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**TITLE 675 FIRE PREVENTION AND BUILDING  
SAFETY COMMISSION**

**Proposed Rule**  
LSA Document #04-196

**DIGEST**

Adds 675 IAC 22-2.2-26 to adopt NFPA 1126, Standard for the Use of Pyrotechnics before a Proximate Audience, 2001 edition, published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts, together with all amendments adopted by the commission and, under IC 35-47.5-4-4.5, adds 675 IAC 26 to govern the use of a regulated explosive and establish requirements for the issuance of a license for the use of a regulated explosive. Partially effective 30 days after filing with the secretary of state and partially effective July 1, 2005.

**675 IAC 22-2.2-26**  
**675 IAC 26**

SECTION 1. 675 IAC 22-2.2-26 IS ADDED TO READ AS FOLLOWS:

**675 IAC 22-2.2-26 NFPA 1126; use of pyrotechnics before a proximate audience**

**Authority:** IC 22-11-14.5-3; IC 22-13-2-2; IC 22-13-2-13

**Affected:** IC 22-11-14; IC 22-12; IC 22-13; IC 22-14

**Sec. 26. (a) That certain document, being titled the NFPA 1126, Standard for the Use of Pyrotechnics before a Proximate Audience, 2001 edition, published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts 02269, is hereby incorporated by reference as if fully set out in this rule save and except those revisions made in this rule.**

**(b) This rule is available for reference and review at the Fire and Building Services Department, Indiana Government Center-South, 402 West Washington Street, W246, Indianapolis, Indiana 46204.**

**(c) NFPA 10, NFPA 101, NFPA 160, NFPA 495, NFPA 1122, NFPA 1123, NFPA 1125, and NFPA 1127 are:**

- (1) not adopted;**
- (2) not enforceable; and**
- (3) referenced for informational purposes only.**

**(d) Amend section 1.1 to delete “or outdoors” in the first sentence.**

**(e) Delete section 1.1.1 in its entirety.**

**(f) Delete section 1.1.4 in its entirety.**

**(g) Amend section 1.1.13 to read as follows: 1.1.13 Facilities in or at which pyrotechnics are to be used or stored shall comply with the applicable rules of the Fire Prevention and Building Safety Commission.**

**(h) Amend section 1.1.15 to read as follows: 1.1.15 This standard shall not apply to the manufacture of model rocket and high power rocket motors.**

**(i) Amend section 1.1.17 to read as follows: This standard shall not apply to the sale and use of model rockets and model rocket motors.**

**(j) Amend section 1.1.18 to read as follows: This standard shall not apply to the sale and use of high power sport rockets**

and high power sport rocket motors.

- (k) Amend section 1.2.1 to delete “outdoors” at the end of the section.
- (l) Delete section 1.2.1.1 in its entirety.
- (m) Delete section 1.2.1.2 in its entirety.
- (n) Delete section 1.4 in its entirety.
- (o) Amend section 1.5 to delete the second sentence.
- (p) Amend section 1.5.1 to read as follows: **Aerial Shell.** A cylindrical or spherical cartridge containing pyrotechnic material, a long fuse or electric match wires, and a black powder lift charge.
- (q) Amend section 1.5.6 to read as follows: **Authority Having Jurisdiction.** The chief of the responding fire department of the location proposed for the display of indoor pyrotechnics or the chief’s designee.
- (r) Amend section 1.5.35 to read as follows: **Listed.** Equipment or materials included on a list published by an approved testing laboratory, inspection agency, or other organization concerned with current product evaluation that maintains periodic inspection of production of listed equipment or materials, and whose listing states that equipment or materials comply with approved nationally recognized standards and have been tested or evaluated and found suitable for use in a specified manner.
- (s) Amend section 1.5.36 to read as follows: **Magazine.** Any building, structure, or indoor container used for the storage of explosives.
- (t) Amend section 1.5.41 to read as follows: **Performance.** The event before, during, or after which pyrotechnics are used.
- (u) Amend section 1.5.42 to read as follows: **Performer.** Any person in a performance who is not part of the audience or support personnel.
- (v) Delete section 1.5.43 in its entirety.
- (w) Amend section 1.5.45 to read as follows: **Producer.** An individual who has overall responsibility for the operation and management of the performance.
- (x) Amend section 1.5.46 to read as follows: **Production.** All the occurrences of a performance. There are two types of productions: fixed and touring.
- (y) Amend 1.5.47 to read as follows: **Proximate Audience.** An audience closer to pyrotechnic devices than permitted by the rules of the fire prevention and building safety commission.
- (z) Amend section 1.5.50 to read as follows: **Pyrotechnic Operator (Special Effects Operator).** The individual who has responsibility for pyrotechnic safety and who controls or initiates the use of pyrotechnic materials at a performance.
- (aa) Delete chapter 2 in its entirety.
- (bb) Delete chapter 3 in its entirety.
- (cc) Delete section 4.1.1 in its entirety.
- (dd) Amend section 4.2.1 to read as follows: **Before any performance, the pyrotechnic operator shall submit a plan for the use of pyrotechnics to the authority having jurisdiction.**

