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Camilla Bustamante
Commissioner, District 3



Adam F. Johnson
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Gregory S. Shaffer
County Manager

Santa Fe County Operational Permit Application: Pyrotechnics Before a Proximate Audience

Authority Having Jurisdiction (AHJ or Designee): Santa Fe County Fire Department

IFC2021 Section 105.5.42 – Required Operational Permits – Pyrotechnic special effects material.

An operational permit is required for use and handling of pyrotechnic special effects material.

NFPA 1126 – Standard for the Use of Pyrotechnics Before a Proximate Audience.

This standard shall apply to the use of pyrotechnics in the performing arts in conjunction with theatrical, musical, or similar productions before a proximate audience, performers, or support personnel. (1126.1.3.1)

Use Permit Requirements

1. The use of all pyrotechnics shall be approved or have a permit issued by the authority having jurisdiction. (1126.6.1.2).
2. All pyrotechnics before a proximate audience shall require a state or federally licensed pyrotechnician to apply for this Operational Permit as well as be present for and manage all pyrotechnic performances occurring under this permit application. (SFCFD FMO)
 - a. Printed Name of the Licensed Pyrotechnician (LP): _____
 - b. Phone Number of the LP: _____
 - c. Email of the LP: _____
 - d. Name of the Group sponsoring the Application: _____
3. An Operational Permit application meeting, in-person or online, shall be required no less than 30 business days prior to the initial pyrotechnic performance. All documentation required by this permit application shall be submitted and ready for SFCFD review at the time of the aforementioned required meeting. (SFCFD FMO)
4. The Operational Permit fee shall be \$50.00 USD per pyrotechnic setup/occurrence. (SFCO 2023-6, Section 15, Item C).

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Pyrotechnics Plan – Required Documents

1. Before the performance of any production, the permittee shall submit a plan for the use of pyrotechnics to the authority having jurisdiction. (1126.6.2.1) The plan for the use of pyrotechnics shall be made in writing or such other form as is approved by the authority having jurisdiction. (1126.6.3.1)
2. The plan shall include the following: (1126.6.3.2)
 - a. Name of the person, group, or organization sponsoring the production
 - b. Date and time of day of the production
 - c. Exact location of the production
 - d. Name of the person actually in charge of firing the pyrotechnics (i.e., the pyrotechnic operator)
 - e. Number, names, and ages of all assistants who are to be present
 - f. Qualifications of the pyrotechnic operator
 - g. Pyrotechnic experience of the operator
 - h. Confirmation of any applicable state and federal licenses held by the operator or assistant(s)
 - i. Evidence of the permittee's insurance carrier or financial responsibility
 - j. Number and types of pyrotechnic devices and materials to be used, the operator's experience with those devices and effects, and a definition of the general responsibilities of assistants
 - k. Diagram of the grounds or facilities where the production is to be held that shows the point at which the pyrotechnic devices are to be fired, the fallout radius for each pyrotechnic device used in the performance, and the lines behind which the audience is to be restrained
 - l. Point of on-site assembly of pyrotechnic devices
 - m. Manner and place of storage of the pyrotechnic materials and devices
 - n. Safety data sheet (SDS) for the pyrotechnic material(s) to be used
 - o. Certification that the set, scenery, and rigging materials are inherently flame-retardant or have been treated to achieve flame-retardancy
 - p. Certification that all materials worn by performers in the fallout area during use of pyrotechnic effects shall be inherently flame-retardant or have been treated to achieve flame-retardancy
 - q. In the case of a hybrid flame effect, identification of those portions of the flame effect that require compliance with NFPA 160 and those portions that require compliance with NFPA 1126

Pre-show Review and Demonstration

- A pre-show demonstration shall be scheduled with sufficient time allowed to reset/reload the pyrotechnics before the arrival of the audience. (1126.6.4.2)
- Where the use of certain indoor pyrotechnics requires smoke detectors to be bypassed or air-handling systems to be disengaged, the fire department shall be notified, and a fire department representative shall be present for the demonstration. (1126.6.4.3.1)

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- The individual responsible for the life safety systems of the building shall return those systems to normal operating conditions as soon as the likelihood of false alarms from the pyrotechnics has passed. (1126.6.4.3.2)

Qualifications of Operators and Assistants

- **6.5.1** All pyrotechnic operators shall be at least 21 years old and licensed or approved by the authority having jurisdiction in accordance with any and all applicable laws. (1126.6.5.1)
 - **6.5.1.1** An applicant for licensing as an operator shall provide evidence of actual experience as an operator or assistant as part of demonstrating competency to the authority having jurisdiction. (1126.6.5.1.1)
 - **6.5.1.2** An applicant for licensing as an operator shall successfully complete a written examination of laws, regulations, and safety practices pertaining to the discharge of pyrotechnics, which shall be administered by the authority having jurisdiction, or otherwise shall demonstrate knowledge of these areas. (1126.6.5.1.2)
- **6.5.2** All assistants shall be at least 18 years old. (1126.6.5.2)

Use of Pyrotechnics

Portable Fire-Fighting Equipment.

