



UNDERSTANDING THE HAZARD

Idle, vacant or strikebound facilities

Human element



Vacant and idle buildings are valuable corporate assets, but too often are not treated as such. Consequently, they are easily targeted by arsonists, vandals, and thieves, and are also vulnerable to weather-related events. If proper attention is not given to these buildings, they will likely be lost or deteriorate beyond practical use.

UTH topic categories

- Construction
- Equipment
- Fire protection
- Human element
- Natural hazards
- Process hazards

This series of publications is designed to help you understand the everyday hazards present at your company's facilities. For more information on how you can better understand the risks your business and operations face every day, contact FM.

The hazard

There are many reasons for buildings to be shut down, locked up, abandoned, or simply have their staffing significantly reduced. Regardless of the reason, however, all such buildings have an increased risk of property loss.

Plumbing systems can leak unnoticed for extended periods of time, resulting in damage to the building and its contents. Lack of adequate security measures can increase the risk of theft and unauthorized access to the building. Contractors using torches to remove equipment are less likely to take adequate hot work precautions. Disgruntled employees or vandals may start fires in combustible debris. A small fire that would have been controlled by the building's automatic sprinklers during normal operations may spread throughout the building because the system was shut off to keep pipes from freezing. Or a fire protection control valve may have been closed by mistake and not noticed due to a lack of regular inspection, testing, and maintenance.

Science of the hazard

Actually, there isn't a great deal of science involved. A building is situated on your property. The building may contain inventory, spare parts, equipment, or even entire idled production lines or other revenue-generating equipment you hope to reactivate in the future. The building may get a cursory glance every few hours when security drives by, but it isn't being carefully monitored—despite the valuable assets inside. This situation makes the building extremely vulnerable and provides ill-wishers an easy target.

In addition, weather such as wind, freeze, flood, and surface water can damage an unoccupied building. Other, smaller problems that would be noticed and addressed if the building was occupied can turn into major issues over time. In general, these buildings are not maintained the same as occupied facilities. More often than not, an idle facility is simply ignored.



In the event of emergency, valuable time may be lost while the fire service searches for this connection hidden beneath overgrown vegetation.

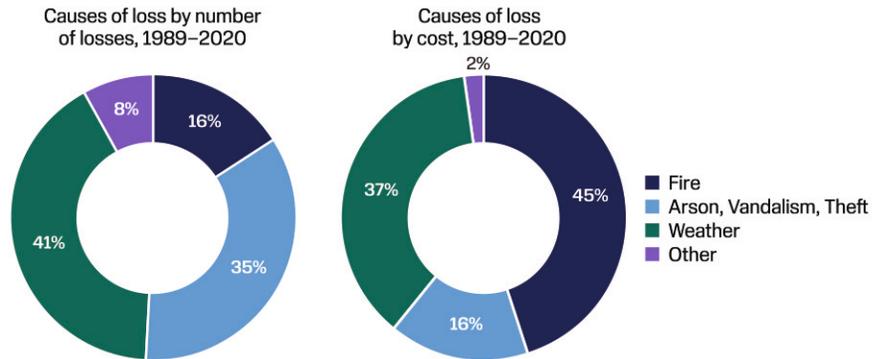
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What you can do at your facility

- Keep sprinkler systems in operation, including an inspect-and-test program.
- Adopt a robust preventive maintenance program for liquid damage exposure from building plumbing and roof systems.
- Remove unnecessary combustible material both inside and outside, and keep vegetation trimmed.
- Remove ignitable liquids and turn off utilities, if not needed.
- Monitor hot work operations.
- Inform the public fire service of the building's vacant condition, and provide them with access if necessary.
- Make sure the building is secure to deter arsonists or vagrants.
- Maintain adequate protective interior and exterior lighting.
- Maintain security from remote cameras or a surveillance service.
- Maintain the building heat at no lower than 40°F (4.5°C).
- For buildings subject to humid conditions, set and maintain heating, ventilation, and air conditioning (HVAC) systems to prevent the growth of mold.
- Notify FM if you have any idle, vacant, or strikebound buildings.

