

Precautions During Fire Protection Impairments

*Details of precautions that should be considered for every impairment.
Which precautions are appropriate depends on the specifics of each situation.*

Precautions During an Impairment

When a fire protection impairment occurs, precautions should be put in place to mitigate the risk. Which precautions are appropriate for a given impairment depends on the specifics of the situation. For large impairments such as interruption to the entire site water supply, it may even be necessary to suspend operations to reduce the fire hazard. Several other common precautions are discussed below.

Hot Work Prohibited

One of the most important precautions for any impairment is preventing the ignition of fires. Hot Work operations should be strictly prohibited in areas where fire protection is impaired. Impairments should be coordinated with the person(s) who authorize(s) hot work to enforce this. In the rare cases that hot work is truly unavoidable, management review and permission should be required.

Smoking Prohibited

Like Hot Work, smoking presents a significant potential ignition source and should be prohibited in any areas where fire protection is impaired.

Site Emergency Team Notified

Facilities that have a dedicated in-house Emergency Response Team should ensure the members are briefed on the nature, extent, and duration of the impairment.

Public Fire Department Notified

Some public fire departments ask to be notified of significant fire protection impairments, especially for facilities that are large or house unique hazards.

Ongoing Patrol of the Area

An ongoing patrol is a continuous or periodic “fire watch” person who tours the area to check for signs of fire, check for fire safety issues (e.g. combustibles near heaters or high intensity lighting), and ensure that other precautions are adhered to. Periodic patrols should tour the area multiple times per shift.

Fire Hose Laid Out

If practical, fire hoses can be laid out to the affected area and charged to ensure a rapid response to any fire that may develop.

Hazardous Operations Stopped

If flame, heat, or sparks are a normal part of operations, strongly consider suspending operations while fire protection is impaired. Processes that involve flammable liquids or generation of combustible dusts should also be stopped.

Continuous Work Authorized

Work to restore fire protection should be conducted without delay or disruption.

Fire Hydrant Connected to Sprinkler Riser

If the impairment occurs on the lead-in from an underground main to the sprinkler riser, it may be possible to maintain water to the sprinkler system by isolating the valves for the underground main and connecting a fire hydrant to the sprinkler riser by a 2-inch fire hose connected to the sprinkler main drain. The system is still considered impaired, because the available water flow and pressure are sharply reduced, but a fire hose can supply enough water to operate one or two sprinkler heads and greatly reduce the hazard.

Protected Equipment Shut Down or Hazard Removed

Some sprinkler systems protect a single piece of equipment such as a Power Transformer, Steam Turbine, Oven, Fryer, Paper Machine, or Press. In these cases, shutting down the equipment while fire protection is impaired reduces the risk. In cases where a sprinkler system protects an area like a warehouse, it may be practical to remove the hazard by emptying all combustible inventory from the building during the work.

Redundant Fire Protection Active

Occasionally, a hazard is protected by two fully redundant automatic fire protection systems.

The most common example is fire pumps, where a site will often have two redundant fire pumps to ensure fire protection is maintained if a pump fails.

Less commonly, a critical area like a server room may be protected by two independent fire protection systems (e.g. a clean agent system and a sprinkler system). In these cases, one system can remain active while the other system is taken offline, and full protection is still maintained.