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# TRANSPORT CANADA MARINE SAFETY PROGRAM

REPORT ON THE 2014/15  
CONCENTRATED INSPECTION CAMPAIGN

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## **1. INTRODUCTION**

Transport Canada Marine Safety and Security (TCMSS) is currently developing its domestic Concentrated Inspection Campaign program, with the expectation of it being in place by early 2015/16. As part of this development, TCMSS has conducted two pilot Concentrated Inspection Campaigns (CICs); one in 2013/14, and the latter in 2014/15. This report outlines the process and findings of the 2014/15 campaign.

## **2. OVERVIEW AND OBJECTIVE**

A CIC is carried out to address specific areas where high levels of deficiencies have been encountered by inspectors, or where new regulatory or international convention requirements have recently entered into force. In the past, Transport Canada only conducted CIC inspections on international vessels (i.e. Port State Control), as part of the Paris and Tokyo Memoranda of Understanding.

In 2012, TCMSS adapted the international CIC approach and piloted its first CIC on domestic Canadian vessels<sup>1</sup>. The focus of this pilot was on bulk carriers and structural safety, specifically for the Great Lake bulk carriers. While no major issues with structural safety was found, three recommendations were developed that were presented to the Canadian Maritime Advisory Council (CMAC) in April 2014. Annex A of this report provides a list of these three recommendations.

At the beginning of the 2014/15 fiscal year, TCMSS started planning its second CIC pilot. As part of its review for identifying the second area of focus, an analysis was conducted on 2013 deficiencies found from domestic vessel inspections, as well as reviewing Transportation Safety Board findings and recommendations, as well as input from CMAC. Based on these factors, three (3) potential target areas were identified for this CIC. Based on this analysis and input from the Marine Safety and Security Executive, it was determined that the focus would be on fire safety appliances and lifesaving equipment for small to medium sized passenger vessels. The goal of the pilot was to focus on the processes/systems that vessel owners have in place to ensure compliance with the *Canada Shipping Act, 2001*. This included boat and fire drills, passenger count, and the means to address passengers with special needs.

Both of these pilots will be used in the development of TCMSS' national CIC program for domestic vessels. Once this program has been developed, TCMSS plans to conduct a CIC every two years.

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<sup>1</sup> TCMSS' CIC is different from standard TCMSS inspections that focus on all vessel elements and are conducted regularly. CICs are conducted within a short time frame only and address specific areas of safety. What remains the same is that both kinds of inspections provide assurance that Canadian vessels comply with the *Canada Shipping Act, 2001*.

### **3. SMALL TO MEDIUM SIZED VESSELS**

As indicated above, small to medium sized passenger vessels were selected for this pilot. For the CIC, small to medium sized passenger vessels were defined as less than 500 gross tonnes<sup>2</sup> and had more than 12 passengers<sup>3</sup>. In addition, the CIC targeted vessels that had seasonal type operations – for example, harbour tours, whale watching, etc.

### **4. CONCENTRATED INSPECTION CAMPAIGN PROCESS**

There are three main phases for the CIC that TCMSS followed, based on the international CIC program: design, planning, and targeting.

#### *i. Design Phase*

For the 2014/15 CIC pilot, as indicated above TCMSS used a risk based approach to select the topic for the 2014/15 CIC, which included:

- reviewing deficiencies found on domestic vessels in 2013;
- identifying vessel types that are considered a high risk (e.g. if an accident occurs, what is the significance of the outcome);
- reviewing Transportation Safety Board (TSB) studies/incident reports; and
- input received from industry.

Transport Canada Marine Safety and Security presented the planned 2014/15 pilot at the April 2014 CMAC. During this meeting, a presentation was provided to TCMSS by industry regarding passengers who require special care and/or assistance during shipboard emergencies (e.g. fire/abandon ship). During this presentation it was noted that declared persons needing special care or assistance in emergency situations were not being recorded and communicated to the vessel's Master prior to departure. Recent TSB investigations also noted similar findings. As a result of these sources, as well as TCMSS' internal analysis, it was decided that part of the 2014/15 CIC would include how vessel owners dealt with passengers requiring assistance.

As part of the design phase, TCMSS inspectors were consulted to aid in the development of the CIC questionnaire. A total of 23 questions were developed, which were divided into three sections: documentation verification; procedural verification; and the conduct of fire and evacuation drills. A copy of the questionnaire can be found in Annex B.

