

<b>University of Pittsburgh Safety Manual</b>	EH&S Guideline Number: <b>02-006</b>	
Subject: <b>FIRE ALARM AND FIRE PROTECTION OUTAGE/IMPAIRMENT PROCEDURES</b>	Revised Date: 06/22/2018 Review Date: 09/25/2020	Page 1 of 9

## **FIRE ALARM /FIRE PROTECTION OUTAGE/IMPAIRMENT RESPONSE GUIDELINE**

### **FIRE ALARM AND FIRE PROTECTION SYSTEM TESTING**

#### 1. Testing of the Fire Alarm and Fire Protection Systems

- 1.1. The Building Engineer, Electrician, or Plumber (or equivalent) shall perform a test of the fire alarm and/or fire protection systems in accordance with City Codes, NFPA and FM Global (University's Property Insurance Carrier) Standards.
- 1.2. The Building Engineer/Electrician (or equivalent) shall call Pitt Police (412-624-2121) and Guardian (1-800-922-4827) to inform them of the testing. Guardian should be provided the following information: caller's name, University of Pittsburgh, building name, time and the associated Password for the building. The hold should be requested only for the time needed to test the alarms.
- 1.3. At least 30 minutes prior to the start of the testing, the Building Engineer will post all building entrance doors with signs stating:  
  
"Fire alarm test today. If smoke or fire is noted, call 9-1-1 immediately."  
(See Attachment No. 1)
- 1.4. After the signs are posted, an announcement by the Building Engineer should be made (in buildings equipped to do so) stating "Testing of the fire alarm system is being performed. If smoke or fire is noted, call 9-1-1 immediately."
- 1.5. Immediately after testing is completed, notify Pitt Police and Guardian that the system should be taken off hold.

NOTE: Although the alarms will be placed back in service by Guardian at midnight, Guardian should be promptly notified when the testing is complete. Confirmation that the alarm signals were received by Guardian and that the system has been restored should be obtained.

- 1.6. An announcement should be made by the Building Engineer in buildings so equipped ["testing of the fire alarm system is now complete (repeat)"] and the posted signs removed.
- 1.7. The testing should be documented with records maintained on file for review.

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- 1.8. If a problem is detected during the testing, the Building Engineer/Electrician (or equivalent) should attempt to reset the device/panel. If the problem is not cleared or if it involves any system or component of the buildings fire protection systems, an “Emergency Outage/Impairment” will exist.

Procedures for notifying appropriate department (Facilities Management, Housing or Property Management) personnel should be followed along with informing EH&S in accordance with the guidelines specified in Sections 3.0 and/or 6.0 below.

## **FIRE ALARM SYSTEM IMPAIRMENT PROCEDURES**

### **2. Scheduled Outage/Impairment**

- 2.1. The University’s procedures for Scheduled Outage/Impairment email notification should be followed.
- 2.2. Upon receipt of the outage/impairment notification email, EH&S will notify FM Global and the City Bureau of Fire with applicable details regarding the alarm impairment and precautions being taken.
- 2.3. For all scheduled outages/impairments, the Building Engineer/Electrician (or equivalent) must be notified by the coordinator, Project Manager or Contractor.
- 2.4. At least 30 minutes prior to any scheduled outage, the Building Engineer will post a sign at all building entrance doors (and elevator lobbies for buildings without a PA system) stating:

“WARNING: The fire alarm system is temporarily out of service. If smoke or fire is noted, call 9-1-1 immediately.” (See Attachment No. 2)

If the fire alarm outage is limited to a specific floor, then Attachment No. 2A can be posted.

- 2.5. The Building Engineer/Electrician (or equivalent) shall call Pitt Police (412-624-2121) and Guardian (1-800-922-4827) to inform them of the alarm system outage/impairment. Guardian should be provided the following information: caller’s name, University of Pittsburgh, building name, time and the associated Password for the building.
- 2.6. An announcement should be made by the Building Engineer (in buildings equipped to do so) after the signs are posted (and every 2 hours thereafter when the building is occupied) to inform the occupants that the system is impaired.

