



01 May, 2021

Small Boat Program Inspection Bulletin 02-2021

Fire detection systems aboard vessels with overnight berthing

1. All NOAA vessels 300GT and less with overnight berthing shall comply with this notice no later than 01 May, 2024.
2. Vessels currently in compliance with NOAA Small Boat Standards and Procedures Manual (SBSPM) 4.1 edition will be allowed to continue to operate with existing fire detection systems as long as they are maintained and documented.

Background:

1. Small Boat Program Bulletin 01-2021 (Lookout and Roving Watch Requirements) 01 May, 2021 has directed all vessels with overnight berthing to have smoke detection systems that provide an audible alarm in all berthing and common spaces. This bulletin provides technical information for compliance with that directive.
2. Currently, NOAA small boat fire detection systems fall into to two categories:
 - a. Independent modular smoke detection and alarm unit meeting UL 217 requirements. These are individual smoke detectors that do not communicate with a central panel and are commonly found in your home.
 - b. A centrally monitored and alarmed panel at the operator's station connected to individual smoke and heat detectors located throughout the vessel. Some vessels may have a combination of both of these type's of systems.
3. Rule changes being proposed by the U.S. Coast Guard and on the National Transportation Safety Board's "most wanted list" will require a centrally monitored fire detection system. This system will require a centrally mounted control and alarm panel on all vessels with overnight berthing. In addition, alarms must sound simultaneously in all accommodation spaces when a single detector alerts. Also, heat detectors must be installed and monitored by this panel in all machinery spaces. This will be separate from fixed gas extinguishing systems that alarm only upon discharge.
 - a. Accommodation spaces for the purposes of this notice shall be pilothouse/bridge, messdecks, galleys (including any space with a microwave oven), berthing areas, interior lab spaces.
 - b. Machinery spaces are any interior space of the vessel with an internal combustion engine or oil fired boiler or any space with a tank containing gasoline.

Action:

1. Vessels shall install or modify existing fire detection systems to include all elements listed below:
 - a. The fire detection and alarm system shall be in operation at all times that the vessel is in service.
 - b. The fire detection and alarm system must control and monitor input signals for all connected detectors and manual pull stations or call points.
 - c. Detectors fitted throughout the vessel must also emit, or cause to be emitted, an audible alarm within the space when activated and throughout all berthing and accommodation spaces when activated.
 - d. The fire detection and alarm system must be so arranged and installed that the presence of a fire in any of the protected spaces will be automatically registered visibly and audibly in the pilothouse. The visible notice must indicate the location or zone in which the alarm originated.
 - e. Means to manually acknowledge all alarm and fault signals must be provided at the control panel. The audible alarm on the control panel may be manually silenced. The control panel must clearly distinguish between normal, alarm, and fault conditions.
 - f. The activation of any detector or manual pull station must cause an audible and visual fire detection alarm signal at the control panel.
 - g. A fire detection and alarm system must automatically reset to a normal operating condition after alarm and fault situations are cleared.
 - h. In fire detection and alarm systems with addressable detectors and manual alarm stations, the initiation of the first fire detector and resulting alarm must not prevent any other detector from responding.
 - i. Fire detection and alarm systems may output signals to other fire safety systems including, but not limited to, paging systems, fire alarm or public address systems, fan stops, fire doors, fire dampers, sprinkler systems, smoke extraction systems, low-location lighting systems, fixed local application fire extinguishing systems, and closed-circuit television systems.
 - j. Fire detection and alarm systems may accept signals from other safety systems. For example, a signal initiated from actuation of a machinery space fixed gas extinguishing system may be sent to a fire detection and alarm system.
 - k. Detectors must be responsive to heat, smoke, or other products of combustion, flame, or any combination of these factors. Detectors responsive to other unsafe conditions such as Carbon Monoxide may be used and incorporated into the fire detection and alarm system.
 - l. Detectors must be capable of being triggered or tested and restored to service without the replacement of any component.
 - m. Audible alarms must generate sound pressure levels as set forth in 46 CFR 161.002 and must be at least 75 dBA as measured at the sleeping position in cabins.
 - n. Be at least 10 dBA above ambient noise levels existing during normal operation with the ship under way in moderate weather when measured at a point 5 feet (1.5 meters) above the finished floor and at least 3 feet (1 meter) from the source and not exceed 120 dBA.

2. Although no longer required, vessels may retain independent modular smoke detection and alarm units installed throughout the vessel in conjunction with a centrally monitored system provided they are maintained and documented.
3. If vessels retain independent modular smoke detection systems they will not be allowed to substitute for non-functioning centrally monitored fire detection systems under any circumstances.
4. VOC's are strongly encouraged to contact the SBP Inspection Coordinator or Engineering Coordinator prior to the purchase or soliciting of installation contracts to ensure compliance with the requirements listed above. The SBP will make every effort to assist with specifications and contract language to prevent excessive cost and unneeded components.

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