

Operating Procedures for Including Pyrotechnic Devices at an Event

Effective Date: June 1, 2019

Updated: November 22, 2019

These procedures support the policy on [Use and Assignment of University Facilities \(IV.B.1\)](#).

I. Introduction

Purdue University, through its departments, colleges, and student organizations, sponsors and hosts a variety of events during the course of the year. Many of these events are celebratory in nature, and the sponsor may desire to include special effects via the use of Pyrotechnic Devices as part of the event. The success of such an event requires careful planning that makes safety the highest priority. These procedures intend to mitigate the risks associated with Pyrotechnic Devices while reinforcing the safety of event participants and protection of property. The use of Pyrotechnic Devices at University sponsored events, or at third-party sponsored events on University owned or leased property, must be pre-approved and in accordance with this Operating Procedure. Additionally, Indiana requires local fire chief approval for all pyrotechnics display permits.

II. Contacts

For questions regarding the interpretation of these procedures, please contact:

[Environmental Health & Public Safety](#)

765-494-1424

EHPS@purdue.edu

[Office of Risk Management](#)

765-494-7695

RiskMgmt@purdue.edu

For regional campus approval of pyrotechnic display permits, contact the appropriate local fire department.

Hammond Fire Department

219-853-6416

Westville Fire Department

219-785-2113

Ft. Wayne Fire Department

260-427-1478

III. **Application**

These procedures apply to any event, performance, program or other activity that includes the use of Pyrotechnic Devices and where the sponsor or co-sponsor is:

- A. A campus, college, school, department, office, organization or other unit of the University, regardless of the program location, or;
- B. A third party who is hosting or conducting an event that includes Pyrotechnic Devices on University-owned or leased property.

IV. **Exclusions**

There are no exclusions to these procedures.

V. **Requesting Approval for Events Involving Pyrotechnics**

Sponsors of events involving the use of Pyrotechnic Devices on University owned or leased property or at a University sponsored event off campus must contact the Environmental Health and Public Safety (EHPS) department at least 30 days prior to the event, who will then assist the sponsor in completing a Pyrotechnics Special Effects Plan. EHPS will review the plan to ensure compliance with the appropriate NFPA (National Fire Protection Association) regulations, review the pyrotechnic display permit issued by the State Fire Marshall, and may require a special effects demonstration prior to the event, along with a general inspection of the proposed fallout areas. The sponsor will be made aware of any compliance or safety issues, and failure to rectify those issues or achieve compliance with regulations to the satisfaction of EHPS will result in postponement or cancelation of the pyrotechnic display.

An appropriately trained and experienced Pyrotechnic Operator must supervise the use of all Pyrotechnic Devices that are part of a University sponsored event or part of a third-party sponsored event held on University owned or leased property. Training, experience, and other requirements for Pyrotechnic Operators are outlined in section VII of this procedure.

VI. **Definitions**

NFPA. National Fire Protection Association is a U.S. nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards by establishing fire protection and prevention safeguards.

Pyrotechnic Device. Any device containing materials designed to create an exothermic chemical reaction timed to produce a special effect, such as an explosion, flash, smoke, flame, firework, or confetti burst. Pyrotechnic Devices include, but are not limited to, flame projectors; flares; flash pots, papers, tubes, and trays; gerbs; mortars; line rockets; puff pots; smoke cartridges; and Saxons or pinwheels.

Pyrotechnic Operator. The person responsible for pyrotechnic safety and who controls, initiates, or otherwise creates special effects using Pyrotechnic Devices. The operator is also responsible for storing, setting up, and removing Pyrotechnic Devices and related materials after a performance.

VII. **Requirements for Pyrotechnic Operators**

Pyrotechnic Operators can be internal (Purdue employees) or external (hired, qualified third-party contractors). The University prefers the use of qualified third-party contractors; however, it will allow Purdue employees who meet the requirements below to act as Pyrotechnic Operators.

All Pyrotechnic Operators will possess and produce documentation of the following training and certifications:

- A. Evidence of formal pyrotechnics training in accordance with NFPA 1123 or NFPA 1126. This can be achieved through completion of the Pyrotechnic Guild International Display Fireworks Operator Certification; courses or programs offered by the American Pyrotechnics Association, which include material contained in NFPA 1123 or NFPA 1126; or a license indicating that the operator has trained in accordance with NFPA 1123 or NFPA 1126.
- B. Evidence of continuing education related to pyrotechnics safety at least every three years as recommended by the Pyrotechnics Guild International.
- C. Ensure that any pyrotechnic assistants have adequate training and meet the requirements of NFPA 1123 and NFPA 1126.
- D. Ensure that pyrotechnics assistants handle, assemble, or manipulate Pyrotechnic Devices only under the direct supervision of the Pyrotechnic Operator.
- E. Ensure that all transportation, handling, and use of Pyrotechnic Devices and related materials are in compliance with applicable DOT, OSHA, and NFPA standards, and in accordance with applicable state and local laws.

