REASSESSMENT OF THE RESPONSES TO MARINE SAFETY RECOMMENDATION M03-03

Emergency preparedness

Background

On 09 November 1999, the loaded bulk carrier *Alcor* was upbound in the St. Lawrence River to Trois-Rivières, under the conduct of a pilot. While undertaking a course alteration the vessel ran aground. Immediately after the grounding the master contacted the owners of the vessel to consult about tugs. One tug was ordered one and a half hours after the grounding and it arrived on scene about three and a half hours later. By that time, after high tide, one tug was found to be insufficient. The pilot decided to remain on board and assist.

Some 28 hours after the grounding, a salvage effort was made with four tugs. The vessel was moved 2.8 cables from her grounded position but grounded a second time on the falling tide. Some 31 hours after the initial grounding the pilot requested a relief. In the early hours of the following day the hull of the vessel failed.

A second salvage company was selected and extensive temporary repairs were made to the hull for a second refloating attempt. On 05 December 1999, the vessel was refloated. However, the vessel narrowly averted a third grounding as the salvage/navigation team did not fully appreciate the effect of the current on the vessel and the progress of the vessel was not closely monitored.

While refloating attempts were underway on board the *Alcor*, an upbound vessel was contacted by Vessel Traffic Services (VTS) and informed that they will likely ask the vessel to slow down and to not enter the section of the river to be temporarily closed. The pilot of the upbound vessel contacted the pilots of the *Alcor* for more information and was told that the *Alcor* would be in the channel in about an hour's time. The pilot of the upbound vessel then informed VTS that he would be continuing at full speed in order to pass the *Alcor* before her entry into the channel. Transport Canada (TC) and Canadian Coast Guard (CCG) officials on board the *Alcor* later became aware that the upbound vessel had been allowed to transit and requested that the channel be closed. VTS closed the channel to navigation and the upbound vessel was stopped and anchored.

As the escorted *Alcor* later cleared the area of the channel closed to navigation, the tanker *Eternity* was already underway. The navigation teams of each vessel at anchor made a decision to depart in isolation and commenced weighing anchor. During this time, a near-collision occurred between the tanker *Eternity*, underway, and the container ship *Canmar Pride*, weighing anchor.

The Board concluded its investigation and released report M99L0126 on 22 January 2004.



Board Recommendation M03-03 (January 2004)

A number of shortcomings were identified in the actions taken to resolve this occurrence. The response to the initial grounding was inadequate and contributed to the escalation of the incident. Less-than-optimal use of tugs and navigational equipment as well as less than adequate bridge resource management during salvage operations culminated in the vessel running aground a second time and sustaining extensive damage. Not all of the key parties were involved in the planning and development of the salvage plan. The working relationship of the bridge team during salvage operations was fragmented and uncoordinated, with the vessel almost grounding for a third time. There was no contingency plan for navigation-related emergencies, leading to an uncoordinated approach to handing the emergency. The lack of a contingency plan precluded objective assessment by government officials of the timeliness and appropriateness of the emergency response.

The Board recognized that emergency response management structures and risk-based decision-making models are used in response to specific marine emergency situations that do not include response to navigation-related emergencies. Further, noting the complementary mandates of TC and DFO/CCG to foster the safety of vessels and to protect the marine environment and, acknowledging the important role of pilotage authorities in providing valuable information on the operation of ships in pilotage waters, the Board believed that a planned and coordinated approach is necessary to deal with navigation-related emergencies in Canadian waters while supporting the vessel owners' efforts to deal with an occurrence. The Board, therefore, recommended that:

The Department of Transport, the Department of Fisheries and Oceans, and Canadian pilotage authorities, in consultation with marine interests, develop, implement, and exercise contingency plans to ensure that risks associated with navigation-related emergencies are adequately addressed.

TSB Recommendation M03-03

Response of the Laurentian Pilotage Authority to Recommendation M03-03 (February 2004)

As a follow-up to the investigation reports received concerning the above-mentioned vessels, please note that the Laurentian Pilotage Authority (LPA) has already taken the necessary action to prevent such incidents from happening and carefully notes the recommendations contained in these reports.

