

What's New

Tech's Fire Break is a new method of communicating with the technicians and trainees about what's new in the Fire Protection Certification Program. Since the beginning, ASTTBC and the Fire Protection Certification Board members communicated to the technicians through "SUPPRESS". It was the intent to publish 3 – 4 editions each year. This did not happen, in the beginning because of the development of the FPCP, and then the refining of the program took up most of the FPCB member's time. In 2009 only one edition of SUPPRESS was published.

We are now going to try something different. A publication, every two months, around four to six pages long, depending on the subject matter available. This new publication will be called "Tech's Fire Break" and will contain information for technicians in all the disciplines. It will be used to keep the technicians up-to-date with what is happening in the Fire Protection Certification Program.

BC Fire Code Requirements for Smoke Alarms

On March 25, 2010, Minister of Housing Rich Coleman announced new BC Fire Code requirements related to smoke alarms to increase public safety and more closely harmonize with the National Fire Code of Canada.

Smoke alarms are cost effective devices that can alert occupants of fire at its early stages, which saves lives and prevents injuries. Smoke alarm requirements were introduced into the BC Building Code in 1979, and have been mandatory in all dwellings and sleeping accommodation rooms (i.e. hotels, motels) since then. BC's building code requirements are the same as those found in the model National Building Code of Canada. However, the requirements for smoke alarms in the BC Fire Code differ from those in the National Fire Code of Canada in the scope of application. Until now, the BC Fire Code required smoke alarms in all existing hotels and public buildings, but did not require them in all existing dwelling units, such as private homes. Improving public safety by extending the BC Fire Code smoke alarm requirements to private dwellings, including those constructed before March 31, 1979, will more closely harmonize the BC Fire Code with the National Fire Code of Canada.

The National Fire Code allows for battery-operated smoke alarms. BC will allow battery operated smoke alarms in limited circumstances. Some battery-operated smoke alarms may be less reliable than alarms which are hard wired to a building's electrical system because they require occupant maintenance and are more easily disabled intentionally or inadvertently. However, the significant cost of installing smoke alarms integrated with a building's electrical system is likely to discourage their installation in older buildings. The change permits battery operated smoke alarms in those dwelling units constructed prior to the BC Building Code's mandatory requirement for their installation in dwelling units built before March 31, 1979. Battery operated smoke alarms will also be permitted in buildings that are not connected to electrical power.

Revisions to Article 2.1.3.3 of the British Columbia Fire Code

~~Smoke alarms conforming to CAN/ULC-S531, "Smoke Alarms," shall be provided in all hotels and public buildings as defined in the Act, where required by and in conformance with the British Columbia Building Code~~ **installed in each dwelling unit and, except for care or detention occupancies required to have a fire alarm system, in each sleeping room not within a dwelling unit.** ~~Smoke alarms may be battery operated where permitted by the authority having jurisdiction~~ **within dwelling units shall be installed between each sleeping area and the remainder of the dwelling unit, and where the sleeping areas are served by hallways, the smoke alarms shall be installed in the hallways.**

~~Smoke alarms shall be installed in conformance with CAN/ULC S-553, "Installation of Smoke Alarms".~~

Smoke alarms are permitted to be battery operated in
a) **a dwelling unit constructed before March 31, 1979, or**
b) ~~a building which is not supplied with electrical power.~~

The changes to the BC Fire Code will require an amendment to the BC Building Code, Division A, Clause 1.1.1.1.(1)(k) to avoid a conflict between the two codes.

Amend

Division A, 1.1.1.1. Application of this Code

1) This Code applies to any one or more of the following

k) **except as permitted by the British Columbia Fire Code Regulation,** the installation, replacement, or *alteration* of materials or equipment regulated by this Code.

The new requirements in the BC Fire Code come into effect on May 1, 2010. Owners of dwelling units built before March 31, 1979 are required to have smoke alarms installed in accordance with the new requirements by that date.