- *Four or more fire extinguishers of the classification and size as approved by the authority having jurisdiction shall be readily accessible while the pyrotechnics are being loaded, prepared for firing, or fired. (1126.8.1.1)
 - *Attempting to extinguish pyrotechnic fires is not recommended. Fire extinguishers should be chosen to fight potential secondary fires. (A8.1.1)
 - The following shall be provided in addition to those required by NFPA 10 for the building: (1126.8.1.1.1)
 - Two pressurized water extinguishers, each with a minimum rating of 2-A (1126.8.1.1.1)
 - Two extinguishers, each with a minimum rating of 10-B:C, or two extinguishers appropriate to the fuel source being used. (1126.8.1.1.1)
- The extinguishers shall be placed so that at least one is located on each opposing side of the performance where pyrotechnics are used. (1126.8.1.1.2)
- Additional fire-extinguishing equipment shall be provided as required by NFPA 10 and the authority having jurisdiction. (1126.8.1.1.3)
- Personnel who have a working knowledge of the use of the applicable fire extinguishers shall be present while the pyrotechnics are being handled, used, or removed. (1126.8.1.1.4)

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Fire Detection and Life Safety Systems.

- Portions of fire detection and life safety systems shall be permitted to be interrupted during the operation of temporarily installed pyrotechnic effects when the following conditions are met: (1126.8.1.2.1)
 1. Approval by the authority having jurisdiction
 2. Approval by the owner or owner's agent
 3. * Presence of an approved fire watch capable of directing the operation of all fire detection and life safety systems installed in the building.
 - *A fire watch is a qualified person or persons in attendance during all times when fixed fire detection systems are intentionally taken out of operation and should be acceptable to the authority having jurisdiction. The fire watch should be familiar with the operation of all fire and life safety systems in the building and be able to notify emergency responders. (A8.1.2.1)

Separation Distances for Audiences.

- *Each pyrotechnic device fired during a performance shall be separated from the audience by a minimum of 15 ft (4.6 m) or twice the fallout radius of the device, whichever is greater, except where otherwise approved by the authority having jurisdiction. (1126.8.4.1)
 - * A pyrotechnic device with a 10 ft (3 m) fallout radius should be separated from the audience by a minimum distance of 20 ft (6 m). (A8.4.1)
- Concussion mortars and concussion effects shall be separated from the audience in all directions by a minimum of 25 ft (7.6 m). (1126.8.4.2)
- Flown concussion mortars and concussion effects shall not be over the audience or in a location where debris from the devices will fall into an audience area. (1126.8.4.3)
- There shall be no glowing or flaming particles within 10 ft (3 m) of the audience. (1126.8.4.4)

Storage Requirements.

- Pyrotechnic materials and devices shall be stored in accordance with regulations promulgated by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF). (1126.8.5.3.1)
- A closed vehicle, such as a truck, shall be permitted to be used for storage where permitted by ATF, state, or local regulations. (1126.8.5.3.2)
- To prevent unauthorized personnel from gaining access to the pyrotechnics, the venue manager for the site shall provide a separate, secured area, room, or facility for the preparation of pyrotechnic materials and devices that has been approved by the authority having jurisdiction and that is acceptable to the pyrotechnic operator. (1126.8.5.3.3)
- Provisions for lockable storage for pyrotechnics, approved by the authority having jurisdiction, also shall be provided. (1126.8.5.3.4)
- A quantity of pyrotechnics no greater than that needed for the production of special effects in one day shall be removed from storage. (1126.8.5.4)

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Smoking.

- Smoking shall not be permitted within 25 ft (7.6 m) of the area where pyrotechnics are being handled or stored. (1126.8.5.5.1)
- NO SMOKING signs shall be conspicuously posted. (1126.8.5.5.2)
- Smoking by performers as part of the performance shall be permitted as blocked in rehearsals and approved by the pyrotechnic operator and the authority having jurisdiction. (1126.8.5.5.3)

Other Safety Requirements.

