Published on *The National Law Review* https://natlawreview.com

Taking Steps to Douse Factory Fire Risks

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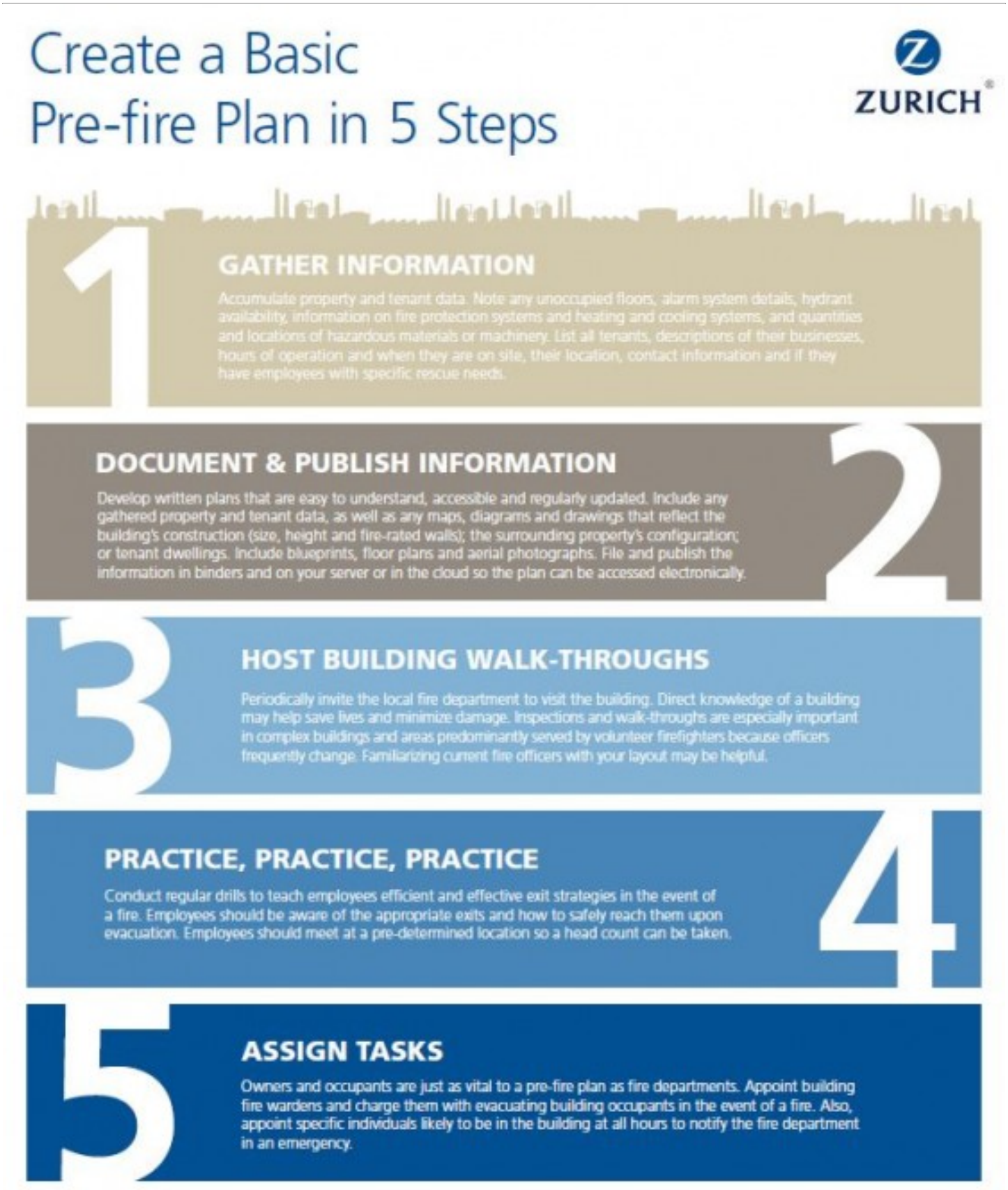
The **National Fire Protection Association** (NFPA) reports that **property losses at U.S. factories total nearly $1 billion annually**. Between 2006-2010, about 42,800 industrial or manufacturing property fires in the utility, defense, agriculture, and mining industries were reported to U.S. fire departments each year, as well as 22 deaths and 300 injuries each year, according to the NFPA.