Basic Communications:

First, a brief word about Digital Telephone Service. In Canada, this is being provided (primarily) by Shaw Communications or Rogers Cable. The modem usually supplied for interface to the television cable jack has a very small back-up battery inside. Typically this is only good for four (4) hours of stand-by time. In our view, this is an unacceptable connection for any fire alarm communicator employing a normal telephone line as the primary means of signal transmission. Some AHJ's have accepted this type of connection as long as a UPS (Uninterruptable Power Supply) of sufficient stand-by capacity to meet the "twenty-four hour rule" is supplied. We would suggest that such a "work-around" should only be acceptable if the UPS were monitored by the fire alarm system for "trouble" conditions (like "low battery" or "fuse failure"). For the purposes of this "TIP", we are assuming a normal "POTS" line (as supplied by Telus) is utilized.

Fire alarm communicators come in a variety of "flavours". Let's start by identifying each one:

Dual line digital communicators are the "vanilla" in our counter. There are several manufacturers and a number of "approved" models, although many jurisdictions no longer find them an acceptable means of transmitting fire alarm signals and ULC has "delisted" many. Those still in service are "grandfathered" for the most part, but check with the local AHJ to make sure.

Communication method used: Normal POTS telephone line. **Special Note:** Use of VOIP or other enhanced telephony technology may actually prevent older versions of these units from dialling.

Back-up method: Normal POTS telephone line (hence the term "dual line" communicator).

Transmitter test: A communicator test signal must be generated by the system every twenty-four (24) hours. You must determine the time of the signal and ensure that the daily test regimen is being followed. How do you do this? Contact the central monitoring facility and verify with the operator that the system is transmitting the required signal.

Pros: Cost effective

Cons: NFPA 72 stipulates that the primary and secondary communication lines be terminated in separate trunks at opposite ends of the protected premises. Most telephone companies provide a single "drop" and usually from a common feed (on a pole or termination box). This means that both lines could be easily compromised. In many instances, building owners will often "forget" what the extra phone bill is for and cancel one (or both) of the lines. It's important to review the daily test reports generated by the monitoring station to ensure the unit is communicating properly. A "fail to test" report is usually indicative of a telephone line problem.

Manufacturers: Silent Knight, Digital Security Controls (DSC), Ademco, Contronics, FireLite, Notifier, Mircom, Paradox, Potter

DVACs communicators are still the "cream" on the Sundae. They are widely accepted as a "top tier" method of transmitting fire alarm signals.

Communication method used: Dedicated addressible transponders that are polled for status every few seconds by special central station receivers. Signals are transmitted via a network of dedicated data lines that are routed through hardened, secure "hubs" directly to the central monitoring facility.

Back-up method: None. Failure of a unit is immediately identified at the central monitoring facility and will result in an immediate pre-determined response.

Transmitter test: This unit is online as part of a dedicated network. Disconnection will cause a "line fault" condition to register at the central monitoring station.

Pros: Secure, stable, solid

Cons: Expensive. Monitoring agencies will usually take responsibility for the line charges from the telephone provider. These are "added" (often marked up as well) to the cost of the actual monitoring service.

Manufacturers: Europlex, SureGard, Contronics, Morse, Chubb, ADT

Long Range Radio (LRR) communicators are "truffles". This technology requires a significant infrastructure investment on the part of the monitoring agency. "Repeater" stations must be utilized to provide coverage beyond the (usually) ten (10) mile transmitter range.

Communication method used: As to be expected, this is a wireless communication method utilizing radio frequency (RF). There is minimal reliance on cabling (except to power the unit).

Back-up method: None. Failure of a unit in the network is immediately identified.

Transmitter test: This unit is online as part of a dedicated network. Disconnection will cause a "line fault" condition to register at the central monitoring station.

Pros: Secure, stable

Cons: Expensive. Requires the monitoring agency to invest heavily in receiver technology which is proprietary to one manufacturer (in other words you can't have transmitters from two separate manufacturers "talking" to one receiver). This cost, of course is "passed on" to the end user.

Manufacturers: Ademco (Honeywell), Morse

GSM communicators are the chocolate. The transmitters are powered independently from the alarm system and don't require specialized knowledge or equipment to process the signals generated at the central station other than a standard digital communicator.