**(ee) Amend section 4.2.2 to read as follows: The pyrotechnic operator shall keep the plan available at the site for safety inspectors or other designated agents of the authority having jurisdiction.**

**(ff) Amend section 4.2.3 to read as follows: Any addition of pyrotechnics to a performance or any significant change in the presentation of pyrotechnics shall be approved by the authority having jurisdiction prior to such addition or significant change.**

**(gg) Amend section 4.3.1 to read as follows: The plan for the use of pyrotechnics shall be made in writing.**

**(hh) Amend section 4.3.2(d) to read as follows: Name of the pyrotechnic operator.**

**(ii) Amend section 4.3.2(i) to read as follows: Evidence of the pyrotechnic operator's insurance carrier or financial responsibility.**

**(jj) Amend section 4.3.3 to read as follows: All plans shall be submitted as soon as is possible so that the authority having jurisdiction has time to be present and notify other interested parties. In no event shall such advance notice be less than 24 hours.**

**(kk) Amend section 4.4.1 to read as follows: A walk-through and a representative demonstration of the pyrotechnics shall be approved by the authority having jurisdiction.**

**(ll) Delete section 4.4.3 in its entirety.**

**(mm) Amend section 4.5.1 to read as follows: All pyrotechnic operators shall be at least 21 years of age.**

**(nn) Delete section 6.1.1.2 in its entirety.**

**(oo) Amend section 6.1.6, exception no. 1 to read as follows: Exception No. 1: Portions of a fire detection and life safety system may be permitted to be interrupted during the operation of temporarily installed pyrotechnic effects when the authority having jurisdiction imposes a fire watch consisting of at least two (2) firefighters certified by the Board of Firefighting Personnel Standards and Education who are capable of directing the emergency evacuation of the audience, performers and support personnel.**

**(pp) Delete section 6.1.6, exception no. 2 in its entirety.**

**(qq) Amend section 6.2.7 to read as follows: Before firing any pyrotechnic device, the pyrotechnic operator shall prevent unauthorized entry into the area where the special effects are to occur.**

**(rr) Amend section 6.3.2 to delete the exception in its entirety.**

**(ss) Amend section 6.3.4 to delete the exception in its entirety.**

**(tt) Amend section 6.4.1 to delete the exception in its entirety.**

**(uu) Amend section 6.5.5 to delete the exception in its entirety.**

**(vv) Amend section 6.7.6 to read as follows: Life safety and other systems that have been disarmed or disengaged as specified by 6.1.6 shall be restored to normal operating condition as soon as the likelihood of false alarms from the use of pyrotechnics has passed.**

**(ww) Delete Chapter 7 in its entirety.**

**(xx) Delete Appendix A in its entirety.**

**(yy) Delete Appendix B in its entirety.**

(zz) Delete Appendix C in its entirety.

