

(c) Storage of quantities exceeding 800 pounds (363 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:

- (i) The warehouse or storage room is unaccessible to unauthorized personnel.
- (ii) Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least 1 inch (25 mm) nominal thickness and having shelves with no more than 3 feet (914 mm) of separation between shelves.
- (iii) No more than 400 pounds (182 kg) is stored in any one cabinet.
- (iv) Cabinets shall be located against walls of the storage room or warehouse with at least 40 feet (12 192 mm) between cabinets.
- (v) The minimum required separation between cabinets shall be 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall and be constructed of steel not less than $\frac{1}{4}$ inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.
- (vi) Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids or oxidizing materials by a distance of 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of 1 hour.
- (vii) The building shall be equipped throughout with an automatic sprinkler system installed in accordance with *paragraph (C)(3)(a)(i)(903.3.1.1) of rule 1301:7-7-09 of the Administrative Code*.

(d) Smokeless propellants not stored according to *paragraph (F)(5)(b)(i)(a), (F)(5)(b)(i)(b), or (F)(5)(b)(i)(c) of this rule* shall be stored in a Type 2 or 4 magazine in accordance with *paragraph (D)(3304) of this rule* and NFPA 495 as listed in *rule 1301:7-7-47 of the Administrative Code*.

(ii) **3306.5.2.2 Black powder.** Commercial stocks of black powder in quantities less than 50 pounds (23 kg) shall be allowed to be stored in Type 2 or 4 indoor or outdoor magazines. Quantities greater than 50 pounds (23 kg) shall be stored in outdoor Type 2 or 4 magazines. When black powder and smokeless propellants are stored together in the same magazine, the total quantity shall not exceed that permitted for black powder.

(iii) **3306.5.2.3 Small arms primers.** Commercial stocks of small arms primers shall be stored as follows:

- (a) Quantities not to exceed 750,000 small arms primers stored in a building shall be arranged such that not more than 100,000 small arms primers are stored in any one pile and piles are at least 15 feet (4572 mm) apart.
- (b) Quantities exceeding 750,000 small arms primers stored in a building shall comply with all of the following:
 - (i) The warehouse or storage building shall not be accessible to unauthorized personnel.
 - (ii) Small arms primers shall be stored in cabinets. No more than 200,000 small arms primers shall be stored in any one cabinet.
 - (iii) Shelves in cabinets shall have vertical separation of at least 2 feet (610 mm).
 - (iv) Cabinets shall be located against walls of the warehouse or storage room with at least 40 feet (12 192 mm) between cabinets. The minimum required separation between cabinets shall be allowed to be reduced to 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall be firmly attached to the wall, and shall be constructed of steel not less than $\frac{1}{4}$ inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.
 - (v) Small arms primers shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids or oxidizing materials by a distance of 25 feet (7620 mm) by a fire partition having a fire-resistance rating of 1 hour.
 - (vi) The building shall be protected throughout with an automatic sprinkler system installed in accordance with *paragraph (C)(3)(a)(i)(903.3.1.1) of rule 1301:7-7-09 of the Administrative Code*.

(c) Small arms primers not stored in accordance with *paragraph (F)(5)(b)(iii)(a) or (F)(5)(b)(iii)(b) of this rule* shall be stored in a magazine meeting the requirements of *paragraph (D)(3304) of this rule* and NFPA 495 as listed in *rule 1301:7-7-47 of the Administrative Code*.

(G) SECTION 3307 BLASTING

(1) **3307.1 General.** Blasting operations shall be conducted only by approved, competent operators familiar with the

required safety precautions and the hazards involved and in accordance with the provisions of NFPA 495 as listed in rule 1301:7-7-47 of the Administrative Code.

(2) **3307.2 Manufacturer's instructions.** Blasting operations shall be performed in accordance with the instructions of the manufacturer of the explosive materials being used.

(3) **3307.3 Blasting in congested areas.** When blasting is done in a congested area or in close proximity to a structure, railway or highway, or any other installation, precautions shall be taken to minimize earth vibrations and air blast effects. Blasting mats or other protective means shall be used to prevent fragments from being thrown.

(4) **3307.4 Restricted hours.** Surface-blasting operations shall only be conducted during daylight hours between sunrise and sunset. Other blasting shall be performed during daylight hours unless otherwise approved by the fire code official.