Communication method used: Existing cellular networks. This is also RF technology similar to Long Range Radio with a "wired" component. The signals generated by the transmitter are received at the manufacturer's receiving centre which then re-routes it to a normal telephone line and the central monitoring stations digital line receiver.

Back-up method: None. GSM is usually the "backup" for a single line digital communicator.

Transmitter test: A communicator test signal must be generated by the system every twenty-four (24) hours. Follow the procedure for a dual line digital communicator.

Pros: Stable

Cons: As with any compromise, heavy reliance is placed on cellular network technology. Less secure than LRR or DVACs. Failure of the unit could be transmitted by normal phone line (as long as this is also not compromised). Otherwise, the central monitoring facility will usually alert the alarm provider when the daily "test" signal is not received.

Manufacturers: Tellular, DSC, DLinks, Honeywell

Alarm communicators utilize a number of methods in which to connect to your fire alarm panel. Mircom, Potter, Notifier and FireLite manufacture digital "UDACT" communicators that are either integral to the common control board or connected to them by a ribbon cable. The advantage here is that individual zones can transmit signals so that the central monitoring station can actually identify the location of the fire and relay this to the responding authority. After-market communicators must utilize the common alarm, supervisory and trouble contacts on the fire alarm panel and can only transmit "generalized" alarm, supervisory, and trouble signals. Regardless of the method of connection, you (as the testing technician) must be able to recognize whether this has been accomplished correctly.

In the case of an optional UDACT communicator, the unit is usually mounted on special rails or stand-offs supplied by the manufacturer for the purpose and located inside the fire alarm panel. The fire alarm installation manual will illustrate the connection method and provide you with the necessary details to properly test the unit. In all instances involving UDACT units, there will be two telephone lines terminated to the unit. This is normally done through twin eight position jacks which should be located immediately adjacent to it. Disconnection of one (or both) jacks will cause the fire alarm system trouble buzzer to sound. If one jack remains connected the UDACT will transmit a "line fault" trouble to the central monitoring facility.

All other communicators are housed in metal cans mounted adjacent to the fire alarm system and will employ preprogrammed zones similar to those of the fire alarm panels initiating circuits. End of line resistors must be connected across the normally open relay contacts in the fire alarm control panel. The wire/cable between the communicator and fire alarm system must be physically protected (usually via flexible conduit (BX) or EMT). The communicators must employ tamper switches on the access cover, and a visual method of identifying whether AC power is present and if a trouble condition exists. The Silent Knight 5104 provides all these through a viewable "window" on the front cover, but I have seldom seen the proper cover tamper used (needless to say, this would constitute a deficiency!). DSC, Ademco, and other "stand alone" units utilize an AC "on" LED that is normally installed in one of the knockouts and a separate keypad that will display the zoning information and any system troubles. If the keypad is missing, then there's no way to determine the status of the communicator. I've even seen some alarm companies install the keypads inside the can (which means you have to open it to see the status). Needless to say, neither of these installations would pass.

TIP: A "low battery" signal received by the central monitoring facility does not automatically translate to a "low battery" on the fire alarm system. It will usually mean a "low battery" condition exists in the communicator and the servicing agency (or the monitoring company) must be notified.

Power to the communicator must be provided via a dedicated circuit (similar to the one used by the fire alarm system). In the case of a UDACT, power for the unit is provided by the fire alarms AUX power output (which is often supervised).

Let's review the communicator section of the standard test report we provide in our **Forms** section. The first line reads:

Monitoring connections are properly supervised. This is pretty well self explanatory. End-of-line resistors for each zone of the communicator should be present across the appropriate relay terminals inside the fire alarm system's common control. You must also confirm they are of the correct value. The second reads:

The communicator is ULC listed for fire alarm monitoring. Check to see that a label is in place identifying the equipment as a "UL/ULC listed subscribers unit for fire". Don't stop there, however. You must determine that the unit has been **installed correctly**. The checklist for this includes (but is not limited to):

1. Dedicated circuit disconnecting means (breaker) for the communicator;
2. All interconnecting wiring must be installed in rigid EMT conduit or armoured "BX";
3. A visual means to identify "trouble", "supervisory" and "alarm" signals locally (through either a keypad or similar display located adjacent to the communicator's enclosure);
4. An AC power "on" indicator;
5. A tamper switch for the unit's common control cover/door/lid;
6. Standby power supply of sufficient size to supervise the fire alarm system for the required time mandated by Code.