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- 2.7. Per City of Pittsburgh Bureau of Fire requirements, a fire watch consisting of at least one roving individual is needed throughout the duration of the outage. In addition, per University requirements, a Building Engineer/Electrician (or equivalent) should be stationed at the fire panel to reactivate any disabled alarms (see Section IV. for additional details). Provisions for the fire watch will be coordinated by the responsible department (Facilities Management, Housing or Property Management).
- 2.8. During the scheduled outage, all hot work operations are prohibited in the areas where the alarms are out of service, unless the work is critical to repair of the alarm system. If the work is critical, the FM Global Hot Work Permit System should be utilized.
- 2.9. When the alarm system is returned to service, the Building Engineer/Electrician (or equivalent) shall call Guardian, Pitt Police and EH&S (412-648-9460 or 412-624-9505). Notification to EH&S should include the date and time the system was restored so that appropriate follow-up information can be sent to FM Global.
- 2.10. The warning signs should be removed, and appropriate announcements made by the Building Engineer (in buildings so equipped).

### 3. Emergency Outage/Impairment

- 3.1. The Building Engineer/Electrician (or equivalent) shall call Pitt Police (412-624-2121), Guardian (1-800-922-4827) and the EH&S Duty Officer (412-298-7998) to inform them of the alarm system outage/impairment. Guardian should be provided the following information: caller's name, University of Pittsburgh, building name, time and the associated Password for the building.
- 3.2. For all emergency outages/impairments, the Building Engineer/Electrician (or equivalent) will post a sign at all building entrance doors (and elevator lobbies for buildings without a PA system) stating the following:  
  

“WARNING: The fire alarm system is temporarily out of service. If an actual fire is noted, call 9-1-1 immediately.” (See Attachment No. 2).

If the fire alarm outage is limited to a specific floor, then Attachment No. 2A can be posted.
- 3.3. An announcement should be made by the Building Engineer (in buildings equipped to do so) after the signs are posted (and every 2 hours thereafter when the building is occupied) to inform the occupants that the system is impaired.
- 3.4. When the message is received, EH&S will notify FM Global and the City of Pittsburgh Bureau of Fire that an alarm is impaired, and the precautions taken.

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- 3.5. Per City of Pittsburgh Bureau of Fire requirements, a fire watch consisting of at least one roving individual is needed throughout the duration of the outage. In addition, per University requirements, a Building Engineer/Electrician (or equivalent) should be stationed at the fire panel to reactivate any disabled alarms (see Section IV. for additional details). Provisions for the fire watch will be coordinated by the responsible department (Facilities Management, Housing or Property Management).
  - 3.6. During the emergency outage, all hot work operations are prohibited in the areas where the alarms are out of service, unless the work is critical to repair of the alarm system. If the work is critical, the FM Global Hot Work Permit System should be utilized.
  - 3.7. When the alarm system is returned to service, the Building Engineer/Electrician (or equivalent) shall call Guardian, Pitt Police and EH&S. Notification to EH&S should include the date and time so that appropriate follow-up information can be sent to FM Global.
  - 3.8. The warning signs should be removed, and appropriate announcements made by the Building Engineer (in buildings so equipped).
4. Construction, Renovations or Demolition Work
- 4.1. Contractors on site must notify the Project Manager (or equivalent) of any situations that may impact the fire alarm system. The University's Outage/Impairment email notification procedures should be followed.
  - 4.2. The Project Manager will notify the Building Engineer/Electrician (or equivalent) to take appropriate action as outlined above for a Scheduled Outage/Impairment (Section 2.0).
  - 4.3. In the majority of cases, smoke detectors are the primary concern for false signaling due to dust and debris during demolition or construction. In lieu of disabling the detector and/or system, potentially impacted detectors should be "bagged and taped off" at the start of the workday and removed at the end of each workday or removed when the space will be unattended for more than 1 hour.

**NOTE:** It is a violation of the City of Pittsburgh's Fire Code to disable a fire detection device or the fire alarm system due to work involving construction, renovation, or demolition. Failure to remove the bag covering the detector is also a violation of the Code. A "minimal" level of detection acceptable to the AHJ must be in service in all areas of the building (including the areas under construction) or a fire watch must be provided in order to occupy the building.

