



REASSESSMENT OF THE RESPONSES TO MARINE SAFETY RECOMMENDATION M03-02

SAFETY CULTURE IN THE CANADIAN FISHING INDUSTRY

Background

At about 0445, the *Alex B. 1* departed Havre-Saint-Pierre with a crew of five on board and commenced dragging for scallops at about 0600. Fishing proceeded without incident; every half-hour, the drag was hauled aboard, emptied, and then deployed again.

While fishing, water was discovered in the engine compartment. All compartments from the lazarette to the accommodation were flooded. Four bilge pumps were activated but the rate of water ingress exceeded the capacity of the pumps. The vessel was subsequently towed to port.

Major modifications made by the owner to convert the vessel for scallop dragging were found to be inadequate for the scallop fishery. Examination of the vessel revealed substantial wear on the hull in way of the lazarette, resulting from fishing gear making contact with the hull. As well, holes made in the transverse watertight bulkheads to run electrical conduits were not sealed. Transport Canada (TC) had no information of the modifications made to the vessel.

The Board concluded its investigation and released report M01L0112 on 08 September 2003

Board Recommendation M03-02 (08 September 2003)

In this occurrence, the vessel was not seaworthy; the transverse bulkheads were not watertight, and the hull protection was inadequate given the fishing gear used. The owner did not know the basic principles of stability or the regulations applicable to major alterations, particularly his obligation to notify the regional office of Transport Canada Marine Safety of any alterations affecting the vessel's seaworthiness. The report noted that failure to report major alterations is still a widespread problem, and may be the result of factors such as: knowledge of regulatory requirements may be inadequate as training is voluntary; safety promotion programs targeting fishers may be ineffective; and the system of inspections and other risk-reduction measures may not be successful.

The only training that fishers of vessels 60 GT or less are required to have, is one course on marine emergency duties, and that minimum requirement will not be enforced until 2007. Of all the Canadian registered fishing vessels, about 94% have a gross tonnage of 60 GT or less. The report notes that without training, fishers will continue to operate and modify their vessels as they see fit.

The Board noted that although fishing is a high-risk occupation, there is a tendency for fishers to deny or downplay risks. Fishers may not have a clear understanding of the link between certain acts or omissions and accidents. This lack of a "safety culture" among fishers has been noted in a number of TSB reports. An appropriate regulatory system, targeted training, and dissemination of safety information are means of managing and reducing risks. However, without a true safety culture pervading the entire commercial fishing industry, these mechanisms would undoubtedly be less effective.

The Board, concerned that certain aspects of the trade that affect safety, such as stability and seaworthiness, hazard and fatigue awareness, are not covered, and that a concerted and overarching effort to change the existing paradigm within the fishing community is necessary to establish a true safety culture within the community, recommends that:

Transport Canada, in coordination with Fisheries and Oceans Canada, fisher associations and training institutions, develop a national strategy for establishing, maintaining and promoting a safety culture within the fishing industry.

M03-02

Response to M03-02 (17 November 2003)

In addition to the actions noted in the TSB report, Transport Canada (TC) has consulted with the Department of Fisheries and Oceans, Canadian Coast Guard, Search and Rescue (DFO/CCG/SAR), the Canadian Council of Professional Fish Harvesters (CCPFH) and training institutes with regard to information or programs involving safety culture.

The Memorial University of Newfoundland has launched a five year federally funded study on safety at sea in the fishing industry. The study called "SafeCatch," will examine inter alia, different regulatory, education and safety programs and regimes worldwide and analyze incident data to find linkages and trends in fishing vessel incidents. Of special interest is the development of a community based interactive occupational health and safety and fishing vessel safety education program for fish harvesters. TC will follow this initiative with interest.

CCPFH, a National Industry Sector Council that represents approximately 70% of the fishing industry in Canada, plans and implements training and adjustment programs for the fish harvesting industry in Canada. CCPFH has recently commenced a safety and health study of the fishing industry to be completed in spring 2004. The results of this study will be used jointly by CCPFH and TC to develop and deliver an efficient regional training program to the fishing industry.

TC has also introduced a policy whereby all changes made to fishing vessels such as: First Registry, ownership changes; vessel alterations; vessel name changes; changes of owners' names and addresses and closing, are to be reported by our Registrars of Ships to the respective TC regional inspection personnel. This will enhance safety by allowing TC to track any changes made.

While acknowledging that the process of developing and supporting a safety culture is and continues to be ongoing, TC, Marine Safety is of the opinion that these actions demonstrate that all stakeholders are actively pursuing a safety culture within the industry. Furthermore, TC believes that incident statistics, collected by the TSB, support the fact that TC, DFO and industry

efforts to establish and nourish a safety culture within the fishing industry are having the intended effect.

TC, Marine Safety will continue its efforts, working with all stakeholders, including the TSB, to increase fishing vessel safety and a safety culture that supports it.