(aaa) Delete Appendix D in its entirety. *(Fire Prevention and Building Safety Commission; 675 IAC 22-2.2-26)*

SECTION 2. 675 IAC 26 IS ADDED TO READ AS FOLLOWS:

## **ARTICLE 26. REGULATED EXPLOSIVES; USE AND LICENSURE**

### **Rule 1. Definitions**

#### **675 IAC 26-1-1 Definitions**

**Authority:** IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

**Affected:** IC 35-47.5-2-13; IC 35-47.5-5-11

**Sec. 1.** The following definitions apply throughout this article:

- (1) “Airblast” means the noise and concussion originating from a blast, usually produced by the detonation gases venting to the atmosphere.
- (2) “Approved testing agency” means a person who administers the required examination for licensed regulated explosive use-blaster in accordance with 675 IAC 26-2-4.
- (3) “Blast” means the controlled detonation of explosives or explosive materials to break or move, or both, rock or other materials.
- (4) “Blast design” means the process of calculating blasthole diameter and layout, detonator timing, regulated explosives and blasting agent selection, and consideration of geology and topography to create a blast, within accepted safety guidelines, that delivers the desired quantity and quality of broken material.
- (5) “Blast initiation system” means the combination of detonators, detonation systems, and regulated explosives used to initiate a blast.
- (6) “Boosting” means the use of a unit of explosives or blasting agent to perpetuate or intensify an explosive reaction.
- (7) “Borehole” means a drilled hole, usually in rock, into which regulated explosives are loaded for blasting.
- (8) “Flyrock” means dirt, mud, stone, fragmented rock, and other solid material propelled through the air from a blast.
- (9) “Ground vibration” means a shaking of the ground in a specific wave form originating from a blast.
- (10) “Licensed regulated explosive use-blaster” means an individual who:
  - (A) supervises or directs and performs the loading and firing of explosives materials;
  - (B) is an employee of a licensed regulated explosive use-operator; and
  - (C) is licensed by the office of the state fire marshal under this rule.A licensed regulated explosive use-blaster may supervise or direct and perform any type of blasting.
- (11) “Licensed regulated explosive use-operator” means the person who:
  - (A) takes possession of a regulated explosive in this state for the purpose of detonation under the person’s direction or control;
  - (B) is the employer of a licensed regulated explosive use-blaster; and
  - (C) holds a licensed regulated explosive use-operator permit issued by the office of the state fire marshal under this rule.
- (12) “Person” means any of the following:
  - (A) An individual.
  - (B) A partnership.
  - (C) A copartnership.
  - (D) A company.
  - (E) A corporation.
  - (F) A limited liability company.
  - (G) An association.
- (13) “Proctor” means an individual who is an employee of an approved testing entity.
- (14) “Regulated explosive” has the meaning set forth in IC 35-47.5-2-13.
- (15) “Stemming” means the inert material, such as drill cuttings or crushed stone, used in a blasthole to confine the gaseous products of detonation.
- (16) “Tamping” means the process of compressing the stemming or regulated explosive in a blasthole.

*(Fire Prevention and Building Safety Commission; 675 IAC 26-1-1)*

## **Rule 2. Licensure Requirements**

### **675 IAC 26-2-1 Purpose**

**Authority:** IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

**Affected:** IC 35-47.5-5-11

**Sec. 1.** This rule establishes the licensure requirements for the use of regulated explosives as follows:

- (1) Requirements for licensed regulated explosive use-blaster as provided in sections 2 through 4 of this rule.
- (2) Requirements for licensed regulated explosive use-operator as provided in sections 7 through 9 of this rule.
- (3) Procedures for the office of the state fire marshal to administer a program to issue licenses to individuals who comply with the requirements for licensed regulated explosive use-blaster and licensed use permits to persons who comply with the requirements for obtaining licensed use permits.

*(Fire Prevention and Building Safety Commission; 675 IAC 26-2-1)*

### **675 IAC 26-2-2 Application for licensure as a licensed regulated explosive use-blaster**

**Authority:** IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

**Affected:** IC 35-47.5-5-11

**Sec. 2.** An applicant for licensure as a licensed regulated explosive use-blaster shall submit evidence to the office of the state fire marshal on a form approved by the fire prevention and building safety commission and under penalty of perjury that the individual:

- (1) has successfully completed:
  - (A) the examination approved by the office of the state fire marshal and administered by an approved testing agency; and
  - (B) one (1) year of experience in the proper use of regulated explosives;
- (2) is at least twenty-one (21) years of age; and
- (3) has submitted the fee required in section 4 of this rule.

