HOUSE BILL No. 5565

February 8, 1996, Introduced by Reps. Gire, LaForge, DeMars, Olshove, Dobronski, DeHart, Kelly, Dolan and Hertel and referred to the Committee on Regulatory Affairs.

A bill to regulate fireworks; to provide for the powers and duties of certain state and local agencies; to provide penalties; and to repeal acts and parts of acts.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

Sec. 1. This act shall be known and may be cited as the "fireworks act".

CHAPTER I

Sec. 2. As used in this act:

(a) "Aerial shell" means a cartridge containing pyrotechnic composition, a long fuse, or electric match wires, and a black powder lifting charge.

(b) "Approved" means acceptable to the authority having jurisdiction.

(c) "Artificial barricade" means an artificial mound or revetted wall of earth having a minimum thickness of 3 feet.

(d) "Authority having jurisdiction" means the organization, office, or individual responsible for approving equipment, an installation, or a procedure.

(e) "Auto burglar alarm" means a tube that contains a pyrotechnic composition that produces a loud whistle, smoke, or both when ignited and that may contain not more than 50 milligrams of explosive composition that produces a report when ignited.

(f) "Barrage" means a rapidly fired sequence of aerial fireworks.

(g) "Barricade" means a natural or artificial barrier that will effectively screen a magazine, building, railway, or highway from the effects of an explosion in a magazine or a building containing an explosive, and that is of such a height that a straight line from the top of each sidewall of the magazine or building containing the explosive to the eave line of any other magazine or building, to a point 12 feet above the center of a railway or highway, will pass through the barrier.

(h) "Black match" means a fuse made from string impregnated with black powder and used for igniting pyrotechnic devices.

(i) "Booby trap" means a tube with a string protruding from both ends that contains not more than 15 milligrams of friction sensitive explosive composition and that produces a report when the strings are pulled.

(j) "Break" means an individual burst from an aerial shell.

(k) "Bullet-sensitive explosive material" means an explosive material that can be detonated by 150-grain m2 ball ammunition having a nominal muzzle velocity of 2700 feet per second when

fired from a 0.30 caliber rifle at a distance of 100 feet measured perpendicular when the explosive material is at a temperature of 70 to 75 degrees Fahrenheit and is placed against a 1/4 inch steel plate.

(*l*) "Cigarette load" means a wooden peg that is coated with a minute quantity of explosive composition, is small enough to be inserted into a cigarette, and produces a report when ignited.

(m) "Common fireworks" means any small fireworks device designed primarily to produce a visible effect by combustion, and that complies with the construction, chemical composition, and labeling regulations of the United States consumer product safety commission.

(n) "Cone fountain" means a paper cone that contains less than 50 grams of pyrotechnic composition.

(o) "Cylinder fountain" means a paper tube not more than 3/4 inches in inside diameter that contains less than 75 grams of pyrotechnic composition.

(p) "Explosive" means a chemical compound, mixture, or device, the primary purpose of which is to function by explosion. Explosive includes, but is not limited to, all of the following:

(*i*) Any compound, mixture, or device regulated as an explosive under chapter 40 of title 18 of the United States code.

(*ii*) Any compound, mixture, or device classified as a class a or class b explosive under the hazardous material regulations of the United States department of transportation.

(*iii*) Dynamite.

(*iv*) Black powder.

(*v*) Pellet powder.

(*vi*) An initiating explosive.

(*vii*) A detonator.

(*viii*) A safety fuse.

(*ix*) A squib.

(*x*) Detonating cord.

(*xi*) Igniter cord.

(*xii*) An igniter.

(q) "Fireworks" means any composition or device made from explosive or flammable compositions designed primarily to produce a visible display or an audible effect, or both, by combustion, deflagration, or detonation. However, fireworks does not mean highway or railway fuses.

(r) "Fireworks plant" means real property and the buildings on that property that are used for or in connection with the manufacturing or processing of fireworks including, but not limited to, storage buildings used with or in connection with plant operation.

(s) "Flash powder" means an explosive composition intended for use in firecrackers or salutes that produces an audible report and flash when ignited.

(t) "Flitter sparkler" means a paper tube not more than 1/8 inches in outside diameter that contains less than 100 grams of pyrotechnic composition.

(u) "Highway" means a public street or road.

(v) "Labeled" means equipment or material to which is attached a label, symbol, or other identifying mark of an organization acceptable to the authority having jurisdiction if that organization is concerned with product evaluation, and maintains periodic inspection of the production of labeled equipment or material, and by whose labeling the manufacturer indicated compliance with appropriate standards of performance in a specified manner.

(w) "Listed" means equipment or material included in a list published by an organization acceptable to the authority having jurisdiction if that organization is concerned with product evaluation, maintains periodic inspection of the production of listed equipment or material, and that organization's listing states that the equipment or material meets appropriate standards or that the equipment or material has been tested and found suitable for use in a specified manner.

(x) "Magazine" means a building or structure used exclusively for the storage of explosive material and that meets the requirements of this act.

(y) "Manufacture" means the preparation of a fireworks mix or the loading or assembly of fireworks.

(z) "Mixing building" means a building used primarily for the mixing or blending of a pyrotechnic composition.

(aa) "Mortar" means a tube from which aerial shells are fired into the air.

(bb) "Mortar rack" means a strong frame containing 1 or more mortars.

(cc) "Mortar trough" means an above ground structure filled with sand or similar material into which 1 or more mortars are positioned for use in a fireworks display.

(dd) "Motor vehicle" means that term as defined in section 33 of the Michigan vehicle code. Act No. 300 of the Public Acts of 1949, being section 257.33 of the Michigan Compiled Laws.

(ee) "Natural barricade" means natural features of the ground including, but not limited to, hills or timber of sufficient density that the surrounding exposures that require protection cannot be seen from the magazine or building containing an explosive when the trees are bare of leaves.

(ff) "Nonprocess building" means a building in a fireworks plant in which no fireworks, pyrotechnic composition, or explosive composition is processed or stored.

(gg) "Party popper" means a plastic or paper device that contains not more than 15 milligrams of friction sensitive explosive composition to which a string is attached and that expels paper streamers and produces a report when ignited by pulling the string.

(hh) "Process building" means a building in which pyrotechnic or explosive composition is pressed or otherwise prepared for finish or assembly or in which common fireworks are prepared for shipment.

(ii) "Public conveyance" means a railroad car, street car, ferry, cab, airplane, or other vehicle that is used to carry passengers for hire.

(jj) "Pyrotechnic composition" means a chemical mixture that upon burning and without explosion produces a visible brilliant display, or a bright light, or a sound.

(kk) "Railway" means a steam, electric, diesel-electric, or other railroad that carries passengers for hire on the particular line or branch in the vicinity of a pyrotechnics manufacturing or storage facility.

(*ll*) "Ready box" means a container for storing aerial shells at the site of a fireworks display.

(mm) "Safety cap" means a paper tube that is closed at 1 end and that is placed over the end of the fuse of a fireworks device to protect the fireworks device from damage and accidental ignition.

(nn) "Salute" means a special firework that is designed to produce a loud report.

(oo) "Salute powder" means a pyrotechnic composition that makes a loud report when ignited and that constitutes the only pyrotechnic mixture in a salute.

(pp) "Screen barricade" means a barrier that will contain the embers and debris from a fire or deflagration in a process building to prevent propagation of fire to other buildings or areas and that meets all of the following qualifications:

(*i*) Is constructed of metal roofing or 1/4 to 1/2 inch mesh screen, or an equivalent material.

(*ii*) Extends from floor level to a height such that a straight line from the top of each side wall of the process building to the eave line of any exposed building intercepts the barricade at a point not less than 5 feet from the top of the barricade.

(*iii*) The top 5 feet of the barricade is inclined towards the top of the process building at an angle of 30 to 45 degrees.

(qq) "Shipping building" means a building used to pack special fireworks into a shipping carton or for loading a carton of special fireworks into a vehicle for shipment to a purchaser.

(rr) "Smoke device" means a tube or sphere that contains not more than 250 grams of pyrotechnic or other chemical composition that produces white or colored smoke when ignited.

(ss) "Snapper" means a paper wrapped item that contains particles of sand coated with a minute amount of an explosive composition that produces a report when dropped on a hard surface.

(tt) "Storage building" means a building, structure, or facility in which finished common fireworks are stored, or in which common fireworks in any stage of processing are stored but in which no processing or manufacturing is performed.

(uu) "Theatrical flash powder" means a pyrotechnic composition intended for use in theatrical shows, but that is not intended to produce a loud report.

(vv) "Toy cap" means a device that contains not more than .25 grains of explosive composition that explodes when struck by another object.

(ww) "Toy pistol" means a device in which toy caps are used that is constructed so that the user's hand cannot come in contact with the toy cap when it is placed in the device for an explosion and that is not designed to break apart or to shoot a projectile when the explosion occurs.

(xx) "Toy snake" means a compressed pellet of pyrotechnic composition that does not contain mercuric thiocyanate and that produces an ash which expands in length as the pellet burns.

(yy) "Trick match" means a match that has been coated with a minute amount of an explosive or pyrotechnic composition and that produces a shower of sparks, a report, or both when the match is ignited.

(zz) "Unoccupied building" means a building that remains unoccupied during the entire daily period of operations of the facility, but that may be used for long-term storage of material acceptable to the authority having jurisdiction if no fireworks or pyrotechnic composition is contained within the building.

(aaa) "Warehouse" means a building or structure exclusively used to store material other than combustible material or an explosive composition used to manufacture fireworks.

