



ASSESSMENT OF THE RESPONSE FROM TRANSPORT CANADA TO MARINE SAFETY RECOMMENDATION M04-01

MANAGEMENT OF SAFETY BY OPERATORS OF PASSENGER VESSELS

Background

The *Lady Duck* was an amphibious vehicle based on the conversion of a Ford F-350 truck chassis and arranged to carry up to 12 passengers on combined road and water-borne tours in the National Capital Region and on the Ottawa River. The vehicle was developed and built by the owner and entered commercial service at the start of the tourist season in June 2001.

The *Lady Duck* started the amphibious tour at about 1500 on 23 June 2002, with the driver, 10 passengers and a tour guide on board. When the vehicle entered the water at the Hull Marina, the main bilge pumps were switched on to clear the hull of any shipped water. Because no water was seen to be discharging from the outlets, the emergency bilge pumps were also switched on. Water was then seen to be discharging intermittently from outlets on both sides of the vehicle. The vehicle was driven to the Ottawa side of the river to various points of interest. The river was calm, with waves caused by wakes from boats and other watercraft in the tour area. On occasion, the vehicle encountered waves that washed over the hood and up to the windshield.

Toward the end of the tour, while returning to the Hull Marina, the driver noticed that the front end of the vehicle was floating lower than normal and that water was being continuously discharged from both sides of the vehicle. The driver then ordered the four foremost passengers and the tour guide to move to the back of the vehicle to try to decrease the forward trim.

The forward trim continued to increase and, realizing that the safety of passengers was at risk, the driver instructed the tour guide to tell passengers to don personal flotation devices. The driver then broadcast a MAYDAY on very high frequency (VHF) radio. The situation deteriorated rapidly as more floodwater accumulated in the forward end of the vehicle. The driver then called on the passengers to abandon the sinking vehicle. The driver, tour guide and six passengers managed to get free of the sinking vehicle. The remaining four passengers became trapped under the fabric awning and sank with the vehicle in 8 metres of water.

The picture that emerged from this investigation was one of an organization pursuing minimal compliance with regulations rather than one seeking to minimize risk through all available means. The organization did not demonstrate a commitment to operating safely in that it did not seek the advice of Transport Canada (TC) with respect to the condition of the vehicle and was reticent to follow recommendations that were not specifically required by regulation.



Training provided by the company to enable drivers to make such decisions was minimal and informal. There was no formal training program offered to guides before conducting tours on any of their amphibious vehicles and there were no written company policies or procedures on what and how to train tour guides.

Board Recommendation M04-01

The effective management of safety requires operators to be able to identify the hazards associated with their operation, assess the risk arising from those hazards, and identify mitigation strategies to reduce the risks to the lowest possible level. However, as demonstrated in this occurrence, small passenger vessel operators may not be aware of the risks associated with the operation of their vessels or possess the competence to manage those risks.

Given the benefits associated in preventing accidents, and the need for a structured approach for operators to effectively manage the risks associated with their operation on an ongoing basis, the Board recommended that:

The Department of Transport take steps to ensure that small passenger vessel enterprises have a safety management system.

M04-01

Response to M04-01

In its 26 August 2004 letter, TC provided the following comments:

- TC agrees with the intent of the recommendation and the Department is reviewing the feasibility of implementing safety management systems for operators of Canadian domestic vessels, including small passenger vessel operators. The review, which is scheduled to be completed by mid-2005, will assess the benefits and costs of marine safety management systems and examine the experience of other marine administrations (such as New Zealand and the United Kingdom) in their implementation of such systems.
- If the results indicate that safety management systems are warranted and feasible for any given sector of the domestic marine industry, TC will, in consultation with the industry, determine the best approach to implement such regulatory requirements. In the meantime, TC continues to support the voluntary adoption of safety management systems by domestic operators.

Board Assessment of Response to M04-01

A study to evaluate the feasibility of implementing a safety management system for the domestic fleet was completed in May 2002. The study found that there is no clear indication that safety management has improved maritime safety although there was some evidence that safety management in other environments has delivered benefit. (The study included a survey but there were no responses from the Canadian Shipowners Association, the Canadian Ferry Operators Association and the Canadian Passenger Vessel Association. There were only six responses from tour and other passenger vessels.) The study recommended that consideration of the New Zealand two-tier approach in which a safety management system (SMS) be applied to all commercial vessels carrying more than 12 passengers or above 15 gross tons. For smaller

passenger and cargo vessels, a Safe Operating Plan (SOP) programme should be implemented. An SOP is a scaled-down version of an SMS aimed at providing a practical and affordable set of safety requirements for small commercial vessels. Individual operators draw up an SOP that includes a written record of the vessel's maintenance and safe operating procedures. It also details the conditions under which a vessel operates and the conditions for carrying passengers.

The results of the May 2002 study, along with other sources of information, formed the basis of a further review by TC Marine Safety of the potential for safety management systems in the domestic marine sector. This review has been completed and a report, entitled *Analysis of Options for Safety Management Systems in the Canadian Domestic Shipping Industry*, was submitted to the TC Marine Safety Executive Committee in September 2005 for consideration. TC intends to review all essential information, including that which may come from an anticipated coroner's investigation, and consult with stakeholders prior to implementing any additional safety requirements.

Since TC intends to consult with industry to determine how best to implement safety management systems, should the results of the review warrant their implementation, the response is considered to be **Satisfactory Intent**.

Next TSB Action: M04-01

The results of the review and subsequent actions to address the safety deficiency will be monitored.