Standard Operating Procedure (SOP) – SAFETY-001
Fire Protection Impairment Program

A. Introduction

A Fire Protection Impairment Program is an effective management program used to:
- Supervise the safe shutdown of a fire protection or alarm system.
- Control potential fire hazards during the impairment.
- Restore the fire protection system to service as soon as possible.
- Implement a fire watch accordingly.
- Notify appropriate personnel.

B. Purpose

To establish procedures to implement when a fire protection system is out of service due to construction, alteration, power outage, fiber network failure, repair or emergency condition. These procedures are intended to assess the risk (probability and severity) that the impairment creates and directs actions that mitigate the impacts. This procedure does not apply to routine scheduled maintenance or testing.

C. Scope

This SOP applies to all university-owned buildings, and Millersville employees and contractors.

In compliance with National Fire Protection Act, a fire watch is required to be implemented under certain conditions whenever a fire suppression or fire alarm system is out of service or compromised. Notification must be made to the Environmental Health and Safety Office (EHS) and Facilities Management Department (FMD) when a fire protection system to include a fire alarm system is out of service, under repair, or otherwise inoperable to determine if a fire watch is warranted.

Fire watch requirements for system outages and impairments will be determined on a case by case basis taking into consideration the extent of the interruption, building use, number of expected occupants, and expected outage time of the interruption.

D. Definitions

Fire protection systems: Sprinkler systems, standpipe systems, fire hose systems, underground fire service mains, fire pumps, water storage tanks, water spray fixed systems, foam-water systems, special extinguishing systems, fire service control valves, fire alarm systems and emergency lights.

Fire watch: A person or persons designated to physically patrol the area where the fire protection system is impaired.

Impairment: a shutdown, in whole or part, of a fire protection system. **NFPA 101, section 9.6.1.6 specifies that an impairment exists when an alarm system is out of service for more than 4 hours in a 24-hours period, or an automatic sprinkler system is out of service more than 10 hours in a 24-hour period.**

1. ***Emergency impairment:*** when a fire protection system is out of service due to an unexpected occurrence, such as a ruptured pipe or an unexpected power outage.
2. ***Planned impairment:*** when a fire protection system is out of service due to work that has been planned in advance, such as revisions to the water supply or sprinkler piping system.
3. ***Level 1 impairment:*** when a limited number of components of a fire protection system are found defective or removed from service. A Level 1 impairment represents a minimal impact to the overall life safety of building occupants. This type of impairment includes, but is not limited to, impairments involving non-occupied spaces, individual rooms, or individual zones or portions of a system.
4. ***Level 2 impairment:*** a shutdown of an entire fire protection system, or major portion, significantly affecting occupant life safety. Impairment of any portion of a residential occupancy will be categorized as a level 2 impairment.

Impairment Coordinator (IC): The person who manages the impairment while system work is being performed and has overall responsibility for proper implementation of the Fire Protection Impairment Program. The Director of Environmental Health and Safety will be designated as the Impairment Coordinator. Alternate Impairment Coordinators are the Assistant Vice President for Facilities or the Director of Maintenance and Operations.

E. Responsibilities

Campus employee: Any individual who impairs a fire protection system, in whole or part, must first notify the Impairment Coordinator. If an impairment permit is required, the individual will complete an Outage Request (see SOP Admin-001 for more details) for planned events and a Fire & Life Safety System Permit/Impairment Tag (Appendix A) to the fire department connection for sprinkler system impairments or to the fire alarm annunciator/control panel for fire alarm systems.

Contractors, Outside Workers, Outside Company Representatives: Any contractor / contractor's representative or outside worker who impairs a fire protection system, in whole or part, must first notify the Impairment Coordinator. If an impairment permit is required, the contractor, contractor's representative, or outside worker will complete an outage request (Appendix A) for planned events and attach the Fire & Life Safety System Permit/Impairment Tag (Appendix B) to the fire department connection for sprinkler system impairments or to the fire alarm annunciator/control panel for fire alarm systems.

Impairment Coordinator (IC): The IC will:
- Determine the level of impairment due to a shutdown, in whole or part, of a fire protection system.
- Complete the Impairment Worksheet (Appendix C) when authorizing Level 2 impairments.
- Issue and verify removal of fire & life safety system permit/impairment tags when authorizing Level 2 impairments.
- Coordinate the fire watch, if it has been determined that a fire watch is necessary. The IC will receive the documented fire watch activities on Appendix D, the Fire Watch Log Sheet.
- Provide training to employees who will be utilized as fire watch personnel.