(bbb) "Wire sparkler" means a wire coated with not more than 100 grams of nonmagnesium pyrotechnic composition or not more than 5 grams of pyrotechnic composition containing chlorate or perchlorate salts that produces a shower of sparks when ignited.

Sec. 3. A person may apply to the governing body of a local unit of government for a permit to purchase, sell, possess, store, transport, or use fireworks pursuant to this act. The

application shall be on a form provided to the local unit of government by the state fire marshal. The local unit of government may charge a fee of not more than $25.00 to process the application.

Sec. 4. The governing body of a local unit of government shall review applications submitted under section 3. Except as provided under section 5(3), if an application is not approved or denied within 14 days after the application is submitted, the application is considered approved.

Sec. 5. (1) Subject to subsection (2), and except as provided in subsection (3), the governing body of a local unit of government may issue a permit to a person who properly applies for a permit under section 3, allowing that person to purchase, sell, possess, store, transport, or use fireworks pursuant to this act. The permit shall be on a form provided by the state fire marshal, and may be restricted as the governing body of the local unit of government considers appropriate. A permit issued under this subsection is not transferable.

(2) If a local unit of government issues a permit to a person to sell fireworks at retail, the permit shall specify the business location at which sales may be made. A permit shall not be issued to a person to sell fireworks at retail except from a building or other nonmovable structure.

(3) A permit shall not be issued under this section to an individual who is less than 18 years of age.

(4) A permit is not required for any of the following:

(a) Flat paper caps containing not more than .25 of a grain of explosive content per cap, in a package labeled to indicate the maximum explosive content per cap.

(b) A toy pistol, toy cannon, toy cane, toy trick noise maker, or a toy gun of a type approved by the director of the department of state police in which paper caps as described in subdivision (a) are used and that are constructed so that an individual's hand cannot come in contact with the cap when in place for the explosion and that are not designed to break apart or be separated so as to form a missile by the explosion.

(c) A sparkler containing not more than .0125 pounds of burning portion per sparkler.

(d) A flitter sparkler, a cone fountain, or a cylinder fountain.

(e) A toy snake that does not contain mercury, if the toy snake is packed in a cardboard box with not more than 12 pieces per box for retail sale and if the manufacturer's name and the quantity contained in each box are printed on the box.

(f) A toy smoke device.

(g) Possession, transportation, sale, or use of a signal flare of a type approved by the director of the department of state police, a blank cartridge or blank cartridge pistol specifically for a show or theater, or for training or exhibiting a dog, for signal purposes in an athletic sport, for use by a military organization, any item described in subsection (5) used by a railroad for emergency signal purposes.

(5) Except as otherwise provided in this act, a person shall not offer for sale, expose for sale, sell at retail, keep with intent to sell at retail, possess, give, furnish, transport, use, explode, or cause to explode any of the following:

(a) A blank cartridge, blank cartridge pistol, toy cannon, toy cane, or toy gun in which an explosive is used.

(b) An unmanned balloon that requires fire underneath to propel it and that is not moored to the ground while aloft.

(c) A firecracker, torpedo, skyrocket, roman candle, daygo bomb, bottle rocket, whistling chaser, rocket on a stick, or other fireworks of substantially similar construction.

(d) Any fireworks containing an explosive or flammable compound or a tablet or other device commonly used and sold as fireworks that contains a nitrate, fulminate, chlorate, oxalate, sulphide of lead, barium, antimony, arsenic, mercury, nitroglycerine, phosphorus, or a compound containing these or other modern explosives.

(6) A person shall not sell or ship fireworks for which a permit is required to a person who does not hold a permit.

Sec. 6. A person who is licensed under section 3 of the general sales tax act, Act No. 167 of the Public Acts of 1933, being section 205.53 of the Michigan Compiled Laws, to engage in and conduct the business of purchasing, selling, or transporting fireworks is, as to matters addressed under this act, subject to regulation only under this act. A person who is not licensed under section 3 of Act No. 167 of the Public Acts of 1933 to engage in and conduct the business of purchasing, selling, or

transporting fireworks is, as to matters addressed under this act, subject to regulation under this act and under any applicable ordinance of a local unit of government.

Sec. 7. A person shall not sell at retail fireworks at any location other than the business location set forth in his or her permit to sell fireworks.

CHAPTER II

Sec. 8. (1) A person shall not manufacture fireworks in this state except as provided in this act.

(2) A person who manufactures, imports, or deals in fireworks shall possess a valid federal license or permit if required under title XI, regulation of explosives, of the crime control act of 1970, 18 U.S.C. chapter 40, and shall comply with all applicable state and local laws and regulations.

(3) A copy of each license or permit required under subsection (2) shall be posted at each fireworks plant.

(4) A license or permit holder shall take every reasonable precaution to protect his or her license or permit from loss, theft, defacement, destruction, or unauthorized duplication. The loss, theft, defacement, destruction, or unauthorized duplication of a license or permit shall immediately be reported to the issuing authority.

(5) A license or permit shall not be assigned or transferred.

(6) The authority issuing a license or permit shall immediately be notified of any change of business address.

Sec. 9. (1) Except as provided in subsection (2), a manufacturer shall maintain records in compliance with federal regulations. The records shall be kept for 5 years and shall be made available to the authorities having jurisdiction upon request.

(2) If only common fireworks are handled, records shall be kept for 3 years.

(3) The loss, theft, or unlawful removal of explosive material shall be reported immediately to the nearest office of the federal bureau of alcohol, tobacco, and firearms, United States department of the treasury, and to local law enforcement authorities.

(4) A manufacturer shall maintain records for all chemicals and chemical mixtures in compliance with the hazard communication standard, title 29, Code of Federal Regulations, parts 1910, 1200, "hazard communication."

(5) Except as provided in subsection (6), a fireworks plant shall comply with this act.

(6) A fireworks plant is not required to comply with subsections (2) to (4) if all of the following apply:

(a) The plant manufactures only custom fireworks that are not for general sale.

(b) Not more than 5 pounds of explosive composition, of which not more than 1/2 pound is initiating explosive, is present in a building at any time.

(c) All explosive and pyrotechnic compositions are removed to an appropriate storage magazine at the end of each work day.

Sec. 10. (1) All plant buildings shall be securely locked at the end of the work day or whenever plant personnel are not present to provide security.

(2) Except as provided in subsection (3), each road leading into the plant shall have a suitable gate which shall be kept closed and securely locked at all times when the gate is not in use. Vehicle access into the plant shall be restricted to roadways by means of a fence, or a natural barrier such as trees or a culvert, or by other appropriate means.

(3) The main plant entrance may be left open during regular plant operating hours if the entrance is in full view of and under observation by an authorized responsible employee or guard.

(4) Conspicuous signs indicating "WARNING--NO SMOKING--NO TRESPASSING" shall be posted at frequent intervals around the plant perimeter.

(5) Only authorized employees or representatives of federal, state, or local agencies having jurisdiction over the plant shall be allowed into the plant without special permission of the person in charge of the plant.

Sec. 11. (1) Each process building and area shall be separated from other process buildings and areas, and from nonprocess buildings, according to the distances specified in table 1.

(2) Process buildings and areas shall be separated from inhabited buildings, railways, highways, magazines, special fireworks shipping buildings, and common fireworks storage buildings according to the distances specified in table 2.

(3) Each magazine for storing special fireworks and components for special fireworks, except salute powder and salutes, shall be separated from inhabited buildings, passenger railways, public highways, and other magazines according to the distance specified in table 3. For purposes of applying table 3, a shipping building for special fireworks is considered to be a magazine.

(4) Each magazine containing salute powder or salutes shall be separated from other magazines and from inhabited buildings, public highways, and passenger railways according to the distance specified in table 4.

(5) Each storage building for common fireworks, that is located at a fireworks manufacturing facility, shall be separated from inhabited buildings, passenger railways, public highways, and other storage buildings according to the distance specified in table 5.

Table 1
Minimum separation distances between fireworks plant buildings

Net weight of fireworks (see note 1)	Distance between process buildings and areas, and between process and nonprocess buildings and areas	
	In-process special fireworks (see notes 2 and 3)	In-process common fireworks (see note 4)
Lb	Ft	Ft

0-100	57	37
100-200	69	37
200-300	77	37
300-400	85	37
400-500	91	37
500-1,000	not permitted (see notes 3 and 4)	37
2,000	"	37
3,000	"	48
4,000	"	60
5,000	"	67

For SI units: 1 lb = 0.454 kg; 1 ft = 0.305 m

NOTE 1: Net weight is the weight of all pyrotechnic and explosive compositions and fuse only.

NOTE 2: The distances in this column apply only with barricades. If barricades are not used, the distances shall be doubled.

NOTE 3: A maximum of 500 pounds of in-process composition, loose or in partially assembled special fireworks, is permitted in a process building or area. Finished special fireworks shall not be stored in a process building.

NOTE 4: A maximum of 10 pounds of salute powder, in loose form or in assembled units, is permitted in any process building or area. Quantities in excess of 10 pounds shall be kept in an approved magazine.

Table 2
Minimum separation distances of process buildings

and areas from inhabited buildings, passenger railways, public highways, fireworks plant magazines and shipping buildings, and storage buildings for common fireworks

Net weight of fireworks (see note 1)	Distance from passenger railways, public highways, fireworks magazines and shipping buildings, storage buildings, and inhabited buildings (see note 3)	
	In-process special fireworks (see note 2)	In-process common fireworks (see notes 4 and 5)
Lb	Ft	Ft
0-100	200	25
100-500	200	50
1,000	not permitted (see notes 4 and 5)	75
2,000	"	100
3,000	"	115
4,000	"	124
5,000	"	130

For SI units: 1 lb = 0.454 kg; 1 ft = 0.305 m

NOTE 1: Net weight is the weight of all pyrotechnic and explosive compositions and fuse only.

