

ENVIRONMENT, SAFETY & HEALTH DIVISION

Chapter 12: [Fire and Life Safety](#)

## Quick Start Summary

Product ID: [500](#) | Revision ID: 2149 | Date published: 30 September 2019 | Date effective: 30 September 2019

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireQuickstart.pdf>

### 1 Who needs to know about these requirements

The requirements of Fire and Life Safety apply to all workers, supervisors, area and building managers, the SLAC fire marshal, Facilities and Operations, SLAC Site Security, and the local fire department.

### 2 Why

Fires can injure personnel, destroy property, and disrupt operations. Preventing them is critical for safe operations. Likewise, in the event of a fire, properly installed and maintained fire protection equipment, from sprinkler systems to portable fire extinguishers and exit paths, are critical for safety.

### 3 What do I need to know

Everyone at SLAC should take responsibility for minimizing fire hazards and ensuring fire protection equipment is fully functional by

- Following fire prevention requirements, including smoking requirements
- Obtaining and following a permit when performing *hot work*
- Maintaining unobstructed exit paths and access to fire protection equipment
- Following procedures for impairing *fire protection systems*
- Using an appropriate portable fire extinguisher only if trained to do so, on a small fire, and after verifying that someone has reported the fire to 911 and ext. 5555 (see [Emergency Management: Emergency Notification, Response, and Reporting Procedures](#))

### 4 When

The requirements of this chapter take effect 30 September 2019.

### 5 Where do I find more information

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, “Fire and Life Safety”](#)
- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)

Or contact the [program manager](#).



## Chapter 12

# Fire and Life Safety

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## 1 Purpose

The purpose of this program is to ensure that activities that may contribute to a fire or life safety hazard are conducted safely; that conditions that may contribute to such hazards are in compliance with applicable regulations; and that SLAC provides a level of fire protection and fire suppression capability sufficient to minimize losses from fire and related hazards, consistent with a *highly protected risk (HPR)* property. It covers the design and construction of structures; inspection, maintenance, and impairment of fire protection systems and exit paths; and fire prevention for activities such as *hot work*, smoking, and using flammables and combustibles. It applies to workers, supervisors, area and building managers, the SLAC fire marshal, Facilities and Operations, SLAC Site Security, and the local fire department.

## 2 Roles and Responsibilities

Functional roles and general responsibilities for each are listed below. More detailed responsibilities and when they apply are provided in the procedures and requirements.

The roles may be performed by one or more individuals and one individual may play more than one role, depending on the structure of the organizations involved. Responsibilities may be delegated.

### 2.1 Worker

- Follows fire prevention requirements, including requirements regarding smoking
- Follows permit conditions when performing hot work
- Does not obstruct exit paths or access to fire protection equipment
- Follows procedures for impairing fire protection systems
- Uses an appropriate portable fire extinguisher, only if trained to do so, on a small fire, and after verifying that someone has reported the fire to 911 (see [Emergency Management: Emergency Notification, Response, and Reporting Procedures](#))
- Implements requirements for management of combustible materials in beam line areas, if responsible for housekeeping in those areas (see FMO Guidelines>Combustible Materials Management in the [Fire Protection Resource Site \[FireFacts\]](#))

### 2.2 Supervisor

- Ensures workers are following fire prevention requirements

- Obtains permit for hot work
- Ensures hot work permit conditions are met, including conducting daily inspection if acting as permit approver
- Ensures procedures are followed for impairing fire protection systems
- Designates a person to be responsible for portable fire extinguishers in his or her area
- Ensures that adequate exit paths are maintained
- Ensures procedures or worker instructions refer to requirements for management of combustible materials in beam line areas

## 2.3 Area / Building Manager

- Ensures fire protection equipment is maintained and only modified following procedures
- Is notified of hot work and fire protection system impairments and coordinates with occupants
- Ensures that inspections of exit paths (including exit doors) are performed at least once a year
- Places new portable fire extinguishers into service, maintains a current inventory, ensures they are serviced annually, and inspects them monthly, with results documented on a tag attached to each extinguisher
- Reports all non-routine needs for portable fire extinguisher servicing, as well as any notices of overdue routine servicing, to the fire marshal
- Ensures that extinguishers remain accessible to trained personnel and that building occupants do not block access to extinguishers or fire service equipment with furniture or storage

## 2.4 Facilities and Operations Division

- Handles service requests for hot work and fire protection system impairment (through the [Facilities Service Request System](#))
- Maintains fire protection systems
- Provides hydrant flow testing at request of fire marshal
- Is solely responsible for taking fire protection equipment out of service and impairing fire protection systems
- Inspects fire barriers, smoke barriers, fire doors, and fire dampers
- Tests emergency lighting monthly
- Installs portable fire extinguisher stations

## 2.5 SLAC Site Security

- Contacts Facilities to respond to emergency impairments
- Participates in building fire watches

## 2.6 Local Fire Department

- San Mateo County Public Safety Communications dispatches firefighters in response to all fire alarms received from SLAC
- Menlo Park Fire Protection District performs flushing annually on all working fire hydrants at SLAC (in years of severe drought, testing a reduced number is allowed)

## 2.7 SLAC Fire Marshal / Program Manager

- Designates approvers for hot work permits
- Reviews, as impairment coordinator, all fire protection system impairments, issues mitigation measures if necessary, and authorizes impairments
- Performs periodic fire prevention inspections and assessments of SLAC buildings
- Oversees performance of fire hazard analyses for major new beam line construction projects by in-house or contract fire protection engineers
- Oversees performance of fire protection design analysis for major construction projects under \$150 million. Maintains a record of results of SLAC fire safety inspections, facility fire protection assessments, and fire hazard analyses
- Under delegated authority of DOE Bay Area Site Office manager, performs routine duties of *authority having jurisdiction (AHJ)* at SLAC for fire protection code and standards interpretation, performs fire protection system acceptance, and coordinates with DOE Bay Area Site Office to obtain DOE approval of code and standard alternatives. (For building-related non-fire code interpretation and approval, the Code Compliance and AHJ Services Department head acts as building official. For electrical safety codes, the electrical safety officer is AHJ.)

