

Document Fire System Impairment Policy	Published 7/21/2023	Valid for Wisconsin Rapids
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Purpose

The fire system impairment policy is in place to establish procedures to be followed whenever a fire protection system or equipment is taken out of service (impairment) for maintenance, repairs, additions, or alterations. These procedures will insure that all systems are returned to a fully operational status as soon as practical, work is completed in a timely manner, and appropriate precautions taken to minimize the potential for significant property damage or serious injuries.

Execution

A. General Practice

1. All fire protection system water control valves that are locked will be under the exclusive control the Safety Department, Area Manager, and the Team Leaders as directed by the safety team.
2. Fire protection impairments will be corrected on a priority basis.
3. Whenever possible, plan fire protection system and equipment impairments in advance to allow appropriate planning and alternative options to be evaluated. The following must be done to minimize the duration and extent of an impairment:
 - Ensure pre-approval of piping or system modifications with approval by Health and Safety, and FM Global
 - Planned work done during non-operating periods, if possible
 - Shut down hazardous operations (i.e. hot work)
 - Reduce area of impaired protection by alternate arrangements
 - Ensure that required equipment, materials and personnel are available prior to taking a system out of service
 - Pre-fabricate replacement/repair materials, to the extent possible



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4. Team Leaders, Area Manager, and the Safety Department will evaluate the need for impairment and assist in determining the precautions needed for temporary protection, such as, but not limited to:
 - Supplemental water supplies (hose streams charged)
 - Additional fire extinguishers
 - Additional fire prevention practices
 - Staging mobile equipment
 - Additional operator/Team Leader rounds
 - Relocation of combustibles
5. All efforts will be made to restore protection during the shift that the impairment is initiated.
6. Only hot work that is absolutely necessary will be allowed until the system is restored. This work will be treated as a high hazard area with additional extinguishers or charged hose lines available.

B. Planned Fire System Impairment Procedures

1. Water Supply Valves
 - Planned impairments to fire system water supply valves will be managed according to the procedures found in Attachment A, with the safety department and area managers having primary responsibility for compliance.
 - Operations, maintenance, and contract personnel will adhere and follow the procedures in Attachment A, including support and interaction with Process Safety Coordinator to assure proper management of impairments.
2. Other Than Water Supply Valves
 - Impairments to other fire protection equipment will be managed per the procedures outlined in Attachment A although all steps listed may not apply. A Red Tag Permit will be completed at minimum; discussion will occur between the Team Leaders and affected areas, FM Global will be notified, precautions taken, and actions documented.



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C. Emergency Impairments

1. Team Leaders, Area Managers, or the Safety Department have the authority to isolate or shut down a fire protection system to limit damage when an emergency situation exists. Notification and communication to operations, maintenance and FM Global will occur after action has been taken.
2. Restoration of protection will be according to procedures outlined in Attachment A.

D. Lockout and Line Breaking Considerations

1. The Red Tag Permit System used is the Wisconsin Rapids facility recognized zero energy state (ZES) control (as part of the impairment procedure). A tagout process is used in lieu of placing individual or group locks on a closed fire protection water supply valve. The Red Tag Permit System also serves as the control for line breaking practices that occur during fire system repair and maintenance. See Attachment B.
2. The use of red tags for lockout is limited to specific situations, as follows:
 - The line breaking work that is being conducted occurs on piping, valves or other related components located downstream of the red tagged valve, and
 - No backup or secondary fire protection system is provided
3. The red tag permit is not an acceptable form of energy isolation for other fire protection apparatus/energy sources, such as isolation of an electric motor on an electric fire pump or rebuild of a fire pump when a second pump is available.
4. The Wisconsin Rapids Facility Line Breaking Permit does not apply to fire system line breaking. Verification of energy isolation is achieved by drainage and visual verification (gauges, flow) of pressure release. Other aspects of the mill line breaking policy will be adhered to.
5. Clarifications for lockout and line breaking practices not identified here should be referred to the safety department.

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E. Record Retention

1. All completed impairment tags and documentation must be retained for insurance company engineer review.
2. Documentation will be maintained by the safety department.