The third reads: The monitoring/central station is ULC listed for fire alarm monitoring. This may take a little "digging" (monitoring stations are often reluctant to divulge such information), but a really handy source is provided by the City of Vancouver **here**. You can obtain the central station certificate numbers directly from ULC. Just input the name of the monitoring station in the company name search box located **here**. The fourth asks whether:

The monitoring station is approved by the local jurisdictional authority. As far as I know, only Vancouver lists "approved" agencies of this type so you can usually check this "NA" for any other jurisdiction (but please check with your local AHJ first).

The last line of the section is the most important. You must check that all signals generated by the fire alarm system during your test are received by the monitoring station. In many instances, burglar alarm companies install these units and some employ a little known programming "dongle" called "swinger shutdown". What this means is that the communicator limits the number of alarm events it transmits on a specific zone in a given period (usually 24 hours). For instance, if your fire alarm system is transmitting alarm signals on "zone 1" of the communicator, "swinger shutdown" may be enabled after as few as three alarm events in a twenty-four hour period. It is important that "swinger shutdown" is **DISABLED** on a fire alarm communicator. I don't think I need to paint you a picture as to the reason why.

In Vancouver (and many other jurisdictions), actuation of a sprinkler system or linked suppression system must also initiate a "waterflow" signal to the monitoring station. Some older fire alarm panels are incapable of producing more than a "common alarm" and a "common trouble" output however on newer units a dedicated relay which "follows" the sprinkler/suppression system initiating zones must be installed.

Frank Kurz

The Fire Technicians Network

<http://www.firetechs.net/library/tips.asp>

Special Fire Suppression System Certification

Those technician that used manufacturer training for their academic education when applying for certification in SP – Special Fire Suppression systems are reminded that the manufacturers training is usually only good for two years, then the technician has to upgrade their academic training to stay current in that field. Today, ASTTBC has not asked the technician to send in their current certificates with expiry dates in the future. This has not been done, because ASTTBC relies on the technician to keep their credentials up-to-date, this is further stress in the

Code of Ethics. If you have not sent in your up-to-date manufacturer's certificate of training, please do so. When the technician applied for certification using manufacturer's training to meet the requirements of the academic education for the discipline, then it is up to the technician to keep that certification up-to-date, especially from a liability point of view. Manufacturers have expiry dates on the training certificates for a reason, the equipment may seem similar to you, but every year new and improved systems are coming on the market. The system you were trained on in 1990 is not the same equipment that you may be servicing today. Check with the manufacturers to ensure that your current training is adequate, if it is and your current certificate is still valid, with an expiry date on it, ask the manufacturer to give you something in writing that your previous training is still good.

The above information applies to all technicians that have used manufacturers training to meet the academic education of those disciplines you currently hold.

An old interpretation that is still valid.

In 1995 a fire chief in the Lower Mainland quote ULC because he was concerned that some service companies that inspect and test fire alarm systems have been using the clause 5.3.1.2. of CAN/ULC S536-m86 as an excuse not to service and verify heat detectors and smoke alarms in suites on an annual bases. The fire chief further states that the service companies are under the impression that it is adequate to test these devices once in three years.

The fire chief wrote to ULC for clarification on this matter and their response is shown below.
From Underwriters' Laboratories of Canada

December 7, 1995

Subject CAN/ULC-S536-M86 – Interpretation of Clause 5.3.1.2.

Further to your inquiry of November 23, 1995 in which you asked if the subject Clause 5.3.1.2. was meant to cover suites in strata buildings where the only reason the devices are not tested is lack of access with little effort.