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- 4.4. If there is no other course of action and alarms must be put on hold and/or specific detection devices temporarily disabled (i.e. beam type detectors, duct detectors, etc.), then the above procedures regarding scheduled outages/impairments must be followed. Every effort must be made to minimize the time that the alarms are inactive.
- 4.5. For additional fire safety details for buildings under construction, renovation or demolition, see the University of Pittsburgh Fire Prevention Plan and Checklist.

## **FIRE PROTECTION SYSTEM IMPAIRMENT PROCEDURES**

### 5. Scheduled Outage/Impairment Procedures

- 5.1. The University's procedures for Scheduled Outage/Impairment email notification should be followed.
- 5.2. Upon receipt of the outage/impairment notification email, EH&S will notify FM Global and the City of Pittsburgh Bureau of Fire with applicable details regarding the fire protection and/or alarm system impairment and precautions being taken.
- 5.3. For all scheduled outages/impairments, the Building Engineer/Electrician (or equivalent) and Plumbers must be notified by the coordinator, Project Manager or Contractor.
- 5.4. The Building Engineer/Electrician (or equivalent) shall call Pitt Police (412-624-2121) and Guardian (1-800-922-4827) to inform them of the fire protection system outage/impairment. Guardian should be provided the following information: caller's name, University of Pittsburgh, building name, time and the associated Password for the building.
- 5.5. At least 30 minutes prior to the outage/impairment, the Building Engineer will post a sign at all building entrance doors and elevator lobbies stating the following:  
  
"WARNING: The fire protection sprinkler system is temporarily out of service. If smoke or fire is noted, activate the nearest fire alarm pull station and call 9-1-1 immediately."  
(See Attachment No. 3).

If the outage of the fire protection sprinkler system is limited to a specific floor, then Attachment No. 3A can be posted.

- 5.6. The Plumbers (or equivalent) will isolate the valves associated with the sprinkler system, fire pump or public water supplying the fire protection system that will be impaired. The Electricians (or equivalent) will isolate the associated fire pump control panel and/or any associated alarm devices.

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- 5.7. As required by the City of Pittsburgh Bureau of Fire and FM Global, a “tag” shall be used to indicate that a fire protection system or portion thereof has been removed from service. The FM Global “Red Tag Permit” is applied to any closed fire protection control valves or impaired system. EH&S will complete Part 1 of the tag when notification is sent (Section 5.2).
  - 5.8. If the building is not provided with a complete and unaffected fire detection system, a fire watch consisting of at least one roving individual is needed throughout the duration of the outage per City of Pittsburgh Bureau of Fire requirements. In addition, per University requirements, a Building Engineer/Electrician (or equivalent) should be stationed at the fire panel to reactivate any disabled alarms (see Section IV. for additional details). Provisions for the fire watch will be coordinated by the responsible department (Facilities Management, Housing or Property Management).
  - 5.9. During the scheduled outage, all hot work operations are prohibited in the areas where the protection or alarms are out of service, unless the work is critical or associated with getting the protection system back in service. If the work is critical, the FM Global Hot Work Permit System should be utilized.
  - 5.10. When the impaired fire protection and alarm system is returned to service, the Building Engineer/Electrician (or equivalent) shall notify Guardian, Pitt Police and EH&S. Notification to EH&S should include the date and time so that appropriate follow-up information can be sent to FM Global.
  - 5.11. The warning signs should be removed, and appropriate announcements made by the Building Engineer (in buildings so equipped).
6. Emergency Outage/Impairment
- 6.1. In the event of an emergency outage/impairment, the Building Engineer/Electrician (or equivalent) and Plumbers must be notified by the coordinator, Project Manager or Contractor.
  - 6.2. The Building Engineer/Electrician (or equivalent) shall call Pitt Police (412-624-2121) and Guardian (1-800-922-4827) and the EH&S Duty Officer (412-298-7998) to inform them of the fire protection system outage/impairment.
    - 6.2.1. Guardian should be provided the following information: caller’s name, University of Pittsburgh, building name, time and the associated Password for the building.
    - 6.2.2. Information provided to EH&S should include the type of system impaired (sprinklers, fire pump, water supply, alarms, etc.), a listing of closed fire protection control valves and/or other associated components, the area affected and estimated duration of the impairment.