All assistants working under the supervision of a Purdue-employed Pyrotechnic Operator must also be Purdue employees.

Purdue-employed Pyrotechnic Operators are subject to the following limitations:

- May only utilize an airburst, confetti cannon, flare, flame projector, 100G flash paper, flash pot, gerb, puff pot, line rocket, and Saxon/pinwheel.
- Exceptions for the use of Pyrotechnic Devices other than those listed above must have prior written approval from EHPS.
- Due to the risk associated with mixing binary powder, unless otherwise approved by EHPS, all Pyrotechnic Devices must be pre-loaded devices in ready-to-use condition provided by a third-party manufacturer.
- Pyrotechnic services may only be provided on University owned or leased property.

VIII. **Insurance Requirements for Third-Party Pyrotechnic Operators**

External or third-party Pyrotechnic Operators providing services as part of a University-sponsored event must maintain, as a vendor/service provider, the following types of insurance with companies that hold a Best's rating of not less than "A", and in amounts no less than as follows:

- Commercial general liability with a minimum limit of \$5M per occurrence for bodily injury, property damage, and personal injury arising out of pyrotechnic displays;
- Automobile liability with a minimum limit of \$1M per occurrence; and
- Worker's compensation per Indiana state statute.

The vendor/operator must provide to the University, at least ten (10) days prior to the event, a Certificate of Insurance (COI) that provides evidence of the forgoing insurance coverages. The vendor/operator must name The Trustees of Purdue University and Purdue University as additional insureds on the general liability policy for pyrotechnics, and must stipulate that such policy is primary to any insurance maintained by the University.

IX. **Indemnification Requirements for Third-Party Pyrotechnic Operators**

Contracts with any third-party pyrotechnic vendor/operator must include indemnification language as shown below or equivalent language. The appropriate contracting authority within the University must also review such contracts.

Vendor agrees to indemnify Purdue, and its trustees, officers, agents, servants, attorneys, employees, successors or assigns ("Indemnified Parties") and hold the Indemnified Parties harmless from and against all liability, losses, damages, claims, liens, and expenses (including reasonable attorneys' fees) arising out of or connected with the work or services performed, Vendor's breach of this Agreement, or resulting from claims for bodily injury, wrongful death, personal injury or property damage (collectively "Indemnifiable Losses"). Vendor shall at the request of Purdue undertake to defend any and all suits and to investigate and to defend any and all claims or suits, investigate and defend any and all claims whether justified or not, if such claim or suit be against Purdue, the Trustees of Purdue, or their respective officers, agents servants, attorneys, employees, successors or assigns, provided however, that Vendor may not settle any claims against the Indemnified Parties without the Indemnified Parties' prior written consent.

X. Tools

Pyrotechnics Special Effects Plan Template

Pyrotechnics Special Effects Plan

Event Name: _____ Event Date & Time: _____

Sponsor: _____

Contact Name: _____ Contact Title: _____

Phone: _____ Email: _____

Event Location: _____

Pyrotechnic Operator: _____ Phone: _____

Email: _____ Employed by: _____

Qualifications (list): _____

Experience (list): _____

Assistants (list name, age, and employer): _____

Licenses/Permits held by the Operator and Assistants: _____

Insurance Carrier for Pyrotechnic Operator: _____

List the type and number of Pyrotechnic Devices and materials to be used, the operator's experience with those devices/materials, and responsibilities of assistants related to the devices/materials.

Point of on-site assembly of Pyrotechnic Devices: _____

Manner and place of storage of Pyrotechnic Devices and materials: _____

Attach:

- Diagram of the grounds/facilities where the production is to be held with the location where Pyrotechnic Devices are to be fired, fallout radius for each device, and lines that the audience is to be restrained behind, all clearly marked.
- Safety Data Sheet (SDS) for the Pyrotechnic Device (s) and related materials to be used.

Certify fire retardancy of:

- the set, scenery, and rigging materials, and
- the costumes/materials worn by performers in the fallout area during use of the pyrotechnic effects.