NOTE 2: This table does not apply to the separation distance between process buildings (see table 1), between magazines (see tables 3 and 4), or between storage buildings (see table 5).

NOTE 3: The distances in this table apply with or without barricades or screen-type barricades. However, the use of barricades is recommended.

NOTE 4: A maximum of 500 pounds of in-process composition, loose or in partially assembled special fireworks, is permitted in any process building or area. Finished special fireworks shall not be stored in a process building.

NOTE 5: A maximum of 10 pounds of salute powder, in loose form or in assembled units, is permitted in any process building or area. Quantities in excess of 10 pounds shall be kept in an approved magazine.

Table 3
Table of distances for the storage of special fireworks (except salutes) at fireworks manufacturing plants

Net weight of fireworks	Distance between magazine and inhabited building, passenger railway, or public highway	Distance between magazines
Lb	Ft	Ft
0-1,000	150	100
1,000-5,000	230	150
5,000-10,000	300	200
above 10,000	--Use table 4	

For SI units: 1 lb = 0.454 kg; 1 ft = 0.305 m

NOTE 1: Net weight is the weight of all pyrotechnic and explosive compositions and fuse only.

(6) If a process building is separated from any other process or nonprocess building by less than the distance specified in table 1, the buildings, as a group, shall be considered 1 building. The total quantity of explosive and pyrotechnic composition in the group of buildings shall not exceed 500 pounds, or 10 pounds of salute powder. Each building in the group shall otherwise comply with the separation distances specified in tables 1 and 2.

(7) If 2 or more magazines or storage buildings are separated by less than the distance specified in table 3, 4, or 5, the magazines or storage buildings shall be considered as 1 magazine or storage building. The total quantity of explosive and pyrotechnic composition stored in the of buildings shall be used to determine the minimum separation distances of each building in the group from inhabited buildings, railways, highways, and other magazines and storage buildings.

(8) An unoccupied building at a manufacturing facility is exempted from the separation distance requirements set forth in this section.

Sec. 12. (1) At least 1 wall or the roof of each process building in which an explosion hazard exists shall be provided with explosion relief, by suitable weakwall construction, or by explosion vents.

(2) A process building shall be a single story and shall not have a basement.

(3) Each wall joint and opening for wiring, plumbing, or other utilities shall be sealed to prevent entry of dust.

(4) Horizontal ledges and surfaces upon which dust may settle and accumulate shall be minimized.

(5) A floor or work surface shall not have a crack or crevice in which explosive or pyrotechnic composition may lodge. Each floor or work surface in a mixing or loading building for salute powder shall be of conductive material. Conductive footwear or other grounding techniques for personnel shall be used whenever exposed salute powder is present.

(6) A device for discharging static shall be provided at the entrance to each mixing, pressing, or loading building. Each person entering a mixing, processing, or loading building shall use the device.

Table 4

	DISTANCE IN FEET			
QUANTITY OF EXPLOSIVES	Inhabited buildings	Public highways Class A to D (see note 11)	Passenger railways--public highways with traffic volume of more than 3,000 vehicles-per day	Separation of magazine

Pounds over	Pounds not over	Barri-caded	Un-barri-caded	Barri-caded	Un-barri-caded	Barri-caded	Un-barri-caded	Barri-caded	Un-barri-caded
2	5	70	140	30	60	51	102	6	12
5	10	90	180	35	70	64	128	8	16
10	20	110	220	45	90	81	162	10	20
20	30	125	250	50	100	93	186	11	22
30	40	140	280	55	110	103	206	12	24
40	50	150	300	60	120	110	220	14	28
50	75	170	340	70	140	127	254	15	30
75	100	190	380	75	150	139	278	16	32
100	125	200	400	80	160	150	300	18	36
125	150	215	430	85	170	159	318	19	38
150	200	235	470	95	190	175	350	21	42
200	250	255	510	105	210	189	378	23	46
250	300	270	540	110	220	201	402	24	48
300	400	295	590	120	240	221	442	27	54
400	500	320	640	130	260	238	476	29	58
500	600	340	680	135	270	253	506	31	62
600	700	355	710	145	290	266	532	32	64
700	800	375	750	150	300	278	556	33	66

1	800	900	390	780	155	310	289	578	35	70
2	900	1,000	400	800	160	320	300	600	36	72
3										
4	1,000	1,200	425	850	165	330	318	636	39	78
5	1,200	1,400	450	900	170	340	336	672	41	82
6	1,400	1,600	470	940	175	350	351	702	43	86
7	1,600	1,800	490	980	180	360	366	732	44	88
8	1,800	2,000	505	1,010	185	370	378	756	45	90
9										
10	2,000	2,500	545	1,090	190	380	408	816	49	98
11	2,500	3,000	580	1,160	195	390	432	864	52	104
12	3,000	4,000	635	1,270	210	420	474	948	58	116
13	4,000	5,000	685	1,370	225	450	513	1,026	61	122
14	5,000	6,000	730	1,460	235	470	546	1,092	65	130
15										
16	6,000	7,000	770	1,540	245	490	573	1,146	68	136
17	7,000	8,000	800	1,600	250	500	600	1,200	72	144
18	8,000	9,000	835	1,670	255	510	624	1,248	75	150
19	9,000	10,000	865	1,730	260	520	645	1,290	78	156
20	10,000	12,000	875	1,750	270	540	687	1,374	82	164
21										
22	12,000	14,000	885	1,770	275	550	723	1,446	87	174
23	14,000	16,000	900	1,800	280	560	756	1,512	90	180
24	16,000	18,000	940	1,880	285	570	786	1,572	94	188
25	18,000	20,000	975	1,950	290	580	813	1,626	98	196
26	20,000	25,000	1,055	2,000	315	630	876	1,752	105	210

1										
2	25,000	30,000	1,130	2,000	340	680	933	1,866	112	224
3	30,000	35,000	1,205	2,000	360	720	981	1,962	119	238
4	35,000	40,000	1,275	2,000	380	760	1,026	2,000	124	248
5	40,000	45,000	1,340	2,000	400	800	1,068	2,000	129	258
6	45,000	50,000	1,400	2,000	420	840	1,104	2,000	135	270
7										
8	50,000	55,000	1,460	2,000	440	880	1,140	2,000	140	280
9	55,000	60,000	1,515	2,000	455	910	1,173	2,000	145	290
10	60,000	65,000	1,565	2,000	470	940	1,206	2,000	150	300
11	65,000	70,000	1,610	2,000	485	970	1,236	2,000	155	310
12	70,000	75,000	1,655	2,000	500	1,000	1,263	2,000	160	320
13										
14	75,000	80,000	1,695	2,000	510	1,020	1,293	2,000	165	330
15	80,000	85,000	1,730	2,000	520	1,040	1,317	2,000	170	340
16	85,000	90,000	1,760	2,000	530	1,060	1,344	2,000	175	350
17	90,000	95,000	1,790	2,000	540	1,080	1,368	2,000	180	360
18	95,000	100,000	1,815	2,000	545	1,090	1,392	2,000	185	370
19										
20	100,000	110,000	1,835	2,000	550	1,100	1,437	2,000	195	390
21	110,000	120,000	1,855	2,000	555	1,110	1,479	2,000	205	410
22	120,000	130,000	1,875	2,000	560	1,120	1,521	2,000	215	430
23	130,000	140,000	1,890	2,000	565	1,130	1,557	2,000	225	450
24	140,000	150,000	1,900	2,000	570	1,140	1,593	2,000	235	470
25										
26	150,000	160,000	1,935	2,000	580	1,160	1,629	2,000	245	490

160,000	170,000	1,965	2,000	590	1,180	1,662	2,000	255	510
170,000	180,000	1,990	2,000	600	1,200	1,695	2,000	265	530
180,000	190,000	2,010	2,010	605	1,210	1,725	2,000	275	550
190,000	200,000	2,030	2,030	610	1,220	1,755	2,000	285	570
200,000	210,000	2,055	2,055	620	1,240	1,782	2,000	295	590
210,000	230,000	2,100	2,100	635	1,270	1,836	2,000	315	630
230,000	250,000	2,155	2,155	650	1,300	1,890	2,000	335	670
250,000	275,000	2,215	2,215	670	1,340	1,950	2,000	360	720
275,000	300,000	2,275	2,275	690	1,380	2,000	2,000	385	770

NOTE 1: "Explosive material" means an explosive, a blasting agent, or a detonator.

NOTE 2: "Explosive" means a chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion. A list of explosives determined to be within the coverage of 18 U.S.C. chapter 40, "Importation, Manufacture, Distribution and Storage of Explosive Materials" is issued at least annually by the director of the bureau of alcohol, tobacco, and firearms of the federal department of treasury.

NOTE 3: "Blasting agent" means a material or mixture, consisting of fuel and oxidizer, intended for blasting, that is not otherwise defined as an explosive, if the finished product, as mixed for use or shipment, cannot be detonated by means of a number 8 test blasting cap when unconfined.

NOTE 4: "Detonator" means a device containing a detonating charge that is used for detonating an explosive including, but not limited to, an instantaneous or delay type electric blasting cap or a blasting cap for use with a safety fuse or a detonating-cord delay connector.

NOTE 5: "Magazine" means a building or structure, other than a building used to manufacture an explosive, that is used for the permanent storage of an explosive material.

NOTE 6: "Natural barricade" means a natural feature of the ground, such as a hill, or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the magazine when the trees are bare of leaves.

NOTE 7: "Artificial barricade" means an artificial mound or revetted wall of earth at least 3 feet thick.