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- 6.3. The Building Engineer will post a sign at all building entrance doors and elevator lobbies stating the following:
- “WARNING: The fire protection sprinkler system is temporarily out of service. If smoke or fire is noted, activate the nearest fire alarm pull station and call 9-1-1 immediately.”  
(See Attachment No. 3)
- If the outage of the fire protection sprinkler system is limited to a specific floor, then Attachment No. 3A can be posted.
- 6.4. The Plumbers (or equivalent) will isolate the valves associated with the sprinkler system, fire pump or public water supplying the fire protection system that will be impaired. The Electricians (or equivalent) will isolate the associated fire pump control panel and/or any associated alarm devices.
- 6.5. When the message is received, EH&S will notify FM Global and the City of Pittsburgh Bureau of the fire protection systems that are impaired and the precautions taken.
- 6.6. As required by the City of Pittsburgh Bureau of Fire and FM Global, a “tag” shall be used to indicate that a fire protection system or portion thereof has been removed from service. The FM Global “Red Tag Permit” is applied to any closed fire protection control valves or impaired system. EH&S will complete Part 1 of the tag when notification is sent (Section 6.6).
- 6.7. For the emergency outages creating a condition where a complete and unaffected fire detection system is not provided, a fire watch consisting of at least one roving individual is needed throughout the duration of the outage per City of Pittsburgh Bureau of Fire requirements. In addition, per University requirements, a Building Engineer/Electrician (or equivalent) should be stationed at the fire panel to reactivate any disabled alarms (see Section IV. for additional details). Provisions for the fire watch will be coordinated by the responsible department (Facilities Management, Housing or Property Management).
- 6.8. During the emergency outage, all hot work operations are prohibited in the areas where the protection is out of service, unless the work is critical or associated with getting the protection system back in service. If the work is critical, the FM Global Hot Work Permit System should be utilized.
- 6.9. When the impaired systems are returned to service, the Building Engineer/Electrician (or equivalent) shall notify Guardian, Pitt Police and EH&S. Notification to EH&S should include the date and time so that appropriate follow-up information can be sent to FM Global.
- 6.10. The warning signs should be removed, and appropriate announcements made by the Building Engineer (in buildings so equipped).

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## 7. Construction, Renovations or Demolition Work

- 7.1. Contractors on site must notify the Project Manager (or equivalent) of any situations that may impact the fire protection systems (sprinklers, fire hose standpipes, fire pump and/or water supply). The University's Outage/Impairment email notification procedures should be followed.
- 7.2. The Project Manager will notify the Plumber, Building Engineer, and Electrician (or equivalent) to take appropriate action as outlined above for a Scheduled Outage/Impairment (Section 5.0).
- 7.3. For additional fire safety details for buildings under construction, renovation or Demolition, please see the University Fire Prevention Plan and Checklist.

## Fire Watch

### 8. Fire Watch Definition

A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department. In addition, per University requirements, a Building Engineer/Electrician (or equivalent) should be stationed at the fire panel to reactivate any disabled alarms and/or notify Pitt Police and 9-1-1 when the system is on "hold" with Guardian and Pitt Police.

A fire watch is needed when a building's fire (or emergency) alarm system cannot notify occupants of a hazardous condition or the need to evacuate the building. A fire watch is also needed when the building's fire protection systems are impaired. This could include the following:

- 8.1. The fire alarm panel is impaired.
- 8.2. The notification devices (horns/speakers/strobes) are not active/do not function.
- 8.3. There is no main or back-up power (emergency generator or battery) available to supply the fire alarm system/panel.
- 8.4. There is no communication and monitoring system/service in operation, or the system is on "hold" with Guardian (land and cell lines) and/or Pitt Police (RS2).
- 8.5. The fire detection system (smoke detectors, heat detectors) is not in service (in full or in part would determine the extent of the fire watch area).



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- 8.6. The fire protection sprinklers are not in service (in full or in part would determine the extent of the fire watch area).
- 8.7. The fire pump or the fire protection water supply (underground main break and/or PWSA valve closures) is not in service. A potential issue is that there may not be notification of a fire/hazard as the sprinkler water flow switch may not operate to initiate the alarms.
- 8.8. During construction, renovation or demolition projects, when sprinkler systems on entire floors are taken out of service, temporary smoke detectors can be installed to negate the need for a fire watch. This must be addressed in the University Fire Prevention Plan.