How Would Marine Operations Respond to Such an Event?

By Battalion Chief Joseph Abbamonte

The Port of New York/New Jersey is the largest port on the eastern seaboard and the third largest port in the United States. More than 135 million tons of cargo, worth roughly $166 billion, passes underneath the Verrazano Narrows Bridge and into the metropolitan area each year. Approximately 7,000 ships transport this cargo. Cargo may include a variety of hazardous materials, such as explosives, flammables, corrosives, oxidizers and poisons.

Additionally, an increasing number of vessels operating within the Port of New York/New Jersey are utilizing and/or transporting emerging fuels, which include Bakken crude oil, Liquefied Natural Gas (LNG), hydrogen fuel cells, solar and other technologies. As emission standards continue to become stricter and fuel costs increasingly affect the maritime industry, FDNY members can expect an increasing share of Port traffic to be powered by and/or transporting emerging fuels.

Should a large-scale, maritime incident occur, under the U.S. Coast Guard's Contingency Plan, FDNY Marine Operations may be called upon to respond anywhere within the Port of New York/New Jersey, up to the Port of Albany and all throughout Long Island Sound. Within the Port itself, there are more than 150 pieces of critical infrastructure, such as intermodal cargo ports, oil refineries, bridges, tunnels, power plants and LNG peak-shaving facilities, as well as many areas of national significance. During the past decade, FDNY Marine units have both responded to and operated at multiple incidents, both inside and outside the Port of New York/New Jersey and established their value as regional assets.

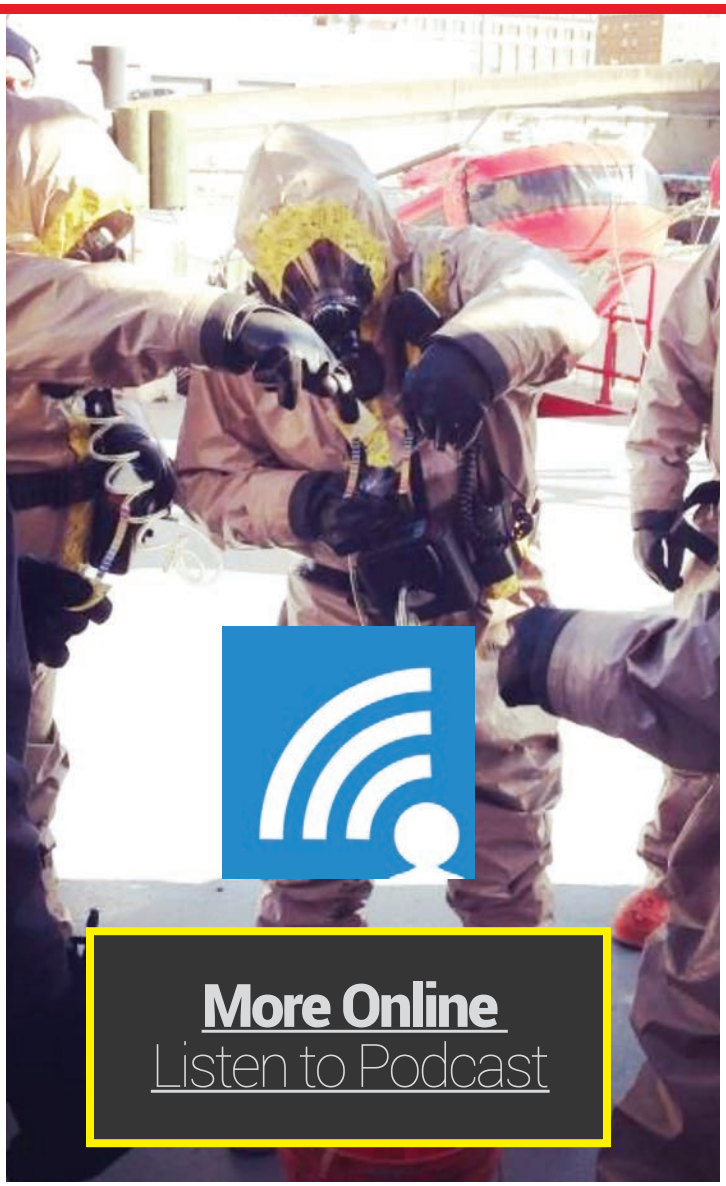
In order to reach this status, FDNY Marine Operations developed a strategy and capability to address all potential hazards in the maritime domain, whether they occur naturally or are manmade. An accident or terrorist attack that involves a spill or release of hydrocarbons, LNG or other chemicals into the Port could lead to dangerous fires, explosions and contamination hazards that threaten life safety, critical infrastructure and regional economics.