# 3 Procedures, Processes, and Requirements

These documents list the core requirements for this program and describe how to implement them:

- [Fire and Life Safety: Fire Prevention Hot Work Procedures](#) (SLAC-I-730-0A12C-001). Describes process for hot work permits
- [Fire and Life Safety: Fire Protection Equipment Requirements](#) (SLAC-I-730-0A12S-004). Describes requirements for fire protection systems
- [Fire and Life Safety: Fire Protection System Impairment Procedures](#) (SLAC-I-730-0A12C-002). Describes process for impairing fire protection systems
- [Fire and Life Safety: Portable Fire Extinguisher Requirements](#) (SLAC-I-730-0A12S-001)
- [Fire and Life Safety: Exit Path Requirements](#) (SLAC-I-730-0A12S-005). Describes requirements for exit paths
- [Fire and Life Safety: Smoking Requirements](#) (SLAC-I-730-0A12S-003). Describes requirements related to smoking

This site provides useful tools:

- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)

## 4 Training

### 4.1 Fire Prevention Hot Work Personnel

Personnel involved in performing, monitoring, or supervising fire watches for hot work processes must take these courses:

- ESH Course 108, Fire Extinguisher Training ([ESH Course 108](#))
- ESH Course 108PRA, Fire Extinguisher Training Practical ([ESH Course 108PRA](#))

Requesters and approvers of hot work permits and field construction managers must take this course:

- ESH Course 119, Hot Work Permit Training ([ESH Course 119](#))

### 4.2 Users of Portable Fire Extinguishers

Only personnel who have taken the following course may use portable fire extinguishers:

- ESH Course 108, Fire Extinguisher Training ([ESH Course 108](#))

## 5 Definitions

*authority having jurisdiction (AHJ)*. An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure ([DOE-STD-1066-2012](#))

*exit path*. A continuous and unobstructed way of exit travel from any point in a building or structure to a point outside of the building or structure, consisting of corridors, stairways, and/or aisles leading to an exit door; an exit door; the path or way outside of the exit door that leads away from the building; and associated emergency lighting and signage, as required by code

*fire*. Fire in general refers to the chemical process known as combustion. Within the context of fire protection, the word *fire* refers to unintended, unwanted, and uncontrolled combustion.

*fire protection system*. A site or building system designed to mitigate the effects of fire. Fire protection systems are distinguished as either *active* or *passive*.

*fire protection system, active*. Includes fire alarm and fire suppression systems, as well as the site fire water distribution system and associated hydrants. Most but not all fire suppression systems at SLAC are wet-pipe sprinkler systems.

*fire protection system, passive*. Consist primarily of rated fire barriers within structures. Fail-safe devices such as fire dampers and door hold-open mechanisms are considered to be part of the passive fire protection system, even though they may have direct connections to the active building fire alarm system.

*highly protected risk (HPR).* A facility with fire safety requirements characterized by a high level of fire protection design, systems, and management controls. The HPR approach is exemplified by [DOE-STD-1066-2012](#) guidelines and [Factory Mutual Global data sheets](#).

*hot work fire prevention.* An activity involving open flames and/or spark-producing operations including welding, brazing, sweating, oxyacetylene cutting, and spark-producing mechanical metal-cutting operations, and the use of open flames from any non-stationary device that has not been listed or approved for the purpose by a nationally recognized testing laboratory (NRTL). The term *fire prevention hot work* is used to differentiate this activity from *electrical hot work*, which involves work on energized electrical circuits. (Note at SLAC, open flame cooking is considered a special form of hot work and also requires permits.)

*impairment.* Any condition in which a fire protection system cannot perform its designed fire safety function

*impairment, emergency.* Any situation in which an accident creates an unintentional fire protection system impairment. Emergency impairments may affect only one system or in rare instances an impairment may affect the entire site (for example, an extended site-wide power outage or a site-wide loss of water supply).

*impairment, hidden.* Any situation in which a fire protection system is found to be impaired, and the impairment is unknown to the group authorized to impair that system

*impairment, planned.* Any situation in which all or part of a fire detection or suppression system such as a fire alarm control panel or a fire sprinkler system is turned off, or otherwise temporarily rendered inoperable by the group authorized to perform such an activity

*nationally recognized testing laboratory (NRTL).* A testing laboratory recognized by the SLAC fire marshal as providing valid listing services for safety approval of equipment, devices, or systems used in buildings. In general, the fire marshal recognizes laboratories on the federal Occupational Health and Safety Administration (OSHA) [NRTL](#) list.

*sprinkler system* A building water distribution system used for the sole purpose of extinguishing fires. The vast majority of sprinkler systems at SLAC are *wet-pipe sprinkler systems*. Wet-pipe systems are normally pressurized with water. Individual sprinklers activate and release water when directly exposed to the heat of a fire.

## 6 References

### 6.1 External Requirements

The following are the external requirements that apply to this program:

- Title 10, *Code of Federal Regulations*, “Energy”, Chapter 3, “Department of Energy”, Part 851, “Worker Safety and Health Program” ([10 CFR 851](#)) (including references to 29 CFR 1910 and 29 CFR 1926 and all applicable building codes and National Fire Protection Association codes and standards)
- Title 29, *Code of Federal Regulations*, “Labor”, Subtitle B, “Regulations Relating to Labor” (Continued), Chapter 17, “Occupational Safety and Health Administration, Department of Labor (Continued)”

- Part 1910, “Occupational Safety and Health Standards”, Subpart L, “Fire Protection” ([29 CFR 1910 Subpart L](#))
- Part 1926, “Safety and Health Regulations for Construction”, Subpart C, “General Safety and Health Provisions”, Section 24, “Fire Protection and Prevention” ([29 CFR 1926.24](#))
- Site Compliance Plan for Department of Energy Order 414.1D, Change 1, “Quality Assurance” ([DOE O 414.1D, Chg 1 \[Admin Chg\] SCP](#))
- Site Compliance Plan for Department of Energy Order 420.1C, Change 1, “Facility Safety” ([DOE O 420.1C, Chg 1 \[PgChg\] SCP](#))
- Title 8, *California Code of Regulations*, “Industrial Relations”, Division 1, “Department of Industrial Relations”, Chapter 4, “Division of Industrial Safety”, Subchapter 4, “Construction Safety Orders”, Article 36, “Fire Protection and Prevention” ([8 CCR 1920–1938](#))
- Title 19, *California Code of Regulations*, “Public Safety”, Division 1, “State Fire Marshal”, Chapter 5, “Automatic Fire Extinguishing Systems”, Article 4, “Inspection, Testing and Maintenance Frequencies”, sections 904.5–904.7 (maintenance requirements for five-year testing of fire sprinkler systems and testing of dry chemical and wet chemical fire extinguishing systems) ([19 CCR 904.5–904.7](#))
- Title 24, *California Code of Regulations*, “California Building Standards Code”
  - Part 2, “California Building Code” ([24 CCR Part 2](#))
  - Part 9, “California Fire Code” ([24 CCR Part 9](#))
- The following industry-accepted consensus standards:
  - American National Standards Institute (ANSI) Z49.1-2012, “Safety in Welding, Cutting and Allied Processes” ([ANSI Z49.1-2012](#))
  - National Fire Protection Association (NFPA) consensus standards, as adopted by reference in 10 CFR 851. Note SLAC uses codes published as of the current year, for example, 2015 editions are available for SLAC use as of January 1, 2015.
- SLAC is located in an unincorporated area of San Mateo County. There are no applicable local fire protection requirements that apply directly to the fire protection program at SLAC. See [Chapter 40, “Chemical Lifecycle Management”](#), for process safety management requirements administered by San Mateo County.