NOTE 8: "Barricaded" means that a building containing an explosive is effectually screened from a magazine, building, railway, or highway by a natural barricade or by an artificial barricade of such height that a straight line from the top of each sidewall of the building containing an explosive to the eave line of each magazine, or building, or to a point 12 feet above the center of a railway or highway, will pass through that intervening natural or artificial barricade.

NOTE 9: "Inhabited building" means a building regularly occupied in whole or in part as a habitation for human beings, or a church, schoolhouse, railroad station, store,

or other structure in which people are accustomed to assemble, except a building or structure occupied in connection with the manufacture, transportation, storage, or use of an explosive.

NOTE 10: "Railway" means a steam, electric, or other railroad or railway that carries passengers for hire.

NOTE 11: "Highway" means a street or public road. "Public highways class a to d" means a highway with an average traffic volume of 3,000 or fewer vehicles per day as specified in American civil engineering practice (Abbott, vol. 1, table 46, sec. 3-7.4, 1956 edition, John Wiley and sons).

NOTE 12: When 2 or more storage magazines are located on the same property, each magazine shall comply with the minimum distances specified from inhabited buildings, railways, and highways, and, in addition, each magazine shall be separated from other magazines by not less than the distance shown for "separation of magazines," except that the quantity of explosives contained in each cap magazine shall govern in regard to the spacing of cap magazines from magazines containing other explosives. If 2 or more magazines are separated from each other by less than the specified "separation of magazines" distances, those magazines as a group shall be considered as 1 magazine, and the total quantity of explosives stored in that group shall be treated as if those explosives were stored in a single magazine located on the site of any magazine of the group,

and shall comply with the minimum of distance specified from other magazines, inhabited buildings, railways, or highways.

NOTE 13: Storage in excess of 300,000 pounds of explosives in 1 magazine is generally not required for commercial enterprises.

NOTE 14: This table applies only to the manufacture and permanent storage of commercial explosives. This table does not apply to transportation of explosives or any handling or temporary storage necessary or incident to the transportation of explosives. This table does not apply to a bomb, projectile, or other heavily encased explosive.

NOTE 15: All types of blasting caps in strengths through number 8 cap shall be rated at 1-1/2 pounds of explosives per 1,000 caps. For strengths higher than number 8 cap, the manufacturer shall be consulted.

NOTE 16: For quantity and distance purposes, detonating cord of 50 to 60 grains per foot shall be calculated as equivalent to 9 pounds of high explosives per 1,000 feet. Heavier or lighter core loads shall be rated proportionately.

Table 5

Minimum separation distances of common fireworks storage buildings from inhabited buildings, magazines, passenger railways, public highways, and other storage buildings

Net weight of fireworks (see note 1)	Distance from passenger railways, public highways, and other storage buildings (see note 2)	Distance from inhabited buildings (see note 2) and magazines (see note 2)

Lb	Ft	Ft
0-100	25	50
100-200	30	60
200-400	35	70
400-600	40	80
600-800	45	90
800-1,000	50	100
1,000-2,000	58	115
2,000-3,000	62	124
3,000-4,000	65	130
4,000-5,000	68	135
5,000-6,000	70	139
6,000-8,000	73	140
8,000-10,000	75	150
10,000-15,000	80	159
15,000-20,000	83	165
20,000-30,000	87	174
30,000-40,000	90	180
40,000-50,000	93	185
50,000-60,000	95	189
60,000-80,000	98	195

80,000-100,000	100	200
100,000-150,000	105	209
150,000-200,000	108	215
200,000-250,000	110	220

For SI units: 1 lb = 0.454 kg; 1 ft = 0.305 m.

NOTE 1: Net weight is the weight of all pyrotechnic and explosive compositions and fuse only. For common fireworks approximately 25% of the gross weight of the fireworks will be the net weight of composition and fuse.

NOTE 2: This table applies only to the storage of common fireworks at a fireworks manufacturing plant. This table does not apply to storing packaged common fireworks at a retail, wholesale, or distributing facility.

Sec. 13. (1) Means of egress in each building shall comply with applicable requirements of NFPA 101, life safety code.

(2) Except as provided in subsection (3), means of egress in each process building shall also comply with the following requirements:

(a) From each location in each undivided floor area of more than 100 square feet there shall be at least 2 remotely located exits.

(b) If a process building is divided into rooms, there shall be at least 2 means of escape from each room of more than 100 square feet.

(c) Each exit shall be located so that each location within the room or undivided floor area is within 25 feet of an exit. No route to an exit shall be obstructed.

(d) Each exit door shall open outward and shall be capable of being pressure actuated from the inside.

(3) A toilet room is required to have only 1 exit if that room is located away from each process area or is suitably shielded from the process area.

Sec. 14. (1) Except as provided in subsection (2), a stove, exposed flame, or portable electric heater is prohibited in any building in which fireworks, a fireworks component, or a flammable liquid may be present.

(2) Subsection (1) does not apply to a nonprocess building.

(3) Except as provided in subsection (4), heating shall be provided by steam, hot water, or 1 or more indirect hot air radiators, or by any other means acceptable to the authority having jurisdiction.

(4) Subsection (3) does not apply to a nonprocess building.

Sec. 15. A unit heater located in a building that may contain exposed explosive or pyrotechnic composition shall be equipped with motors and electrical devices suitable for use in class II, group E, division 1 locations.

Sec. 16. (1) All wiring, switches, and electrical fixtures in a process building shall be suitable for a class II, group E, division 1 location.

(2) Except as provided in subsection (3), portable lighting equipment shall not be used.

(3) Approved portable lighting equipment may be used during a repair operation, if the area has been cleared of all pyrotechnic or explosive material and all dust and residue has been removed by washing.

(4) Each press or other mechanical device used in the vicinity of exposed explosive or pyrotechnic composition shall be electrically bonded and grounded.

(5) All artificial lighting shall be electrically powered.

Sec. 17. (1) The number of occupants in each process building and in each magazine shall not exceed the number necessary to properly conduct production operations.

(2) The maximum number of occupants permitted in each process building and in each magazine shall be posted in a conspicuous location in each process building or magazine.

(3) Except as provided in subsection (4), not more than 500 pounds of pyrotechnic or explosive composition shall be permitted at any time in a process building or area. Any pyrotechnic or explosive composition not in immediate use shall be kept in a covered, nonferrous container.

(4) Subsection (3) does not apply to an explosive or pyrotechnic or explosive composition that has been loaded or pressed into tubes or other containers as common fireworks.

(5) The maximum quantity of salute powder permitted in any process building or area is 10 pounds.

(6) Except as provided in subsection (7), regulations of the federal bureau of alcohol, tobacco and firearms regarding the removal of dry explosive powders and mixtures, partially

assembled special fireworks, and finished special fireworks from process buildings to magazines at the conclusion of each day's operation shall be complied with.

(7) Subsection (6) does not apply if a variance has been issued in writing to the manufacturer by the federal bureau of alcohol, tobacco and firearms.

Sec. 18. (1) Each building shall be kept clean, orderly, and free of accumulations of dust or rubbish.

(2) A spill of explosive or pyrotechnic composition shall be immediately cleaned up and removed from the building. The spilled composition shall be destroyed by immersion in water or by burning in a manner acceptable to the authority having jurisdiction.

(3) Rags, combustible scrap, and paper shall be kept separate from waste explosive or pyrotechnic composition. Explosive or pyrotechnic composition shall be kept in an approved, marked container until removed from the building. Each disposal container shall be removed from each building on a daily basis and removed from the plant at regular intervals. Waste explosive or pyrotechnic composition shall be destroyed as provided in this act.

(4) Smoking material shall not be carried into a process building or allowed in the vicinity of a process building. Each individual shall deposit his or her smoking material at a suitable location in a nonprocess building immediately upon entering the plant.

(5) Smoking shall be permitted only in an office building or in a building used exclusively as a lunch room or rest room and in which the presence of explosive or pyrotechnic composition is prohibited.

(6) Each authorized smoking location shall be marked as an authorized smoking location, shall contain 1 or more suitable receptacles for disposal of smoking material, and shall be provided with at least 1 approved portable fire extinguisher suitable for use on a class A fire.

(7) Personnel whose clothing may be contaminated with an explosive or pyrotechnic composition to a degree that may endanger personnel safety shall not be allowed in a smoking location.

(8) No individual shall be permitted to enter the plant while possessing alcohol or a drug.

(9) Personnel working at or supervising a mixing, pressing, or loading operation shall be provided with and shall wear cotton or other similarly effective protective clothing. Other protective clothing, eye protection, and respiratory protection shall be worn as needed.

(10) Washing and change facilities shall be provided for personnel.

(11) Work clothing shall be washed frequently to prevent accumulation of explosive or pyrotechnic composition and shall not be worn outside the plant.

(12) Each plant shall have an employee designated as a safety officer who shall be responsible for general safety, fire prevention and protection, and employee safety training.

(13) A person designated as a safety officer pursuant to subsection (12) shall give formal instruction regarding proper methods and procedures, safety requirements, and procedures for handling explosive and pyrotechnic compositions and devices to all employees when they begin employment and at least annually after the employee's initial date of employment.

(14) An oxidizer shall not be stored in the same building with a combustible powdered material including, but not limited to, charcoal, gum, metal, sulfuri, or antimony sulfide.

Sec. 19. (1) Except as provided in subsection (2), portable fire extinguishers shall be provided in all buildings according to the requirements of NFPA 10, standard for portable fire extinguishers.

(2) A fire extinguisher shall not be located in a building in which an explosive or pyrotechnic mixture is exposed.