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<sup>2</sup> A small sample of passenger vessels were greater than 500 GRT

<sup>3</sup> Exemptions to this would be tugs and fishing vessels issued passenger certificates for supplementary operations.

*ii. Planning Phase*

TCMSS sent out letters to all vessel owners whose vessels were targeted for inspection. To ensure limited impact on vessel operations, TCMSS inspectors contacted each vessel owner to arrange a time for the CIC to be conducted. In most cases, the CICs were scheduled to be conducted during non-operating hours.

*iii. Targeting Phase*

At the beginning of this phase, TCMSS conducted a judgmental sample which resulted in 71 passenger vessels being targeted for inspection. A majority of the vessels were under 500 gross tonnes, and the number of passenger carried varied, depending on the vessel's operations (e.g. harbor cruises, cable ferries, etc.). Of the 71 vessels, 60 had CICs conducted<sup>4</sup>. The following table provides an outline of the number of CICs, based on Transport Canada's regional territories.

<b>Region</b>	<b>Number of CICs conducted</b>	<b>Originally Planned</b>	<b>Percentage Completed</b>
Atlantic	16	19	84%
Quebec	15	18	83%
Ontario	15	18	83%
Prairie and Northern	5	5	100%
Pacific	9	11	82%
<i>Total</i>	<i>60</i>	<i>71</i>	<i>85%</i>

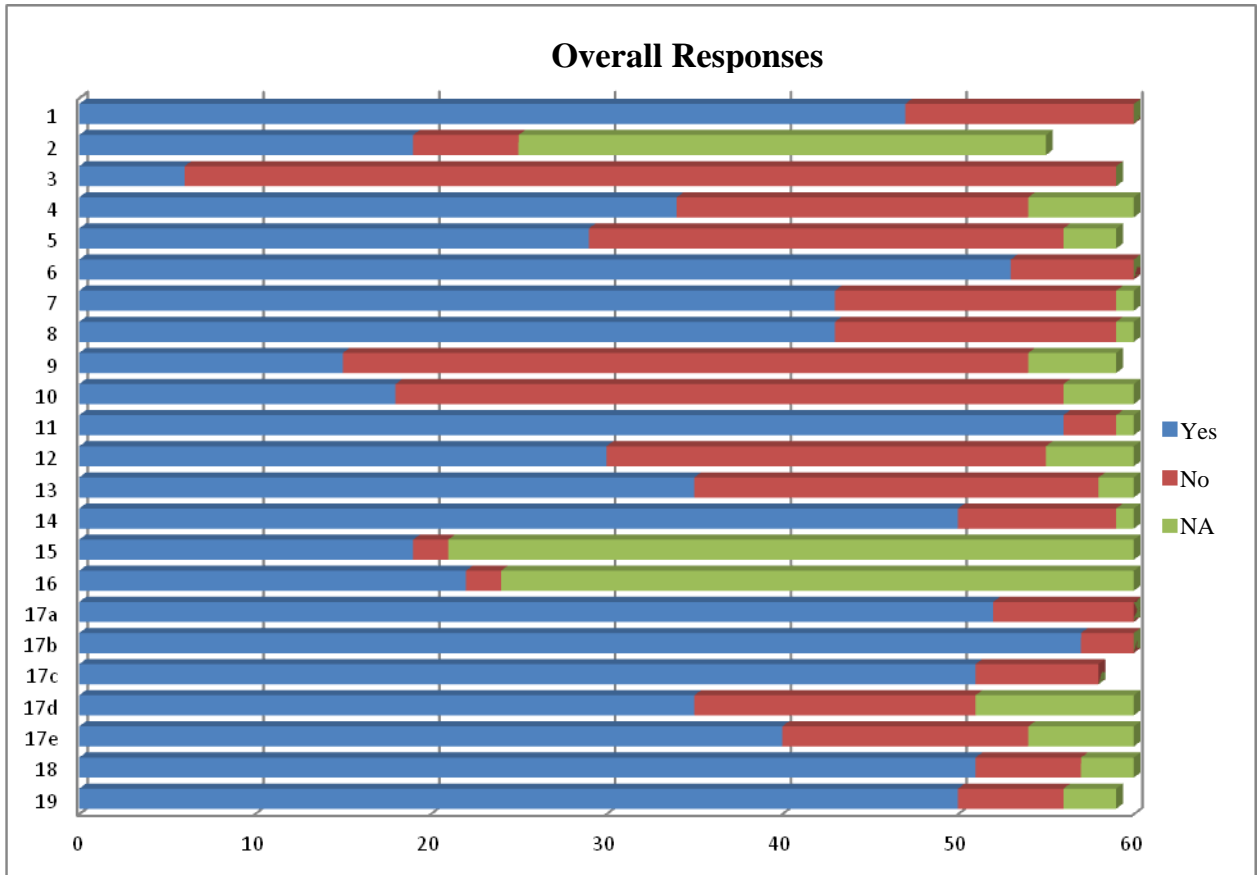
Prior to the onsite visit, TCMSS regional inspectors reviewed each vessel file, identifying past deficiencies regarding firefighting and lifesaving equipment and reviewing any related Marine Technical Review Board decisions. TCMSS inspectors were also tasked to issue deficiency notices if any significant deficiencies were found during the conduct of the CIC.