- No pyrotechnics shall be left unattended other than in a secured, approved location. (1126.8.5.6.1)
- *The pyrotechnic operator and assistants shall wear safety glasses and protective clothing applicable to the hazard associated with the material during preparation and loading of pyrotechnic devices. (1126.8.5.6.2)
 - *Protective clothing should include long-sleeved shirts and long pants made of 100 percent cotton, leather, or other materials with equivalent flammability, melting, thermal, or static-reducing protective characteristics. (A8.5.6.2)
- No personnel shall use or handle pyrotechnic materials or devices while under the influence of intoxicating beverages, narcotics, controlled substances, or prescription or nonprescription drugs that can impair judgment. (1126.8.5.6.3)

Safeguarding Performers

- The pyrotechnic effect operator shall advise all performers and support personnel that they are exposed to a potentially hazardous situation when performing or otherwise carrying out their responsibilities in the vicinity of a pyrotechnic effect. (1126.8.6.1.1)
- Performers and support personnel familiar and experienced with the pyrotechnic effects being used shall be permitted to be in the area of a pyrotechnic effect but only voluntarily and in the performance of their duties. (1126.8.6.1.2)
- No part, projectile, or debris from the pyrotechnic material or device shall be propelled so that it damages overhead properties, overhead equipment, or the ceiling and walls of the performance site. (1126.8.6.1.3)

Final Pre-Performance Safety Procedures.

- Immediately before any performance, the pyrotechnic operator shall make a final check of wiring, position(s), hookups, and pyrotechnic devices to ensure that they are in working order. (1126.8.6.3.1)
- The pyrotechnic operator also shall verify safety distances. (1126.8.6.3.2)
- The placement and wiring of all pyrotechnic devices shall be designed to minimize the possibility of performers and support personnel disturbing the devices during a performance. (1126.8.6.4)
- The pyrotechnic operator shall exercise extreme care throughout the performance to ensure that the pyrotechnic devices function correctly and that the performers, support personnel, and audience are clear of the devices. (1126.8.6.5)

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- **Smoke Control.** When pyrotechnics are fired, the quantity of smoke developed shall be controlled so as not to obscure the visibility of exit signs or paths of egress. (1126.8.6.6)

Post-Performance Procedures.

- Immediately after each performance and before support personnel remove any property related to a performance, the pyrotechnic operator shall verify that all pyrotechnic devices have been fired. (1126.8.7.1.1)
- Any unfired pyrotechnic materials or devices shall be either fired or disposed of in accordance with the manufacturer's recommendations. (1126.8.7.1.2)
- All unused pyrotechnics shall be disposed of in accordance with the manufacturer's instructions or returned to storage as soon as possible following the performance or rehearsal. (1126.8.7.2)
- After all other properties and equipment relating to the production have been removed from the performance site, the pyrotechnic operator shall verify that the performance site is free of any pyrotechnic devices or materials. (1126.8.7.3)
- Binary systems that have been mixed in excess of the needs of a rehearsal or performance shall be stored as an explosive of the applicable class or disposed of in accordance with the manufacturer's instructions. (See Section 5.3 for storage requirements.) (1126.8.7.4)
- Life safety and other systems that have been disarmed or disengaged as specified by 6.4.3 and 8.1.2 shall be restored to normal operating condition as soon as the likelihood of false alarms from the use of pyrotechnics has passed. (1126.8.7.5)
- The fire watch required by 8.1.2 shall remain present until the restoration of normal operating conditions has been verified. (1126.8.7.6)

Financial Responsibility

Before any permit for display fireworks is issued, the applicant shall furnish proof of financial responsibility by either providing a bond or letter of credit in the amount of not less than \$2,000,000 (two million dollars) per claim, \$5,000,000 (five million dollars) aggregate, to satisfy any claims for damages to property or personal injuries arising out of any act or omission on the part of the applicant or any agent or employee of the applicant. (SFC Ordinance 2023-6)

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Acknowledgements

I hereby attest and acknowledge my responsibilities as the Licensed Pyrotechnic Operator and shall comply with the terms of this application and all applicable Fire Codes and referenced Standards as identified by the Santa Fe County Ordinance 2023-6 and Santa Fe County Resolution 2023-104 and specifically Santa Fe County Ordinance 2023-6 Section 7 Item I.

Review and Operational Permit approved by the Fire Code Official or their Designee, shall not relieve the applicant of the responsibility of compliance with the Santa Fe County Fire Code.

Note: any deviation to the submitted and approved application without the consent of the Authority Having Jurisdiction or their Designee will render Operational Permit approval null and void.

Printed Name

Position/Title

Signature

Date

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