“Fire is the No. 1 preventable disaster at manufacturing facilities,” Cindy Slubowski, vice president and head of manufacturing at Zurich, said in a statement. “Most fires are preventable, and the risks can be reduced dramatically.”

In recognition of National Fire Prevention Week (Oct. 5-11), Zurich recommends that factory owners implement a pre-fire plan, starting with these steps:



When initial fire prevention efforts fail, automatic sprinklers are an effective secondary line of defense. They not only can protect property from fire damage, but they also play a major role in helping reduce injuries and fatalities. According to the NFPA, sprinklers have a 97% success rate in controlling fires when sprinklers operate during the blaze.

“Sprinklers are a proven method of keeping fires from raging out of control, which gives building

occupants a greater chance to evacuate without injury," Slubowski said. "On top of that, firefighters face fewer risks while working inside the building to completely extinguish the fire." She added that insurers can help building owners develop a pre-fire plan that fits their particular manufacturing facility.

In its white paper, "Loss Prevention," Zurich recommends weekly checks for factories including:

- Visually checking fire protection control valves that are fitted with breakable seals to verify that they are open. Include valves inside ceilings, in pits, and at fire pumps.
- Starting and running electric fire pumps via pressure drop for at least 10 minutes and diesel fire pumps for at least 30 minutes, exercising both sets of batteries. Verify that the diesel fire pump's fuel tank is at least two-thirds full.
- For dry pipe, preaction, and deluge sprinkler systems, check gauges for proper air pressure to verify that the systems have not tripped. Also check their enclosures for adequate heat to prevent freezing.

Common causes and prevention measures:

Extinguish Factory Fire Risks

Help prevent injuries, loss of life and production downtime.

Fire's Impact on Factory Workers:

Potential for injury or death

Potential lost wages from a factory shutdown

3 Common Causes of Factory Fires:

Hot Work

- **Think Twice:** Don't use hot methods if cold methods will suffice.
- **Prepare for Hot Work:** Remove combustible and flammable materials and liquids, or place them at least 35 to 50 feet away from work area.
- **Ventilate Flammable Vapors:** Flush out storage tanks and process vessels. Verify with a gas detector that flammable vapors are absent from the air.
- **Clean or Cover:** Wet down any combustible floors, walls or roofs, or cover them with metal shields or fire resistant tarps.
- **Enlist a Fire Watch:** Designate fire watches during hot work, during any breaks and following completion of hot work for 30 to 60 minutes.

Combustible Dust

- **Repair Equipment:** Shut down and immediately repair any equipment or process producing a dust cloud.
- **Minimize Dust:** Dust accumulation should not exceed 1/32 of an inch.
- **Clean with Caution:** Don't suspend dust into the air while cleaning. Clean dust from production areas using vacuums approved for dust collection. Don't overlook cleaning overhead areas.
- **Control Static Electricity:** Don't operate equipment if ignition sources like static electricity are present. Bond equipment to the ground to minimize static.
- **Eliminate Risk Areas:** Locate relief valves away from dust hazard areas.

Hydraulic Fluid Leaks

- **Inspect and Align Equipment:** Inspect machine hoses and fittings to ensure they are free of leaks. Align equipment parts to minimize excess fluid dripping on surfaces.
- **Lock Out Machines:** Shut off equipment needing repair and bleed off stored energy. Try to start the machine to verify it has been locked correctly.
- **Housekeeping:** Routinely wipe equipment clean to minimize oil build up.
- **Properly Maintain Hoses:** Protect hoses from abrasion. Protect piping and fittings from damage and vibration.
- **Safely Store Fluid:** Store excess hydraulic fluid in liquid storage rooms. Otherwise, make sure fluid is in safety cans or flammable liquid storage cabinets.

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>
> Cindy Slubowski, VP, Head of Manufacturing, Zurich

National Law Review, Volume IV, Number 280