(3) Each plant shall have formal emergency procedures. The emergency procedures shall include employee instruction and training and shall be applicable to all anticipated emergencies. An emergency warning signal shall be established.

(4) Emergency procedures shall include instruction in the use of portable fire extinguishers and instructions on which fires they may be safely used.

(5) Each employee shall be instructed to abandon fire fighting efforts if a fire involves an explosive or pyrotechnic composition or device or may spread to an explosive or pyrotechnic composition or device. In such cases, each employee shall be

instructed to evacuate the building immediately and to alert other plant personnel.

(6) Except as provided in subsection (7), a master electrical disconnect shall be provided where electrical service enters the plant. The master disconnect shall be arranged to disconnect all electrical power to the plant.

(7) Each emergency electrical circuit including, but not limited to, a circuit to a fire pump or emergency lighting, shall have its own master disconnect.

Sec. 20. Fireworks and fireworks components shall be tested only in an area specifically designated for that purpose. The test site shall be located a safe distance from all plant buildings or structures.

CHAPTER III

Sec. 21. (1) Unless they are in the process of being manufactured or packaged or are being transported, special fireworks, salute powder, and black powder shall be stored at all times in magazines meeting the requirements of this act.

(2) Salutes and bulk salute powder shall be stored only in type 1 or type 2 magazines.

(3) Black powder and special fireworks, other than bulk salutes that are not bullet-sensitive, shall be stored only in a type 1, 2, 3, or 4 magazine.

(4) A magazine containing special fireworks shall be separated from an inhabited building, railway, or highway by the distance specified in table 3 or 4.

(5) A magazine containing special fireworks shall be separated from a magazine or plant building by a barricade or screen barricade and by the distance specified in table 2.

(6) A magazine containing black powder shall be separated from an inhabited building, railway, highway, or other magazine by the distance specified in table 3.

Sec. 22. (1) A magazine shall be constructed to comply with this act or in a manner substantially equivalent to the requirements of this act.

(2) The ground around a magazine shall be graded so that water drains away from the magazine.

(3) Except as provided in subsection (5), a magazine requiring heat shall be heated by hot water radiant heating within the magazine building or by indirect warm air heating.

(4) Indirect warm air shall be heated by hot water or by steam coils having a pressure of 15 pounds per square inch gauge or less located outside the magazine building.

(5) A magazine heating system shall meet all of the following requirements:

(a) Radiant heating coils within the building shall be installed so that explosive material or its container cannot contact the coils and so that air is free to circulate between the coils and the explosive material. The surface temperature of the coils shall not exceed 165 degrees Fahrenheit.

(b) Heating ducts shall be installed so that the hot air discharge from the ducts is not directed against explosive material or its container.

(c) The heating system shall be controlled so that the ambient temperature of the magazine does not exceed 130 degrees Fahrenheit.

(d) An electric fan or pump used in the heating system shall be located outside the magazine, separate from the magazine walls, and shall be grounded.

(e) An electric motor or control for an electric heating device used to heat water or produce steam shall have an overload device and disconnect that complies with NFPA 70, national electrical code. All electrical switchgear shall be located at least 25 feet from the magazine.

(f) A fuel-fired heating source for hot water or steam shall be separated from the magazine by a distance of not less than 25 feet. The area between the heating unit and the magazine shall be cleared of all combustible material.

(g) Explosive material stored in a magazine shall be arranged to provide for uniform air circulation.

(6) Except as provided in subsection (7) when lighting is necessary within a magazine, an electric safety flashlight or an electric safety lantern shall be used.

(7) Electric lighting may be used within a magazine if the installation meets the following requirements:

(a) Each junction box containing a fuse or circuit breaker and each electrical disconnect is located at least 25 feet from the magazine.

(b) Each disconnect, fuse, and circuit breaker is protected by a voltage surge arrester capable of handling 2,500 amperes for 0.1 seconds.

(c) All wiring from switches inside and outside the magazine is installed in rigid conduit. Wiring leading into the magazine shall be installed underground.

(d) All conduit and each light fixture inside the magazine are protected from physical damage by a suitable guard or by placement in a protected location.

(e) Each light fixture is suitably enclosed to prevent a spark or hot metal from falling on the floor or onto material stored in the magazine.

(f) A junction box located within the magazine does not have an opening and is equipped with a close-fitting cover.

(g) A magazine containing material that may release a flammable vapor has wiring and fixtures that meet the requirements of article 501 of NFPA 70, national electrical code.

(h) A light inside a magazine is not left on when the magazine is unattended.

(8) There shall be no exposed ferrous metal on the interior of a magazine that may contact material stored within that magazine.

(9) If ventilation is required in a magazine, sufficient ventilation shall be provided to protect the stored material for the specific area in which the plant is located.

(10) Stored material shall be placed so that it does not interfere with ventilation or contact a masonry wall, or steel or

other ferrous metal, by means of a nonsparking lattice or equivalent lining.

Sec. 23. (1) A type 1 magazine shall be a permanent structure, such as a building or igloo, that is bullet-resistant, fire-resistant, theft-resistant, weather-resistant, and ventilated and shall comply with all of the following:

(a) Each wall and door of a type 1 magazine shall be bullet-resistant and shall be constructed according to 1 or more of the specifications listed in Appendix B.

(b) The roof may be constructed of a structurally sound material that is fire-resistant on the exterior.

(c) If the natural terrain around the magazine makes it possible for a bullet to be shot through the roof and ceiling at such an angle that the bullet can strike explosive material within that magazine, the roof or the ceiling shall be constructed in such a manner as to be bullet-resistant.

(d) The foundation shall be constructed of masonry, wood, or metal and shall be completely enclosed except for openings to provide cross ventilation. The exterior of a wood foundation enclosure shall be covered with not less than 26-gauge metal.

(e) The floor shall be constructed of wood or other suitable material. A floor constructed of material that may cause a spark shall be covered with a nonsparking surface, or the explosive material shall be packed on pallets of nonsparking material.

(f) The magazine shall be ventilated to prevent dampness or heating of explosives. Each ventilation opening shall be screened to prevent a spark from entering the magazine.

Ventilators in side walls shall be offset or shielded. A magazine having foundation and roof ventilators, with the air circulating between side walls and floor and between side walls and ceiling, shall have a wood lattice lining or equivalent means to prevent packages from being stacked against side walls and blocking air circulation. A 2-inch air space shall be provided between side walls and the floor.

(g) Each door of the magazine shall be equipped with 1 of the following locking systems:

(*i*) Two mortise locks.

(*ii*) Two padlocks with separate hasps and staples.

(*iii*) A mortise lock and a padlock.

(*iv*) A mortise lock that requires 2 keys to open the lock.

(*v*) A 3-point lock or an equivalent lock that secures the door to the frame at more than 1 point.

Each padlock shall be steel, shall have at least 5 tumblers, and shall have at least a 3/8-inch case-hardened shackle. Each padlock shall be protected by a steel hood installed so as to discourage insertion of bolt cutters. A door secured by a substantial internal bolt is not required to have an additional locking device. Each hinge and hasp shall be securely fastened to the magazine and locking hardware shall be secured rigidly and directly to the door frame.

(2) A type 2 magazine shall be a portable or mobile structure, such as a box, skid-magazine, trailer, or semitrailer that is fire-resistant, theft-resistant, weather-resistant, and

ventilated. If used for outdoor storage, a type 2 magazine shall be bullet-resistant.

(3) A type 2 outdoor magazine shall meet all of the following criteria:

(a) Each wall and the roof or ceiling shall be constructed as provided under subsection (1)(a), (b), and (c).

(b) Each door shall be of metal, constructed as provided under subsection (1)(a), or shall have a metal exterior with an inner door as provided under subsection (1)(a).

(c) A floor constructed of ferrous metal shall be covered with a nonsparking surface.

(d) If the magazine opens on top, it shall have a lid that overlaps the sides by at least 1 inch when closed.

(e) The magazine shall be supported so that its floor does not directly contact the ground.

(f) A magazine having a capacity of less than 1 cubic yard shall be securely fastened to a fixed object to prevent theft of the magazine.

(g) Each hinge, hasp, lock, and locking hardware of a type 2 magazine shall be the same as provided under subsection (1)(g) except that a padlock on a vehicular magazine is not required to be protected by a steel hood.

(h) When a vehicular magazine is left unattended, its wheels shall be removed or its kingpins shall be locked or it shall otherwise be effectively immobilized.

(4) A type 2 indoor magazine shall meet all of the following criteria:

(a) The magazine shall have substantial wheels or casters to facilitate removal from the building in case of emergency.

(b) The cover of the magazine shall have substantial strap hinges and a means for locking. The magazine shall be kept locked with a 5-tumbler padlock or its equivalent, except when explosive material is placed into or removed from the magazine.

(c) The magazine shall be painted red and the top shall bear the words "Explosives--Keep Fire Away" in white letters at least 3 inches high.

(d) A magazine constructed of wood shall have sides, bottoms, and covers or doors of 2-inch hardwood, well braced at the corners. The magazine shall be covered with sheet metal of not less than 26 gauge. Any nail exposed to the interior of the magazine shall be countersunk.

(e) A magazine constructed of metal shall be of 12-gauge sheet metal and shall be lined with a nonsparking material. The edges of a metal cover shall overlap the sides by at least 1 inch.

(5) A type 3 magazine shall be a portable structure that is fire-resistant, theft-resistant, and weather-resistant and shall comply with all of the following:

(a) The magazine shall be equipped with a 5-tumbler padlock.

(b) A magazine constructed of wood shall have sides, bottoms, covers, or doors of 4-inch hardwood, well braced at corners. The sides, bottoms, covers, or doors shall be covered

with sheet metal of not less than 26 gauge. Any nail exposed to the interior of the magazine shall be countersunk.

