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**United States Coast Guard**

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NVIC 7 02

# NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 7 02

Subj: MARINE SAFETY AT FIREWORKS DISPLAYS

Ref: (a) Title 33, Code of Federal Regulations (CFR), Part 100
(b) Title 33, Code of Federal Regulations (CFR), Part 160
(c) National Fire Protection Association (NFPA) 1123, Code for Fireworks Display
(d) COMDTINST 3120.14, Incident Command System

1. PURPOSE. This Navigational and Vessel Inspection Circular (NVIC) sets forth recommended guidelines for outdoor fireworks displays on board vessels and floating platforms on navigable waters of the United States.

2. DIRECTIVES AFFECTED. None.

3. BACKGROUND.

   a. There have been several serious accidents relating to fireworks displays being discharged from barges. The worst accident occurred in Alton, Illinois on 4 July 1997, in which three people were killed. The combination of accidents and of increasing number of shows has raised numerous issues on the safe conduct of these displays particularly in relationship to floating platforms, vessels, and shows over waterways.

   b. The event sponsor is responsible for overall safety of a marine fireworks display. Local authorities will also be involved. The Coast Guard has the authority to impose appropriate controls on marine events that may pose a threat to persons, vessels and facilities under its jurisdiction (refs. (a) and (b)). Each Coast Guard District Commander has delegated this authority to the Group Commanders or Captains of the Port (COTP)

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under their command. In order to ensure appropriate controls are addressed, the Coast Guard Issuing Authority issues marine event permits. The approval of these permits results from a joint effort among the event organizer, local authorities and the Coast Guard Issuing Authority.

c. This NVIC provides guidance on safety for marine fireworks displays based on the current CFRs, NFPA codes, and accident report findings. Fireworks displays are not directly addressed in the CFR; therefore COTPs, as or in cooperation with Coast Guard Issuing Authorities, have been applying the requirements for hazardous explosive materials and dangerous cargoes to these displays. Another source of guidance has been NFPA 1123 (ref. (c)), which has been recently revised to include a chapter on fireworks displays for vessels and floating platforms. Additionally, issues have arisen as a result of recent accidents.

4. DISCUSSION. The intent of this NVIC is to establish guidance on outdoor fireworks displays from vessels and floating platforms on navigable waters of the United States. The fireworks displays should meet the requirements of NFPA 1123, Code for Fireworks Display. The appendices C, D and F should be strongly considered as recommendations as opposed to reference documentation. In addition, the following guidelines are recommended:

a. The Coast Guard Issuing Authority issues permits for marine events upon approval of an application from the event sponsor. The COTP, as or in cooperation with the Coast Guard Issuing Authority, should ensure the safe conduct of the fireworks display through coordination with the event sponsor, the fireworks operator, the fire department, the police department, the Authority Having Jurisdiction (AHJ), the Federal Aviation Administration (FAA), and any other appropriate groups. Worker safety falls under the responsibility of the U.S. Department of Labor (OSHA). As a courtesy, the organizer should notify the Occupational Safety and Health Administration (OSHA) of the fireworks event.

(1) The definition of "Authority Having Jurisdiction (AHJ)" is per NFPA 1123 which states, "The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure."

(2) The definition of "Coast Guard Issuing Authority" applies only to the party who is responsible for issuing the Coast Guard permit applicable to the referred section, such as the District Commander, Group Commander or Captain of the Port.

b. The fireworks operator should provide a copy of the fireworks permit issued by the AHJ to the Coast Guard Issuing Authority.

c. The Coast Guard Issuing Authority, whether Group Commander or COTP, has the authority to supervise and control the transportation, handling, loading, discharging, stowage, or storage of hazardous materials on board vessels.

d. The Coast Guard Issuing Authority may direct that barges, or other vessels unfamiliar to the Coast Guard, be examined prior to being used for fireworks displays. The examination is intended to determine that the vessel is safe for the purpose, and that the guidance in this NVIC will be followed, as appropriate.

e. If the local or state jurisdiction requires the fireworks operator to have a license, then the operator should have a current and valid license. The Coast Guard does not license fireworks operators.

f. The fireworks operator should have training and experience in arranging and inspecting fireworks discharge equipment. The operator should be an employee of a company in the business of public display of fireworks. If not licensed, the operator should provide documentation of successfully completing a fireworks course taught by a competent public or private authority. The operator shall provide documentation of having participated in the setup and inspection of a minimum of one public display within the past twenty-four months.

g. A copy of the site plan should be given to the Coast Guard Issuing Authority. Site plans are described in NFPA 1123, 3.1.2.

h. The fireworks operator should submit a safety plan for the fireworks display to the Coast Guard Issuing Authority and fire officials responsible for fire protection, fire fighting and enforcement of fire prevention laws. This safety plan should include emergency procedures including at a minimum the items in NFPA 1123, Appendix F.6.4. It is recommended that a standby towing vessel be available to provide assistance in case of an emergency. The emergency procedures should address but are not limited to the evacuation of the crew, the location of the towing vessel, and a refuge area for emergency personnel access.

i. There should be a command center for the event before, during, and after the fireworks show. Coast Guard personnel may or may not be present in the command center, depending upon the safety and security implications of the event. The command center should be located and equipped to allow constant monitoring and an unobstructed view of the entire display site, including the fallout area. The command center should be capable of initiating and directing the response of perimeter security and rescue vessels as needed. The Coast Guard Issuing Authority will consider establishment of safety zones, and/or implementation of the Incident Command System (ref. (d)) for displays that are very large, or have special safety or security implications.

j. Dump scows with wall heights exceeding 1.2 m (4 ft.) high should not be used for fireworks displays since they increase the difficulty of exiting the vessel.

k. Even though NFPA 1123, Section A.4.3.4, allows the use of wooden vessels for fireworks displays, their use in marine fireworks displays is strongly discouraged.

l. Vessels used for fireworks displays should have man overboard handholds or ladders on the bow, stern, and each side with the distance between ladders not to exceed 30 m (100 ft.).

m. Firing of shells should not occur when, in the opinion of the AHJ, conditions such as high seas or rapid water current pose a potential safety hazard to the operator and assistants.

n. Personal flotation devices (PFD) should be Type I to keep the head of an unconscious wearer out of the water. PFDs should be equipped with retro-reflective material and a lifejacket light. If the lifejacket light is not an automatic water-activated type, the light should be turned on during the entire show. If operators find Type I PFDs to be unacceptably restrictive, the use of Coast Guard approved automatic inflatable PFDs should be considered.

o. Each vessel and floating platform should have at least one approved ring life buoy with a lifeline 30 m (100 ft.) or more in length. All lifesaving equipment designed to be thrown into the water should be immediately available and in serviceable condition.

p. The rescue boat (emergency response watercraft) should be provided with a communications system capable of conversing with the operator and the command center. The rescue boat should not be inflatable, and should be capable of withstanding brief exposure to hot embers. The rescue boat and crew shall be positioned at a safe location in the vicinity of the display area.

q. No welding or hot work is permitted while fireworks are aboard the floating vessel or floating platform.

5. IMPLEMENTATION. Coast Guard COTPs and Group Commanders are requested to publicize NFPA 1123 and this NVIC to fireworks contractors, local government authorities, police and fire officials within their zones, and to use this guidance in their oversight of marine events, planning and enforcement of waterway management safety during events involving fireworks displays.

PAUL J. PLUTA
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Assistant Commandant for Marine Safety, Security
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