*(Fire Prevention and Building Safety Commission; 675 IAC 26-2-2)*

### **675 IAC 26-2-3 Licensure examination**

**Authority:** IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

**Affected:** IC 35-47.5-5-11

**Sec. 3. (a)** The subjects for the licensed regulated explosive use-blaster examination are as follows:

- (1) Explosives and related products, including the following:
  - (A) High explosives.
  - (B) Blasting agents.
  - (C) Chemical and physical properties of explosive products and appropriate product selection.
- (2) Detonation materials and unique product properties, and methods of use, including the following:
  - (A) Electric detonators.
  - (B) Nonelectric detonators.
  - (C) Boosters and primers.
  - (D) Detonating cord.
  - (E) Detonating tube.
- (3) Electric detonators/special conditions, including the following:
  - (A) Required safety testing procedures.
  - (B) Approved test equipment.
  - (C) Approved blasting machines.
- (4) Blast layout and blasthole design, including the following:
  - (A) Geology.
  - (B) Topography.
  - (C) Burden and spacing calculations.
  - (D) Drill hole diameter and pattern placement.
  - (E) Blasthole detonation timing.
- (5) Control of airblast, ground vibration, and flyrock, including the following:

- (A) Seismograph equipment usage.
- (B) Airblast monitoring and control measures.
- (C) Scale distance calculations.
- (D) Detonator timing sequences.
- (E) Flyrock reduction techniques.
- (6) Blasting records, including the following:
  - (A) Delivery, storage, and use reports.
  - (B) Blasting log.
  - (C) Seismograph log.
  - (D) Record retention requirements.
- (7) Unpredictable hazards, including the following:
  - (A) Weather conditions.
  - (B) Stray current.
  - (C) Radio frequency energy.
  - (D) Misfire conditions.
  - (E) Site security and safety.
- (8) Applicable federal and state regulations and statutes.
- (9) New product and procedure technology.

(b) The approved testing agency shall obtain the form and content of the examination from the office of the state fire marshal and shall administer the examination in accordance with the following:

- (1) A minimum of seventy percent (70%) grade is required to pass the examination.
- (2) One (1) or more proctors shall monitor each examination.
- (3) A photo identification must be provided by the applicant.
- (4) Once all admission requirements have been verified, the applicant will be allowed to take the examination.
- (5) Once the examination has begun, the entrance to the examination site will be secured and no additional applicants will be permitted to enter.
- (6) Each examination participant shall sign and date the student registration form.
- (7) Examination participants shall be seated at least five (5) feet away from each other participant.
- (8) Any examination participant observed talking to another examination participant while either has his or her answer sheet in his or her possession shall be immediately dismissed from the examination and shall receive a score of zero (0) on the examination.
- (9) Any examination participant observed copying from another participant's paper shall:
  - (A) be immediately dismissed from the examination; and
  - (B) receive a score of zero (0) on the examination.
- (10) The maximum time allowed for each examination shall be three (3) hours.
- (11) At the end of the examination period, the proctor shall ensure that:
  - (A) each student returns:
    - (i) the test booklet;
    - (ii) the completed answer sheet; and
    - (iii) the completed registration form; and
  - (B) no marks were made on the test booklet.
- (12) The proctor shall seal all test booklets and answer sheets, and the authorized testing agency shall process the answer sheets for scoring. Each participant shall be notified in writing by the authorized testing agency of his or her examination score within ten (10) business days after the completion of the examination.
- (13) If more than one (1) room is being used for the examination, a minimum of one (1) proctor per room shall be required.

*(Fire Prevention and Building Safety Commission; 675 IAC 26-2-3)*

**675 IAC 26-2-4 Issuance of licensed regulated explosive use-blaster license; reciprocity; renewal of license; maintenance and sanctions**

**Authority:** IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

**Affected:** IC 22-12-7-7; IC 35-47.5-5-11

**Sec. 4. (a) The office of the state fire marshal shall issue a license to an individual who:**

- (1) complies with the requirements of section 2 of this rule or is certified under 312 IAC 25-9; and

(2) pays the licensure fee of one hundred seventy-five dollars (\$175), payable to the fire and building services fund.

(b) A license expires three (3) years from the date the individual is initially licensed as a licensed regulated explosive use-blaster. Renewal of licenses shall be as set forth in subsection (h).

(c) A license shall not be assigned or transferred.

(d) A licensed regulated explosive use-blaster shall carry his or her license in his or her possession at all times when blasting is occurring.