(c) A magazine constructed of metal shall be the same as required under subsection (4)(e).

(6) A type 4 magazine shall be a permanent, portable, or mobile structure such as a building, igloo, box, semitrailer, or other mobile container that is fire-resistant, theft-resistant, and weather-resistant.

(7) A type 4 outdoor magazine shall meet all of the following criteria:

(a) The magazine shall be constructed of masonry, wood covered with sheet metal, fabricated metal, or a combination of masonry, wood covered with sheet metal, or fabricated metal. Each door shall be metal or wood covered with metal.

(b) A permanent magazine shall comply with subsection (1)(d), (f), and (g).

(c) A vehicular magazine shall comply with subsection (1)(g) and shall be immobilized when unattended, as provided under subsection (3)(h).

(8) A type 4 indoor magazine shall comply with subsection (4).

Sec. 24. (1) A magazine shall be under the responsibility of a competent person at all times. The person shall be at least 21 years of age and shall be responsible for the enforcement of all safety precautions.

(2) A magazine containing an explosive shall be inspected at intervals of not more than 7 days to determine whether there has

been unauthorized or attempted unauthorized entry of the magazine or whether there has been unauthorized removal of the magazine or its contents.

(3) Each magazine door shall be kept locked except when explosive material is placed into or removed from the magazine or during inspection of the magazine.

(4) When explosive material is removed from the magazine for use, the oldest stock shall be used first.

(5) Corresponding grades and brands of explosive material shall be stored together in such a manner that brand and grade markings are readily visible. All stock shall be stored so as to be easily counted and checked.

(6) Containers of explosive material shall be piled in a stable manner, and laid flat with top side up.

(7) An open container of explosive material shall be securely closed before it is returned to a magazine. A container without a closed lid shall not be stored in a magazine.

(8) Except as provided in subsection (9), a container of explosive material shall not be opened, unpacked, or repacked inside a magazine or within 50 feet of a magazine, or in close proximity to any other explosive.

(9) A fiberboard container may be opened, but not unpacked, inside a magazine or within 50 feet of a magazine.

(10) Except as provided in subsection (11), any tool used for opening a container of explosive material shall be nonsparking.

(11) A metal slitter may be used for opening fiberboard containers.

(12) A magazine shall be used exclusively for storing explosive and pyrotechnic material. A metal tool other than a nonferrous conveyor shall not be stored in a magazine. A ferrous metal conveyor stand protected by a coat of paint may be stored within a magazine.

(13) A magazine floor shall be regularly swept and kept clean and dry and free of grit, paper, empty packing material, and rubbish. A broom or other cleaning utensil shall not have a spark producing metal part. Sweepings from a magazine floor shall be disposed of according to manufacturer's instructions.

(14) When any explosive or pyrotechnic material has deteriorated to the extent that it has become unstable or dangerous, the person responsible for that material shall immediately contact the manufacturer for assistance.

(15) Before repairing the interior of a magazine, all explosive or pyrotechnic material shall be removed and the interior shall be cleaned.

(16) Before repairing the exterior of a magazine in which there is a possibility of causing a spark or fire, all explosive and pyrotechnic material shall be removed.

(17) Explosive or pyrotechnic material removed from a magazine undergoing repair shall be placed in another magazine or at a safe distance from the magazine. The material shall be properly guarded and protected. Upon completion of the repairs, the material shall be promptly returned to the magazine.

Sec. 25. (1) Except as provided in subsection (2), a spark-producing device or firearm shall not be permitted inside a magazine or within 50 feet of a magazine.

(2) Subsection (1) does not apply to a firearm carried by an authorized guard.

(3) The area around a magazine shall be kept clear of brush, dried vegetation, leaves, and similar combustibles for a distance of at least 25 feet.

(4) Combustible materials shall not be stored within 50 feet of a magazine.

Sec. 26. (1) A shipping building shall be separated from a process building by the distance specified in table 2.

(2) A shipping building shall be separated from an inhabited building, railway, highway, or magazine by the distance specified in table 3.

(3) A maximum of 10,000 pounds gross weight of special fireworks is permitted at 1 time in a shipping building.

(4) Not more than 30 pounds net weight of salute powder as finished salutes is permitted at any time in a shipping building.

(5) All electrical equipment and fixtures in a shipping building shall be approved for use in a class II, group e, division 1 location.

(6) Special fireworks awaiting packing and shipping may remain in a shipping building overnight if the building is fire- and theft-resistant, the building is securely locked when not in

operation, and the windows are guarded with bars or similar protection.

CHAPTER IV

Sec. 27. (1) Common fireworks at a fireworks manufacturing plant shall be stored in a building meeting the requirements of this chapter at all times unless the fireworks are being manufactured, packaged, or transported.

(2) A storage building shall be constructed so as to comply with this chapter or constructed in a manner substantially equivalent to the requirements of this chapter.

(3) A storage building containing common fireworks shall be separated from an inhabited building, passenger railway, or public highway by the distances specified in table 5. A storage building containing common fireworks shall be separated from any other storage building, magazine, or fireworks manufacturing building by the distances specified in table 2.

Sec. 28. (1) A storage building for class C fireworks may be a building, igloo, box, trailer, semitrailer, or other mobile facility. A storage building for class C fireworks shall be constructed to resist fire from an external source and to be weather-resistant and theft-resistant and shall comply with all of the following:

(a) Each opening shall be equipped with a means for locking.

(b) Each door shall open outward and each exit shall be clearly marked. Each aisle and exit door shall be kept free of obstructions.

(c) Each electrical fixture shall be dust-ignitionproof. All electrical wiring shall comply with articles 500 and 502 of NFPA 70, national electrical code.

(d) An electrical receptacle or unguarded light fixture shall not be permitted within 25 feet of any fireworks or pyrotechnic composition. Each light fixture within 25 feet of fireworks shall have a guard.

(e) An electrical disconnect shall be located outside each storage building and shall be arranged to de-energize all electrical power to the building.

Sec. 29. (1) Each storage building shall be under the direct supervision of a competent person while in operation. The person shall be at least 21 years of age, and shall be responsible for enforcing all safety precautions.

(2) Each door shall be kept locked when the building is not in operation.

(3) Except as provided in subsection (4), common fireworks shall be stored in its original package or in an unopened case or carton. All containers shall be stacked neatly and in a stable manner.

(4) Unpackaged fireworks returned to the storage building by a retailer may be stored temporarily in bins until repackaged.

(5) Except as provided in subsection (6), a tool used for opening containers shall be nonsparking.

(6) A metal slitter may be used for opening fiberboard containers.

(7) A storage building shall be kept clean and dry, and free of grit, paper, empty used packages, and rubbish. A broom or other cleaning utensil shall not have a spark producing metal part. Sweepings from a magazine floor shall be disposed of properly.

(8) Before making repairs to the interior of a storage building, all fireworks shall be removed and the interior shall be cleaned.

(9) Before making repairs to the exterior of a storage building where there is a possibility of causing a spark or fire, all fireworks shall be removed.

(10) Fireworks removed from a storage building undergoing repair shall be handled as provided under section 24(17).

(11) Except as provided in subsection (12), smoking, matches, open flames, spark producing devices, and firearms shall not be permitted inside of a storage building or within 25 feet of stored fireworks.

(12) Subsection (11) does not apply to a firearm carried by an authorized guard.

(13) The area around storage buildings shall be kept clear of brush, dried vegetation, leaves, and similar combustibles for a distance of at least 25 feet.

CHAPTER V

Sec. 30. (1) Transportation of fireworks shall meet all applicable requirements of the United States department of transportation.

(2) Transportation of fireworks shall meet the requirements of this act, to the extent those requirements do not conflict with the requirements of the United States department of transportation.

(3) A motor vehicle used to transport fireworks shall be inspected to determine that it is in proper condition by checking all of the following:

(a) Each fire extinguisher shall be fully charged and in working order.

(b) Electrical wiring shall be protected and securely fastened to prevent short circuits and intermittent open circuits.

(c) The chassis, motor, oil pan, and body underside shall be reasonably clean and free of excess oil and grease.

(d) The fuel tank and fuel lines shall be secure and shall not leak.

(e) The brakes, lights, horn, windshield wipers, and steering apparatus shall all function properly.

(f) Each tire shall be checked for proper inflation and for defects.

(4) The vehicle shall be in proper condition in all other respects and shall be acceptable for handling explosives and fireworks.

Sec. 31. (1) Each vehicle shall be driven by and in the charge of a properly licensed driver or a qualified representative of the carrier operating the vehicle. The licensed driver or qualified representative shall be physically fit, careful,

capable, reliable, able to read and write the English language, and not addicted to or under the influence of intoxicants, narcotics, or other dangerous drugs.

(2) The driver or representative shall be at least 21 years of age.

Sec. 32. (1) A motor vehicle transporting black powder or class B fireworks shall be attended at all times by the driver or the representative of the operator of the vehicle. The attendant shall be informed of the class of material carried and its inherent dangerous properties. The attendant shall also be instructed in the procedures to be followed in order to protect the public from danger.

(2) The attendant shall be thoroughly familiar with the vehicle and shall be trained, given the necessary means to move the vehicle when required, and authorized to move the vehicle when required.

(3) The driver or representative shall be familiar with this chapter, local and state traffic regulations, and federal regulations governing the transportation of fireworks.

(4) For the purpose of this section, a motor vehicle shall be considered attended when the driver or other attendant is physically on or in the vehicle, or has the vehicle within his or her field of vision and can reach it quickly and without interference, and is awake and alert, and not engaged in any activity that may divert his or her attention from the vehicle.

