



The Fire & Security Authority[®]

2010 ISSUE 2



UL's New Proprietary Fire Alarm Monitoring Center Listing Program

Providing code compliance confidence for college campuses, retailers, manufacturing facilities and code authorities

by Tom Presnak

For many years, manufacturing facilities, college campuses and retailers have operated facilities to monitor fire alarms for their own properties. These proprietary monitoring facilities have no means of formal recognition that demonstrates compliance with nationally recognized codes and stan-

dards. Likewise, code authorities have no way to verify that these monitoring facilities — many located some distances away from their monitored properties — comply with the requirements found in the supervising stations chapter of NFPA 72 the National Fire Alarm and Signaling Code.

To address this situation, UL has established an evaluation service and Listing category (UUKA) for proprietary fire alarm monitoring stations which comply with the supervising stations chapter of NFPA 72.

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What's Hot...

State of Iowa now tracks number of "Lives saved" by smoke detectors

Clive, IOWA — The State Fire Marshal Division (SFM) announced today that the number of lowans saved (22) by working smoke detectors is more than double the number of lives lost (9) in Iowa in 2010. A press conference was held at the Clive Fire Department. So far in 2010, nine lowans have died in fires while 22 people have been saved because of working smoke detectors.

State Fire Marshal Ray Reynolds said, "Typically, the number of fire deaths is well known and well publicized. When I became State Fire Marshal, I felt it was just as important, if not more important, to track and publicize the number of

lives saved because of working smoke detectors. I'm proud that lowans take fire prevention seriously."



Tori Smith, age 9, from Ottumwa woke up to a beeping smoke detector at 2:00 a.m. at her home on April 17th and alerted her mother and brother. All three got out safely and are now counted among the 22 people saved by a working smoke detector. The family's home was badly damaged by fire.

Ottumwa Fire Marshal Mike Jones joined Tori and her family at today's press conference.

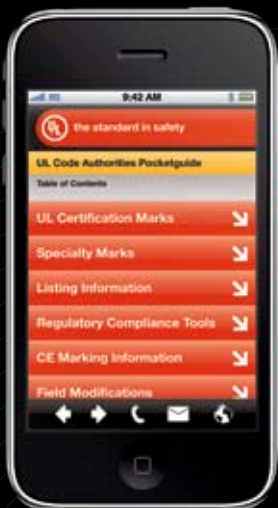
Clive Fire Marshal Tony Collins said, "One of the most important ways the fire service can save lives is to insure that

lowans have working smoke detectors. We support the State Fire Marshal and won't be satisfied until the number of fire fatalities is zero. One fire fatality is too many."

The State Fire Marshal Division recommends that smoke detectors should be replaced every ten years and batteries in smoke detectors should be replaced every year. A new dual sensing smoke detector law went into effect in Iowa on April 1, 2010.

To enroll in the DPS E-mail Notification system simply log on to <https://dpsemailnotify.iowa.gov> and follow the instructions to enroll as a new user*.

**This May 4, 2010 press release has been reprinted in its entirety from the Iowa Department of Public Safety website <http://www.dps.state.ia.us>.*



