

Fire Protection Impairments FAQ

answers to common questions and guidance for unique situations

How long does an impairment need to be before a permit and reporting is necessary?

A fire protection system is considered impaired if it is rendered inoperable for any length of time. Your site policy should specify when an impairment needs to be reported. It is not the intent to capture very short-duration activities where protection is promptly restored to service (e.g. lubricating valve stems, exercising valves, or checking tamper switches). It is considered best practice to use the full impairment procedure any time an impaired device is left unattended, even if it is only for a few minutes. The system must be used for any impairment that spans a shift change, to ensure awareness for the incoming shift.

Is fire pump maintenance an impairment?

Yes, normal fire pump inspection and maintenance activities such as changing engine or gear oils and oil filters require taking the fire pump offline. If a fire occurred during the maintenance activity, the engine could not be immediately started. Thus, an impairment permit should be used even if the job is constantly attended.

Do dry pipe sprinkler flushing investigations constitute an impairment?

An impairment is not created when the system is tripped and left wet, as it can still respond to a fire. However, an impairment is normally necessary when the sprinkler valve is closed to install hose connections and to reset the system after the obstruction investigation is complete.

How should dry pipe sprinkler system accelerators be managed?

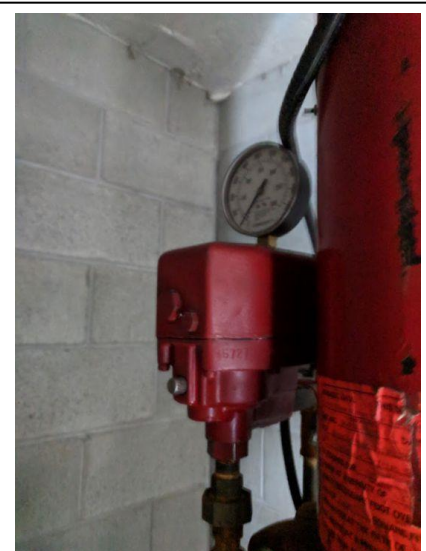
If an accelerator for a dry sprinkler system is isolated for any reason, an impairment should be logged. Even though the sprinkler system can be left in service and will still operate, water delivery to the fire will be delayed. In significant fires, this can impact the system's ability to control the fire. An impairment permit should be used to ensure the issue is documented and that the accelerator is correctly returned to service. Simply note on the impairment permit that the Dry Sprinkler System remains in service.

What about Fire Alarm Systems?

Your site impairment policy should specify whether fire alarm devices such as smoke and heat detectors should be managed with an impairment permit. Many insurers do not require impairments to these devices to be reported, because they do not affect automatic systems that physically combat the fire.

However, special care must be taken for fire alarm devices that are interlocked to protection systems, such as smoke or heat detectors that actuate pre-action sprinkler systems in server rooms or deluge sprinkler systems. These devices must be managed with an impairment permit.

Some locations choose to manage all fire alarm devices with impairment permits to avoid confusion. The site Impairment Policy should document the approach your organization has chosen.



This dry sprinkler system accelerator is shut off and should be logged as an impairment.

What about the Public Water Supply?

Sites that rely on a public water supply for fire protection must be vigilant to disruptions in the supply. A water main break or planned shut down for work can impair fire protection systems on site, even in the absence of any action by site staff or closure of any valves on site. This situation consequently represents a significant fire protection impairment and should be managed and reported accordingly.

Do fire extinguishers qualify as a redundant protection system?

No. Checking fire extinguishers and providing extra extinguishers is a good precaution for any impairment, but only a fully automatic protection system qualifies as “redundant.” Systems that rely on manual operation such as fire extinguishers and hoses are considered a good precaution, but not a redundant protection system.

What other special systems should an impairment policy consider?

Some sites have special protection systems that should also be managed with an Impairment Permit. Examples include clean agent systems for servers and electrical rooms, CO2 systems for fryers or machinery enclosures, spark suppression systems on combustible dust collectors, water mist systems, and foam systems – including foam tanks and bladders.

Locations with an on-site water reservoir or water tank should also use the impairment policy if the reservoir or tank is drained below the minimum fire reserve for cleaning, inspection, or maintenance.