(5) **3307.5 Utility notification.** Whenever blasting is being conducted in the vicinity of utility lines or rights-of-way, the blaster shall notify the appropriate representatives of the utilities at least 24 hours in advance of blasting, specifying the location and intended time of such blasting. Verbal notices shall be confirmed with written notice.

Exception: In an emergency situation, the time limit shall not apply when approved.

(6) **3307.6 Electric detonator precautions.** Precautions shall be taken to prevent accidental discharge of electric detonators from currents induced by radar and radio transmitters, lightning, adjacent power lines, dust and snow storms, or other sources of extraneous electricity.

(7) **3307.7 Nonelectric detonator precautions.** Precautions shall be taken to prevent accidental initiation of nonelectric detonators from stray currents induced by lightning or static electricity.

(8) **3307.8 Blasting area security.** During the time that holes are being loaded or are loaded with explosive materials, blasting agents or detonators, only authorized persons engaged in drilling and loading operations or otherwise authorized to enter the site shall be allowed at the blast site. The blast site shall be guarded or barricaded and posted. Blast site security shall be maintained until after the post-blast inspection has been completed.

(9) **3307.9 Drill holes.** Holes drilled for the loading of explosive charges shall be made and loaded in accordance with NFPA 495 as listed in rule 1301:7-7-47 of the Administrative Code.

(10) **3307.10 Removal of excess explosive materials.** After loading for a blast is completed and before firing, excess explosive materials shall be removed from the area and returned to the proper storage facilities.

(11) **3307.11 Initiation means.** The initiation of blasts shall be by means conforming to the provisions of NFPA 495 as listed in rule 1301:7-7-47 of the Administrative Code.

(12) **3307.12 Connections.** The blaster shall supervise the connecting of the blastholes and the connection of the load-line to the power source or initiation point. Connections shall

be made progressively from the blasthole back to the initiation point.

Blasting lead lines shall remain shunted (shorted) and shall not be connected to the blasting machine or other source of current until the blast is to be fired.

(13) **3307.13 Firing control.** No blast shall be fired until the blaster has made certain that all surplus explosive materials are in a safe place in accordance with paragraph (G)(10)(3307.10) of this rule, all persons and equipment are at a safe distance or under sufficient cover and that an adequate warning signal has been given.

(14) **3307.14 Post-blast procedures.** After the blast, the following procedures shall be observed.

- (a) No person shall return to the blast area until allowed to do so by the blaster in charge.
- (b) The blaster shall allow sufficient time for smoke and fumes to dissipate and for dust to settle before returning to or approaching the blast area.
- (c) The blaster shall inspect the entire blast site for misfires before allowing other personnel to return to the blast area.

(15) **3307.15 Misfires.** Where a misfire is suspected, all initiating circuits shall be traced and a search made for unexploded charges. Where a misfire is found, the blaster shall provide proper safeguards for excluding all personnel from the blast area. Misfires shall be reported to the blasting supervisor immediately. Misfires shall be handled under the direction of the person in charge of the blasting operation in accordance with NFPA 495 as listed in rule 1301:7-7-47 of the Administrative Code.

(H) SECTION 3308 FIREWORKS EXHIBITION

(1) **3308.1 Permit.** This paragraph applies to any exhibition of 1.1G fireworks (UN0333), 1.2G fireworks (UN0334), 1.3G fireworks (UN0335), 1.4G fireworks (UN0336), 1.4G special effects fireworks (UN0432), 1.4S fireworks (UN0337) and 1.4S special effects fireworks (UN0432). No 1.1G fireworks (UN0333), 1.2G fireworks (UN0334), 1.3G fireworks (UN0335) or 1.4G fireworks (UN0336) may be displayed or otherwise discharged indoors.

A permit shall be obtained from the local fire official and law enforcement officer of the jurisdiction for any outdoor exhibition of 1.1G fireworks (UN0333), 1.2G fireworks (UN0334), 1.3G fireworks (UN0335), 1.4G fireworks (UN0336), 1.4G special effects fireworks (UN0432), 1.4S fireworks (UN0337) and 1.4S special effects fireworks (UN0432) fireworks and any indoor exhibition of 1.4G special effects fireworks (UN0432), 1.4S fireworks (UN0337) and 1.4S special effects fireworks (UN0432) pursuant to the applicable provisions of section 3743.54 of the Revised Code. The permit shall bear the signatures of the fire official and law enforcement official having jurisdiction and the licensed exhibitor applying to conduct the fireworks exhibition. The permit shall identify the certified fire safety inspector, fire chief, or fire prevention officer who will be present