Loss experience

A review of FM client losses involving idle and vacant buildings from 1989 to 2020 shows that non-arson-related fire accounted for 16% of the losses by number, but 45% by cost. Conversely, arson, vandalism, and theft caused 35% of the losses by number, but were responsible for only 16% of the loss cost.



Source: FM clients



Until this idle facility is purchased or leased, it is a prime target for arson and vandalism.

Loss examples

At an idle food-processing plant, sparks from a demolition contractor's torch fell through holes in the third floor and ignited plastic bag storage on the unsprinklered second floor. By the time the contractor's employees reached the second floor, fire had already started along the wall behind the plastic bags. The fire spread, and by the time it was put out, the loss cost was approximately US\$4.3 million (indexed to 2020 values).

Another fire took place at an idle manufacturing facility. Discovery of the fire was delayed because power to operate a supervised proprietary water-flow alarm system had been shut off weeks before. Arson was the suspected cause of this fire that severely damaged the 87,225-ft² (8,103-m²) building. The loss cost was approximately US\$7.3 million (indexed to 2020 values).

Related FM resources

FM PROPERTY LOSS PREVENTION DATA SHEETS

- 1-24, *Protection Against Liquid Damage in Light-Hazard Occupancies*
- 9-1, *Supervision of Property*
- 10-3, *Hot Work Management*
- 10-6, *Protection Against Arson and Other Incendiary Fires*

OTHER FM PUBLICATIONS

- *Reducing the Arson Threat* (P7721)
- *Hot Work Permit System Wall Hanger* (P9311)
- *Controlling the Shut-Valve Hazard* (P7133)
- *Red Tag Permit System Wall Hanger* (P7427)
- *Protecting Your Facilities from Wind Storms* (P0101)
- *Freeze-Up Checklist* (P9521)
- *Pandemic Property Loss Prevention Checklist* (W152550)

But what about...

...draining the sprinkler system instead of paying to heat the building?

A wet sprinkler system should never be drained without speaking to your FM engineer first. If you are in a freeze-prone area, the best option is to maintain a building temperature of 40°F (4.5°C) throughout the winter. Another option is to leave the sprinkler system pressurized and monitor the temperature carefully. Bring in safe, portable heaters if the temperature drops below 40°F (4.5°C). Be sure to follow all FM publications on the prevention of freeze-ups (see sidebar for list).

...the lack of available staff? We don't have enough people to properly monitor our idle buildings.

If you do not have a security service, at a minimum you should appoint maintenance staff to check (on a weekly basis) that sprinkler control valves are locked open, and (on a daily basis) that doors and windows are locked shut. During the winter months, the interior temperature should be checked frequently to ensure it is above 40°F (4.5°C) both during the day and at night. If you use a security service, require them to conduct these minimum checks and include the results in their daily reports.

...the difficulty of checking buildings while workers at the facility are on strike or during civil unrest?

It's true that during labor strikes or periods of civil unrest it can be difficult to get onto the property, let alone check idle buildings. Yet, you can't afford not to check these facilities. These buildings are part of your corporate assets, and if they catch fire or suffer weather damage, they threaten the rest of the property. At the very least, the idle building will be devalued as a result of any damage. This risk can be mitigated by taking the steps recommended in the answer to the previous question.



From the presence of overgrown vegetation, it is clear this building has not been occupied for some time, making it an obvious target for thieves and vandals.

Need more information?

Ask your FM engineer or client service team about the following:

- Examples of properties particularly at risk of this hazard
- The FM Fire Prevention Grant Program

Don't let this happen to you



This idle building is a setup for disaster. Accumulated combustible rubble can easily be ignited, and if automatic sprinklers are not in service (whether intentionally or through neglect) the damage will likely be extensive.

Ordering information

For additional copies of *Understanding the Hazard* publications, contact your FM engineer or client service team.

Additional FM brochures and educational material can be found in the FM Resource Catalog and ordered or downloaded online at fmcatalog.com. Or for personal assistance worldwide, contact our U.S.-based customer services team, Monday – Friday, 8 a.m. – 5 p.m. ET:

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