(e) Reciprocal licensure shall be granted to an individual as follows:

(1) The individual presents an application on a form approved by the fire prevention and building safety commission, together with an original licensure document from another state or federal agency evidencing licensure under requirements that are substantially similar to the requirements of this rule.

(2) The individual submits a fee in the amount of one hundred seventy-five dollars (\$175).

(f) For purposes of subsection (e)(1), the licensure or certification requirements of the states of Illinois, Kentucky, and Ohio are deemed substantially similar to the requirements of this rule.

(g) Reciprocal licensure shall be effective for the duration of licensure or certification issued by the originating agency described in subsection (e)(1).

(h) For renewal of licensure, the individual shall:

(1) accrue a minimum of eight (8) hours per year of continuing education in one (1) or more of the subjects listed in section 3(a) of this rule. For purposes of this subsection, "per year" means each of three (3) twelve (12) calendar month periods, beginning on either the date that individual received initial licensure under section 2 of this rule or the date of licensure or certification by the originating agency described in subsection (e)(1);

(2) submit a renewal application on a form approved by the office of the state fire marshal;

(3) submit evidence of compliance with the continuing education requirements contained in subdivision (1);

(4) have successfully completed the examination described in section 2(1) of this rule; and

(5) pay a fee in the amount of one hundred seventy-five dollars (\$175).

(i) To maintain licensure, the individual shall comply with all applicable rules of the fire prevention and building safety commission. Failure to comply may subject the holder of a licensed regulated explosive use-blaster license to sanctions contained in IC 22-12-7-7. (*Fire Prevention and Building Safety Commission; 675 IAC 26-2-4*)

#### **675 IAC 26-2-5 Application for licensure as a licensed regulated explosive use-operator**

Authority: IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

Affected: IC 35-47.5-5-11

**Sec. 5.** A person who takes possession of a regulated explosive in the state of Indiana for the purpose of detonation under the person's direction or control shall submit an application to become a licensed regulated explosive use-operator to the office of the state fire marshal on a form approved by the fire prevention and building safety commission and under penalty of perjury. (*Fire Prevention and Building Safety Commission; 675 IAC 26-2-5*)

#### **675 IAC 26-2-6 Issuance of licensed regulated explosive use-operator license; maintenance; renewal**

Authority: IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

Affected: IC 35-47.5-5-11

**Sec. 6. (a)** The office of the state fire marshal shall issue a licensed regulated explosive use-operator license to a person who has:

(1) applied under section 5 of this rule; and

(2) paid a fee in the amount of three hundred fifty dollars (\$350).

(b) A licensed use permit expires three (3) years from the date it was issued by the office of the state fire marshal.

(c) To renew licensure, a person shall:

(1) submit an application on a form approved by the office of the state fire marshal;

(2) pay a fee in the amount of three hundred fifty dollars (\$350);

(3) accrue a minimum of eight (8) hours per year of continuing education in one (1) or more of the subjects listed in section 3(a) of this rule. For purposes of this subsection, "per year" means each of three (3) twelve (12) calendar month periods, beginning on the date that applicant received initial licensure under this section. For purposes of this subsection, the continuing education requirements shall be completed by an officer, partner, or manager of a person who is:

(A) a partnership;

(B) a copartnership;

(C) a company;

(D) a corporation;

(E) a limited liability company; or

(F) an association; and

(4) submit evidence of compliance with the continuing education requirements contained in subdivision (3).

*(Fire Prevention and Building Safety Commission; 675 IAC 26-2-6)*

### **675 IAC 26-2-7 Orders, sanctions, and appeals**

Authority: IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

Affected: IC 4-21.5-3; IC 22-12-7-7; IC 35-47-1-5; IC 35-47.5-2-13; IC 35-47.5-5-11

Sec. 7. (a) The office of the state fire marshal may enforce the provisions of this rule through the issuance of administrative orders under IC 22-12-7.

(b) Orders issued under subsection (a) may include corrective actions or sanctions in accordance with IC 22-12-7-7.