Facilities Management Department (FMD)
- Communicate both planned and emergency impairments to the IC, Information Desk, monitoring company and local fire department.
- Send campus notification out as needed with detailed instructions implementing interim life

safety measures.
- Implement fire watch procedures as needed.

Fire Watch Personnel
- Meet with IC and/or FMD personnel to understand the extent and duration of the impairment.
- Understand the requirements, frequency and route to conduct the tour of the impacted areas.
- Document tour findings and deliver to the IC for review and corrective actions.
- ***Fire Watch personnel serve as a "human smoke detector" and to notify 911 at the first sign of smoke or fire.***

F. Notification

Whenever scheduled repairs demand that a fire suppression or fire alarm system be taken out of service, notification must be made to EHS (717-871-4240) and FMD (717-871-7875). Additionally, when it is discovered that a fire suppression or fire alarm system is inoperable due to damage, utility failure, or operates improperly, EHS and FMD must be notified. When reporting such an outage, include the following information:

1. Location of the system;
2. System(s) impacted and corresponding areas of coverage;
3. Anticipated duration of the outage;
4. Suspected reason for the outage if know; and
5. Name and contact information.

G. Procedures

Impairment Procedures – Level 1:
- All level 1 impairments must be reported to IC and Facilities Management Department (FMD).
- FMD will contact the information desk, the building occupant and/or campus community, the monitoring company, the local fire department and others as needed.
- FMD will expedite repairs to return the system to fully functional condition.

Impairment Procedures – Level 2:
- The IC will authorize the preplanned impairment and verify that the following procedures have been implemented:
    - The extent and expected duration of the impairment have been determined.
    - The areas or buildings involved have been considered and the increased risks determined.
    - When a required automatic sprinkler system is out of service for an extended duration, the impairment coordinator will arrange for one of the following:
        - Evacuation of the building or portion of the building affected by the system out of service, or
        - A fire watch for all portions of the building left unprotected by the shutdown until the fire alarm or sprinkler system has been returned to service.
    - When a required fire alarm system is out of service for an extended duration, the impairment coordinator will arrange for one of the following:
        - Evacuation of the building or portion of the building affected by the system out of service, or

        - Implementation of mitigating measures for the period that the system is impaired. This considers the building occupancy type, nature and duration of impairment, building occupancy level during the impairment period, active work being conducted on the fire alarm system during the impairment, condition of other fire protection systems and features, and hazards and assets at risk. Appropriate mitigating measures range from simple occupant notification to full-time fire watch.
    - Sprinkler systems: the impairment coordinator will complete or authorize a Fire & Life Safety System Permit/Impairment Tag (Appendix B), making sure it is located at the fire department connection, indicating which system, or part thereof, has been removed from service.
    - Fire alarm systems: the impairment coordinator will complete or authorize a Fire & Life Safety System Permit/Impairment Tag (Appendix B), making sure it is located at the fire alarm annunciator or fire alarm control panel.

Emergency Impairment Procedures – Level 1 or 2:

- When an emergency or unplanned impairment occurs, actions will be taken to minimize potential injury, damage or impact.
- The above procedures will be implemented with the following exceptions:
    - Any damage to fire protection systems caused by the contractor will be repaired by a licensed fire protection company at the contractor's expense. Any required fire watch activities due to damage of the fire protection equipment will be supplied by the contractor. Contractor must supply their own fire watch activities to ensure compliance with this policy.

Fire Watch:

- Personnel will be assigned to conduct a fire watch during any scheduled fire alarm or fire suppression system test, maintenance, or repair, conducted or coordinated by IC and/or FMD.
- IC and FMD personnel are responsible for establishing a fire watch for the buildings which they oversee whenever a system fails or maintenance and/or repairs are necessary.
- Fire watches are conducted in accordance with the procedures outlined in this guide.
- A fire watch utilized for a fire alarm or automatic sprinkler system shutdown will be composed of individuals beyond normal staffing, assigned to walk the areas affected.
- The number of fire watch personnel utilized will be determined by the impairment coordinator.
- Fire watch personnel used for fire alarm shutdowns must be specially trained in fire prevention (**R**escue, **A**larm, **C**ontain, **E**vacuate – **RACE**) and in occupant and fire department notification techniques.
- Fire watch personnel used for automatic sprinkler system shutdowns must be specially trained in fire prevention and in the use of fire extinguishers (**P**ull, **A**im **S**queeze, **S**weep – **PASS**), and in occupant and fire department notification techniques.
- A fire watch is defined as, "the assignment of a qualified person or persons for the express purpose of notifying the fire department, the building occupants, or both of an emergency; preventing a fire from occurring; extinguishing small fires; or protecting the public from fire or life safety dangers". The responsibilities of an individual assigned to fire watch duty is to fulfill the intent of NFPA-72 as follows:
    - Notify occupants to evacuate when there is a fire in the building.
    - Call 911 or activate nearest pull station (if not impaired) to initiate emergency personnel response.
    - The persons performing this type of fire watch are not to be permitted to perform any other duties.