(5) This section does not prohibit necessary communication with a public officer or representative of the carrier, shipper,

or consignee or necessary absence from the vehicle to obtain food or to provide for physical comfort.

(6) A vehicle may be left unattended in an area where such parking is permitted, such as an area meeting the requirements of NFPA 498, standard for explosive motor vehicle terminals.

(7) A vehicle transporting class B fireworks shall avoid congested areas and heavy traffic. If a route through congested areas has been designated by local authorities, that route shall be followed.

(8) Except as provided in subsection (9), a vehicle transporting class B fireworks shall not be parked before reaching its destination, whether or not the vehicle is attended, on any public street adjacent to or near any bridge, tunnel, dwelling, building, or place where people work, congregate, or assemble.

(9) Subsection (8) does not apply in cases of emergency or when the driver or attendant leaves the vehicle to obtain food or to provide for physical comfort.

(10) Spark producing metal, a metal tool, oil, a match, firearm, electric storage battery, flammable material, acid, oxidizing material, or corrosive material shall not be carried in the body of a vehicle transporting class B fireworks.

(11) Delivery of fireworks shall be made only to authorized persons.

CHAPTER VI

Sec. 33. (1) A mortar shell shall be classified and described only in terms of the inside diameter of the mortar in which the shell can be safely used.

(2) An aerial shell shall be constructed so that the shell fits easily into the appropriate size mortar and so that the lift charge and internal delay fuse are appropriate to propel the shell to a safe altitude before functioning.

(3) Each shell shall be labeled with the type of shell, the shell size, and the name of the manufacturer or distributor. Each shell also shall carry a warning label.

(4) The label or wrapper of each type of aerial shell shall be conspicuously marked with a number to indicate the shell size.

(5) The label or wrapper of each type of aerial salute shall be conspicuously marked with the word "salute".

(6) Except as provided in subsection (7), if a quick match fuse is used to ignite the lift charge of an aerial shell, the fuse shall be long enough to allow not less than 6 inches of fuse to protrude from the mortar after the shell has been properly inserted into the mortar.

(7) Subsection (6) does not apply if the shell is to be fired electrically.

(8) Except as provided in subsection (9), the time delay between igniting the tip of an aerial shell's fuse and the firing of the shell shall not be less than 3 seconds or more than 6 seconds.

(9) A delay period is not required if an aerial shell is electrically ignited.

(10) Except as provided in subsection (11), a safety cap shall be installed over the exposed end of each aerial fuse. The

safety cap shall be a different color than the fuse. The safety cap shall be installed in such a manner that the fuse is not damaged.

(11) A safety cap is not required for an electrically fired display; however, pyrotechnic composition shall not be exposed.

(12) A single break salute shell shall not exceed 3 inches in diameter or 3 inches in length exclusive of the propellant charge. The maximum quantity of salute powder in a single break salute shall not exceed 2.5 ounces.

(13) For single break shells that are larger than 3 inches in diameter and that contain multiple internal salutes, and for multibreak shells that are larger than 3 inches in diameter, the maximum quantity of salute powder per shell shall not exceed 5 ounces.

Sec. 34. (1) All fireworks shall be stored and transported according to the requirements of NFPA 1124, code for the manufacture, transportation, and storage of fireworks, before reaching the display site.

(2) Fireworks delivered to the display site shall not be left unattended or allowed to become wet.

(3) Except as provided in subsection (4), each shell shall be inspected by the operator upon delivery to the display site. A shell that is torn or that leaks, has a broken fuse, or shows any sign of having been wet shall be set aside and shall not be fired. After the display, any shell set aside pursuant to this subsection shall be returned to the supplier or destroyed according to the supplier's instructions.

(4) A minor repair to a fuse is allowed. For an electrically ignited display, attachment of electric matches and other similar tasks is permitted.

(5) Except as provided in subsection (6), all shells delivered to the display site shall immediately be separated according to size and as to whether they are salutes. Until it is loaded into a mortar, each shell shall be stored in a covered container such as a ready box or corrugated carton meeting United States department of transportation requirements for the transportation of special fireworks.

(6) Shells for an electrically ignited display are not required to be separated according to size or whether they are salutes.

(7) Except as provided in subsections (8) and (9), during performance of an outdoor fireworks display, each ready box shall be located at a distance of not less than 25 feet upwind from the mortar placement. If the wind shifts during a display, each ready box shall be relocated upwind from the discharge site.

(8) When acceptable to the authority having jurisdiction, alternate measures shall be taken.

(9) A ready box is not required if no shell is required to be stored during the display.

Sec. 35. (1) Each mortar shall be carefully inspected for defects, such as a dent, bent end, damaged interior, or damaged plug prior to placement. A mortar found to be defective shall not be used.

(2) Each mortar shall be positioned so that shells are propelled away from spectators and over a fallout area. A mortar shall not be angled toward a spectator viewing area.

(3) Except as provided in subsection (4), each mortar shall be buried in the ground or in an aboveground trough or drum to a depth of 2/3 to 3/4 of its length.

(4) A securely positioned mortar rack may be used to fire single break shells not exceeding 6 inches in diameter.

(5) If a paper mortar may be damaged by being placed in damp ground, the mortar shall be placed in a moisture-resistant bag.

(6) If groundwater may leak into a mortar, the mortar shall be placed in a water-resistant bag before being placed in the ground.

(7) A weather-resistant covering shall be placed over the mouth of each mortar if there is imminent danger of water collecting in the mortar.

(8) Except as provided in subsection (9), if there is significant danger of a mortar being further driven into the ground when it is fired, sufficient added support shall be placed beneath the mortar.

(9) If a mortar is only to be used once, such as for an electrically fired display, added support is optional.

(10) Except as provided in subsection (11), a mortar that is buried in the ground, in a trough, or in a drum shall be separated from any adjacent mortar by a distance at least equal to the diameter of the mortar. A mortar in a trough or drum shall be positioned to afford the maximum protection to the shooter.

(11) Subsection (10) does not apply if electrical firing is used.

(12) If a trough or drum is used, the trough or drum shall be filled with sand or soft dirt. Stones or other possibly dangerous debris shall not be used.

(13) Except as provided in subsections (14) and (15), if more than 3 shells are chain fused the following apply:

(a) If the mortars are buried, the mortars shall be separated by a distance equal to 4 times the diameter of the largest mortar.

(b) If the mortars are in racks, the mortar racks shall have sufficient strength to prevent any adjacent mortar from being repositioned if a shell detonates in a mortar causing that mortar to burst.

(14) If there is doubt concerning the strength of racks holding chain fused mortars, the separation distances for those racks shall be twice the distance listed in table 3 for the largest mortar in the sequence.

(15) If the separation distance is twice the separation distance required in table 3, buried mortars shall be separated by a minimum of the internal diameter of the largest mortar in the sequence.

(16) If mortars are to be reloaded during a display, mortars of various sizes shall not be intermixed. Mortars of the same size shall be placed in groups, and the groups shall be separated from one another.

(17) If personnel are to be in the immediate area of a mortar during an outdoor fireworks display, sandbags or other suitable protection shall be placed around the mortar to the approximate height of the mouth of the mortar in each direction in which personnel could be located.

(18) Each mortar shall be inspected before the first shell is loaded to ensure that no water or debris has accumulated in the bottom of the mortar.

(19) Each mortar shall be of sufficient strength and durability to safely fire the aerial shells to be used.

(20) A cast iron mortar shall not be used.

(21) If a seamed metal mortar is used, the mortar shall be placed so that the seam is facing either right or left as one faces the mortar.

(22) Each mortar shall be of sufficient length to propel aerial shells to a safe height.

(23) Except as provided in subsection (24), a cleaning tool shall be provided to clean debris from mortars as necessary.

(24) If mortars are not to be reloaded during a display, a cleaning tool is not required.

(25) Except as provided in subsection (26), numerals indicating the inside diameter of the mortar shall be conspicuously painted or otherwise marked on the top of each mortar.

(26) Subsection (25) does not apply to an outdoor fireworks display fired under the direct control of a professional fireworks display company.

Sec. 36. (1) Electrical contact shall not be allowed to occur between any wiring associated with the electrical firing unit and any metal object in contact with the ground.

(2) If the electrical firing unit is powered from an alternating current power line, line isolation shall be used.

(3) Except as provided in subsection (4), an electrical firing unit shall include a key-operated switch or other similar device to prevent unauthorized or unintentional firing.

(4) A key-operated switch is not required if the electrical firing unit is very small and attached to the wire running to an electric match for the brief duration of the actual firing.

(5) A manually activated electrical firing unit shall be designed so that at least 2 positive actions must be taken to apply electric current to an electric match.

(6) Each computer-activated automatic sequencing type electrical firing unit shall have some form of dead man switch, so that firing will cease the moment the switch is released.

(7) If the electrical firing unit has a built-in test circuit, the unit shall be designed to limit the test current into a short circuit to 0.05 ampere or to 20% of the no-fire current of the electric match, whichever is less.

(8) A multitester, such as a volt-ohm meter, shall not be used for testing unless its maximum current delivering potential has been measured and found to meet the requirements of this section.

(9) No individual shall be allowed to be present in the immediate area of fireworks that have been attached to an electrical firing unit when firing circuits are tested.

CHAPTER VII

Sec. 37. (1) The area selected for the discharge site, the spectator viewing area, the fallout area, and each parking area shall be inspected and approved by the authority having jurisdiction.

(2) The site for the outdoor display shall have at least a 70-foot radius per inch of internal mortar diameter of the largest aerial shell to be fired, except as provided in table 6. No spectator, dwelling, or spectator parking area shall be located within the display site.