The building owner should be able to gain access once a year to all suites for the purpose of testing fire alarm devices. The subject clause does not intend to be an escape for this.

The subject clause offers an escape for devices that may be difficult to access such as elevator shafts, ducts, crawl spaces, etc. as you suggest.

CAN/ULC-S536-M86 – Clause 5.3.1.2. states: Every reasonable effort shall be made to test all the devices required in this subsection on a yearly basis. In the event that some devices cannot reasonably be made accessible, a list of such devices and their location shall be included in the report. However all such devices shall be tested at least once every three years.

The current B.C. Fire Code Regulations refers to:

Division B
Acceptable Solutions
Part 6 — Fire Protection Equipment
Section 6.3. Fire Alarm and Voice Communication Systems
6.3.1. General

6.3.1.2. Inspection and Testing

- 1) Fire alarm systems shall be inspected and tested in conformance with CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems.” [\[I\]](#)
- 2) Fire alarm and detection system components shall be accessible for purposes of inspection or maintenance. [\[I\]](#)

CAN/ULC-S536-04 Inspection and Testing of Fire Alarm Systems, Clause 5.7.1.3

All field devices shall be tested on a yearly basis, except in the event that a device cannot reasonably be made accessible for safety considerations (for example, continuous process operations, energized electrical equipment, radiation, and height), the device and its location shall be recorded and identified as “inaccessible” in the remarks column of the report similar to that shown in Appendix E3.2, Individual Device Record. The last test date shall also be recorded in the remarks column of E3.2. Those field devices identified as being inaccessible as noted in the remarks column of E3.2, shall be tested at least once every two years.

As you can see nothing has changed over the years, all devices including those in the suites are to be tested annually. The only thing that has changed is the time frame for testing those devices which are inaccessible, from three years to two years and the technician needs to clearly identify those devices in the inspection report .

Changes in Certification

Effective April 1, 2010, the following changes will be made to the Fire Protection Certification Policy.

New Discipline

Prior to April 1, 2010, a technician who applied for and received certification in **Fire Pumps “FP”** was given the designation **Water Based Fire Protection Systems “WA”** on their technician’s stamp, despite not being certified in Water Based Fire Protection Systems.

Effective April 1, 2010, there will be a new and separate discipline called **Fire Pumps “FP”** with the prerequisite of Water Based Fire Protection Systems “WA”.

A technician now must be certified in “WA” before applying for certification in “FP”. The requirements are as follows:

| Water Based Fire Protection Systems – WA | |
|--|---|
| Number of Required Units | 40 systems |
| Work Experience (Documented) | 1 year |
| Education - Academic | <ul style="list-style-type: none">▪ BCIT MSYS 2080 Inspection and Testing of sprinkler systems (must have)▪ Challenge exam▪ The following are in addition to the MSYS 2080.▪ Fire Hydrants▪ PUBW 1114 Water Systems Operator 1 course |

| | |
|--|--|
| | includes a three hour evening of Fire Hydrants - types and installations, operation and maintenance, updated Apr /07 |
|--|--|

| Fire Pumps | |
|------------------------------|---|
| Number of Required Units | minimum 40 systems |
| Work Experience (Documented) | 1 year |
| Education - Academic | <ul style="list-style-type: none"> ▪ Pre requisite is Certification in Water-Based Fire Protection Systems – “WA” ▪ Courses that are acceptable to the FPCB, or ▪ Challenge exam |

Technicians certified in “FP” will be notified in the near future that their stamps must be returned to ASTTBC to have the “FP” designation added to their stamp and the “WA” removed, unless they have certification in “WA”. This required stamp change will be at no cost to members.

Interim Certification

The second change to the FPCP is Interim Certification, which now has a time limit. Interim Certification was initially used to ensure that technicians were approved to conduct the inspection and testing of fire protection equipment until the necessary academic programs could be made available. Interim Certification was subsequently changed and only available to those technicians working outside the Lower Mainland.