The LPA intends to participate with the other involved stakeholders and has a working committee to ensure that all recommendations issued are implemented.

The LPA intends to coordinate its efforts with the other involved stakeholders and has established a working committee to ensure a follow-up of all recommendations.

Transport Canada's response to Recommendation M03-03 (April 2004)

Transport Canada (TC) agrees with the Board's recommendation and has taken the following steps to develop, implement and exercise contingency plans associated with navigation-related emergencies. TC Regional Marine Safety offices are working with the four Canadian pilotage authorities and regional Canadian Coast Guard (CCG) offices to review the TSB's report. TC has requested each region, through a working group, to develop an action plan that meets the intent of the recommendation. The working group consisting of all stakeholders will examine how to improve the coordination, communication and emergency response as suggested in the TSB's recommendation.

The action plans will consist of clear and measurable objectives stemming from an internal review of the recommendations made by the working group as a result of their work to address potential shortcomings of navigation-related emergency response plans. The action plans will also propose practical solutions and contingency plans to improve the local awareness and response of on-scene personnel during an emergency situation. The aim is to enhance the coordination functions of lead and resource organizations and better define their roles. Following receipt of the proposed actions plans, TC, Marine Safety Executive will evaluate and identify the subsequent actions required.

Further to action already taken, which was noted in the TSB's report, TC and the CCG regional Quebec offices have identified possible scenarios and developed a process by which initial response teams can be quickly and efficiently identified to address navigation-related emergencies such as groundings. The Marine Safety Regional Response Team has duty officers on standby to answer any emergency calls 24 hours a day. When a marine emergency occurs, a response team is deployed to assess the situation and to relay timely information to the regional emergency coordinator. Similar arrangements could be implemented nationwide if not already in place in other regions.

In addition, TC is monitoring the regional pilotage risk assessments conducted by the pilotage authorities with a view to potentially modifying the pilotage regulations in areas where significant changes to pilotage practices or regulations are required to provide safe and efficient pilotage services.

Response of the Department of Fisheries and Oceans to Recommendation M03-03 (April 2004)

DFO has been working on the issues addressed in the recommendations. In early 2002, shortly after the initial Transportation Safety Board findings had been released to DFO, and interdepartmental committee—the Transport Canada Marine Safety (TC-MS) Department of Fisheries and Oceans/Canadian Coast Guard (DFO/CCG) task force on improving emergency response management—was formed. The main areas for improvement identified at that time were:

- co-ordination among the players;
- · review of the alerting and Warning Network; and
- · development of a common risk analysis method.

A progress report on the Alerting and Warning Network was submitted to the committee in early February 2004. This report reviews the operation of the network and proposes a series of improvements ranging from upgrading the computer equipment to establishing protocols with all players involved in reviewing the players' information needs. We are currently establishing the protocols and consulting the appropriate agencies for the needs review.

The CCG prepared a progress report in June 2003 concerning a common risk analysis method. This report proposes a risk evaluation for each work area, determines scenarios on the basis of the risks, and describes the roles and responsibilities for the preparation, response and recovery phases of incidents.

The CCG is now developing a common risk analysis methodology and is working with Transport Canada to prepare its risk analysis methods. Once TC has completed its work, the departments will work together to develop a common approach.

The Laurentian Pilotage Authority (LPA) and the Corporation of Pilots will be invited to join the task force once the Alerting Network review and the development of a risk analysis method have advanced to the point where they can participate in them. It was felt that, before this could happen, there was a need to review all responses and ensure good co-ordination between the two main players, TC and CCG. Exercises involving more players, including the LPA, are part of the action plans for 2004-2005 and 2005-2006. Meetings between CCG and LPA are being planned for this spring, and the LPA will be brought up to date with the work being done within the CCG.