## 6.2 Related Documents

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 1, “General Policy and Responsibilities”](#)
  - [General Policy and Responsibilities: ESH Project Review Procedure](#) (SLAC-I-720-0A24C-001)
- [Chapter 8, “Electrical Safety”](#)
- [Chapter 37, “Emergency Management”](#)
  - [Emergency Management: Emergency Notification, Response, and Reporting Procedures](#) (SLAC-I-730-0A14C-002)
- [Chapter 40, “Chemical Lifecycle Management”](#)



Other SLAC Documents

- [Building Management Guide](#) (SLAC-I-708-403-005-00)
- [Facilities Service Request System](#)
- [SLAC Designated Smoking Areas](#)

Other Documents

- Department of Energy Standard 1066-2012, “Fire Protection Design Criteria” ([DOE-STD-1066-2012](#))
- Occupational Safety and Health Administration (OSHA), Office of Technical Programs and Coordination Activities (OTPCA). [Nationally Recognized Testing Laboratory Program](#)
- [FM Global Property Loss Prevention Data Sheets](#)



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# Fire Prevention Hot Work Procedures

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URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireProcedHotwork.pdf>

## 1 Purpose

The purpose of these procedures is to minimize ignition hazards caused by *hot work*, that is, activities that generate open flame or sparking, such as welding, open-flame soldering, oxygen cutting, and barbecuing. They cover the permitting of fire prevention hot work, both temporary and fixed (that is, ongoing in designated areas). They apply to workers who perform hot work activities at SLAC, their supervisors, area and building managers, the SLAC fire marshal, Facilities and Operations, and SLAC Site Security.

### 1.1 Activities Excluded from Hot Work

These requirements do not apply to the following activities:

- Smoking in designated smoking areas
- Soldering electronic components
- Using laboratory bench-top burners (such as Bunsen burners)
- Combustion occurring inside listed or approved devices or machinery
- Hydrogen furnace flares
- Cooking on fixed stoves in kitchens

## 2 Procedures

A permit is required for any hot work. Hot work permits may be requested by any SLAC worker. SLAC employees and others with SLAC logins use the [Hot Work Permit-Fire](#) system. Subcontractors may obtain permits through their field construction manager (FCM). Permits are approved by individuals authorized by the SLAC fire marshal. Permits expire at the end of their designated term.

Requesters and approvers of hot work permits and FCMs must complete ESH Course 119, Hot Work Permit Training ([ESH Course 119](#)). (No training is required to request open flame cooking permits.)

All SLAC personnel involved in performing, monitoring, or supervising fire watches for hot work processes must complete ESH Course 108, Fire Extinguisher Training ([ESH Course 108](#)) and ESH Course 108PRA, Fire Extinguisher Training Practical ([ESH Course 108PRA](#)). Contract personnel performing these duties must provide evidence of equivalent non-SLAC training.

## 2.1 Temporary Hot Work Permit Procedure

Temporary hot work permits are valid for up to eight days.

| Step | Person                           | Action   |
|------|----------------------------------|--|
| 1.   | Requester                        | Initiates hot work permit using the <a href="#">Hot Work Permit-Fire</a> system, selecting appropriate approver. Separate permits are necessary for each specific area in which hot work will be performed.<br><br>If subcontractor, contacts the field construction manager to submit the request.  |
| 2.   | Hot Work Permit-Fire System      | Notifies SLAC fire marshal, selected approver, and building / area manager if applicable   |
| 3.   | Requester                        | Initiates Facilities service request, by using the <a href="#">Facilities Service Request System</a> or calling ext. 8901, if impairing fire detectors necessary (see <a href="#">Fire and Life Safety: Fire Protection System Impairment Procedures</a> )   |
| 4.   | Facilities Service Desk          | Generates service request documentation and notifies Facilities Fire Protection Group, if impairing fire detectors necessary   |
| 5.   | Requester                        | Notifies approver when ready to begin work   |
| 6.   | Approver                         | Reviews restrictions and conditions with requester at job site. Signs permit copy in the field and adds approval to <a href="#">Hot Work Permit-Fire</a> system.   |
| 7.   | Requester                        | Receives copy of permit<br><br>Places permit in a readily accessible location, such as the work planning and control (WPC) folder, or posts in plain view  |
| 8.   | Facilities Fire Protection Group | Turns fire detectors off and on at the beginning and end of each work day, respectively, if impairing fire detectors necessary   |
| 9.   | Requester                        | Performs work, meeting following requirements: <ul style="list-style-type: none"> <li>▪ Provides a fire watch during welding operations. Continues fire watch for at least 30 minutes after welding or other hot work is completed.</li> <li>▪ Does not perform hot work in areas where flammable liquids, or vapors, lint, dust or combustible storage is at risk of ignition</li> <li>▪ Provides shielding in areas where sparks, slag, or heat may come in contact with combustible material</li> <li>▪ Wears appropriate clothing in addition to required personal protective equipment</li> <li>▪ Provides minimum 2A:20BC fire extinguisher for area where welding is done</li> <li>▪ Maintains all welding equipment in good order. Inspect prior to each use</li> <li>▪ Makes permit available at hot work site at all times that hot work is in progress</li> <li>▪ Performs only hot work specifically described on the permit</li> <li>▪ Performs hot work only during the specific times and dates listed on the permit</li> <li>▪ Requests new permit if work extends beyond term of original permit</li> </ul> <p>If precautions and procedures are not satisfactory, the SLAC fire marshal or authorized approvers have the authority to cancel and collect the permit.</p> |

| Step | Person                  | Action   |
|------|-------------------------|--|
| 10.  | Approver                | Visits site at least daily for multi-day permits       |
| 11.  | Building / area Manager | Coordinates with occupants                             |
| 12.  | Requester               | Completes work and notifies other parties as necessary |
| 13.  | Approver                | Closes out permit                                      |

## 2.2 Fixed Hot Work Permit Procedure

Fixed hot work permits cover ongoing work in designated areas. The process for obtaining the permit is the same as for temporary permits, except that the annual permit box is checked. Fixed hot work permits are valid for one year.