(c) Any person aggrieved by an order issued by the office of the state fire marshal may petition for administrative review under IC 22-12-7 and IC 4-21.5-3. *(Fire Prevention and Building Safety Commission; 675 IAC 26-2-7)*

### **Rule 3. Use Requirements**

#### **675 IAC 26-3-1 Adoption of NFPA 495; Explosive Materials Code**

Authority: IC 22-11-14.5-3; IC 22-13; IC 35-47.5-4-4.5

Affected: IC 35-47.5-5-11

Sec. 1. (a) That certain document, being titled the NFPA 495, Explosive Materials Code, 2001 edition, published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, Massachusetts 02269, is hereby incorporated by reference as if fully set out in this rule save and except those revisions made in this rule.

(b) This rule is available for reference and review at the Fire and Building Services Department, Indiana Government Center-South, 402 West Washington Street, W246, Indianapolis, Indiana 46204.

(c) Delete Chapter 1 in its entirety.

(d) Delete Chapter 2 in its entirety.

(e) Amend Section 3.3.7 to read as follows: Blaster means a licensed regulated explosive use-blaster.

(f) Add Section 3.3.45.1 to read as follows: Regulated explosive has the meaning set forth in IC 35-47.5-2-13.

(g) Add Section 3.3.55.1 to read as follows: Stemming means the inert material, such as drill cuttings or crushed stone, used in a blasthole to confine the gaseous products of detonation.

(h) Add Section 3.3.55.2 to read as follows: Tamping means the process of compressing the stemming or regulated explosive in a blasthole.



(i) Delete Section 4.1 in its entirety.

(j) Amend Section 4.2.1 to read as follows: No person shall take possession of explosive materials for the purpose of detonation under the person's direction or control without first obtaining a licensed regulated explosive use-operator license.

(k) Add Section 4.2.1.1 to read as follows: The loading and firing of explosive materials shall be conducted only under the control of a licensed regulated explosive use-blaster.

(l) Amend Section 4.2.3 to read as follows: Every licensed regulated explosive use-operator and every licensed regulated explosive use-blaster shall be responsible for the results and consequences of any loading or firing of explosive materials. All loading and firing shall be supervised and performed by a licensed regulated explosive use-blaster.

(m) Delete Section 4.3 in its entirety.

(n) Delete Section 4.4 in its entirety.

(o) Delete Section 4.5 in its entirety.

(p) Delete Section 4.6 in its entirety.

(q) Delete Section 4.7 in its entirety.

(r) Amend Section 4.8.1 to read as follows: A licensed regulated explosive use-operator shall keep a record of all transactions or operations involving explosive materials.

(s) Delete Section 4.8.2 in its entirety.

(t) Amend Section 4.8.3 to read as follows: A licensed regulated explosive use-operator shall keep a daily record of all explosive materials received and fired or otherwise disposed of by the licensed regulated explosive use-operator.

(u) Add Section 4.8.3.1 to read as follows: A record of each blast shall be kept. All such records shall contain at least the following data:

- (1) The name of the licensed regulated explosive use-operator.
- (2) The exact location of the blast, with date and time of detonation.
- (3) The name, signature, and license number of the licensed regulated explosive use-blaster on site at the blast.
- (4) The type of material blasted.
- (5) The number of holes, burden, and spacing.
- (6) The diameter and depth of holes.
- (7) The types of explosives used.
- (8) The total amount of explosives used, in pounds.
- (9) The maximum weight of explosives per delay period of eight (8) milliseconds or greater.
- (10) The method of firing and type of circuit.
- (11) The direction, distance in feet, and identification of the nearest Class 1 or Class 2 structure that is neither owned nor operated by the entity in subdivision (1) or (3).
- (12) The weather conditions.
- (13) The type and height or length of stemming.
- (14) A statement as to whether mats or other protections against flyrock were used.
- (15) The type of detonators used and delay periods used.
- (16) Seismograph readings, where required, shall accurately indicate the exact location of the seismograph and the distance from the seismograph to the blast. The seismograph shall create a visually inspectable Cartesian presentation of all three (3) mutually perpendicular vibration traces and one (1) acoustic channel versus time, and having both vertical and horizontal scaling factors.
- (17) Seismograph records, where used, shall include the following:
  - (A) The name of the person analyzing the seismographic record.
  - (B) The seismograph reading.