Board assessment of the response to Recommendation M03-03 (December 2004)

Follow-up information received from TC and DFO/CCG indicates that, other than what is ongoing in DFO/CCG's Laurentian Region, there is no other regional coordinated effort among the parties to address the recommendation. TC indicated that its regions have been requested to review the local contingency plan and to prepare an action plan to meet the intent of recommendation M03-03; however, there is no information to suggest that this review is being coordinated with other stakeholders. CCG has indicated that it has taken action only in the Laurentian Region. With respect to this recommendation, it is being handled by that DFO/CCG region, and DFO/CCG Headquarters staff will wait for and share that region's Alessons learned® with the other regions for their use as required. However, information being gathered as a result of ongoing investigations into the grounding of the bulk carrier *Yong Kang* (M03L0148), near Quebec, and the grounding of container vessel *Horizon* (M04L0092), near Sorel, suggest that there may continue to be inadequacies in the preparedness and the coordination of the responses by TC and DFO/CCG.

Follow-up information from DFO/CCG Laurentian Region indicates that the ongoing work has so far only involved the regional TC Marine Safety branch. It is intended to expand participation and there has been discussion with the LPA to explain the ongoing work and it is planned to invite them to participate later on. Procedures have been implemented to promote cooperation between TC and DFO/CCG.

A meeting of the Laurentian Region TC-DFO/CCG committee is planned and subcommittees on risk assessment and on the updating of the warning system will present their respective

recommendations for the next steps of the project. This is the stage at which it is expected that the LPA and the Port of Montreal, which has already expressed an interest in participating in an exercise which involves issues similar to the ones in the grounding of the *Alcor*, may be asked to participate.

With respect to the identification of substandard vessels, vessels coming to Canada are required to report to VTS in advance of their arrival into Canadian waters. Information, including deficiencies, reported by those vessels to VTS is entered into the Information System on Marine Navigation (INNAV). Any vessel flagged by INNAV as a ship of particular interest (or where there is a notation that an authority be contacted) is reported by VTS to the appropriate authority. Furthermore, TC is transferring its Port State Control Database to a web base application. Such a change will allow *read access' only to other federal departments, i.e. the Canadian Coast Guard. Presently, the Canadian data of the PSC database is available on the Internet. Vessel queries can be made and the results of the PSC inspections can be viewed. (This information has also been applied to the re-assessment of Board recommendation M93-13.)

TC and DFO/CCG are taking measures in the Laurentian Region to identify improvements relating to alerting of the various players, including the pilotage authority, and that exercises are being proposed for testing the co-ordination and management of responses to navigation-related incidents. However, other than the development of a web-based application to permit access to TC's Port State Control Database, which will allow marine traffic regulators to readily identify vessels with known deficiencies, there is no indication of a coordinated approach being taken in other parts of the country to address the recommendation.

Therefore, the responses of TC, DFO/CCG, and LPA are considered, in the aggregate, **Satisfactory in Part**.

Board reassessment of the response to Recommendation M03-03 (December 2005)

In the fall of 2004, an exercise that involved DFO (MCTS) and Montreal Port Authority took place within the Port of Montreal to validate the roles of the various parties regarding marine traffic management following a marine occurrence. An April 2005 draft TC/CCG regional guide was developed that describes the procedures for responding to emergency situations. TC and the Laurentian Pilotage Authority are presently developing an agreement to have a pilot assigned to the response team in the event of an occurrence. There is no indication of a coordinated approach being taken in other parts of the country to address the recommendation. The aforementioned actions being taken in one CCG region of the country, if fully implemented, should reduce the deficiency associated with emergencies; however, there is no indication that any other action is being taken in the other CCG regions.

No substantial change to address the safety deficiency since the last assessment.

Transport Canada's response to Recommendation M03-03 (November 2006)

TC's update, dated November 2006, indicated that a joint task force between TC and DFO was created in 2003 on improving emergency response management. TC & CCG have developed a joint guide on the management of how to handle unusual marine occurrences. This guide entitled Exceptional Marine Occurrences Management Guide has been designed to outline the

roles & responsibilities for each department in the event that an occurrence requires the coordination efforts from both departments. This guide sets out the various procedures for assessing risk situations. It will serve as a reference document during emergency situations.