(3) Except as provided in subsection (4), distances from health care and detention and correctional facilities shall be at least twice the distances specified in table 6.

(4) With the approval of the health care or detention and correctional facility, the requirement that the distance be at least twice the distance specified in table 6 may be waived.

(5) Distances from bulk storage areas of materials that have a flammability, explosive, or toxic hazard shall be twice that required in table 3.

Table 6
Minimum radius of display site for outdoor display of fireworks

Minimum radius of display site for

Shell size	outdoor display of fireworks
less than 3 in. (76 mm)	140 ft (43 m)
3 in. (76 mm)	210 ft (64 m)
4 in. (102 mm)	280 ft (85 m)
5 in. (127 mm)	350 ft (107 m)
6 in. (152 mm)	420 ft (128 m)
7 in. (178 mm)	490 ft (149 m)
8 in. (203 mm)	560 ft (170 m)
10 in. (254 mm)	700 ft (214 m)
12 in. (305 mm)	840 ft (256 m)
greater than 12 in. (305 mm)	Approval of authority having jurisdiction

For SI units: 1 in. = 25.4 mm

Sec. 38. (1) The area selected for the discharge of aerial shells shall be located so that the trajectory of a shell shall not come within 25 feet of any overhead object.

(2) Except as provided in subsection (3), each ground display piece shall be located at a minimum distance of 75 feet from each spectator viewing area and each parking area.

(3) If a ground piece has greater hazard potential, such as a large wheel with a powerful driver, a roman candle battery, or an item employing a large salute, the minimum separation distance shall be increased to 125 feet.

(4) If a mortar is positioned vertically, the mortar shall be placed at the approximate center of the display site.

(5) If an aerial shell is to be stored at the discharge site for subsequent loading into a mortar during the display, the mortar shall be placed at least 1/6, but not more than 1/3, the distance from the center of the display site toward the main spectator area. The mortars shall be angled so that any dud shell will fall at a point approximately equal to the offset of the mortar from the center of the display site but in the opposite direction.

(6) Fireworks shall not be discharged within 100 feet of a tent or canvas shelter.

Sec. 39. (1) A fallout area shall be a large open area.

(2) No spectators, vehicles, or readily combustible materials shall be located within the fallout area during the display.

CHAPTER VIII

Sec. 40. (1) The sponsor of the display shall provide adequate fire protection for the display.

(2) The sponsor shall consult with the authority having jurisdiction to determine the level of fire protection required.

(3) Monitors whose sole duty shall be the enforcement of crowd control shall be located around the display area by the sponsor. The authority having jurisdiction shall approve the provisions for crowd control.

(4) Monitors shall be located around the discharge site to prevent spectators or any other unauthorized persons from entering the discharge site. Entry into the discharge site shall be restricted throughout the display and until the discharge site

has been inspected after the display. If practical, fences and rope barriers shall be used to aid in crowd control.

(5) If pyrotechnic materials are present before the display, unescorted public access to the site shall not be allowed.

(6) The operator is responsible for safety.

(7) The operator shall ensure that a sufficient number of assistants are on hand to safely conduct the fireworks display. Only the operator and necessary assistants shall be permitted in the discharge area while the display is in progress.

(8) The operator shall ensure that all assistants are fully trained to properly perform their assigned tasks and that they are knowledgeable of safety hazards.

(9) If, in the opinion of the authority having jurisdiction or the operator, any adverse condition exists that significantly affects safety, the fireworks display shall be postponed until the condition is corrected.

(10) If, in the opinion of the authority having jurisdiction or the operator, the lack of crowd control poses a danger, the fireworks display shall immediately be discontinued until the situation is corrected.

(11) If, in the opinion of the authority having jurisdiction or the operator, high winds, precipitation, or other adverse weather conditions pose a significant safety hazard, the fireworks display shall be postponed until weather conditions are acceptable.

(12) An operator or an assistant shall use only a flashlight or electric lighting for artificial illumination.

(13) No smoking shall be allowed within 50 feet of any area where fireworks or other pyrotechnic materials are present.

(14) Measures shall be taken to protect all pyrotechnic material to be used in the display from adverse weather conditions. Moisture-damaged material shall not be used.

(15) No person shall be allowed in the discharge area if he or she is under the influence of alcohol, a narcotic, or other drug that could adversely affect his or her judgment, movement, or stability.

Sec. 41. (1) Except as provided in subsection (3), a shell shall be carried from the storage area to the discharge site only by its body, and not by its fuse.

(2) Each shell shall be checked for proper fit in its mortar before the display.

(3) When being loaded into a mortar, a shell shall be held by its fuse, or a lowering cord if provided, and carefully lowered into the mortar. The person loading the shell shall not place any part of his or her body over the mouth of the mortar.

(4) A person loading a shell shall be reasonably certain that the shell is properly seated in the bottom of the mortar.

(5) A shell shall not be forced into a mortar too small to accept it. A shell that does not fit properly into the mortar shall not be fired but shall be disposed of according to the procedure described in subsection (12).

(6) Except as provided in subsection (7), a shell shall be ignited by lighting the tip of the fuse with a fusee, torch, portfire, or similar device. The operator shall not place any

part of his or her body over the mortar. As soon as the fuse is ignited, the operator shall retreat from the mortar area.

(7) Electrical ignition may be used as an alternative to lighting the fuse with a fusee, torch, portfire, or similar device.

(8) Except as provided in subsection (9), the safety cap protecting the fuse shall not be removed by the person responsible for igniting the fuse until immediately before the shell is to be fired.

(9) Subsection (8) does not apply if electrical ignition is used.

(10) The first shell fired shall be observed carefully to determine that its trajectory is such that the shell functions over the fallout area and that any dangerous debris or unexploded shells will land in the fallout area.

(11) The display shall be interrupted and the mortars shall be reangled or repositioned as necessary for safety during an outdoor fireworks display.

(12) Except as provided in subsection (13), if a shell fails to ignite in the mortar, the mortar shall be marked to indicate the presence of an unfired shell. The mortar shall not be reloaded or reused as long as the misfired shell remains. Immediately following the display but not sooner than 15 minutes after the attempted firing, if the shell still has not fired, the mortar shall be cautiously flooded with water and allowed to remain for a minimum of 5 minutes before it is cautiously emptied

of the shell. The supplier shall be contacted as soon as possible for proper disposal instructions.

(13) When electrical ignition is used and the firing failure is electrical in nature or the aerial shell was intentionally not fired, the shell may be salvaged by the operator.

(14) It is the responsibility of the person igniting an aerial shell to detect when a shell does not fire from a mortar. That person shall warn others in the area and, except as provided in subsection (15) immediately shall cause the mortar to be marked to indicate the presence of an unfired aerial shell.

(15) When electrically firing, it is not necessary to mark the mortar. However, persons entering the area after the fireworks display shall conduct themselves as though an unfired shell may remain in a mortar until otherwise advised by the operator.

(16) Manual reignition of chain fused aerial shells shall only be attempted at properly installed ignition points.

(17) Following the display, the firing crew shall conduct an inspection of the fallout area to locate any unexploded aerial shells. The inspection shall be conducted before any public access to the site is allowed. Any shell found during the search shall not be handled until at least 15 minutes have elapsed from the time the shell was fired. The shell shall then be cautiously flooded with water and allowed to remain for a minimum of 5 minutes before being cautiously placed in a plastic bucket or fiberboard box. The supplier shall be contacted as soon as possible for disposal instructions.

(18) If fireworks are displayed at night and it is not possible to thoroughly inspect the site, the operator shall ensure that the entire site is inspected early the following morning.

(19) Except as provided in subsections (20) and (21), to the extent that it is practical, each ground piece shall be positioned outside of the discharge area of aerial displays.

(20) If a ground display piece is to be fired electrically, the display piece may be located in the fallout area.

(21) If an aerial shell is preloaded, the ground display piece may be located in that discharge area.

(22) Dry grass or combustible material located beneath a ground display piece shall be wet down before the display if that grass or material is in sufficient quantity to be a fire hazard.

(23) Each pole for a ground display piece shall be securely placed and firmly braced so that it will not fall over during the functioning of the firework device.

(24) Except as provided in subsection (25), specific instructions from the supplier shall accompany each ground display piece. A list of required accessories also shall be supplied.

(25) Specific instructions are not required for an outdoor fireworks display fired under the direct control of a professional display company.

CHAPTER IX

Sec. 42. (1) Each operator shall be at least 21 years old and licensed or approved by the authority having jurisdiction in accordance with applicable laws.

(2) A person applying for a license as an operator shall successfully complete a written examination administered by the authority having jurisdiction of laws, regulations, and safety practices pertaining to the discharge of fireworks, or otherwise demonstrate proficiency.

(3) Each assistant shall be at least 18 years of age.

(4) Before a person conducts a fireworks display, the person shall obtain a permit from the authority having jurisdiction.

(5) A person applying for a permit under subsection 4 shall demonstrate financial responsibility by providing proof of insurance or by other appropriate means before a permit is issued to that person.

Sec. 43. A person who violates this act is guilty of a misdemeanor punishable by imprisonment for not more than 90 days or a fine of not more than $100.00, or both.

Sec. 44. Sections 243a, 243b, 243c, 243d, and 243e of the Michigan penal code, Act No. 328 of the Public Acts of 1931, being sections 750.243a, 750.243b, 750.243c, 750.243d, and 750.243e of the Michigan Compiled Laws, are repealed.

Sec. 45. This act shall not take effect unless Senate Bill No. ___ or House Bill No. 5564 (request no. 03823'95 a) of the 88th Legislature is enacted into law.