Technicians are now required to achieve the academic requirement in two years from the date of receiving Interim Certification for Full Certification. The academic requirement can be achieved by taking the prescribed courses or taking the challenge exams.

Technicians who currently have Interim Certification will be given two years from April 1, 2010 to meet the academic requirements.

News Release

NFPA issues safety alert regarding antifreeze in residential sprinklers **Fatal fire raises concern about antifreeze**

July 6, 2010 – The National Fire Protection Association (NFPA) today issued a [safety alert](#) recommending that residential fire sprinkler systems containing antifreeze should be drained and the antifreeze replaced with water. The alert follows a research study and an initial set of fire tests conducted after a fire incident raised concerns about antifreeze solutions in residential sprinkler systems. The incident involved a grease fire in a kitchen where a sprinkler with a high concentration of antifreeze deployed. The fire resulted in a single fatality and serious injury to another person.

“Fire sprinklers are one of the most effective ways to save lives and property from fire,” said James M. Shannon, president of NFPA. “Until we can provide further information based on additional research that is currently underway, we are urging the public to continue the use of sprinklers but to follow our interim safety guidelines by removing antifreeze if it is in their sprinkler systems.

According to NFPA, the home is the place where most fire fatalities occur, and when home sprinklers are present, the risk of dying in a home fire decreases by 83%.

Shannon said based on testing conducted, 70/30% glycerin and 60/40% propylene glycol antifreeze may provide an unacceptable risk of harm to occupants in certain types of fire scenarios, in particular kitchen grease fires. There were successful tests where kitchen grease fires were extinguished or contained with a 50/50% glycerin solution but it was felt there should be additional testing to more fully understand if there is a risk associated with 50/50% glycerin solution.

NFPA offers the following interim guidance on residential sprinklers

Fire sprinklers are extremely effective fire protection devices, significantly reducing deaths, injuries and property loss from fire.

These systems should not be disconnected.

Until the results of further testing on antifreeze are available, NFPA recommends the following:

- If you have, or are responsible for, a residential occupancy with a fire sprinkler system, contact a sprinkler contractor to check and see if there is antifreeze in the system.
- If there is antifreeze in the system, as an interim measure, drain the system and replace it with water only. Problems associated with freezing of sprinkler pipes can be mitigated by alternative measures such as insulation. NFPA hopes to provide further guidance based on additional testing before the winter freezing months.
- If you are putting in a new residential sprinkler system, design and install a system that does not require antifreeze.

Red Tagging Fire Protection Equipment

The B.C. Fire Code Regulations states in Division B - Acceptable Solutions, Part 6 — Fire Protection Equipment Section 6.1. General, 6.1.1. General

6.1.1.1. Application

1) This Part includes requirements for the inspection, testing, maintenance, and operation of portable extinguishers, water-based fire protection systems, special extinguishing systems, fire alarm systems, emergency electrical power supply systems, and emergency lighting.

6.1.1.2. Maintenance

1) Fire protection installations shall be maintained in operating condition. (See [Appendix A.](#))

[A-6.1.1.2.\(1\)](#) Both the British Columbia Building Code and the British Columbia Fire Code assume that all fire protection features of a building, whether required by Code or voluntarily installed, will be designed in conformance with good fire protection engineering practice and will meet the appropriate installation requirements in relevant standards. Such good design is necessary to ensure that the level of public safety established by the Code requirements is not reduced by a voluntary installation. Thus, a voluntarily installed system should be maintained in operating condition, at least to the extent that it was originally intended to function, in conformance with the applicable installation standards.

6.1.1.3. Notification

1) Where tests, repairs or alterations are made to fire protection installations, including sprinkler and standpipe systems, a procedure of notification shall be established. (See [Appendix A.](#))

[A-6.1.1.3.\(1\)](#) Notification of planned or emergency interruption or curtailment of service of fire protection installations is preferably given in advance when possible. The parties to be notified who could be affected may include, but are not necessarily limited to, the fire department, supervisory staff in the building and the occupants of the building.