In addition to TC's update, DFO's (CCG) update, dated 22 November 2006, indicated that an agreement with the Laurentian Pilotage Authority has been signed to utilize the expertise of Class A pilots for the first risk assessment phase, as set out in the Exceptional Marine Occurrence Management Guide. The Québec Region recently held the Prévention 2006 exercise. This exercise is in keeping with the general goal to improve our response and communication capabilities vis-à-vis our partners, including the provincial government. The Québec Region is also currently working with its TC colleagues to evaluate the implementation of two liquefied natural gas terminals in the region, which would help improve both our maritime management process and our teamwork.

The region is also working on phase 1 of what is called an exceptional response management console, the goal of which is to facilitate the acquisition and exchange of internal and external information and to automate the preparation of some situation reports so that the officer on duty can devote more time to the more important tasks of situation analysis and decision-making. Moreover, the Québec Region CCG is planning a multipurpose room that would be equipped to handle exceptional events and that should be ready in summer 2007.

With regards to the memorandum of understanding concerning the operation of the alerting and warning network during marine incidents, only a few details remain to be finalized with the Transportation Safety Board before submitting the document for signature. A similar memorandum was already signed between Transport Canada-Marine Safety and the CCG in May 2005. A new software version is being developed, which will allow us to manage the alerting and warning network more efficiently. This tool should be available by the end of March.

The Exceptional Marine Occurrence Management Guide contains an abridged risk assessment methodology that would involve the participation of multidisciplinary teams such as the pilots mentioned in point 1. However, this is only a rudimentary method that should be further developed to ensure uniform, coherent application.

To this end, the head office coordinator and its partner, TC, will study the possibility of developing a standard risk analysis method for the entire country.

Board reassessment of the response to Recommendation M03-03 (November 2006)

TC & CCG have developed a joint guide on the management of how to handle unusual marine occurrences. This guide entitled Exceptional Marine Occurrences Management Guide has been designed to outline the roles & responsibilities for each department in the event that an occurrence requires the coordination efforts from both departments. This guide sets out the various procedures for assessing risk situations and includes the participation of the Laurentian Pilotage Authority. Furthermore, an exercise to test the coordinated alerting and communication capabilities was carried out. The intention to consider the development of a standard risk analysis methodology for the entire country, if fully implemented, will substantially reduce the risks associated with navigation-related emergencies.

Therefore, the assessment is **Satisfactory Intent**.

Transport Canada's response to Recommendation M03-03 (June 2008)

TC's update, dated June 2008, indicated that a guide entitled *Exceptional Marine Occurrences Management Guide* (EMOMG) has been designed to outline the roles & responsibilities for TC and CCG in the event that an occurrence requires the coordination efforts from both departments. When required, the Laurentian Pilotage Authority (LPA) and other pilotage authorities have agreed to have a pilot available as part of the intervention management team that will assess the situation.

This recommendation has been provided to each Region for their review and implementation as necessary into any existing plans already in place.

Since recommendation M03-03, TP14707, *National Places of Refuge Contingency Plan* (PORCP), has been issued. The purpose of PORCP is to establish a national framework and approach which, with associated regional measures, will provide for an effective and efficient response to requests from ships in need of assistance seeking a place of refuge. The PORCP will help to ensure that a consistent approach is taken across the country to putting in place an effective response plan that will meet both Canada's national and international responsibilities.

Many elements of the EMOMG can be considered as the standard for risk analysis. Quebec Region has implemented the EMOMG; as well they have a *Marine Safety Response Guide* (MSRG) in place. Other Regions are in the process of implementation; for instance, the Ontario Region is in the process of consulting on and amending their regional Emergency Duty Officer System policy and manual to include the required elements of the national PORCP. One of the elements of the PORCP is the requirement to conduct a risk assessment prior to determining courses of action.

Nationally Pilotage Authorities in each region are in regular contact with the CCG traffic centres and do participate in exercises when one is called.

Board reassessment of the response to Recommendation M03-03 (September 2008)

The development the *Exceptional Marine Occurrences Management Guide* and TP14707, *National Places of Refuge Contingency Plan*, have been completed and are in the process of implementation by the TC Regions. Implementation, in conjunction with existing regional response procedures and contingency plans, will provide for a coordinated risk analysis methodology and decision-making assessment of the risks associated with navigational-related emergencies. If fully implemented and exercised across the country, the actions will further the effectiveness of the response, substantially reducing the risks associated with navigation-related emergencies.