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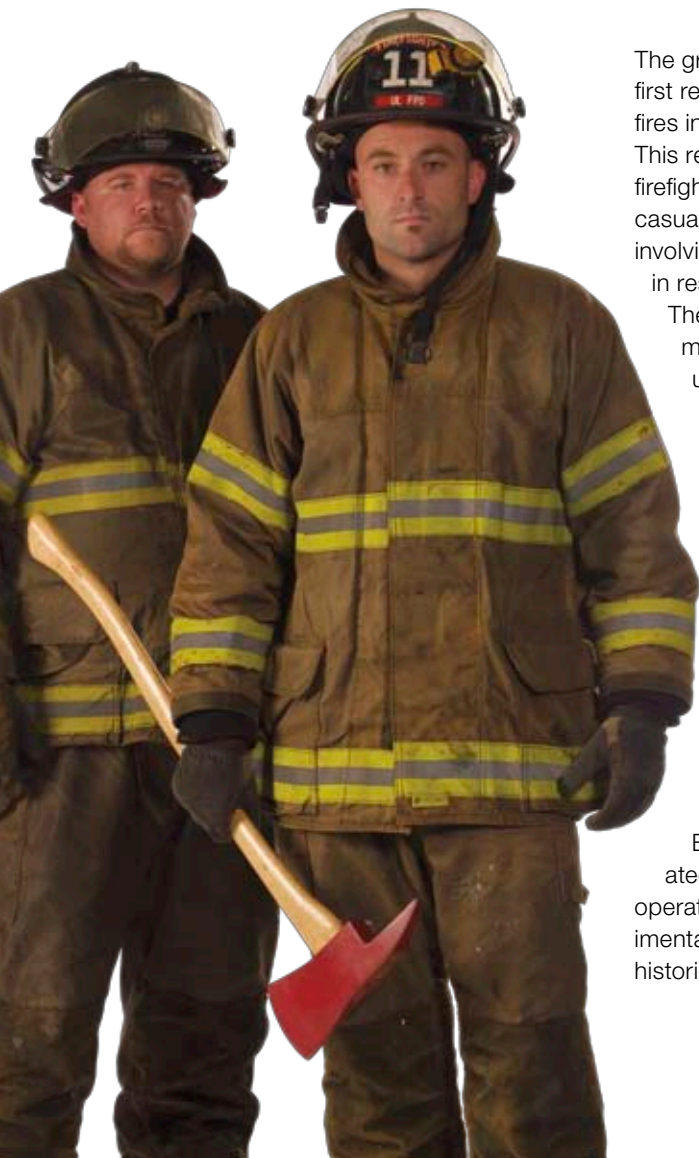
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UL Awarded Grant to Study Firefighter and Photovoltaic System Safety

Continuing its tradition of contributing to firefighter safety and leveraging a long history of experience in electrical safety, Underwriters Laboratories was recently awarded a research grant from the U.S. Department of Homeland Security/FEMA 2009 Assistance to Firefighters Grant Program — Fire Prevention and Safety Grants.



The grant funds a project that addresses first responder concerns about fighting fires involving photovoltaic (PV) modules. This research project will investigate firefighter vulnerability to electrical and casualty hazards when fighting a fire involving PV modules and support systems in residential and commercial buildings.

The increasing use of PV systems makes the need for this project: PV use is growing at a rate of 30 percent annually in the US. The use of this new technology has complicated traditional firefighter tactics, leaving firefighters vulnerable to severe hazards. Though the electrical and fire hazards of PV systems are addressed through current product standards and certification, a limited body of knowledge and insufficient data exists for the fire service to develop safe tactics during suppression and ventilation activities.

Evaluating the hazards associated with PV systems in firefighting operations will require the design of experimental methodologies based on UL's historical and current expertise in product

testing and standards development. The experiments will develop empirical data to understand the magnitude of the hazards. Methodologies will be based on electrical principals, fire dynamics and firefighting tactics.

UL will share the results and information gained through the research with the fire service community and PV industry through Web-based educational programs, presentations and articles. The results from the study will serve as the foundation for potential PV installation code revisions and the creation of tactical and operational guidelines resulting in improved firefighter preparedness and safety.

For more information, please contact Bob Backstrom at Robert.G.Backstrom@us.ul.com or Steve Kerber at Stephen.Kerber@us.ul.com.



UL's New Proprietary Fire Alarm Monitoring Center Listing Program (continued from cover)

The proprietary fire alarm monitoring station certification will not only provide credentialing for this type of facility, but will also identify them appropriately. Many times, these facilities are incorrectly defined as central station facilities, thereby creating confusion for all concerned parties. The central station category is generally considered appropriate for commercial monitoring facilities only. NFPA 72 has strict requirements for facilities conducting off-premises monitoring of fire, supervisory and trouble signals.

Experience and dedication matters

UL staff has been evaluating commercial monitoring facilities for more than 75 years, using full-time dedicated staff to conduct these evaluations. UL staff members hold NICET certification in fire alarm systems, most of those certifications being NICET level II and several NICET level III. UL brings these years of knowledge, technical qualifications and experience to facilities currently processing signals for many high-value operations presently without third party oversight.