Board Assessment to the Response to M03-02 (24 August 2004)

TC indicated that it has consulted with the Department of Fisheries and Oceans, Canadian Coast Guard, Search and Rescue (DFO/CCG/SAR), the Canadian Council of Professional Fish Harvesters (CCPFH) and training institutes with regard to information or programs involving safety culture. However, the response did not provide details regarding those consultations. The response by TC provided an update of several initiatives underway by others to address safety within the fishing community. Two initiatives of interest to TC were noted in the response: the Memorial University of Newfoundland, five-year federally funded study, SafetyNet; and The Canadian Council of Professional Fish Harvesters (CCPFH) safety and health study of the fishing industry.

The Memorial University of Newfoundland SafetyNet Program is conducting through an underlying project "SafeCatch," research on fish harvester occupational health and fishing vessel safety with view to development of an interactive, community-based occupational health and safety (OHS) and fishing vessel safety education program for fish harvesters. Information gathered by TSB staff indicates that "SafeCatch" is a one year funded program ending in the fall 2004. Furthermore, there are currently three pilot projects and one part-time person providing support to communities who are developing an awareness program. For example, a community has put together a play about accidents that happens and precautions to be taken.

TC's response also indicated that the CCPFH has recently commenced a safety and health study of the fishing industry to be completed in spring 2004. The results of this study will be used jointly by CCPFH and TC to develop and deliver an efficient regional training program to the fishing industry.

The CCPFH research is currently underway. The objectives of the research are to:

- review and analyze the available information on incidents and injuries in the commercial fishing fleet;
- develop a profile of the at sea incidents and propose broad strategies for prevention;
- develop a profile of the most common causes of fatalities and injuries and make recommendations for prevention;
- generate a profile of unreported injuries; and
- to do a comparative analysis of provincial insurance programs and make recommendations for best practices.

A presentation of the findings is planned for the conference to be held in conjunction with Canadian Marine Advisory Council (CMAC), November 2004. There is further research planned but this will depend on the results of this phase and will be decided at the conference.

The TSB notes the reliance on other initiatives without a concerted effort from TC and the fishing community. "Building a safety culture is not a safety function, but a project management

function.” [Lamendola, Mark, Technical Editor, *Electrical Construction and Maintenance*, May 1, 1999.] There is no information to suggest that there is a strategic plan in place for the establishment of a safety culture within the fishing community.

The staff therefore considers that although TC has taken some positive steps towards the development of a safety culture amongst the fishing community, overall, TC has limited its range of action to that of monitoring of regional initiatives of others.

The response is considered **Satisfactory in Part**.

Board Reassessment of the Response to M03-02 (07 December 2005)

TC has taken some positive steps towards the development of a safety culture amongst the fishing community, overall; however, TC has limited its range of action to that of monitoring of regional initiatives of others.

Regarding the West Coast Inter-Agency Marine Action Group, TC is an active participant and this has allowed both TC and industry members to establish a network where they can exchange information and answer questions. Industry membership includes but is not limited to the following: The B.C. Seafood Alliance; Marine Education Establishments; Marine Insurance Companies; Fishers Unions (UFAWU-CAW) and other groups, including B.C. Council of Professional Fish Harvesters and the Canadian Fishing Company.

If the regional initiatives are fully implemented, the proposed actions will reduce some of the risks associated with fishing operations.

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

Response to M03-02 (November 2006)

TC's update, dated November 2006, indicated that TC and DFO have signed a Memorandum of Understanding (MOU) between both departments. The purpose of this MOU is to provide a framework for cooperation between DFO, TC and other interested parties with regards to promoting the safety at sea of fishers. The MOU was signed on 06 November 2006.

A program called "SafeCatch on safety at sea in the fishing industry" is being done by the Memorial University of Newfoundland. The program examines, *inter alia*, different regulatory, education and safety programs and regimes worldwide and analyzes incident data to find linkages and trends in fishing vessel incidents. TC continues to actively follow this initiative

Board Reassessment of the Response to M03-02 (November 2006)

The MOU between TC and DFO is directed at promoting safety at sea of both commercial fishers and DFO licence holders. More specifically, the departments will be working cooperatively on issues including: fishing vessel modifications and replacement rules, data sharing, professionalization of fishers, and safety implications of fisheries management plans. The MOU effectively provides a mechanism for coordinating the development of a number of strategies to promote safety within the fishing industry. The planned action when fully

implemented will substantially reduce or eliminate the safety deficiency. However, for the present, the action has not been sufficiently advanced to reduce the risks to transportation safety. Therefore, the assessment is “**Satisfactory Intent.**”

Response to M03-02 (June 2008)

TC’s update, dated June 2008, indicated that TC has improved its communications structure for distributing safety information to fishers, such as the revised TP 10038, *Small Fishing Vessel Safety Manual*; Ship Safety Bulletin 01/2008, *Fishing Vessel Safety - Record of Modifications*, was issued on 18 January 2008 to notify owners on the reporting and hazards of vessel modifications. Work continues as part of the proposed *Fishing Vessel Safety Regulations*. (Follow-up information indicated that the regulations are expected to be pre-published in Part I of the *Canada Gazette* in the fall/winter 2009/2010.) The *Marine Personnel Regulations* are now in place, which provide training to crews. The proposed *Fishing Vessel Safety Regulations* will further enhance training requirements.

