire to have a lot of damage. Smoke is already the major cause of damage to buildings. Smoke contains carbon monoxide, carbon dioxide, soot, and – depending on what is burning – other harmful chemicals, such as hydrogen cyanide, hydrogen chloride, isocyanates and carcinogenic compounds such as benzene and dioxins.

The fire heat will push the soot, the by-product of incomplete combustion, forward and cover everything in its path. Due to the acidic nature of smoke, it can cause most metals to degrade over time, if the soot is not removed in time. Smoke can also damage electronics, machinery or any type of specialty equipment, when they get covered by a smoke film. Even light smoke damage has the capability to short out electronics by bridging circuits and providing an insulating covering on the heat producing components making them prone to extreme overheating which eventually can lead to pre-mature failure.

WATER DAMAGE

Water is the most common weapon for firefighters. Also, sprinkler systems are very effective to combat fires fast and to save lives. However, during and after a fire incident, a lot of water can be used which will accumulate on the company floor, causing inevitable water damage to your assets. This is not to say that sprinklers are a bad investment. Fire sprinklers usually use much less water compared to firefighters, so they create less water damage. In addition, they spring into action the moment a fire erupts, meaning that there will be less fire damage.

2/ LOST BUSINESS

A major fire incident at a business premises cannot only cause a lot of physical damage, it can also bring your business to a standstill, leading to major profit loss. However, there are various degrees of business loss your company can suffer.

TEMPORARY PRODUCTION STOPS

Depending on the size and nature of the business, it can be several months before your company can get back on track. Apart from the decreased revenue a company is facing, this is usually a period of great financial stress, as fixed expenses, such as rent, remuneration of employees, etc. continue to accumulate regardless of the extent of damage and production loss.

PRODUCTION STOP OF CRITICAL RAW MATERIALS

A fire incident at one company can quickly have a larger-scale economic impact. When critical production units are hit by an incident, this may result in problems with the supply chain, increased prices of raw materials or even in the unavailability of certain products.

For example, a small share of the total number of production lines in a plant manufacturing pharmaceutical products may generate a very large proportion of total gross profits. Natural raw materials may be irreplaceable or out of season, creating another source of delay in recovery or another obstacle to meeting demand during the recovery. Specialized plant equipment may involve long delays for replacement. Loss of laboratory facilities may seriously interrupt testing and quality control programs.



CASE

FIRE INCIDENT LEADS TO INCREASED PRICES OF RAW MATERIALS

In October 2016, **BASF** halted production at 20 manufacturing plants at its site in Ludwigshafen, Germany, after an explosion and fire damaged pipelines used to transport the chemical intermediates ethylene and propylene. BASF's Ludwigshafen site is their largest chemical plant and by their declaration of force majeure, there were significant ramifications for the chemical industry. In a notice published October 19, 2016, BASF formally declared force majeure on deliveries of all their acrylic monomers, including the following:

- Glacial Acrylic Acid
- Butyl Acrylate
- Ethyl Acrylate
- 2-Ethylhexyl Acrylate
- Glacial Methacrylic Acid
- Methacrylic Acid Technical Grade

BASF noted that there would be great impacts on logistics and raw material availability as a result of this accident.

This fire incident, in combination with a number of other factors, including increased market demand, caused increasing price pressure on certain raw materials. For example, in the insulation market, this led to increased prices for MDI, an essential component of certain insulation products, and to the unavailability of other insulation products in 2017.

STOP OR MOVE OF A PRODUCTION SITE

Sometimes, a fire incident forces a company to shut down an entire production facility. Costs associated with moving, temporary accommodation and lost profit, can quickly amount to high numbers. In some cases, a competitor may seize the opportunity to enter the market and respond to the existing product demand.

CASE

LOTUS BAKERIES LOSES FACTORY AFTER FIRE INCIDENT

On June 3, 2015, a fire broke out at the waffle production factory of Lotus Bakeries in Wolvertem, Belgium. The fire resulted in the collective redundancy of 71 people. Fortunately, the factory was evacuated and no casualties were reported.

The fire on June 3 completely destroyed the waffle factory in Wolvertem. After the incident, the top management explored several ways to restore the production level, but they ultimately decided not to rebuild the factory. The management also decided to transfer the produced volumes to another Lotus factory in Courcelles, Belgium.



BANKRUPTCY

Fire incidents also have an effect on company staff. They can be temporarily unemployed, even lose their jobs, and in worst case, the company can go bankrupt. A short internet search for the number of bankruptcies after an incident delivers a lot of unverified statistics. A frequently cited statistic is that 80% of businesses will fail after a fire incident within a two-year period. Suffice it to say that the risk of bankruptcy is real, and that it might result from a variety of factors, including asset loss, business loss, and loss of critical data (see below).



3/ LOSS OF CRITICAL DATA

After the fire, your business needs to begin the process of recovery. Physical materials are usually easy to replace. But one of the things that is often overlooked in this stage is the possible loss and recovery of sensitive or critical company data.

Personal computers, hard drives and servers can be all be damaged by fire or water. Sometimes, they contain data that is critical the day-to-day operations of your business. Smart company owners will have anticipated a fire incident by backing up their critical information to a remote location. However, most people and businesses backup their data at the same location, never even expecting a fire. As a result, these computer systems and backups are subject to loss.