The current UL program for commercial monitoring facilities begins with an initial evaluation for compliance with the appropriate codes and standards. Then on an annual basis, UL staff visits these facilities to confirm ongoing compliance by verifying that the monitoring center's processes and procedures are in order, and also by verifying ongoing compliance with physical requirements of the applicable codes and standards. Performing these initial and annual audits allows us at UL to maintain the integrity of the UL Mark

For propriety monitoring stations, UL staff will conduct an initial evaluation to confirm compliance with the proprietary fire supervising station requirements found in NFPA 72. Once the facility demonstrates compliance with the appropriate sections, UL will then grant a Listing and issue a certificate of compliance for a specific facility. These certificates of compliance are valid for one year, pending ongoing compliance with UL's program requirements. Annually, UL



staff will visit the UL Listed proprietary monitoring facility to determine ongoing compliance with NFPA 72.

What to expect with a NFPA 72 audit

The initial Listing evaluation will consist of an in-depth investigation of the proprietary monitoring facility and its operation. The requirements found in NFPA 72 cover topics such as facility construction, staffing, fire protection and security. In addition, UL staff will review primary and standby power arrangements along with emergency preparedness and backup lighting sources as well as a station's compliance with signal disposition requirements for fire, supervisory and trouble signals. NFPA 72 also includes requirements for the response by the property owner or its authorized agent to these signals. All alarm receiving and processing equipment must be UL Listed to the appropriate standard and must bear a UL Mark indicating compliance. UL staff will verify the proper use of these products per the UL Listing requirements and the manufacturer's installation instructions.

A field audit of a proprietary fire alarm monitoring facility is expected to take approximately one day. Companies wishing to obtain this Listing should have properly trained staff who are knowledgeable about a facility and its operation available to escort UL staff. UL will provide a pre-audit data package to complete before a UL visit.

If you operate a proprietary fire alarm monitoring facility (supervising station) and are looking for independent, third-party evaluation that delivers compliance from the world's leading provider of certification services, please contact UL. Code authorities looking for confidence that proprietary fire alarm monitoring facilities adhere to nationally recognized requirements may demand that these facilities be UL certified.

For more information, please contact Tom Presnak at +1.847.664.2651 or at Thomas.E.Presnak@us.ul.com.

Is My Fire Apparatus UL Certified to NFPA 1901?

Certification vs. inspection programs

Purchasers often look for UL certificates for a fire apparatus pump system or aerial testing at the time of apparatus delivery. A UL certificate is sometimes misunderstood as being identical to a product certification of pump and aerial systems.

Some sections of NFPA 1901, Standard for Automotive Fire Apparatus, require certification of test results by an independent third-party certification organization. For example, Section 16.13 of NFPA 1901 requires a third-party certification organization to witness tests and certify test results of pump systems with a rated capacity of 750 gpm or greater.

NFPA 1901 requires that a certification organization be accredited for inspection and testing systems on fire apparatus in accordance with ISO/IEC 17020, General criteria for the operation of various types of bodies performing inspection, or ISO/IEC Guide 65, General requirements for bodies operating product certification systems.

The following briefly defines typical certification programs and inspection programs.

Certification program

Product certification following ISO/IEC Guide 65 criteria typically targets ongoing production of products with the same design and includes surveillance of a manufacturing process and quality control system to determine continued compliance with requirements.

Some examples of UL product certifications are fire fighting personal protective equipment, e.g., helmets, boots and gloves, in which a sample product is evaluated and tested to an appropriate NFPA standard. A manufacturer is authorized to place UL labels on products manufactured with the same construction as the sample product evaluated by UL. A manufacturer signs an agreement that permits UL to conduct surveillance visits and randomly

select samples for follow-up testing to verify continued compliance.

Inspection program

An inspection program typically involves inspection of each individual item. The scope and findings of each inspection are described in a certificate or letter report.

An example of an inspection program is a UL certificate of inspection for an aerial device stating it was inspected for compliance with Section 19.24 of NFPA 1901, 2009 Edition. The scope of inspection is limited to Section 19.24, and the aerial device is not assessed for design and construction requirements cover by other sections of Chapter 19.

