



REASSESSMENT OF THE RESPONSE TO MARINE SAFETY RECOMMENDATION M08-02

Preparation before abandoning a vessel

Background

At 2000 on 21 March 2006, the passenger and vehicle ferry *Queen of the North* departed Prince Rupert, British Columbia, for Port Hardy, British Columbia. On board were 59 passengers and 42 crew members. After entering Wright Sound from Grenville Channel, the vessel struck the northeast side of Gil Island at approximately 0021 on March 22. The vessel sustained extensive damage to its hull, lost its propulsion, and drifted for about 1 hour and 17 minutes before it sank in 430 m of water. Passengers and crew abandoned the vessel before it sank. Two passengers were unaccounted for after the abandonment and have since been declared dead.

The Board concluded its investigation and released report M06W0052 on 12 March 2008.

Board Recommendation M08-02 (March 2008)

In this occurrence, crew members on the *Queen of the North* evacuated 57 of 59 passengers in the 30 minutes between the striking and the time senior crew members entered the last survival craft. The vessel was certified to carry up to 474 passengers – a significantly larger number that, given the short timeframe available for the preparatory phase of abandonment, would have compounded the mustering, accounting, and abandonment difficulties identified in this occurrence. Crew training and experience is therefore paramount for passenger safety on vessels, especially where there are high passenger to-crew ratios.

When crews are faced with an actual emergency, the response of those who have received training and practice is more automatic and requires less interpretation and decision making. Failure to reinforce this training with practice and evaluation reduces the benefit of the original training. Given the risks associated with improperly coordinated preparations for evacuating large number of passengers, the Board therefore recommended that:

The Department of Transport establish criteria, including the requirement for realistic exercises, against which operators of passenger vessels can evaluate the preparedness of their crews to effectively manage passengers during an emergency.

Transport Canada's response to Recommendation M08-02 (June 2008)

Transport Canada (TC) indicated agreement with the recommendation. The response referred to the *Marine Personnel Regulations* under the *Canada Shipping Act, 2001*, in which officers and crew of vessels over 500 in gross tonnage and carrying more than 12 passengers on a voyage other than sheltered waters are required to hold a Passenger Safety Management certificate or endorsement. Senior officers and other responsible crew members are also required to hold a Specialized Passenger Safety Management certificate or endorsement. These requirements came into force as of 01 July 2007 and are applicable to the domestic passenger fleet beginning 07 November 2011.

TC states that two mandatory training courses have already been approved. On 03 March 2008, BC Ferries submitted a request to TC to approve training for a Passenger Safety Management course. This course has been evaluated, and approval has been provided as of 21 May 2008.

In further correspondence with TC, it was communicated that the new Passenger Safety Management course covers all elements contained in the IMO Guidelines and the *STCW 95 Convention* and were the basis for TP 13024.¹

Also, TC continues to work with BC Ferries and other Canadian operators to develop emergency drills that could include realistic exercises. All training provided by BC Ferries is based on realistic scenarios. TC continues to monitor BC Ferries and other Canadian operators training for MED and passenger safety training. These courses contain emergency drills that include realistic exercises. However, TC stated the presence of large groups of people to make the exercise more realistic is difficult to arrange for each course.

Following a meeting with TC officials, the proposed amendments to the *Fire and Boat Drill Regulations* were provided. In regards to drills and realistic exercises the regulations will require crew members to be assigned specific duties and procedures in place for locating and rescuing passengers who are trapped in their staterooms or who are otherwise unaccounted for during an emergency. To the extent of drills, the master shall ensure that drills, in so far as is feasible, are carried out as if there were an actual emergency. The regulations state that, for fire drills, crew members shall perform the duties assigned to them in connection with the fire drill, including mustering of passengers, locating and rescuing passengers, if any, who are trapped in their staterooms or who are otherwise unaccounted for.

Board assessment of the response to Recommendation M08-02 (August 2008)

The Board noted in its final report on the *Queen of the North* that Passenger Safety Management courses based on the provisions of the *STCW Code*, for the most part, involved only classroom instruction. In order for the acquired knowledge to be used as a skill, regular exercises and drills need to be conducted so that crews can be confident and prepared to carry out their emergency duties.

The Board had previously expressed concern about the adequacy of passenger safety management training especially since there were no requirements to carry out drills involving crowd-control duties before evacuation. During the investigation of the *Queen of the North* it was

¹ TP 13024 – *Training Standards for Personnel on board Passenger Carrying Vessels*

also discovered that drills did not include the full range of skills necessary to muster and control large numbers of passengers. As a result the Board recommended the need for criteria, against which operators can evaluate the preparedness of their crews to effectively manage passengers during an emergency. Having crew members who are inexperienced in crowd control and passenger mustering increases the risk to passengers when crew members are unable to muster them or locate missing or unaccounted for passengers.

The Board recognizes the positive intent of the proposed Fire and Boat Drill Regulations and TP13024 on passenger safety. The proposed Fire and Boat Drill Regulations will have requirements for:

- drills to be realistic as far as is feasible carried out as if they were the real emergency
- the need for procedures to be in place to locate and rescue passengers and for these procedures to be carried out during drills and;
- crews to perform duties during a drill including mustering of passengers.

If fully implemented, proposed action will substantially reduce the safety deficiency associated with the preparedness of crews to effectively manage passengers during an emergency. Therefore the assessment is considered to be **Satisfactory Intent**.

Next TSB Action (August 2008)

The Board will monitor the progress of the development and implementation of the proposed regulations and will reassess the deficiency on an annual basis or when otherwise warranted.

Transport Canada's response to Recommendation M08-02 (March 2010)

TC's update, dated March 2010, indicated that the *Marine Personnel Regulations* require that officers and crew of vessels of more than 500 gross tonnage and carrying more than 12 passengers on a voyage other than sheltered waters are required to hold a Passenger Safety Management certificate or endorsement. Senior officers and other responsible crew members are also required to hold a Specialized Passenger Safety Management certificate or endorsement.

These requirements came into force as of July 1, 2007 and are applicable in respect of the domestic passenger fleet beginning November 7, 2011. As such, no further update is required at this time.

Board reassessment of the response to Recommendation M08-02 (July 2010)

Further to the requirements for officers and crew members to hold a Specialized Passenger Safety Management certificate or endorsement, the new *Fire and Boat Drills Regulations*, which apply to passenger vessels of more than 15 gross tonnage that carry more than 12 passengers, were published in the *Canada Gazette*, Part II, on May 12, 2010, and are now in effect.

With respect to improving operational preparedness of crews, the new regulations require the master of a vessel to evaluate the entire crew during each drill to ensure they are competent and ready to perform the required emergency procedures. It is now required that the muster list duties include the locating and rescuing passengers who are trapped in their cabins or are otherwise unaccounted for, and controlling the movements of passengers to their muster

stations. Muster lists must also contain descriptions of the specific duties assigned to each crew member to be performed when an emergency alarm signal is sounded.

The action taken will substantially reduce the risks associated with inadequate passenger management during an emergency. Therefore, the assessment of the response is considered **Fully Satisfactory**.