## 3 Forms

The following forms are required by this procedure:

- [Hot Work Permit-Fire](#). System for requesting and approving hot work permits
- [Facilities Service Request System](#). System for requesting services from Facilities and Operations

## 4 Recordkeeping

The following recordkeeping requirements apply for this procedure:

- The SLAC fire marshal is responsible for maintaining the permit record using the [Hot Work Permit-Fire](#) system.

## 5 References

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, “Fire and Life Safety”](#)
  - [Fire and Life Safety: Fire Protection System Impairment Procedures](#) (SLAC-I-730-0A12C-002)

Other SLAC Documents

- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)
- ESH Course 108, Fire Extinguisher Training ([ESH Course 108](#))
- ESH Course 108PRA, Fire Extinguisher Training Practical ([ESH Course 108PRA](#))
- ESH Course 119, Hot Work Permit Training ([ESH Course 119](#))



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## Fire Protection Equipment Requirements

Product ID: [503](#) | Revision ID: 2151 | Date published: 30 September 2019 | Date effective: 30 September 2019

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireReqEquip.pdf>

### 1 Purpose

The purpose of these requirements is to ensure the adequate provision and operability of fire protection systems. They cover design and construction review, maintenance, and inspection. They apply to workers and supervisors, building and area managers, the SLAC fire marshal, Facilities and Operations, and the local fire department.

### 2 Requirements

Active fire protection systems include

- Automatic fire suppression systems (such as sprinkler, clean agent, carbon dioxide, and dry chemical systems)
- Fire hydrants and standpipe outlets

Fire alarm systems, including smoke and heat detectors and evacuation alarms

Passive fire protection systems include

- Fire and smoke barrier walls and penetrations
- Fire and smoke doors and dampers

#### 2.1 Design and Construction Review

Plans for construction and building modification and experiments will be reviewed for fire safety following the [General Policy and Responsibilities: ESH Project Review Procedure](#). The SLAC fire marshal, under delegated authority of DOE Bay Area Site Office manager, will review the plans, specifications, procedures and acceptance tests.

#### 2.2 Removing from Service

To have fire protection equipment taken out of service temporarily, contact Facilities through the [Facilities Service Request System](#). Only Facilities may take fire protection equipment out of service. *Active fire protection systems* may only be taken out of service following [Fire and Life Safety: Fire Protection System Impairment Procedures](#).

## 2.3 Sprinkler Systems

The Department of Energy (DOE) requires sprinklers in most SLAC buildings ([DOE O 420.1C](#)). *Sprinkler systems* at SLAC are designed and installed in accordance with National Fire Protection Association (NFPA) 13, “Standard for Installation of Sprinkler Systems” ([NFPA 13](#)). The vast majority of sprinkler systems at SLAC are *wet-pipe sprinkler systems*. Wet-pipe systems are normally pressurized with water. Individual sprinklers activate and release water when directly exposed to the heat of a fire. Facilities maintains and tests sprinkler systems.

- Keep heat sources away from sprinkler heads.
- Allow at least 18 inches of clearance below sprinkler heads.
- In areas where damage to sprinkler heads is likely, such as in rooms with low ceilings, protective guards should be installed over the sprinkler heads. (Building managers should contact Facilities to have protective guards installed.)
- Do not hang material from sprinkler piping or sprinkler heads.
- Do not paint sprinkler heads.
- Allow at least three feet of clearance around sprinkler control valves so that fire department personnel can access them easily.

## 2.4 Fire Hydrants and Fire Lanes

Fire hydrants are maintained for emergency use by local fire departments. Non-emergency use of fire hydrants by non-fire department personnel, such as construction subcontractors, must be authorized by the SLAC fire marshal before such use. The local fire department annually inspects and flows fire hydrants at SLAC.

In order to provide access in the event of an emergency, parking is prohibited at all times in marked fire lanes, along red-painted curbs, and in front of sprinkler-system inlet connections (“fire department connections”) and fire hydrants.

## 2.5 Portable Fire Extinguishers

For details on the installation, use and maintenance of portable fire extinguishers, see [Fire and Life Safety: Portable Fire Extinguisher Requirements](#).

## 2.6 Smoke and Heat Detectors and Evacuation Alarms

Many buildings are equipped with evacuation alarms. Some buildings have smoke and heat detectors for specific purposes. Smoke and heat detectors at SLAC automatically transmit an alarm to the local fire department and activate evacuation alarms, if present. Alarms may also be activated manually at fire alarm boxes. Emergency responders are dispatched in response to all fire alarms received from SLAC. Facilities tests and maintains smoke and heat detectors and evacuation alarms. Some special alarms known as supervisory alarms will dispatch SLAC personnel for an investigation without evacuating the building or notifying the fire department. One such example is the tamper alarm on an automatic external defibrillator (AED) device cabinet.



## 2.7 Fire Barrier Walls and Penetrations

For design reasons, certain walls are required to function as fire barrier walls. These walls are specially constructed to resist fire and are assigned an hourly rating indicating their degree of fire resistance. When such walls are penetrated by pipes or electrical cables, listed penetration blocking systems are used to preserve the fire rating of the wall. Similar systems are used to seal fire-rated joints, such as the interface between a fire-rated wall and the roof or ceiling deck above. When Facilities or cabling personnel or subcontractors make alterations to such utilities or joints penetrating a fire wall, the installer must ensure that the penetrated barrier is restored properly.

- Notify the SLAC fire marshal before making new holes or alterations in fire barrier walls (using the [firebarrier-impair listserv](#)).