Therefore, the assessment remains **Satisfactory Intent**.

Transport Canada's response to Recommendation M03-03 (November 2009)

TC's update, dated November 2009, indicated that the National Places of Refuge Contingency Plan (PORCP) has established a national framework, which with associated regional measures,

will provide for an effective and efficient response to requests from ships in need of assistance seeking a place of refuge. Regional PORCPs are now complete in Pacific and Atlantic Regions, and are being finalized in Prairie & Northern, Québec and Ontario Regions.

Board reassessment of the response to Recommendation M03-03 (February 2010)

Implementation and exercising of the *Exceptional Marine Occurrences Management Guide* and the *National Places of Refuge Contingency Plan* in conjunction with the existing regional response procedures and contingency plans will provide for a coordinated risk analysis assessment of the risks associated with navigational-related emergencies. Once implemented and exercised across the country, the actions will further the effectiveness of the response, substantially reducing the risks associated with navigation-related emergencies.

Therefore, the assessment remains **Satisfactory Intent**.

Transport Canada's response to Recommendation M03-03 (December 2010)

TC's update of December 2010 indicated that all regional Places of Refuge Contingency Plans have been completed, except those for the Prairie & Northern and Québec regions. Pacific Region has exercised its plan, and the Ontario and Atlantic regions intend to exercise their plans this year. Prairie & Northern and Québec Regions activated and used the national plan to respond to actual events.

Transport Canada intends to exercise the National Places of Refuge Contingency plan in all regions to ensure that all contacts are aware of the National Plan. These exercises will also be a

good opportunity for all stakeholders to understand their respective roles and responsibilities. The National Plan came into place in 2007 and most regions have now finalized their regional annex to the National Plan (except for Prairie & Northern Region and Quebec, as noted above).

Board reassessment of the response to Recommendation M03-03 (March 2011)

Once regional Places of Refuge Contingency Plans have been completed in the Prairie & Northern and Quebec Regions, and exercised in the Ontario and Atlantic regions, the risks associated with navigation-related emergencies will be substantially reduced or eliminated.

Therefore, until all plans are completed and exercised, the assessment remains **Satisfactory Intent**.

Transport Canada's response to Recommendation M03-03 (December 2011)

All regional Places of Refuge Contingency Plans, which ensure that navigation-related risks are adequately addressed, are complete, except for Prairie & Northern region and Québec region. Both regions are currently finalizing their plans. Both the Pacific region and the Ontario region have exercised their plans. The Prairie & Northern region and the Québec region have activated and used the national plan to respond to actual events. The Atlantic region intends to exercise their plans in the first half of 2012.

Board reassessment of the response to Recommendation M03-03 (March 2012)

Once regional Places of Refuge Contingency Plans have been completed (Prairie & Northern and Québec), and exercised (Atlantic), the risks associated with navigation-related emergencies will be substantially reduced or eliminated.

Therefore, until all plans are completed and exercised, the assessment remains **Satisfactory Intent**.

Transport Canada's response to Recommendation M03-03 (November 2012)

To ensure that risks associated with navigation-related emergencies are adequately addressed, Transport Canada has engaged in the following actions:

The National Places of Refuge Contingency Plan came into effect in 2007. Regional plans, which ensure that navigation-related risks are adequately addressed, are complete and have been tested in the Pacific, Ontario and Atlantic regions. The Prairie and Northern Region and Quebec Region have completed their draft plans, which are pending final approval and translation.

The Prairie and Northern Region and Quebec Region have activated and used the national plan due to real events (not exercise scenarios). Transport Canada intends to exercise the National Places of Refuge Contingency Plan in all regions to ensure that all contacts are aware of the national plan. These exercises will also be a good opportunity for all stakeholders to understand their respective roles and responsibilities.

The National Places of Refuge Contingency Plan and the plans for the Ontario, Pacific and Atlantic regions can be found at the links below:

- http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-menu-1683.htm
- http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-atlantic-menu-1099.htm
- http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-pacific-menu-3046.htm
- http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-ontario-menu-3298.htm

Board reassessment of the response to Recommendation M03-03 (March 2013)

Once the translation of two Places of Refuge Contingency Plans have been completed (Prairie and Northern Region and Quebec Region), and TC completes the planned exercise in all regions, the risks associated with navigation-related emergencies will be substantially reduced or eliminated.