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<sup>4</sup> Vessels that did not have CICs conducted were due, but not limited, to: vessels no longer in service; scheduling conflicts; and the operational season being over prior to the CIC being scheduled.

## 5. FINDINGS

The responses to the questionnaire are summarized in the chart below. For a further breakdown of all the responses, please see Annex C.



As highlighted in the chart, overall there were four questions where 40% or more of responses had a negative finding.<sup>5</sup>

<sup>5</sup> Any question that was answered as a “not applicable” was not included in the calculation when determining the level of negative responses – i.e. the responses were adjusted to reflect only an answer of “yes” or “no”.



The table below provides further information on these questions. TCMSS used 40% as its risk threshold – i.e. 40% or higher indicated an area where further follow-up should be conducted or targeted during annual inspections.

Question	Yes	No	Total	% Yes	% No
Is a record kept on those passengers requiring assistance? (Q9)	15	39	54	28%	72%
Does a procedure exist for identifying passengers requiring special needs? (Q10)	18	38	56	32%	68%
Is the fire control plan satisfactory? (Q12)	30	25	55	55%	45%
Is the life saving equipment plan satisfactory? (Q13)	35	23	58	60%	40%

Section 10 of the Fire and Boat Drill regulation requires that details of persons who have declared a need for special care/assistance during an emergency is communicated to the master of the vessel, as well as being recorded. During the conduct of the CICs, TCMSS inspectors asked crew members if they were aware what the requirements were for people requiring assistance, as well as reviewing passenger logs. It was found that a vast majority of vessel owners do not keep a record of passengers requiring special assistance (72%), closely followed by owners not having a procedure in place that identify passengers requiring special needs (68%).

TCMSS inspectors found, when conducting procedural verifications on board the vessels, that 45% of the vessels did not have a fire control plan that was satisfactory. Section 7 of the Fire Detection and Extinguishing Equipment Regulations requires that plans of the fire extinguishing equipment exist (for vessels over 5 gross tonnes), which includes (but not limited to) the general layout of the fire service main with its relief arrangements, particulars of the fire extinguishers, manual fire alarms as well as full particulars of fitted sprinkler systems (as applicable). TCMSS inspectors found such items as the fire control plan not being on board, or the fire control plans being merged with the life saving equipment plan.

It was also found during these procedural verifications that 40% of the vessels did not have a life saving equipment plan that was satisfactory. As outlined in the Life Saving Equipment Regulations (section 110), every ship shall have a life saving equipment plan. Although these plans are usually posted, TCMSS inspectors did take into account that the plan did not need to be posted for any vessel under 25 metres. Such items that lead to the 40% included the plans not being up-to-date, not being onboard, as well as previous deficiencies of previous inspections for the lifesaving equipment plan still not being rectified.

Overall, based on the CIC inspections, a total of 29 deficiency notices were issued, which represents 48% of the vessels inspected for the CIC.

It should be noted, though, that when both fire and abandon ship drills were conducted TCMSS found that the majority of the drills (89%) were conducted in a satisfactory manner. It was also

found that, for the most part, the firefighting and lifesaving equipment on board the vessels were satisfactorily maintained, as well as safety instructions and signage being visible.

## **6. RECOMMENDATIONS**

As a result of the 2014/15 CIC results, a number of recommendations have been developed.