Responsibility

- A. The safety department is responsible for fire system control and managing fire protection impairments, implementation and distribution of the Red Tag system, recordkeeping, and notification of impairments to both our insurer and area management.
- B. Operating departments are responsible for assuring that appropriate precautions are taken in the event that a sprinkler system or other fire protection system is impaired in their area.
- C. Maintenance, engineers, and contractors are responsible for assuring that prior planning is conducted before requesting any isolation of a fire protection system during non-emergency conditions. This includes reviewing the work in advance with Operations and the safety department.
- D. Operations and maintenance departments are responsible for providing appropriate resources to ensure that fire systems are restored to full service as soon as practical when an impairment occurs.
- E. The safety department has overall responsibility for managing and directing impairments on the fire protection systems.



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**Attachment A
Fire Protection Impairment Procedures**

System or Valve Closure: Contact Process Safety Coordinator and Team Leader when a fire system valve is requested to be closed. Team Leader will do the following:

1. Prepare a Red Tag Permit with the appropriate system, location, and personnel information (Attachment B)
2. Contact the Area Manager and/or Maintenance Manager to review current area status (especially any hot work permits issued) and discuss precaution measures. If a hot work permit has been issued, make sure that hot work is discontinued, unless emergency conditions warrant.
3. Contact the individual/supervisor who will be conducting work on the fire system or equipment to be taken out of service. Team Leader, Safety, and the area manager overseeing the work must meet at the control valve location when the closure occurs.
4. Unlock the system and close the valve. Count the number of turns to close the valve, and document by contacting the Plant Protection office. Do not lock the valve closed.
5. Open drain(s) or hydrants on system and verify that pressure has been isolated.
6. Attach the fire protection "OUT OF SERVICE TAG" (Page 3 of Red Tag) on the valve that was closed. Discussion with all parties involved in the closure and work being performed must occur so that responsibilities for immediate notification, plans in the event of an emergency, tagging as a means to lock out, and notification upon completion of work are clearly stated.
7. Notify the Area Manager and/or Maintenance Manager as to the system closure and remind them of the following:
 - Hot work not allowed unless previously authorized or emergency dictates
 - Additional rounds/awareness for fire watch
 - No smoking policy
8. Notify FM Global Insurance by phone (800) 411-3929 as to the system closure. Be prepared to give the following information:
 - FM Global Index No. 62364.03
 - Building involved
 - System number
 - Approximate length of time that system to be down
 - Reason for closure

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Reopening Valve/Restore to Service: Contact Team Leader, Area Manager, and the Safety Department immediately after work is completed and the valve is ready to be opened. They will do the following:

1. Verify that all system piping and components are in place.
2. Close any drains or hydrants as needed to allow system to be returned to service.
3. Reopen the valve, counting the number of turns to reopen and call in to main gate, asking for verification.
4. Place fire protection chain and lock on valve, locking it in the OPEN position
5. Conduct 2 in. main drain test to verify valve position
6. Remove the fire protection "OUT OF SERVICE TAG" (page 3) on the valve that was closed and return it to the Team Leader or Area Manager for completion, then to the Safety Department.
7. Notify the Area Manager and/or Maintenance Manager as to the system status.
8. Notify FM Global Insurance by phone (800) 411-3929 as to the system status. Be prepared to give the following information:
 - FM Global Index No. 62364.03
 - Building involved
 - System Number and that the system has restored and is locked in the open position.
9. Remove Red Tag (page 2) from fire protection status board, complete the tag and give to the Safety Department.