- IC are responsible for determining the procedures to be followed for each specific circumstance.

Individuals assigned to fire watch duty are responsible for the following:

1. Post signage (Appendix E) throughout the building to notify occupants that a fire watch is being conducted and the appropriate response if a fire or smoke is discovered.
2. Have an understanding of basic fire prevention (RACE) and fire extinguishment techniques (PASS).
3. Be proficient in the operation of the fire alarm and suppression system the area(s) impacted by the outage. In other words know where the fire extinguishers and notification devices are located.
4. Have an understanding of and the ability (i.e., access to a phone, cell phone, or radio) to immediately to initiate emergency personnel response in case of an emergency or fire.
5. Conduct a routine and thorough walk of all locations impacted by the system outage at least once per hour.
6. Note the location of portable fire extinguishers.
7. Notifying occupants to evacuate the building in the event of a fire by verbal warning, whistle, horn, or other notification device. Manual pull station activation is the preferred method is local system is still operable.
8. Fire watch personnel are to have fire extinguishing equipment readily available and be trained in its use.
9. Maintain a log of activities, findings, and incidents throughout the fire watch using the Fire Watch Checklist (Appendix D).
10. Remove fire watch signage once the fire watch is complete.

Fire & Life Safety System Impairment Permit/Tag

(Please attach tag to Fire Department Connection
or
Fire Alarm Annunciator/Control
Panel)

Building Name:_____

Type of system impaired:_____

Reason for impairment:_____

Extent of impairment:_____

Date system shutoff:_____

Expected date of restoration:_____

Impairment authorized by:_____

Fire & Life Safety System Impairment Permit/Tag

(Please attach tag to Fire Department Connection
or
Fire Alarm Annunciator/Control
Panel)

Building Name:_____

Type of system impaired:_____

Reason for impairment:_____

Extent of impairment:_____

Date system shutoff:_____

Expected date of restoration:_____

Impairment authorized by:_____

Appendix A: Fire System Impairment Tag

Millersville University

Finance and Administration Division
Facilities Management Department

Attention Occupants

F I R E W A T C H
I N
P R O G R E S S

Fire alarm or sprinkler system is out-of-service for repairs, construction, or maintenance.

Qualified individuals are conducting a continuous tour of common areas to provide smoke and/or fire detection. Please be alert to evidence of smoke or fire. Contact University Police at **(717) 871-4357 or HELP** or **911** immediately if fire is seen or suspected.

Evacuate the building immediately upon hearing an air horn, whistle, or other alert.

Appendix B: Fire Watch Sign

Impairment Worksheet

Core Information

Today's date: _____ Bldg: _____

Type of system impaired: _____

Extent of impairment: _____

Reason for impairment: _____

Date impairment to begin: _____ Estimated completion date: _____

Person(s) conducting work: _____

Person responsible for mounting impairment tag: _____

Fire watch required? _____ If yes, number of persons: _____

Reminders

Area inspected and risks determined? _____

Prohibitions involved? _____

Building evacuated? _____ Impairment tag issued? _____

Notifications

Has campus police been notified of the impairment? _____

Has monitoring company, if any, been notified of the impairment? _____

Has Facilities on call manager building been notified of the impairment? _____

Restoration

Has the affected system been inspected and tested operational? _____

Has the impairment tag been removed? _____

Has the campus police been notified of the restoration, if a fire alarm system? _____

Has the fire alarm monitoring company been notified of the restoration? _____

Has the facilities on call manager been notified of the restoration? _____

Fire Watch Instructions / Checklist

The primary role of the Fire Watch personnel is to serve as a "human smoke detector" and to notify Blue Rock Regional Fire Department (BRRFD) at 911 at the first sign of smoke/fire.

