

# Impairments to fire protection equipment

## Risk Control Guide RCG004

# Introduction

Buildings and equipment are provided with fire protection and/or detection systems to reduce property damage and interruption to business in the event of fire. These systems must be in service at the outbreak of fire to operate effectively. However, invariably there will be times when these systems must be shut-down for maintenance, testing, system upgrade, or repair. Shutting systems off without taking proper precautions, or leaving these systems impaired longer than necessary, has been a contributing factor in many losses. In most cases, these losses could have been mitigated by properly managing the impairment.

Developing a formal Impairment Management Policy that requires use of Impairment Permits is the best solution toward mitigating this risk. Empowering management to take full ownership and responsibility is critical, as they are most familiar with the fire systems and hazards. This document outlines the basic considerations needed to develop an effective Impairment Management Policy.

## Impairment Policy

Impairments exceeding 24 hours, impairments of major fire protection systems (i.e. sprinkler systems) or impairments of fire protection systems protecting important processes or plant areas should be notified to Intact Insurance Risk Consulting using the link below and selecting “Notify us now”.

[Impairments | Intact Insurance](#)

The notification form should be sent well in advance of a planned impairment or immediately following either an emergency impairment or the discovery of an improper impairment. Intact Insurance Risk Consulting should also be notified immediately after the restoration of the system.

An impairment policy should include the following:

- A policy document that mandates use of a formal permit to monitor all impairments to fire protection and/or detection systems.
- Senior management support and endorsement for the policy.
- The policy should stipulate specific penalties for non-compliance.
- The policy should be effectively, and routinely, communicated to contractors and employees.
- The policy should be reviewed and improved periodically.
- Competent personnel trained to authorise and manage system impairments.
- A comprehensive checklist of precautions.

Only competent personnel should manage or authorise impairments. These personnel should receive training so that they are familiar with the fire and explosion hazards and protection features at the site. They should also fully understand their operational responsibilities, which include initial site inspection, permit issuance and a final check to ensure that protection/ detection systems are restored to service. These individuals should be closely involved in the periodic policy review process.

## Precautions

The person authorising and managing the impairment should consider the following points. If any of the following items are of concern, no permit should be issued until the condition is corrected.

- Affected area minimised.
- Duration minimised.
- Timing appropriate.
- Manpower sufficient.
- Contingency plans to restore protection promptly in the event of fire.
- Good Fire Brigade response anticipated.
- Combustibles relocated.
- Temporary automatic protection provided as practical or required.
- Manual protection satisfactory
- Ignition sources controlled and hazardous operations ceased.
- Hot Work Permit issued if required.
- Fire watch provided, if unreliable detection.
- Emergency Organisation and Fire Brigade notified.
- Workers aware of permit requirements, required precautions, and/or the hazards involved.

The person authorising the impairment should always inspect the site and discuss the precautions with those performing the work prior to issuing a permit. They will be ultimately responsible for coordinating the fire watch, Emergency Organisation and Fire Brigade participation, along with worker education. They should perform aggressive follow-up and should call the Fire Brigade after restoration.

Minimise the size of the impaired area. Impairing multiple systems can result in an unnecessarily large exposure. Minimise the duration of the impairment by initially preparing the work area, and work continuously until the job is complete. If the impairment is due to planned work, make certain that the timing of the impairment is appropriate. Pre-plan with the Fire Brigade to assure that impairments will occur at a time when they can best respond. Have the Fire Brigade on-site for emergency impairments when all precautions cannot be taken.

Manpower is an important consideration with respect to minimising the duration of the impairment, and for ensuring effective response to a fire. Workers need to understand the Impairment Policy, permit precautions, and should be familiar with the hazards in the affected area. Develop contingency plans to restore impaired protection promptly in the event of fire. Make temporary caps available to plug sprinkler lines. Assign personnel the responsibility of re-opening sprinkler control valves quickly in the event of fire.

Whenever possible, relocate combustible materials to eliminate or reduce the fire hazard. If practical, provide temporary partial protection if the impairment will be of extended duration (e.g. feed automatic sprinklers through fire Brigade connections via hose lines). Ensure that adequate manual protection features are present (e.g. charged hose lines and portable fire extinguishers).

Control all ignition sources and cease any hazardous operations. Pay particular attention to Hot Work, smoking, electrical equipment, static electricity, molten materials, spontaneous heating, and/or sparks or hot surfaces associated with mechanical equipment. Hot Work should only be performed if proper precautions are taken and the work is supervised via issuance of a Hot Work permit. Hot Work should not be performed if alternatives such as sawing, bolting, or gluing are practical, or if automatic fire protection systems are impaired. Request that the Site Emergency Organisation stand by during emergency impairments to fire protection systems if Hot Work must be performed in an unprotected combustible occupancy.

A fire watch should be conducted in the affected area unless in-service, full-coverage detection is provided. Hourly surveillance of all affected areas will be sufficient for most occupancies. Increased frequency should be considered in higher hazard occupancies. Always notify the Fire Brigade and Site Emergency Organisation during the impairment. Solicit their participation as needed.

## Sign Off

After the impaired fire protection/detection system has been restored to service, the permit should be returned to the person or department who authorised the work. The time that the systems were restored should be recorded and the permit signed by the person(s) doing the work. The person or department who authorised the work should physically verify that the protection has been placed back in service before signing off. Impairment Permits should be maintained on file for documentation and policy review purposes.

Confirmation of restoration, or to report delays with restoration, should also be notified to Intact Insurance Risk Consulting by replying to the automated email, provided on notification.

Further support can also be provided by contacting [rc.impairments@intactinsurance.co.uk](mailto:rc.impairments@intactinsurance.co.uk)

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