Assessment of design and construction requirements for aerials and other fire truck systems is covered under UL's Vehicle Inspection Program in which an automotive fire apparatus certificate is issued stating that UL assessed a specific apparatus to applicable requirements of NFPA 1901.

The following UL inspection programs are accredited by the International Accreditation Services as complying with ISO/IEC 17020:

- Inspection of automotive fire apparatus in accordance with NFPA 1901, Standard for Automotive Fire Apparatus
- Inspection of in-service automotive fire apparatus in accordance with Sections 18 (pumps) and 19 (aerials) of NFPA 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus
- Inspection of in-service ground ladders in accordance with NFPA 1932, Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders.

Because NFPA 1901 requires an accredited third-party certification organization to certify the test results for each pump, aerial and fixed generator, i.e., 100 percent inspection, product certification in accordance with ISO/IEC Guide 65 is not the best fit to address this need. As such, UL developed inspection programs in compliance with ISO/IEC 17020.

For more information, please contact Tom Hillenbrand at +1.847.664.2603 or Thomas.A.Hillenbrand@us.ul.com.



Canadian Corner



In 2003, Underwriters Laboratories of Canada published CAN/ULC-S561, Installation and Services for Fire Signal Receiving Centres and Systems, to address the needs of the regulatory community in Canada for constructing and operating fire signal receiving centers as well as the interconnection and installation between fire signal transmitting units and fire alarm system controls.

Many times in the past, these types of systems were installed by security system contractors and considered secondary to a fire alarm system connected to a security system. This often resulted in delayed or even missing fire alarm signals to the fire department. The concern of responding authorities was the impetus for establishing a standard method for dispatching the fire service when it receives fire alarm signals.

Following are 10 things you should know about CAN/ULC-S561 for fire alarm monitoring:



10 Things to Know About Fire Alarm Monitoring

- 1** **The Standard is referenced in the National Building Code and National Fire Code**
The National Building Code and the National Fire Code requires that a fire signal receiving center and a fire protective signaling system at a protected property meet the requirements of CAN/ULC-S561, Installation and Services for Fire Signal Receiving Centres and Systems. In addition, the Standard for the installation of fire alarm systems –CAN/ULC-S524-06, Installation of Fire Alarm Systems – requires that the interconnection between a fire alarm system control unit and a fire signal receiving center comply with the same CAN/ULC-S561. These two Standards are not only separately referenced in the Code, but are integral to each other in that conformance to CAN/ULC-S561 is directly linked to CAN/ULC-S524.
- 2** **The Standard covers more than signaling**
In addition to signaling, the CAN/ULC-S561 Standard requires that fire signal receiving centers conform to specifics such as ratings of fire separations, exiting, and other construction and safety requirements as well as operating procedures, standby/back-up systems, signal receivers, automation systems, emergency lighting and basic fire protection.
- 3** **Trained staff and installation/servicing requirements**
The Standard defines the requirements for trained staff that handle operation of a fire signal receiving station. It also covers the installation and service of a fire protective signaling system at a protected property. It should be noted that subcontracting is not permitted under the ULC system certificate program.
- 4** **Signal transmitting and receiving units must meet standards**
The signal transmitting unit located at a monitored premises and signal receiving units located at a fire signal receiving center are required to comply with the requirements of CAN/ULC-S559, Equipment for Fire Signal Receiving Centres and Systems, or CAN/ULC-S527, Standard for Control Units for Fire Alarm System. Equipment and devices not Listed by a nationally accredited certification body such as ULC do not meet the intent of the National Building Code.
- 5** **Communications path systems are defined**
Communication can come in the form of passive or active communication. Examples of passive systems are dual path systems and cellular back up; an example of an active system is Internet Protocol (IP). Transmitting and receiving equipment are ULC Listed to work with both types of communication channels and is tested to determine if there is telephone line supervision between a protected property and a fire signal receiving center.
- 6** **Two Systems for Fire protection signaling systems**
It is sometimes assumed fire protection systems apply to only monitoring fire alarms. In fact, fire protective signaling systems are categorized in two separate systems:

 - Fire alarm panel monitoring
 - Standalone sprinkler alarm monitoring
- 7** **What constitutes a compliant system**
For a system to be considered compliant, it has to include a Listed, i.e., tested and certified by a nationally accredited certification body, signal transmitting unit utilizing an approved communication path transmitting signals to a Listed fire signal receiving center. Supervision is required from the connections in a fire alarm system control unit to a fire alarm transmitter communicating on an approved communication path (passive or active) through to a Listed fire signal receiving center.