Fire barriers can be difficult to identify. The presence of an orange-colored caulking material around penetrating pipes or cables is an indication of one of the more popular sealing systems. Another indication is the use of special small pillows to seal a multiple cable opening. However, there are many types of fire barrier systems. Check with the SLAC fire marshal if you are in doubt about the status of an architectural barrier.

## 2.8 Fire Doors and Fire Dampers

Fire doors and dampers block the spread of smoke and fire through fire barrier walls by automatically closing when fire is detected. Depending on their type, fire doors and dampers are activated by an evacuation alarm or by a smoke or heat sensor. Fire dampers are strategically located in ventilation ducts or air transfer openings. Facilities inspects and maintains fire doors and dampers.

- Do not chock open fire doors.

Fire doors and dampers are labeled as such by Underwriters Laboratories, Inc. (UL) or another nationally recognized test laboratory (NRTL). (This information is included in the manufacturer's literature or on the product's label.)

- Do not paint, remove, or otherwise obscure these labels.
- Enclosed stairwells must have NRTL-listed fire doors, and these doors must be kept closed.

## 3 Forms

The following are forms required by these requirements:

- The [firebarrier-impair listserv](#) is required for notifying the SLAC fire marshal before making new holes or alterations in fire barrier walls
- [Facilities Service Request System](#). System for requesting services from Facilities and Operations

## 4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- None

## 5 References

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, “Fire and Life Safety”](#)
  - [Fire and Life Safety: Fire Protection System Impairment Procedures](#) (SLAC-I-730-0A12C-002)
  - [Fire and Life Safety: Portable Fire Extinguisher Requirements](#) (SLAC-I-730-0A12S-001)
  - [Fire and Life Safety: Exit Path Requirements](#) (SLAC-I-730-0A12S-005)
- [Chapter 1, “General Policy and Responsibilities”](#)
  - [General Policy and Responsibilities: ESH Project Review Procedure](#) (SLAC-I-720-0A24C-001)

Other SLAC Documents

- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)

Other Documents

- Site Compliance Plan for Department of Energy Order 420.1C, Change 1, “Facility Safety” ([DOE O 420.1C, Chg 1 \[PgChg\] SCP](#))
- National Fire Protection Association (NFPA) 13, “Installation of Sprinkler Systems” ([NFPA 13](#))
- Occupational Safety and Health Administration (OSHA), Office of Technical Programs and Coordination Activities (OTPCA). [Nationally Recognized Testing Laboratory Program](#)
- [Underwriters Laboratories, Inc. \(UL\)](#)

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# Fire Protection System Impairment Procedures

Product ID: [102](#) | Revision ID: 2152 | Date published: 30 September 2019 | Date effective: 30 September 2019

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireProcedImpair.pdf>

## 1 Purpose

The purpose of these procedures is to minimize the downtime of *active fire protection systems* by closely controlling their *impairment* (any condition in which a fire protection system cannot perform its designed fire safety function). They cover planned, emergency, and hidden impairments to active fire protection systems, including fire water distribution systems, fire water supply systems, sprinkler systems, other fire suppression systems, building fire alarm control panels, and listed smoke management systems. They apply to workers, supervisors, and area and building managers requesting or carrying out impairments, and the SLAC fire marshal, Facilities and Operations, and SLAC Site Security.

## 2 Procedures

In general, any worker with cause may request, through the Facilities and Operations Division, a planned fire alarm or detection system impairment. (Subcontractors must submit requests through their field construction manager). Only Facilities may impair or restore active fire suppression systems.

### 2.1 Individual Smoke Detector Impairment Procedure

Individual smoke detectors may be impaired for 12 hours or less by simply initiating a Facilities service request, with a minimum 24-hour notice, by using the [Facilities Service Request System](#) or calling ext. 8901.

### 2.2 Planned Impairment Procedure

A *planned impairment* is any situation in which all or part of an active fire system is turned off, deliberately activated for test or drill purposes, or otherwise temporarily rendered inoperable by the group authorized to perform such an activity for a period of time exceeding one hour.

| Step | Person                  | Action   |
|------|-------------------------|--|
| 1.   | Requester               | Initiates Facilities service request, with a minimum 24-hour notice, by using the <a href="#">Facilities Service Request System</a> or calling ext. 8901<br>All requests must contain the word "fire" within the request to ensure it receives proper attention. |
| 2.   | Facilities Service Desk | Generates service request documentation and notifies the impairment coordinator, SLAC fire technicians, SLAC Site Security, Accelerator Control Room, and affected building or area manager(s)   |

| Step | Person                                     | Action  |
|------|--|---|
| 3.   | Impairment coordinator (SLAC fire marshal) | Reviews all impairments, issues mitigation measures if necessary  |
| 4.   | Impairment coordinator                     | If mitigation measures necessary, notifies the DOE Bay Area Site Office (BASO) facility engineer, SLAC duty officers  |
| 5.   | Impairment coordinator                     | Authorizes impairments. For water-based systems, notifies SLAC duty officers, fire department, and DOE Bay Area Site Office (using the <a href="#">firesystem-impair listserv</a> ) |
| 6.   | Impairment coordinator                     | Tracks all impairments  |
| 7.   | Building / area manager                    | Coordinates with occupants  |
| 8.   | Facilities                                 | Impairs system  |
| 9.   | Requester                                  | Notifies Facilities of completion, using the <a href="#">Facilities Service Request System</a> or calling ext. 8901   |
| 10.  | Facilities                                 | Restores system   |
| 11.  | Facilities                                 | Notifies the impairment coordinator, SLAC Site Security, Accelerator Control Room, and affected building or area manager(s) of completion   |
| 12.  | Impairment coordinator                     | For water-based systems, notifies SLAC duty officers, fire department, and DOE Bay Area Site Office of completion   |

## 2.3 Emergency Impairment

An *emergency impairment* is any situation in which an accident creates unintentional fire system impairment. Emergency impairments may affect only one system or in rare instances the entire site (for example, an extended site-wide power outage or a site-wide loss of water supply).

### 2.3.1 Emergency Impairment Procedure, Working Hours

The procedure is the same as for planned impairments, except that no advance notice is made, and the service request documentation is generated after the emergency is under control.