1. As part of its 2015/16 Integrated Inspection and Certification Plan, TCMSS should include the CIC checklist (including CIC guidelines) as part of its certification and compliance inspection processes on delegated and non-delegated passenger vessels. This will allow TCMSS to track further the issues found in the CIC pilot. In addition, it will also serve as a reminder to vessel owners/operators of their regulatory requirements.
2. TCMSS should work in collaboration with passenger vessel and special needs associations to raise awareness and provide clarification to vessel owners/operators on dealing with declared persons needing special care or assistance during emergency situations.
3. Transport Canada should provide guidance to passenger vessel owners/operators (e.g. via Ship Safety Bulletin) on the importance of having emergency procedures in place for passengers requiring special assistance. Regulatory requirements should be included in this guidance, such as Section 106(b) of the *Canada Shipping Act 2001* and Section 10 of the Fire and Boat Drill Regulation, to remind vessel owners/operators of their responsibilities during emergencies.
4. TCMSS should review and develop an implementation approach to provide further guidance to TCMSS inspectors on the requirements for firefighting and lifesaving equipment procedures.
5. Once the CIC national program is finalized, the CIC process should be included as part of Transport Canada's national training program for new inspectors.

## **7. CONCLUSION**

The results of the 2014/15 CIC pilot support the evidence provided by industry at the 2014 April CMAC meeting as well as by the Transportation Safety Board in terms of the requirement to clarify the procedures for passengers requiring special needs. As found during the conduct of the CICs, almost 3 out of 4 vessels did not have a procedure in place. There is a risk that if an emergency does occur onboard a vessel, operators may not have sufficient practices in place to aid passengers who require special assistance.

In addition, almost half of the vessels inspected were issued deficiency notices due to regulatory requirements not being met, which shows that there are still areas requiring improvement for lifesaving equipment and fire and boat drills.

Based on these findings, TCMSS developed the recommendations outlined in sections 6 of this report. These recommendations will be monitored by TCMSS to ensure that they have been implemented in a satisfactory manner.

## **Annex A**

### **2013/14 CIC Recommendations**

## Summary

In 2012, TCMSS began planning its first domestic CIC pilot. After an examination of a variety of issues, structural safety was identified as the topic for the first pilot. Structural safety was chosen for a variety of reasons, notably public concern over the grounding and subsequent deterioration of the MV *Miner*, and the fact that structural safety had been delegated to Recognized Organizations (ROs) for more than 20 years. The decision was made to focus the CIC on Great Lakes bulk carriers (“lakers”) to make the scope of the CIC more feasible due to resource constraints and also due to some other considerations, such as the fact that lakers are built with reduced scantlings (based on operational considerations and conditions), and that the overall laker fleet is quite old (average age at the time was 40 years). Of the 63 vessels that met the selection criteria, 15 were inspected.

Once the CIC was completed, overall it was found that there were no major issues with structural safety in the laker fleet. However, inspectors involved in the CIC identified recommendations for consideration.

## Recommendations

The following are the three recommendations that the 2013/14 CIC developed that were developed for Marine Safety and Security Executive, vessel owners, and Recognized Organizations that inspect and certify domestic bulk carriers.

### Thickness measurements

Thickness measurements (TMs) are key data for evaluating the condition of the vessel’s structure. Vessel owners should keep copies of thickness measurements on board for reference. Vessel owners should also ensure that thickness measurements are made on a more regular basis, as they should be up-to-date (i.e., within a 5-year window) prior to establishing the repair schedule.

### Enhanced Survey Program

International Maritime Organization Resolution A.744(18), adopted on November 4<sup>th</sup>, 1993, launched the *Guidelines on the Enhanced Programme of Inspections During Surveys of Bulk Carriers and Oil Tankers*. As part of compliance with this resolution, bulk carriers are subject to enhanced inspections once they reach 10 years of age. The survey report prepared to demonstrate compliance with this Resolution can be very useful for risk-based inspections on board these vessels. TCMSS should investigate the possibility of adopting a similar program in Canada.

### Advance Planning

TCMSS planned and launched this CIC in a short period of time, after concerns were raised following the grounding of the MV *Miner*. The period allocated to communication with stakeholders, particularly vessel owners, has been noted to have been insufficient. More advance planning and more extensive communication with vessel owners and Recognized Organizations is recommended for any future CIC.