**(18) The maximum number of charges within any period of eight (8) milliseconds.**

**(19) A sketch of the blast pattern, including the number of holes, burden and spacing delay pattern, and a hole profile.**

**(v) Amend Section 4.8.4 to read as follows: A licensed regulated explosive use-operator shall notify the office of the state fire marshal of any change in address.**

**(w) Amend Section 4.8.5 to read as follows: A licensed regulated explosive use-operator shall notify the office of the state fire marshal of the loss, theft, or unlawful removal of explosive materials within twenty-four (24) hours.**

**(x) Delete Chapter 5 in its entirety.**

**(y) Delete Chapter 6 in its entirety.**

**(z) Delete Chapter 7 in its entirety.**

**(aa) Delete Chapter 8 in its entirety.**

**(bb) Amend Section 9.1.1 to read as follows: All licensed regulated explosive use-blasters and licensed regulated explosive use-operators shall comply with all applicable federal and state laws with respect to the sale, possession, storage, and use of explosive materials.**

**(cc) Delete Section 9.1.2 in its entirety.**

**(dd) Amend Section 9.1.3 to read as follows: Explosive materials shall be used only by individuals who are under the direct, on-site supervision of a licensed regulated explosive use-blaster.**

**(ee) Amend Section 9.1.3.1 to read as follows: Loading and firing shall be performed or supervised directly by a licensed regulated explosive use-blaster who is present at the blast site.**

**(ff) Amend Section 9.1.3.2 to read as follows: Trainees, helpers, and other individuals who are not licensed regulated explosive use-blasters shall work only under the direct, on-site supervision of a licensed regulated explosive use-blaster.**

**(gg) Amend Section 9.1.4.3 to read as follows: No individual within fifty (50) feet of any location where explosives are being handled or used shall carry any matches, open light, other fire or flame, or firearms (as defined in IC 35-47-1-5).**

**(hh) Amend Section 9.1.5 to substitute “individual” for “person”.**

**(ii) Delete Section 9.1.8 in its entirety.**

**(jj) Delete Section 9.1.9 in its entirety.**

**(kk) Delete Section 9.1.10 in its entirety.**

**(ll) Delete Section 9.1.11 in its entirety.**

**(mm) Amend Section 9.1.12 to read as follows: Where blasting is done in a congested area or in close proximity to a structure, railway, highway, or any other installation that could be affected, special precautions shall be taken.**

**(nn) Amend Section 9.1.13 to read as follows: Individuals authorized to prepare explosive charges and licensed blasters shall use every reasonable precaution to ensure the safety of the general public and workers.**

**(oo) Amend Section 9.1.15 to read as follows: Where blasting is conducted in the vicinity of utility lines or rights-of-way, the licensed regulated explosive use-operator shall notify the appropriate representatives of the utilities at least twenty-four (24) hours in advance of blasting, specifying the location and the intended time of such blasting. Verbal notice shall be confirmed with written notice.**

(pp) Amend Section 9.1.15 to delete the exception.

(qq) Amend Section 9.1.16 to delete item (1) and amend item (2) to read as follows: Observance of nationally recognized standards, including, without limitation, standards published by the Institute of Makers of Explosives.

(rr) Amend Section 9.2 to read as follows: Blasthole loading.

(ss) Amend Section 9.3.5 to read as follows: All electric blasting circuits and other initiating systems whose continuity can be tested shall be tested with a blasting galvanometer or other blast continuity test instrument as recommended by the product manufacturer. All electrically initiated blasts shall be made by using blasting machines suitable for the circuitry being fired.

(tt) Amend Section 9.5.4 to read as follows: Where there are misfires using cap and fuse, all personnel shall stay clear of the blast site for at least thirty (30) minutes.

(uu) Amend Section 9.5.5 to read as follows: Where there are misfires using other nonelectric detonators, that is, other than cap and fuse, all personnel shall stay clear of the blast site for at least fifteen (15) minutes, and, where there are misfires using electric detonators, all personnel shall stay clear of the blast site for at least thirty (30) minutes.

(vv) Amend Section 9.5.6 to read as follows: Misfires shall be the responsibility of the licensed regulated explosive use-blaster in charge of the blasting operation.

(ww) Amend Section 9.6.3 to read as follows: All explosive materials that are obviously deteriorated or damaged shall not be used and shall be destroyed in accordance with the manufacturer's guidelines or instructions.