The ability to respond to these incidents in order to control the scene, mitigate the hazard and protect life and property, therefore, is dependent upon a tiered response that Marine Operations employs. This tiered response is a system of layered resources, where each ascending layer contains a higher level of specialized response capability than the preceding platform. This enables the Department to quickly deploy a scaled mix of specialty units that are dictated by the complexity of the maritime incident. The FDNY's fleet of fireboats are, therefore, a combination of large and powerful platforms to manage and mitigate large-scale events or disasters; mid-size platforms--which provide a mix of both speed and power; and smaller, fast and agile fireboats that facilitate rapid water rescue and quick water application.

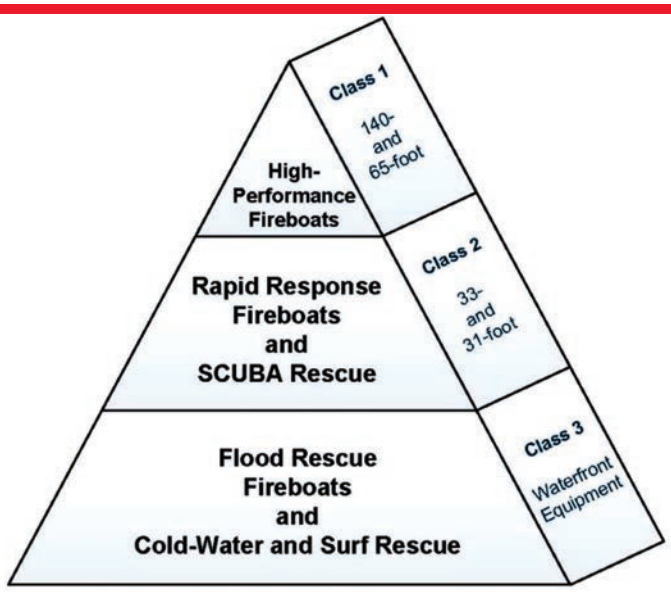
Responding to large-scale incidents involving hazardous materials or flammable liquids, however, requires specialized training, equipment and protective gear in order to safely enter and operate in these contaminated environments. FDNY Marine Operations, along with other specialized, land-based Haz-Mat and Rescue units, offer unique capabilities to mitigate these threats.

The high-performance vessels manned by Marine Companies 1, 6 and 9 all have chemical/biological/radiological/nuclear (CBRN) protective systems that allow units to operate in these contaminated areas. Except for Marine's SCUBA and medical boats, all FDNY Marine assets also are capable of delivering Universal Gold ARAFFF foam. The fireboats, *Three Forty Three* and *Fire Fighter II,* each carry 3,300 gallons of foam onboard, with the ability to carry an additional 1,650 gallons in portable totes on the deck. The FDNY and Marine Operations also have agreements with our Port partners in New Jersey to resupply this highly effective foam concentrate in the event of a large-scale, extended incident. Our mid-size platforms also carry 100 pounds of Purple K dry chemical agent to effect a quick knockdown on certain kinds of fires.

Marine, Haz-Mat and Rescue Operations personnel and the U.S. Coast Guard's Atlantic Strike Team conducted a joint training drill on SUNY Maritime's Training Ship, Empire State.



Marine Haz-Mat Technician training onboard the Three Forty Three.



Marine Operations' *Tiered Response System*

Most container ships carry some kind of hazardous materials. If a fire occurred on one of these ships, there would be a significant possibility of a chemical release.

Despite this robust, task-organized capability, Marine Operations units often find themselves operating alone and unassisted for extended periods of time. Therefore, in order to effectively operate in a safe manner, Marine Operations personnel also have received extensive training in shipboard firefighting, advanced seamanship, damage control techniques, water-borne search and rescue and hazardous materials.

The Marine Hazardous Materials Technician Course was developed by both Marine and Haz-Mat Operations to prepare Marine Operations personnel to rapidly identify and begin taking actions to stabilize an incident involving hazardous materials in the marine environment. The Marine Haz-Mat Technician course includes elements from Haz-Mat Operations Technician I and II courses, newly developed Marine-specific areas of instruction and meets the training requirements of OSHA 1910.120 for Hazardous Materials Technicians. Some Marine Haz-Mat Technician responsibilities include size-up, hazard and environmental impact assessment, communications, atmospheric monitoring, incident stabilization, protection of life and property and decontamination.

FDNY Marine Operations is committed to providing the Port of New York/New Jersey with critical life safety protection, all-hazard emergency response and marine-based firefighting resources.

With an influx of hazardous materials entering the Port of New York/New Jersey, along with the transportation and/or utilization of emerging fuels, FDNY's level of preparedness is enhanced significantly with the tiered response that Marine Operations employs, along with the specialized training in Marine Hazardous Materials. Moreover, the FDNY will continue its maritime mission response capability by adapting to any changes in the threat environment, reinforcing our core competencies and maintaining a steady state of operational readiness. ■

About the Author:

Battalion Chief Joseph Abbamonte has served the FDNY since 1995. He is assigned to the Marine Battalion. Prior assignments include Battalion 27 and the Haz-Mat Battalion. Holds a BA degree from SUNY, Old Westbury, and a 100-gross ton, Near Coastal Masters License from the USCG. This is his second article for *WNYF*.