6.1.1.4. Protection during shutdown

1) When any portion of a fire protection system is temporarily shut down, alternative measures shall be taken to ensure that protection is maintained. (See [Appendix A.](#))

[A-6.1.1.4.\(1\)](#) Interruption of normal operation of a fire protection system for any purpose constitutes a “temporary shutdown.” Types of interruptions include, but are not limited to, periodic inspection or testing, maintenance, and repairs. During a shutdown, alternative measures are necessary to ensure that the level of safety intended by the Code is maintained.

In the shutdown of a fire alarm system, alternative measures should be worked out in cooperation with the fire department to ensure that all persons in the building can be promptly informed, and the fire department notified, should a fire occur while the alarm system is out of service.

When a sprinkler system is shut down, measures that can be taken include the provision of: emergency hose lines and portable extinguishers, extra fire watch service and, where practicable, temporary water connections to the sprinkler system.

CAN/ULC-S536-04

3. GENERAL REQUIREMENTS

NOTE: Where a shutdown of the fire alarm system, or parts thereof is necessary, the alternate measures for occupant safety described in the Building Fire Safety Plan shall be implemented. (Refer to Appendix B, Alternate Measures for Occupant Fire Safety.)

APPENDIX B (INFORMATIVE) – ALTERNATE MEASURES FOR OCCUPANT FIRE SAFETY

(Reference: Note-Section 3)

B1 In the event of any shutdown of fire protection equipment or parts thereof, the Fire Department and building occupants/owner should be notified. Instructions should be posted as to alternate provisions or actions to be taken in case of an emergency. These provisions and actions should be acceptable to the Chief Fire Official and be in accordance with the accepted Fire Safety Plan.

B2 An attempt to minimize the impact of inoperative equipment should be made (i.e. where portions of a sprinkler, fire alarm system and standpipe system are taken out of service, the remaining portions will be maintained). Assistance and direction for specific situations should be sought from the Fire Department and be in accordance with the accepted Fire Safety Plan.

B3 Procedures to be followed in the event of shutdown of any part of a fire protection system are as follows:

- A Notify the Fire Department and the monitoring station. Give your name, address and a description of the work and when you expect it to be completed. The Fire Department should be notified in writing of shutdowns longer than 24 h;
- B Post notices on all floors by elevators and at entrances, stating the work and when it is expected to be completed;
- C Have staff or other reliable person(s) patrol the affected area(s) at least once every hour; and
- D Notify the Fire Department, the monitoring station, and building occupants/owner when work has been completed and systems are operational.

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4.2 Impairments.

Where an impairment to a water-based fire protection system occurs, the procedures outlined in Chapter 14 of this standard shall be followed, including the attachment of a tag to the impaired system.

Chapter 14 Impairments

14.1 General.

This chapter shall provide the minimum requirements for a water-based fire protection system impairment program. Measures shall be taken during the impairment to ensure that increased risks are minimized and the duration of the impairment is limited.

14.2 Impairment Coordinator.

14.2.1 The building owner shall assign an impairment coordinator to comply with the requirements of this chapter.

14.2.2 In the absence of a specific designee, the owner shall be considered the impairment coordinator.

14.2.3 Where the lease, written use agreement, or management contract specifically grants the authority for inspection, testing, and maintenance of the fire protection system(s) to the tenant, management firm, or managing individual, the tenant, management firm, or managing individual shall assign a person as impairment coordinator.

14.3 Tag Impairment System.

14.3.1* A tag shall be used to indicate that a system, or part thereof, has been removed from service.

14.3.2* The tag shall be posted at each fire department connection and system control valve indicating which system, or part thereof, has been removed from service.

14.3.3 The authority having jurisdiction shall specify where the tag is to be placed.

14.4 Impaired Equipment.

14.4.1 The impaired equipment shall be considered to be the water-based fire protection system, or part thereof, that is removed from service.

14.4.2 The impaired equipment shall include, but shall not be limited to, the following:

- (1) Sprinkler systems
- (2) Standpipe systems
- (3) Fire hose systems
- (4) Underground fire service mains
- (5) Fire pumps
- (6) Water storage tanks
- (7) Water spray fixed systems
- (8) Foam-water systems
- (9) Fire service control valves

14.5* Preplanned Impairment Programs.