(xx) Amend Section 10.1.1 to read as follows: At all blasting operations, the maximum ground vibration at any dwelling, public building, school, church, or commercial or institutional building adjacent to the blasting site shall not exceed the limitations specified in Table 10.1.1 and Table 10.1.2(b) unless the license use permittee has a written waiver from the property owner.

(yy) Amend Table 10.1.1 to read as follows:

Table 10.1.1 Peak Particle Velocity Limits			
Distance from Blasting Site		Maximum Allowable Peak Particle Velocity	
m	ft	mm/s	in./s
all distances	all distances	25.4	1.00

(zz) Amend Section 10.1.2 to read as follows: In lieu of Table 10.1.1, a licensed regulated explosive use-operator shall have the option to use the graph shown in Figure 10.1.2(b) to limit peak particle velocity based upon the frequency of the blast vibration.

(aaa) Delete Figure 10.1.2(a) in its entirety.

(bbb) Amend Section 10.1.3 to read as follows: Unless a licensed regulated explosive use-operator uses a seismograph to monitor a blast to ensure compliance with Table 10.1.1 or Figure 10.1.2(a), the licensed regulated explosive use-operator shall comply with the scaled distance equations shown in Table 10.1.3.

(ccc) Amend Table 10.1.3 to read as follows:

Table 10.1.3 Scaled Distance Equations	
Distance from Blasting Site	Scaled Distance* Equation
All distances	$W(lb) = [D(ft)/60]^2$ $\{W(kg) = [D(m)/27.15]^2\}$

W equals the maximum weight of regulated explosives in pounds (or kilograms) that can be detonated per delay interval of 8 milliseconds or longer.

D equals the distance in feet (or meters) from the blast to the nearest dwelling, public building, school, church, or commercial or institutional building not owned, leased, or contracted by the licensed regulated explosive use-operator, or on property for which the owner has not provided a written waiver to the licensed regulated explosive use-operator.

\*To convert English units of scaled distances (ft/lb<sup>2</sup>) to metric units (m/kg<sup>2</sup>), divide by a factor of 2.21.

(ddd) Amend Section 10.1.4 to read as follows: Where the licensed regulated explosive use-operator is using scaled distance equations, the office of the state fire marshal may require seismographic monitoring of shots.

(eee) Amend Section 10.2.1 to read as follows: Airblast at the locations of any dwelling, public building, school, church, or commercial or institutional building not owned, leased, or contracted by the licensed regulated explosive use-operator, or on property for which the owner has not provided a written waiver to the licensed regulated explosive use-operator, shall not exceed the maximum limits specified in Table 10.2.1.

(fff) Amend Table 10.2.1 to read as follows:

Table 10.2.1 Air Blast Limits

Lower Frequency of Measuring System [Hz ( $\pm$ 3 db)]	Measurement Level (dcb)
2 Hz or lower ..... flat response	133 peak
6 Hz or lower ..... flat response	129 peak

(ggg) Amend Section 10.3.2 to read as follows: Flyrock shall not be propelled from the blast site onto property not contracted by the licensed regulated explosive use-operator or onto property for which the owner has not provided a written waiver to the licensed regulated explosive use-operator.

(hhh) Delete Chapter 11 in its entirety.

(iii) Delete Chapter 12 in its entirety. (*Fire Prevention and Building Safety Commission; 675 IAC 26-3-1*)

SECTION 3. SECTION 2 of this document takes effect July 1, 2005.

#### ***Notice of Public Hearing***

*Under IC 4-22-2-24, notice is hereby given that on January 18, 2005 at 10:30 a.m., at the Indiana Government Center-South, 402 West Washington Street, Conference Center Room C, Indianapolis, Indiana; AND on April 5, 2005, at 10:00 a.m., Indiana Government Center-South, 402 West Washington Street, Conference Center Room B, Indianapolis, Indiana the Fire Prevention and Building Safety Commission will hold a public hearing on proposed rules concerning the adoption of NFPA 1126, and licensure of users of regulated explosives, including the adoption of NFPA 495. Copies of these rules are now on file at the Indiana Government Center-South, 402 West Washington Street, Room W246 and Legislative Services Agency, One North Capitol, Suite 325, Indianapolis, Indiana and are open for public inspection.*

Luther J. Taylor, Sr.  
Secretary  
Fire Prevention and Building Safety Commission