### 2.3.2 Emergency Impairment Procedure, Off-hours

This is the general procedure to follow in an off-hours emergency. The exact steps may vary depending on circumstances.

| Step | Person  | Action  |
|------|---|---|
| 1.   | Requester (person identifying a facilities incident, for example, a burst water pipe) | Calls SLAC Site Security (ext. 5555)                          |
| 2.   | SLAC Site Security  | Requests details and dispatches a rover to evaluate situation |
| 3.   | SLAC Site Security rover  | Contacts main gate  |

| Step | Person                         | Action  |
|------|--------------------------------|---|
| 4.   | SLAC Site Security Sector Gate | Main gate uses dedicated operations radio channel to contact Facilities to respond to incident  |
| 5.   | Facilities                     | Determines response group(s) based on type of failure: the Mechanical Utilities Group handles the domestic water system, the Fire Systems Technician Group fire alarm and fire suppression systems and the impairment of non-water based suppression systems. In some cases both groups will be involved. |
| 6.   | Facilities                     | Identifies impairment and verbally notifies group lead, who contacts the impairment coordinator   |
| 7.   | Impairment coordinator         | Notifies SLAC duty officers, BASO and fire department   |
| 8.   | SLAC Site Security             | Notifies affected building/area manager   |
| 9.   | Building / area manager        | Coordinates with occupants  |
| 10.  | Facilities                     | Performs and tracks impairment work   |
| 11.  | Facilities                     | Files a service request with the Facilities Service Desk and writes a report in the operations logbook. Once the need for the impairment is complete, notifies Facilities Service Desk and the appropriate technician brings the fire system back on line and updates the service request to "completed". |
| 12.  | Facilities Service Desk        | Notifies the impairment coordinator, SLAC Site Security, Accelerator Control Room, and affected building or area manager(s) of completion   |
| 13.  | Impairment coordinator         | Notifies SLAC duty officers, fire department, and DOE Bay Area Site Office of completion  |

## 2.4 Reporting Hidden Impairments

A *hidden impairment* is any situation in which a fire system is found to be impaired, and the impairment is unknown to the group authorized to impair that system. Upon discovery, the person finding the impairment reports it through the Facilities Service Desk, which treats the request as an emergency impairment.

## 3 Forms

The following forms are required by this procedure:

- [Facilities Service Request System](#). System for requesting services from Facilities and Operations
- [firesystem-impair listserv](#). Listserv required for notifying SLAC duty officers, fire department, and DOE Bay Area Site Office of impairments to water-based systems

## 4 Recordkeeping

The following recordkeeping requirements apply for this procedure:

- The impairment coordinator maintains the record of all impairments

## 5 References

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, “Fire and Life Safety”](#)
  - [Fire and Life Safety: Fire Protection Equipment Requirements](#) (SLAC-I-730-0A12S-004)

Other SLAC Documents

- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)

Chapter 12: [Fire and Life Safety](#)

## Exit Path Requirements

Product ID: [504](#) | Revision ID: 2153 | Date published: 30 September 2019 | Date effective: 30 September 2019

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireReqExit.pdf>

### 1 Purpose

The purpose of these requirements is to ensure the availability of exit paths. They cover maintenance, inspection, repair, and modification. They apply to workers and supervisors, area and building managers, the SLAC fire marshal, and Facilities and Operations.

### 2 Requirements

An *exit path* is a continuous and unobstructed way of travel from any point in a building or structure to an exit leading outside of the building or structure. An exit path consists of

- Corridors, hallways, stairways, and/or aisles leading to an exit door
- An exit door
- The path or way outside of the exit door that leads away from the building to a SLAC emergency assembly point
- Associated emergency lighting and signage, as required by code

All buildings at SLAC designed for human occupancy must have continuously unobstructed exit paths to permit prompt evacuation and allow immediate access for responding emergency personnel.

#### 2.1 Maintenance, Inspection, and Repair

Managers and supervisors ensure that adequate exit paths are maintained. Building managers ensure that inspections of exit paths (including exit doors) are performed during routine building safety walkthroughs, and management walkthroughs, but no less than once per year. Building managers contact Facilities, through the [Facilities Service Request System](#), to have components of an exit path repaired.

#### 2.2 Modification

All exit path modifications require a fire safety review of the plans, following the [General Policy and Responsibilities: ESH Project Review Procedure](#). Existing buildings may be occupied during repairs and modifications only if their exit paths are continuously maintained or other measures are taken to provide equivalent safety. Impairments to occupied building exit paths are tracked by the SLAC fire marshal. (The SLAC fire marshal must be notified, using the [exit-impair listserv](#), before impairing exits in occupied buildings.)

## 2.3 Exit Signs

All exits must be clearly visible and conspicuously marked with an illuminated EXIT sign. EXIT signs with an arrow must be placed such that building occupants can determine the direction of the nearest exit from any point. If a non-exiting door is likely to be mistaken for an exit, a NO EXIT sign must be posted on it. Area and building managers are responsible for ensuring that EXIT and NO EXIT signs are posted where appropriate in their buildings.

## 2.4 Emergency Lighting

Emergency lighting, which automatically illuminates during power outages, is required in all buildings except those with ample natural light that are occupied only during daylight hours.

Emergency lighting systems must provide one or more foot-candles throughout an exit path for at least 1.5 hours after a power outage occurs. Emergency lighting systems must be battery-powered, regardless of whether or not generator-based backup power is provided. Emergency lights are maintained by Facilities and are tested monthly (except in areas of limited accessibility which are tested during periods when entrance to the area is allowed).

## 2.5 Exit Doors

Exit doors must be side-hinged. They must also swing in the direction of exit when serving an area with an occupant load of 50 or more. Buildings must have at least two separate exit doors that are remote from each other, unless a building or room is so small and so arranged that a second exit door does not improve safety. Never install locks on exit doors that prevent free escape from the inside of the building.

## 2.6 Corridors, Stairways, and Aisles

Corridors and stairways in office areas must be at least 44 inches wide. Some existing office areas may have corridors and stairways that are less than 44 inches wide. If and when such corridors and stairways in existing office buildings are renovated, they must be widened to 44 inches. Corridors and stairways in new industrial areas must be at least 36 inches wide. Corridors and stairways in existing industrial buildings or areas must be at least 28 inches wide.

Open office areas must be arranged to provide clear and continuous paths that lead to two exits. In shared office areas with established aisles between desks or cubicles, minimum aisle width for life safety purposes is 28 inches, or 32 inches if wheelchair access is required.