14.5.1 All pre-planned impairments shall be authorized by the impairment coordinator.

14.5.2 Before authorization is given, the impairment coordinator shall be responsible for verifying that the following procedures have been implemented:

- (1) The extent and expected duration of the impairment have been determined.
- (2) The areas or buildings involved have been inspected and the increased risks determined.
- (3) Recommendations have been submitted to management or building owner/manager.

Where a required fire protection system is out of service for more than 4 hours in a 24-hour period, the impairment coordinator shall arrange for one of the following:

- (a) Evacuation of the building or portion of the building affected by the system out of service
 - (b)* An approved fire watch
 - (c)* Establishment of a temporary water supply
 - (d)* Establishment and implementation of an approved program to eliminate potential ignition sources and limit the amount of fuel available to the fire
- (4) The fire department has been notified.
 - (5) The insurance carrier, the alarm company, building owner/manager, and other authorities having jurisdiction have been notified.

- (6) The supervisors in the areas to be affected have been notified.
- (7) A tag impairment system has been implemented. (*See Section 14.3.*)
- (8) All necessary tools and materials have been assembled on the impairment site.

14.6 Emergency Impairments.

14.6.1 Emergency impairments include but are not limited to system leakage, interruption of water supply, frozen or ruptured piping, and equipment failure.

14.6.2 When emergency impairments occur, emergency action shall be taken to minimize potential injury and damage.

14.6.3 The coordinator shall implement the steps outlined in Section 14.5.

14.7 Restoring Systems to Service.

When all impaired equipment is restored to normal working order, the impairment coordinator shall verify that the following procedures have been implemented:

- (1) Any necessary inspections and tests have been conducted to verify that affected systems are operational. The appropriate chapter of this standard shall be consulted for guidance on the type of inspection and test required.
- (2) Supervisors have been advised that protection is restored.
- (3) The fire department has been advised that protection is restored.
- (4) The building owner/manager, insurance carrier, alarm company, and other authorities having jurisdiction have been advised that protection is restored.
- (5) The impairment tag has been removed.

Electrical Wire Recalled by Cerro Wire due to Fire Hazard

August 18, 2010

Name of Product: THHN Electrical Wire

Manufacturer: Cerro Wire Inc., of Crothersville, Ind.

Hazard: While the actual electrical wire has "14 gauge" printed on it, the packaging incorrectly labels the electrical wire as 12 gauge. If used as a 12 gauge wire, it can overload, posing a fire hazard to consumers.

Incidents/Injuries: None reported.

Description: This recall involves THHN electrical wire labeled on its packaging as 12 gauge solid white 100' UPC 48243982721 and 12 gauge stranded red 50' UPC 48243229215. The actual wire has "THHN Cerro Wire 14 gauge" printed on it. The UPC number and 12 gauge is found on the plastic wrap and on a label at the bottom of the reel.

Sold at: Home Depot & Menards stores in the following states: Colo., Iowa, Idaho, Ill., Ind., Kan., Ky., Mich., Minn., Mo., Mont., N.D., Neb., Ohio, Ore., Pa., S.D., Utah, Wash., Wis., Wyo. from December 2009 through April 2010. The 50-foot wire spools were sold for \$9 and the 100-foot spools for about \$16.

Manufactured in: United States

Remedy: Consumers should immediately stop using any switches, outlets or electrical devices using this wire and contact Cerro Wire for instructions on returning the product for a refund. Any contractor or subcontractor who used this wire should inspect their work to see that their work meets local electrical wiring code.

Consumer Contact: For additional information, contact Cerro Wire toll-free at (866) 572-3776 ext. 269 between 7 a.m. and 5 p.m. ET Monday through Friday or visit the firm's website at www.cerrowire.com

To see this recall on CPSC's web site, including pictures of the recalled products, please go to: <http://www.cpsc.gov/cpsc/pub/prerel/prhtml10/10319.html>