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FIRE PROTECTION OUT OF SERVICE

CONTROL NUMBER 1578377	INDEX NUMBER
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PRECAUTIONS TAKEN (CHECK AS APPROPRIATE)

<input type="checkbox"/> Emergency Organization Notified	<input type="checkbox"/> Continuous Work Authorized
<input type="checkbox"/> Public Fire Department Notified	<input type="checkbox"/> Ongoing Patrol of Area
<input type="checkbox"/> Hazardous Operations Stopped	<input type="checkbox"/> Hydrant Connected to Sprinkler Riser
<input type="checkbox"/> Hot Work Prohibited	<input type="checkbox"/> Pipe Plugs on Hand
<input type="checkbox"/> Smoking Restricted	<input type="checkbox"/> Fire Hose Laid Out
<input type="checkbox"/> Other _____	

CHECK IF	SPRINKLER VALVE LOCATION/NUMBER
<input type="checkbox"/> SPRINKLER	
<input type="checkbox"/> FIRE PUMP	
<input type="checkbox"/> CO ₂	AREA PROTECTED
<input type="checkbox"/> HALON	
<input type="checkbox"/> OTHER	

REASON FOR IMPAIRMENT

PLANNED DATE/TIME TO BE CLOSED	ACTUAL DATE/TIME CLOSED
PLANNED DATE/TIME TO BE OPEN	ACTUAL DATE/TIME OPEN

NO. OF TURNS TO CLOSE	NO. TURNS TO OPEN	2 in. DRAIN TEST PERFORMED <input type="checkbox"/> YES <input type="checkbox"/> NO
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NAME/TITLE OF RESPONSIBLE PERSON (PRINT)

AUTHORIZED BY (Signature)	FIRE PROTECTION EQUIPMENT OPERATOR (Signature)
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PART 3 INSTRUCTIONS


Fire Protection Equipment Operator: Write the date, time and number of turns needed to close the sprinkler control valve and fasten the Red Tag to the shut valve.

When the impairment is over reopen the valve.

Perform a 2 in. drain test. Write the reopening information on this Red Tag and return it to the Firesafety Supervisor.

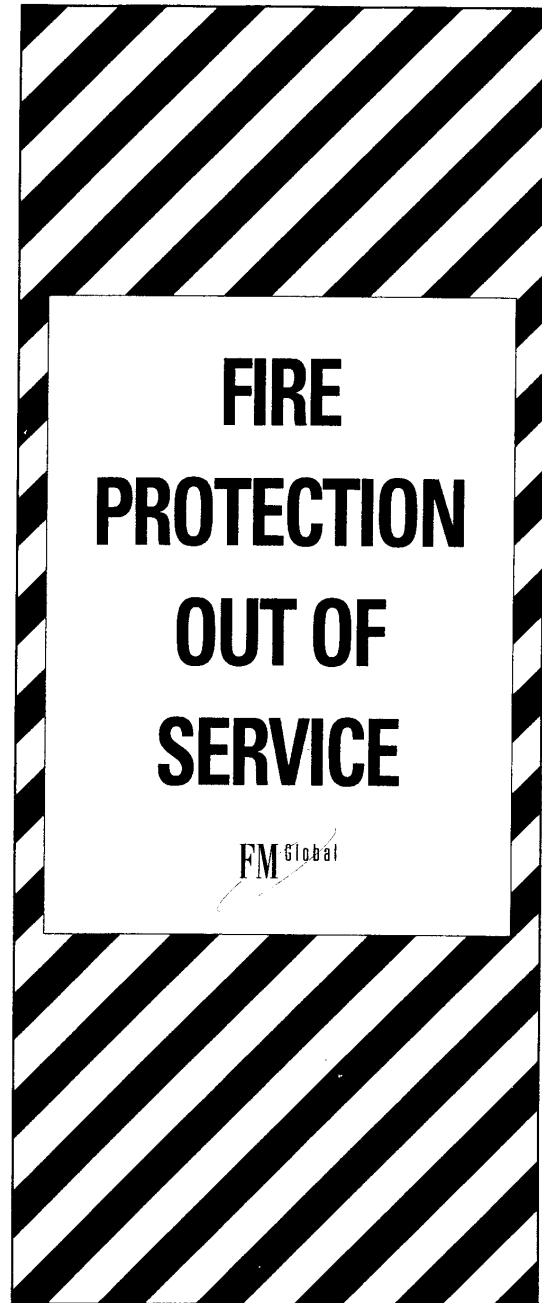
If equipment is other than sprinklers, return equipment to automatic service when the impairment is over.

Firesafety Supervisor: Retain this copy in your Wall Kit or other permanent file when impairment is over.



RED TAG PERMIT

Part 3 of 3



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