Board Reassessment of the Response to M03-02 (September 2008)

As a result of the MOU directed at promoting safety at sea of both commercial fishers and DFO licence holders, and signed by TC and DFO in 2006, both departments will be working cooperatively on issues including: fishing vessel modifications and replacement rules, data sharing, professionalization of fishers, and safety implications of fisheries management plans. The MOU also provides a mechanism for coordinating the development of a number of strategies to promote safety within the fishing industry. The planned action when fully implemented will substantially reduce or eliminate the safety deficiency.

The assessment of the response remains “**Satisfactory Intent.**”

Response to M03-02 (March 2010)

TC’s update, dated March 2010, indicated that to establish, maintain and promote a safety culture within the fishing industry, TC continues to work with the Department of Fisheries and Oceans under the Memorandum of Understanding Regarding the Safety at Sea of Fishers. TC is continuously improving its communications structure for distributing safety information to fishers to notify owners on the reporting and hazards of vessel modifications, as well as other safety issues.

A key goal of the *Canada Shipping Act, 2001* and its regulations is for shipowners and masters (authorized representatives), among others, to take responsibility for safety and pollution prevention. To that end, TC is developing different ways of monitoring compliance including conducting safety audits that evaluate their capability and capacity to manage safe operations and implementation of safety management systems. These will help contribute to the development of a safety culture as fishers take ownership of their own safety.

TC continues to support industry-led safety education and awareness organizations and programs that promote good practice and assist fishers in developing vessel-specific safety programs.

Under the *Marine Personnel Regulations*, safety training is to be provided to crews of all vessels, including fishing vessels.

Board Reassessment of the Response to M03-02 (March 2010)

TC continues to work with the Department of Fisheries and Oceans under the Memorandum of Understanding Regarding the Safety at Sea of Fishers. TC is also improving its communications structure for distributing safety information to fishers to notify owners on the reporting and hazards of vessel modifications, as well as other safety issues. TC is also developing ways of monitoring compliance including conducting safety audits that evaluate their capability and capacity to manage safe operations and implementation of safety management systems. Under the *Marine Personnel Regulations*, safety training is to be provided to crews of all vessels, including fishing vessels. The planned action when fully implemented will substantially reduce or eliminate the safety deficiency.

Therefore, the assessment of the response remains at “**Satisfactory Intent.**”

Response to M03-02 (December 2010)

TC's update of December 2010 described how they are continuing to work with the Department of Fisheries and Oceans under the Memorandum of Understanding Regarding the Safety at Sea of Fishers. TC is continuously improving its communications structure for distributing safety information to fishers to notify owners on the reporting and hazards of vessel modifications, as well as other safety issues.

TC is developing different ways of monitoring compliance including conducting safety audits that evaluate a vessel's capability and capacity to manage safe operations and implement safety management systems. These will help contribute to the development of a safety culture as fishers take ownership of their own safety.

TC continues to support industry-led safety education and awareness organizations and programs that promote good practice and assist fishers in developing vessel-specific safety programs.

Under the *Marine Personnel Regulations*, safety training is to be provided to crews of all vessels, including fishing vessels. TC has begun consultations to develop *Safety Management Regulations*. A three-tier approach is being proposed for safety management of domestic vessels based on their size, type and/or number of passengers. Under safety management, the Authorized Representatives / owners are to develop procedures to ensure that the company and vessel's crew are adequately prepared. Tier 3 of this program is for fishing vessels of any length to have on board a guide to operational safety.

Board Reassessment of the Response to M03-02 (March 2011)

TC continues to work with the Department of Fisheries and Oceans under the Memorandum of Understanding Regarding the Safety at Sea of Fishers. TC is also improving its communications structure for distributing safety information to fishers to notify owners on the reporting and hazards of vessel modifications, as well as other safety issues. TC is also developing ways of

monitoring compliance including conducting safety audits that evaluate their capability and capacity to manage safe operations and implementation of safety management systems. Under the *Marine Personnel Regulations*, safety training is to be provided to crews of all vessels, including fishing vessels. The planned action when fully implemented will substantially reduce or eliminate the safety deficiency.

Therefore, the assessment of the response remains at “**Satisfactory Intent.**”

Next TSB Action (March 2012)

The TSB will monitor the progress of the implementation of the planned actions and will re-assess the deficiency on an annual basis or when otherwise warranted. The deficiency file is assigned an “**Active**” status.