4/ REPUTATIONAL DAMAGE

A large part of a company's market value comes from intangible assets such as brand equity, intellectual capital, and goodwill. In other words: one of the most important assets a company can have is its reputation.

If that company's good reputation is reported and made known in the media and on the internet, it can lead to more customer inquiries, more sales and higher profits. However, a reputation is hard to build, but easy to lose. When disaster strikes, the whole world is watching, be it in the traditional media or on today's increasingly populated social media channels.

CASE

TEXAS CITY REFINERY FIRE DAMAGES BRAND IMAGE

On March 23, 2005, a hydrocarbon vapor cloud was ignited and violently exploded at the ISOM isomerization process unit at BP's Texas City refinery in Texas City, Texas, killing 15 workers, injuring more than 180 others and severely damaging the refinery.

Given the extent of the disaster, the U.S. Chemical Safety Board (CSB) examined both the safety management in the Texas City refinery and the role of the BP Group as well as the role of the Occupational Safety and Health Administration (OSHA) as a regulatory body.

The CSB report found that BP had failed to implement safety recommendations made before the blast. The company was charged with criminal violations of federal environmental laws, and was named in lawsuits from the victims' families. All of this was widely reported in the new and traditional media.



A fire incident in and of itself will not necessarily damage a reputation. More important is the way a company deals with a fire incident afterwards, as well as to what extent a company takes all reasonable steps to ensure the safety of the people in the building for which they are responsible.

CASE

BANGLADESH FACTORY FIRE CHALLENGES CLOTHING BRANDS

In November 2012, a fire broke out in the Tazreen Fashion factory in the Ashulia district on the outskirts of Dhaka, Bangladesh. At least 117 people were confirmed dead in the fire, and over 200 were injured, making it the deadliest factory fire in the nation's history. The factory produced T-shirts, polo shirts and jackets for various famous retailer brands.

This and other incidents in Bangladeshi retail factories revealed various safety violations that the contracting retailer companies failed to address. The various clothing brands involved with the Tazreen Fashion factory responded in different ways to the incident, ranging from acknowledgment and a promise for compensation, to a denial of involvement. The incident's aftermath was widely reported in the media, on the internet and in the ubiquitous social media.

5/ ECOLOGICAL DAMAGE

A fire event can have a serious impact on the natural environment as well. Not only does fire emit carbon already, a fire can also lead to non-carbon contamination of the air, water supply and soils.

A fire plume can contain contaminants from the contents of the building. Many new building products are made from synthetic plastics and polymers, which are more flammable than their natural predecessors and release harmful agents during a fire. Contamination of the soil and water can occur from the products of combustion in the fire plume.

Lastly, contamination of the water supply in an area can occur as a result of runoff from fire suppression methods (i.e. sprinklers, firefighting techniques) which can contain toxic byproducts of the fire.



CASE

FIRE IN SANDOZ CHEMICAL WAREHOUSE RESULTS IN ENVIRONMENTAL DISASTER

The Sandoz agrochemical warehouse in Basel, Switzerland stored insecticides, fungicides, and chemical dyes. In November 1st, 1986, a fire broke out for which the cause was never found. Since the fire was too large to extinguish with foam, the firefighting teams were forced to use water from the nearby Rhine river. Firefighters used approximately 105 gallons (400L) per second of water to extinguish the fire over several hours.

The water used to extinguish the Sandoz chemical warehouse fire resulted in large quantities of water drainage back into the Rhine river. The quantity of fire-water runoff into the Rhine river was not exceptionally large; however, due to the nature of the toxins burning within the building, all aquatic wildlife downstream was destroyed in the vicinity as well as several miles downriver. The environment only recovered after more than ten years.

The Sandoz fire is considered to be one of the greatest man-made chemical disasters in Europe to date.

INVESTING IN FIRE SAFETY

Company owners have a lot to lose from a fire incident. As devastating as a fire can be for your business, there are always unexpected costs that are not taken into account, but nevertheless pose a serious threat to the continuity of your business.

In this eBook, we have demonstrated that a false sense of safety can be dangerous. A first step in taking fire safety serious, is to carry out an assessment of the risk of fire in your company and of the precautions you already have in place. A risk analysis helps you identify the fire hazards and people at risk and enables you to remove or reduce the risk where possible.

A fire risk assessment will also serve as the basis to further determine what your company needs in terms of:

- Fire or smoke **detection** and warning **systems**.
- **Firefighting** equipment
- An **emergency/evacuation plan**: This includes an exit plan and fire safety scenarios, taking into account the several escape routes, emergency doors and emergency lighting, and training for all employees so they know how to use the escape routes.
- Training: Staff needs to be **educated** about the possible fire risks in the company and **trained** on the proper use of the fire detection and firefighting material.





ABOUT ARAANI

Founded in 2014, Araani is a Belgian high-tech company, specialized in video analytics for people, property and process protection. Araani is the developer of SmokeCatcher, the company's advanced video smoke detection solution that has been designed to guarantee business continuity and fire safety for companies that operate in critical and demanding environments.

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