Therefore, until all plans are finalized, translated, and exercised as planned, the assessment remains **Satisfactory Intent**.

Transport Canada's response to Recommendation M03-03 (December 2013)

To ensure that risks associated with navigation-related emergencies are adequately addressed, Transport Canada has engaged in the following actions:

The National Places of Refuge Contingency Plan came into effect in 2007. Regional plans, which ensure that navigation-related risks are adequately addressed, are complete and have been tested in Pacific, Ontario and Atlantic regions. The Quebec region has completed its plan and is currently working on formatting and translating the plan to be posted on the TC website. The Prairie & Northern region has activated and used the national plan due to real events (not exercise scenarios). The Prairie and Northern Region has exercised the plan internally with the inspectors and will be testing it with external clients and stakeholders in the very near future.

The National Places of Refuge Contingency Plan is the framework used by the regions for the consistent development of regional plans. Exercises that are conducted in the regions follow their regional procedures and arrangements identified in their plans. This includes notification to the headquarters level. Transport Canada intends to exercise the Regional Plans. These exercises will provide the opportunity for the department as well as all stakeholders to understand their respective roles and responsibilities.

The National Places of Refuge Contingency Plan and the regional plans can be found at the links below:

National: http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-menu-1683.htm
Atlantic: http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-atlantic-menu-1099.htm
Pacific: http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-pacific-menu-3046.htm
Ontario: http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-ontario-menu-3298.htm
Praire & Northern: http://www.tc.gc.ca/eng/marinesafety/tp-menu-515-4267.htm
Quebec: Quebec Region is currently working on finalizing the plan for posting on the TC website. The plan is presently being exercised during the Mont Louis Incident.

Board reassessment of the response to Recommendation M03-03 (March 2014)

The National Places of Refuge Contingency Plan has been developed and the regional plans have been completed and exercised for all regions except in Quebec, where the exercise was started but not completed. Until Quebec Region's plan has been exercised, finalized and posted on the TC website, the assessment remains at **Satisfactory Intent.**

Transport Canada's response to Recommendation M03-03 (December 2014)

Transport Canada's response reiterated the information provided in its response of December 2013 and indicated that:

To ensure that risks associated with navigation-related emergencies are adequately addressed, Transport Canada has engaged in the following actions:

The National Places of Refuge Contingency Plan came into effect in 2007. Regional plans, which ensure that navigation-related risks are adequately

addressed, are complete and have been tested in Pacific, Ontario and Atlantic regions. The Quebec region completed its plan and it was approved by the Regional Director Marine Safety and Security. It is undergoing minor formatting changes in order to post it on the TC website. Quebec has completed the exercise scenario design and the exercise was conducted on December 15, 2014. The Prairie & Northern region has activated and used the national plan due to real events (not exercise scenarios). The Prairie and Northern Region exercised the plan during Operation Nanook 2014 (August). A full scale exercise with external clients and stakeholders is planned to be carried out this winter.

The National Places of Refuge Contingency Plan and the regional plans can be found at the links below:

National:

http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-menu-1683.htm

http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-atlantic-menu-1099.htm **Pacific:**

http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-pacific-menu-3046.htm **Ontario:**

http://www.tc.gc.ca/eng/marinesafety/tp-tp14707-ontario-menu-3298.htm **Praire & Northern:**

http://www.tc.gc.ca/Publications/en/TP14707/PDF/HR/TP14707E_PNR.pdf **Quebec:**

http://www.tc.gc.ca/eng/publications-marine-abstracts-598.html#tp14707

Board reassessment of the response to Recommendation M03-03 (March 2015)

The National Places of Refuge Contingency Plan has been developed and the regional plans have been completed, posted, and exercised for all regions. The safety deficiency associated with navigation-related emergencies has been adequately addressed and, therefore, the assessment of this response has been changed to **Fully Satisfactory**.

The deficiency file is **Closed**.