## 2.7 Storage

Keep work areas reasonably clear of equipment, furniture, storage containers, and other objects that could interfere with orderly evacuation. Observe these storage rules for exit paths:

- Do not use exit paths for open storage at any time.
- Keep exit paths unobstructed at all times.



- Anchor equipment, furniture, shelf units, and cabinets that could tip and block any part of an exit path.
- New cabinets or lockers in corridors or aisles must conform to all of the following specifications:
  - Installed along one side of the corridor or aisle only
  - Situated at least six feet away from the corridor or aisle’s exit door
  - Metal
  - Labeled with their contents and the name and extension of the person, department, or group using them
- Cabinets or lockers in corridors or aisles must not
  - Interfere with the minimum width requirements for exit paths
  - Be used to store flammable or combustible liquids and gases without written approval of the SLAC fire marshal.

### 3 Forms

The following are forms required by these requirements:

- [Facilities Service Request System](#). System for requesting services from Facilities and Operations
- [exit-impair listserv](#). Listserv required for notifying the SLAC fire marshal before impairing exits in occupied buildings.

### 4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- None

### 5 References

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, “Fire and Life Safety”](#)
  - [Fire and Life Safety: Fire Protection Equipment Requirements](#) (SLAC-I-730-0A12S-004)
  - [Fire and Life Safety: Portable Fire Extinguisher Requirements](#) (SLAC-I-730-0A12S-001)
- [Chapter 1, “General Policy and Responsibilities”](#)
  - [General Policy and Responsibilities: ESH Project Review Procedure](#) (SLAC-I-720-0A24C-001)

Other SLAC Documents

- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)



Chapter 12: [Fire and Life Safety](#)

# Portable Fire Extinguisher Requirements

Product ID: [149](#) | Revision ID: 2157 | Date published: 27 November 2019 | Date effective: 27 November 2019

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireReqExting.pdf>

## 1 Purpose

The purpose of these requirements is to ensure the availability and effective use of portable fire extinguishers. They cover selection, location, purchase and installation, use and training, and maintenance. They apply to workers and supervisors, area and building managers, Facilities and Operations, the Stanford University Fire Protection Systems Group, and the SLAC fire marshal.

## 2 Requirements

### 2.1 Selection

Managers and supervisors must designate a person to be responsible for selecting, purchasing, replacing, and determining the need for portable fire extinguishers in their area and must coordinate these activities with the SLAC fire marshal.

When selecting portable fire extinguishers, consider

- Size of the area to be protected to determine the number and size of fire extinguishers
- Types of possible fires in the area to determine the class or classes of fire extinguishers needed
- Weight of the fire extinguishers. Although they may be necessary in some cases, heavier fire extinguishers can be difficult to handle.
- Potential damage that may be caused by using fire extinguishers on various types of equipment located in the area

The National Fire Protection Association ([NFPA 10](#)) categorizes fires into five classes: A, B, C, D and K.

- Class A fires involve solid hydrocarbon materials such as plastics, wood, paper or cloth.
- Class B fires involve burning hydrocarbon liquids, such as oil, paint or solvent.
- Class C fires involve energized electrical equipment.
- Class D fires involve burning metal. (Most metals will burn in finely divided form. Some metals such as lithium are highly reactive even in bulk form.)
- Class K fires involve burning cooking oils and greases.

Manufacturers rate and label portable fire extinguishers to indicate the classes and sizes of fires that they can extinguish. This rating depends on both the nature of the extinguishing agent and the size of the extinguisher.

## 2.2 Location

[NFPA 10](#) and the *California Fire Code* ([24 CCR Part 9, Section 906](#)) require portable fire extinguishers

- Within easy reach of storage areas for flammables
- Throughout buildings, located so that a person does not have to travel more than 75 feet to reach one

Portable fire extinguishers are also required within 20 feet of a charging station for electric-powered industrial vehicles (for example, forklifts) ([24 CCR Part 9, Section 309.4](#))

Fire extinguishers must be conspicuously located and readily accessible in the event of fire. Locate them along normal paths of travel, including exits from areas. When possible, place them in a location where they will not be obscured from view. In large rooms or in areas where visual obstructions are unavoidable or are likely to occur in the future, provide a location sign above the extinguisher.

If you need assistance determining the number or type of fire extinguishers needed in your area, contact the SLAC fire marshal. A map of all extinguisher locations on-site is available ([SLAC Fire Extinguisher GIS](#)).

## 2.3 Purchase and Installation

Building managers are responsible for placing new fire extinguishers into service when required. To purchase and install a portable fire extinguisher:

1. Because fire extinguishers are pressurized, they are treated as hazardous materials for shipping purposes. All fire extinguishers purchased by SLAC must be ordered through the [Chemical Management Services \(CMS\) system](#). Contact the SLAC fire marshal if you do not have a CMS account and need assistance ordering.
2. When the fire extinguisher arrives, contact the SLAC fire extinguisher technician (using the [fire-extinguisher listserv](#)) and work with the technician to submit a work order for installation of the fire extinguisher to Facilities, through the [Facilities Service Request System](#).
3. After Facilities installs the new fire extinguisher, the Stanford University Fire Protection Systems Group will place a tag on the new fire extinguisher and add it to the annual maintenance schedule.

## 2.4 Use and Training

Workers may use a portable fire extinguisher only if

- They have completed ESH Course 108, Fire Extinguisher Training ([ESH Course 108](#))
- The fire is small and they have verified that someone has reported the fire to 911
- They are certain they have the correct class of portable fire extinguisher for the class of fire (using the wrong type of extinguisher on a fire can intensify the fire or lead directly to personal injury)

## 2.5 Maintenance

### 2.5.1 Annual Service

Under the direction of the SLAC fire marshal, building managers must ensure portable fire extinguishers are serviced annually and the results documented on a tag affixed to each extinguisher. Extinguishers are typically serviced in the month they are due. Extinguishers are serviced by the Stanford University Fire Protection Systems Group.

### 2.5.2 Monthly Inspection

Portable fire extinguishers must be inspected monthly by the building manager or (if not attached to a building) the custodian. The inspection must be documented by initialing and dating the periodic inspection tag attached to the extinguisher. The inspection must verify the following.

