Fire Alarm and Special Hazard Fire Suppression System Impairment Procedures

In some instances, zones of a fire alarm system, specific fire alarm devices, special hazard systems (i.e. FM-200, Inergen, Halon, Wet Chemical, Dry Chemical, water based fire suppression system requiring a local panel to discharge, etc.) must be impaired or taken out of service. These include fire alarm and special hazard system extensions or changes, inadvertent disconnection caused by demolition processes or accidents, and replacement of fire alarm devices and system components either scheduled or unscheduled. Whenever fire alarm or special hazard systems are out of service for any reason, a fire protection emergency exists, and specific impairment procedures are to be followed. **Only SI staff may be authorized to disable any portions of a fire alarm or special hazard fire suppression system.** To ensure that complete precautionary measures are taken the following procedures are to be followed:

1. Fill out the SI Fire Alarm and Special Hazard Fire Suppression System Impairment Permit (Attachment 7), and present it to the Building Manager. Note that for pre-Action and deluge systems, the water based fire system impairment procedures are also to be followed. Indicate which fire alarm device(s) or zone(s) will be impaired, and when, why and for how long the fire protection system will be out of service, and what portion(s) of the building will be without service. Also state what precautions are being taken. This information will enable the building manager to advise on the best measures to minimize the hazard, and isolate the smallest area for the shortest time. [The Building Manager will immediately call the building security office, pertinent SI curatorial staff, and transmit an Outlook e-mail to the “Fire Alarm and Special Hazard Fire Suppression System Impairment” list and the FM Zone Manager, providing them with the information outlined above. The security office is to immediately notify the building control room operator.]

2. After receiving a go-ahead from the Building Manager, fasten a copy of the impairment form to each affected fire alarm panel(s) and special hazard fire suppression cylinder(s). This serves as a reminder that there are impaired fire alarm and suppression system components and should clearly indicate the zone or device impaired. **Both the Building Manager and the OPS Control Room are to keep a written record of the impaired fire alarm and/or special hazard fire suppression devices or zones, its exact location, the date and time it was impaired, the time it is expected to be placed back in service, and the time it was returned to service.**

3. Have everything ready before impairing the fire alarm and/or special hazard system. Workers, materials and tools should all be at hand. Plan the work.

   a.) For special hazard fire suppression system impairments, disconnect the trigger solenoid or other trigger mechanism to avoid an inadvertent system discharge.
b.) For fire alarm impairments, keep as much of the fire alarm system in service by isolating the impairment to a fire alarm device or a single zone, where possible. Ensure an alternate evacuation means is in place should fire alarm notification devices for certain areas of the building be affected by the impairment.

4. Work without interruption until completion. In no case may an entire fire alarm zone, devices, or special hazard fire suppression system remain impaired overnight without special permission from the Building Manager.

5. If possible, schedule work during idle periods when fewer ignition hazards are present.

6. The Building Manager is to ensure all hazardous processes in the affected area(s) are shut down unless sprinklers are fully functional in the area(s) affected by the system impairment. Otherwise, all ignition sources, such as cutting and welding, should be stopped.

7. OPS is to assign security officers to perform fire watch duties (see part C.4 of Chapter 36, “Fire Protection”, of this Manual) where protection is out of service when the area is not normally occupied.

8. When work is completed:
   a) Contact the OFMR Life Safety Systems Branch to witness in-service testing.
   b) Perform functional alarm and trouble tests on the newly installed devices. Ensure fire alarm signals are received at the main fire alarm control panel (Security Control Room and Fire Command Center). Ensure all trouble conditions are properly corrected and addressable system programming returned to normal state prior to the impairment.
   c) For special hazard systems, verify that the approved sequence of operation is in effect and the system is properly functioning.

9. Telephone the Building Manager when the fire alarm device(s), zone(s), and/or special hazard fire suppression systems have been returned to service and the impairment tag(s) on the fire alarm panel(s) and/or agent cylinders removed. The Building Manager will immediately call the building security office (who will in turn alert the control room operator), and transmit an Outlook e-mail “Fire Alarm and/or Special Hazard Fire Suppression System Restored” e-mail to the “Fire Alarm and Special Hazard Fire Suppression System Impairment” list, SI curator, and the FM Zone Manager, confirming that the in-service testing has been conducted in the presence of the OFMR Life Safety Systems Branch staff and that all previously impaired fire alarm devices, zones, and/or special hazard fire suppression system have been returned to a fully functional state.