Questions & Answers

UL Environment is currently developing environmental sustainability standards for a range of building products and is seeking participants for its Standards Technical Panels (STPs). STPs play an important role in the development and review of UL Environment's standards.

An STP is a balanced group representing a cross section of stakeholders affected by a product's manufacture, sale and use. STP members are assigned one of eight interest categories: producer, supply chain, commercial/industrial user, general interest, authority having jurisdiction, government, testing and standards organization, or consumer. Appointments to the panel are made so that no single interest category dominates an STP. UL Environment standards created by STPs establish the basis for identifying environmentally preferable products, based on environmental sustainability criteria associated with a product's manufacture, distribution, use and eventual disposal. The requirements in UL Environment standards are developed based on the life cycle stages of the associated products.

Are there opportunities to get involved in UL Environment's standards development?

UL Environment has formed two STPs so far, one for mineral, fiber and wood composite boards that will be developing a standard for gypsum drywall and another for doors, door frames and associated hardware.

Other STPs being formed for 2010 to create environmental sustainability standards include:

- Suspended ceiling materials and systems
- Thermal insulation
- Lighting — Interior and exterior luminaires/components/LED modules
- Glazing materials, windows and associated hardware and accessories
- Roofing systems and materials
- Stone, ceramic, clay and glass building materials
- Plastics

For more information or to request an application for STP membership, please contact Tim Corder at +1.919.549.1841 or William.T.Corder@ulenvironment.com.



8 Clarity on the disposition of signals

- Fire alarm signals to be transmitted to a fire signal receiving center within 60 seconds
- Fire signal receiving center personnel must contact the fire department within 30 seconds

Defining the transmission time provides much more clarity for code users compared to previous requirements.

9 Clearly defined periodic testing

All fire protective signaling systems are required to be tested annually with records documenting the testing. These tests are required by CAN/ULC-S561 and are in addition to those required by CAN/ULC-S536, Standard for the Inspec-

tion and Testing of Fire Alarm Systems. Stand-alone sprinkler risers shall be tested bimonthly. For these systems to remain working at all times, regular maintenance and testing at a protected property is needed.

10 The assurance of a ULC certificate

Once the installer of the fire protective signaling system determines that fire protective signaling system has been installed in accordance with requirements of CAN/ULC-S561 the installer would then request a ULC Certificate for the protected property, ULC issues a ULC certificate and this is displayed at a fire alarm monitoring panel. The certificate states that an installation,

equipment and method of communication adhere to applicable ULC Standards. This certificate is the only proof that a building is being monitored in accordance with applicable ULC Standards.

In summary, a ULC protective signaling services certificate provides a code authority the necessary evidence that a complete system complies with the CAN/ULC-S561 Standard.

For more information, please contact Alan Cavers at +1.416.757.5250, ext 61207, or at Alan.N.Cavers@ca.ul.com.



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Calendar of Events



If you would like *The Fire & Security Authority* to consider publishing your upcoming events, contact Darlene Knauss, editor, in Northbrook, IL, by e-mail at Darlene.Knauss@us.ul.com. Please type "Calendar" in the subject line.

August 21 – 29
World Firefighter Games (WFG)
DaeGu, Korea
<http://wfg2010.daegu.go.kr>

August 27 – 28
Fire Rescue International (FRI)
Chicago, IL
www.iafc.org/fri

September 1 – 3
Intersec Buenos Aires (Seguriexpo)
Buenos Aires, Argentina
www.seguriexpo.com

September 22 – 23
Door Hardware Institute Expo (DHI)
Chicago, IL
www.dhi.org

September 30 – October 1
American Fire Sprinkler Association Convention and Exhibition (AFSA)
Providence, RI
www.firesprinkler.org