1. The extinguisher is physically present and mounted or stored.
2. The extinguisher is fully charged (that is, the arrow, if a gauge is attached, is in the green zone).
3. The tamper seal is unbroken.
4. The extinguisher appears undamaged.
5. The extinguisher is accessible.
6. The inspection tag is less than a year old.

In areas of limited accessibility (such as accelerator housings), the inspections will be scheduled to coincide with periods when entrance to the area is allowed.

Building managers are responsible for initiating actions to address fire extinguisher deficiencies by submitting a non-routine service request.

### 2.5.3 Non-routine Service Request

Building managers report all non-routine needs for portable fire extinguisher servicing in their buildings, as well as any notices of overdue routine servicing, directly to the SLAC fire marshal (using the [fire-extinguisher listserv](#)). The fire marshal then contacts the Stanford University Fire Protection Systems Group.

### 2.5.4 Accessibility

Building managers will ensure that extinguishers remain accessible to trained personnel and that building occupants do not block access to extinguishers with furniture or storage. Some extinguishers are subject to repeated blockage. In such cases, building managers may wish to relocate the extinguisher or to have Facilities place cautionary tape on the floor to delineate a clear area (see Figure 1 below). The size of the area is at the building manager's discretion. A minimum length or width of 24 inches is recommended.

Groups such as Facilities that use unmounted extinguishers routinely for hot work and similar purposes will have a custodian who stores one or more extinguishers for loaning out to individuals as they need them for work purposes.



Figure 1 Example of Floor Taping for a Fire Extinguisher

### 3 Forms

The following are forms required by these requirements:

- [fire-extinguisher listserv](#). Listserv for requesting fire extinguisher services
- [Facilities Service Request System](#). System for requesting services from Facilities and Operations
- [Chemical Management Services \(CMS\) system](#). System for ordering chemicals, tracking inventory, and storing safety data sheets

### 4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- Servicing and inspections must be documented by initialing and dating the periodic inspection tag attached to the extinguisher.
- The SLAC fire marshal maintains the record of SLAC service requests.

### 5 References

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, “Fire and Life Safety”](#)

- [Fire and Life Safety: Fire Protection Equipment Requirements](#) (SLAC-I-730-0A12S-004)
- [Fire and Life Safety: Fire Protection System Impairment Procedures](#) (SLAC-I-730-0A12C-002)

Other SLAC Documents

- [SLAC Fire Extinguisher GIS](#)
- ESH Course 108, Fire Extinguisher Training ([ESH Course 108](#))

Other SLAC Documents

- [Fire Protection Resource Site \(FireFacts\)](#) (SharePoint)
- [Fire Protection Program Plan](#)

Other Documents

- National Fire Protection Association (NFPA) 10, “Standard for Portable Fire Extinguishers” ([NFPA 10](#))
- Title 24, *California Code of Regulations*, “California Building Standards Code”, Part 9, “California Fire Code”, Chapter 9, “Fire Protection Systems”, Section 309, “Powered Industrial Trucks and Equipment”, Subsection 4, “Portable Fire Extinguishers” ([24 CCR Part 9, Section 309.4](#))
- Title 24, *California Code of Regulations*, “California Building Standards Code”, Part 9, “California Fire Code”, Chapter 9, “Fire Protection Systems”, Section 906, “Portable Fire Extinguishers” ([24 CCR Part 9, Section 906](#))





Chapter 12: [Fire and Life Safety](#)

## Smoking Requirements

Product ID: [502](#) | Revision ID: 2155 | Date published: 30 September 2019 | Date effective: 30 September 2019

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/fireReqSmoking.pdf>

### 1 Purpose

The purpose of these requirements is to comply with Stanford policy and to prevent vegetation fires from discarded smoking materials. They cover both traditional smoking (of cigarettes, cigars, pipes, et cetera) and “vaping” of electronic cigarettes. They apply to all persons on SLAC property.

### 2 Requirements

#### 2.1 Basic Requirements

Smoking on SLAC property is governed first by Stanford University’s Administrative Guide Memo 2.2.6, [“Smoke-free Environment Policy”](#). One key feature of this policy is that outdoor smoking in non-prohibited areas must be at least 30 feet away from doorways, open windows, covered walkways, and ventilation systems to prevent smoke from entering enclosed buildings and facilities. Indoor smoking is prohibited.

#### 2.2 Vaping

For the purposes of applying Administrative Guide Memo 2.2.6, which is driven primarily by public health considerations, SLAC considers vaping to be a form of smoking. This interpretation complies with Santa Clara County and San Mateo County requirements. At SLAC therefore all the requirements of Guide Memo 2.2.6 apply to vaping as well as smoking, that is, vaping is allowed only outdoors and in non-prohibited areas.

#### 2.3 Smoking

For smoking, because of SLAC’s location adjacent to wildland and dry grass areas, SLAC policy is more restrictive than Stanford’s. Smoking is allowed only outdoors, and only in specifically designated areas, approved by the SLAC fire marshal and subject to the following requirements:

1. Include approved disposal containers
2. Be least 30 feet from readily combustible or flammable materials
3. Be at least 30 feet away from any doorway, walkway, air intake, or functional window
4. Not be in a pathway that a non-smoker must use to enter a building
5. Include signage reading SMOKING AREA or similar

For the location of these areas, see [SLAC Designated Smoking Areas](#).

Temporary designated smoking areas may be authorized by the fire marshal for large construction projects upon specific request of a field construction or project manager. Such smoking areas will be located inside the subcontractor's construction area and must comply with designated smoking area rules as given above.

Stanford forbids smoking in university vehicles. At SLAC, the term *university vehicle* means any vehicle owned or rented by Stanford, the Department of Energy, General Services Administration, or SLAC. This policy does not prohibit smoking inside a private car or truck, but solid smoking materials must not be discarded outside the vehicle at SLAC.

If you observe anyone violating this policy, please ask the individual to extinguish the item safely or to move to an appropriate area as defined above. If the person does not, contact SLAC Site Security at ext. 5555. Any ignition of vegetation could create a major fire affecting SLAC and the surrounding community.

### 3 Forms

The following are forms required by these requirements:

- None

### 4 Recordkeeping

The following recordkeeping requirements apply for these requirements:

- None

### 5 References

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 12, "Fire and Life Safety"](#)

Other SLAC Documents

- [SLAC Designated Smoking Areas](#)

Other Documents

- Stanford University. Administrative Guide Memo 2.2.6, ["Smoke-free Environment Policy"](#)