Fire watch personnel should:

(1) Make rounds at one (1) hour intervals. During the rounds, the fire watch personnel should make a thorough inspection of all buildings or spaces including concealed areas, such as attics, unoccupied storage areas, etc.
(2) Be extra attentive to areas where hot work is being performed (welding, soldering, cutting or similar activities).
    a. Are combustibles (wood, paper, cardboard, plastic, chemicals, paint, textile, etc.) located nearby?
    b. Are there opening that sparks or embers can enter (wall cavities, holes in the floor, etc.)?
    c. Are fire extinguishers located within 12 feet of the hot work operation specifically for the activity?
    d.
(3) Maintain the log sheet documenting the building tour, date, time and any deficiencies identified.
(4) Post the Fire Watch Door Notice that is provided in this document on both interior and exterior doors.
(5) Obtain a notification device whistle(s) or air horn which can be used to notify occupants that smoke or fire has been detected. Manual pull stations can also be used if they remain operational.
(6) Remain alert to signs of smoke and/or fire (listen, look and smell).
(7) Enter all stairwells - open doors and look into each stairwell.
(8) Be attentive where fire extinguishers are located.
    a. P-A-S-S: Pull – Aim – Squeeze – Spray
    b. R-A-C-E: Rescue – Alarm – Contain – Evacuate
(9) Exit the building and call 911.
(10) Do not put yourself in jeopardy - if you suspect smoke and/or fire, exit the building; call 911 as quickly as possible.

Each facility should establish programs for fire watch personnel to ensure they are familiar with the property being protected, including:
(a) All buildings, occupancies, and hazards.
(b) Fixed fire protection systems.
(c) Manual and automatic detection and alarm systems.
(d) Portable fire protection equipment.
(e) Emergency shutdown procedures and equipment for which they are responsible.
(f) The facility emergency action plan.
10. Each facility should ensure that fire watch personnel are familiar with the site-specific emergency plans for dealing with fires and other emergencies.

Appendix D: Fire Watch Instruction

11. Each facility should ensure that fire watch personnel are familiar with the procedures to follow in the recognition and reporting of an emergency, including:
(a) When and how to use radio equipment, telephone, and private or public alarm boxes to summon aid.
(b) How to notify the fire brigade, the municipal fire department, and other emergency response organizations.
(c) The personnel to be contacted.
12. Fire watch personnel should be provided with a means for continuous communication (i.e., two-way radio; walkie-talkies; etc.) with a constantly attended location such as the administrative office where a public address announcement can be made throughout all buildings in the event of an emergency.**
13. Each facility manager/administrator should ensure that:
(a) Fire watch personnel are not permitted to change the time record charts.
(b) The changing and review of time record charts is done by the manager/administrator or the manager/administrator's responsible designee.
(c) Time record charts of fire watch personnel are promptly reviewed.
(d) Files are maintained for review by representatives of any authority having jurisdiction.
(e) All irregularities are investigated, recorded, and corrective action is taken.
14. A continuously updated directory of names, telephone numbers, and other information to assist in making emergency calls should be kept at the facilities administrative office. This directory should include the telephone numbers of key facility personnel to be notified in an emergency, fire, police and emergency medical service departments, and other outside agencies needed in an emergency.

Millersville University

Finance and Administration Division
Facilities Management Department

Fire Watch Log

Name of Building under Fire Watch _____ Date:_____

Person performing Fire Watch _____

Fire watch times Started:_____ Ended:_____

I have read the Fire Watch instructions / checklist and understand that I am responsible for following those instructions and patrol my designated area at least once every hour.

Signature: _____

Times must be recorded using the 24-hour clock and initialed. Any problems found during the fire watch must be documented (along with the time found and initialed) and reported to the Facilities Management Department for immediate correction.

I certify (by my initials below) that I completed a tour of my entire assigned area at the following times:							
Time Tour Completed	**Initials**		**Time Tour Completed**	**Initials**		**Time Tour Completed**	**Initials**

Problems noted during fire watch:

_____

_____

_____

_____

_____

_____

_____

Appendix E: Fire Watch Log

Millersville University

Finance and Administration Division
Facilities Management Department

Fire Watch Log

Name of Building under Fire Watch Gordinier / Second Floor

Person performing Fire Watch John J. Smith

I have read the Fire Watch instructions / checklist and understand that I am responsible for following those instructions and patrol my designated area at least once every hour.

Signature: _____

Times must be recorded using the 24-hour clock and initialed. Any problems found during the fire watch must be documented (along with the time found and initialed) and reported to the Facilities Management Department for immediate correction.

EXAMPLE

I certify (by my initials below) that I completed a tour of my entire assigned area at the following times:							
Time Tour Completed	**Initials**		**Time Tour Completed**	**Initials**		**Time Tour Completed**	**Initials**
1130	JJS		1630	JJS			
1230	JJS		1740	JJS			
1330	JJS						
1430	JJS						
1530	JJS						

Problems noted during fire watch:

1137 Soiled utility room door wedged open, Second Floor, East Wing – wedge removed JJS

(1128) Burned out bulb in EXIT sign, west end of Second Floor – reported to maintenance JJS

(1436) Smoke barrier doors in stairwell held open with chairs – chairs removed JJS

(1656) Egress corridor blocked with construction materials – notified project manager JJS

Building	Builidng Mgr	Builidng Mgr
Creek Lodge	Greg Black	Thomas Waltz
Biemesderfer	Jennifer Hart	Pietra Jamison
Bishop Service Building	Greg Black	Thomas Waltz
Boyer Computer Building	George Ciarrocchi	Josh Hartcraft
Breidenstine Hall	Kate Kinney	Shauna Frischkorn
Brooks Hall	Greg Black	Thomas Waltz
Brossman Hall	Susan Troop	Lynn Marquez
Luek Hall	Keisha Patterson	Debra Vredenburg
Caputo Hall	Marianne Frantz	Lynnea Holler
Carpenter Trout Athletic Facility	Peg Kauffman	Miles Gallagher
Chryst Hall	Megan Murphy	Micheal Houlahan
Dilworth Building	Randy Coder	Andrea Hauri
Dutcher Hall	Alison Peoples	Adam Boyer
Gerhart Hall	Marlene Arnold	Gwen Phillips
Gordinier Hall	Dawn Landis	Ed Nase
Hash Building/Bassler Hall	Kim Guasco	Lowery Woodall
Jefferson Hall	Donna Bazow	Peg Kauffman
Lyle Hall	Emi Alvarez Jim Delle	Ana Lehneis Melissa Tineo
McComsey Hall	Jennifer Lefever	Lori Read
McNairy Library	Andy Welaish	Barbara Johnson
Lombardo Welcome Center	Donna Bouaziz	Katy Charles
Osburn Hall	Beth Colvin	Len Litowitz
Palmer Building	Greg Black	Thomas Waltz
Prince St Garage	Greg Black	Thomas Waltz
Pucillo Garage	Greg Black	Thomas Waltz
Pucillo Gym	Kelly Erb	Dan Keefer
Roddy Science Center	Marianne Frantz	Lynnea Holler
Stayer Hall	Kelly Davis	Lara Willox
Student Memorial Center	John Hearn	
Ware Center	Brian Fetterhoff	Nathan Cottrel
Bard Hall	Steve Knepp	Scott Helfrich
Lehigh Hall	Steve Knepp	Scott Helfrich
East Village	Steve Knepp	Scott Helfrich
West Village	Steve Knepp	Scott Helfrich
South Village	Steve Knepp	Scott Helfrich
Wickersham Hall	Linda Mellinger	Janet White
Winter Center	Jay Miller	Nathan Cottrel
Witmer Infirmary	Randi Gordner	Ana Hess
Berks House	Mindy Lefever	Kayla Rankin
Blair House	Dave Schober	Doug Stettenbauer
Cambria House	Mindy Lefever	Kayla Rankin
Chester House	Sabrina Fritz	Darlene Newman
Columbia House	Allan Rivard	Benjamin Flanders
Cumberland House	Sabrina Fritz	Margaret Thorwart
Dauphin House	NA	NA
Delaware House	NA	NA
Duncan Alumni House	Cindy Darin	Elizabeth Young
Franklin House	Elizabeth Thyrum	Vacant
Fulton House	Lianna Souza	Richard Glenn
Huntingdon House	Melissa Wardwell	Patty Taggart
Juniata House	NA	NA
Lancaster House	Randi Howard	Sepi Yalda
Lebanon House	Pete Anders	Howie Bauman
Mercer House	Alison Sehl	Yvonne DeBlois
Mifflin House	David Baird	Stephanie Squires
Montgomery House	NA	NA
Montour House	NA	NA
Newman House	Tom Richardson	Vacant
Nichols House	NA	NA

Appendix F: Building Occupant and Manager List

Northampton House	NA	NA
Northumberland House	Jon Shehan	Donna Bazow
Perry House	NA	NA
Philadelphia House	NA	NA
Pike House	David Baird	Stephanie Squires
Potter House	Vacant	
Schuylkill House	Kim Martin	
Somerset House		
Susquehanna House	NA	NA
Tanger House	NA	Nathan Cottrel
Washington House	Virginia Brooks	Carols Wiley
York House	Megan Murphy	Micheal Houlahan

Appendix F: Building Occupant and Manager List