## **Annex B**

# **Concentrated Inspection Campaign Questionnaire Fire and Boat Drill and Life Saving Equipment Regulations**

## Copy of the Concentrated Inspection Campaign Questionnaire

No.	Question	Yes	No	N/A
<b>Documentation Review</b>				
1	Is ship documentation in order and up-to-date?			
2	If MTRBs relating to life saving and fire equipment exist, are the conditions of approval being maintained?			
3	Are there any outstanding defects from the previous periodic inspection in relation to lifesaving and fire safety equipment?			
4	Is the muster list satisfactory?			
5	Are there any other written emergency procedure(s) that would not be included in the muster list?			
6	Has the crew received onboard familiarization and safety training?			
7	Are training manuals onboard that explain how to use the ship's life saving equipment?			
8	Are records of tests, maintenance and inspections of lifesaving and fire fighting recorded?			
9	Is a record kept on those passengers requiring assistance?			
10	Does a procedure exist for identifying passengers requiring special needs?			
<b>Procedural Verification</b>				
11	Is a passenger count recorded?			
12	Is the fire control plan satisfactory?			
13	Is the life saving equipment plan satisfactory?			
14	Is the master aware of his/her obligations as per section 20 to 24 and schedule of the Fire and Boat Drill regulations?			
15	Are the watertight doors operated properly and in good working order (i.e. day-to-day operations)?			
16	Do they ensure that fire doors are closed tight?			
17	Conduct a general walk-around the vessel, and verify the following:			
	a. Are safety instructions and signage visible?			
	b. Is the firefighting equipment satisfactory?			
	c. Is lifesaving equipment satisfactory?			
	d. Is the vessel as per the fire control plan? As part of your walk around, did you observe any deviations from the fire control plan?			
	e. Is the vessel as per the life saving equipment plan? As part of your walk around, did you observe any deviations from the plan?			
<b>Drills (conduct one or more)</b>				
18	Has the master and crew demonstrated a satisfactory fire drill?			
19	Has the master and crew demonstrated a satisfactory abandon ship drill? Is passenger accounting satisfactory at muster station(s)?			

## **Annex C**

# **2014/15 Concentrated Inspection Campaign Results**



## National Summary

No	Question	Yes	No	N/A	Total	% of No
<b>Documentation Review</b>						
1	Is ship documentation in order and up-to-date?	47	13	0	60	22%
2	If MTRBs relating to life saving and fire equipment exist, are the conditions of approval being maintained?	19	6	30	55	24%
3	Are there any outstanding defects from the previous periodic inspection in relation to lifesaving and fire safety equipment?	6	53	0	59	90%
4	Is the muster list satisfactory?	34	20	6	60	37%
5	Are there any other written emergency procedure(s) that would not be included in the muster list?	29	27	3	59	52%
6	Has the crew received onboard familiarization and safety training?	53	7	0	60	12%
7	Are training manuals onboard that explain how to use the ship's life saving equipment?	43	16	1	60	27%
8	Are records of tests, maintenance and inspections of lifesaving and fire fighting recorded?	43	16	1	60	27%
9	Is a record kept on those passengers requiring assistance?	15	39	5	59	72%
10	Does a procedure exist for identifying passengers requiring special needs?	18	38	4	60	68%
<b>Procedural Verification</b>						
11	Is a passenger count recorded?	56	3	1	59	5%
12	Is the fire control plan satisfactory?	30	25	5	55	45%
13	Is the life saving equipment plan satisfactory?	35	23	2	58	40%
14	Is the master aware of his/her obligations as per section 20 to 24 and schedule of the Fire and Boat Drill regulations?	50	9	1	59	15%
15	Are the watertight doors operated properly and in good working order (i.e. day-to-day operations)?	19	2	39	21	10%
16	Do they ensure that fire doors are closed tight?	22	2	36	24	8%
17	Conduct a general walk-around the vessel, and verify the following:					
	a. Are safety instructions and signage visible?	52	8	0	60	13%
	b. Is the firefighting equipment satisfactory?	57	3	0	60	5%
	c. Is lifesaving equipment satisfactory?	51	7	0	58	12%
	d. Is the vessel as per the fire control plan? As part of your walk around, did you observe any deviations from the fire control plan?	35	16	9	51	31%
	e. Is the vessel as per the life saving equipment plan? As part of your walk around, did you observe any deviations from the plan?	40	14	6	54	26%
<b>Drills (conduct one or more)</b>						
18	Has the master and crew demonstrated a satisfactory fire drill?	51	6	3	57	11%
19	Has the master and crew demonstrated a satisfactory abandon ship drill? Is passenger accounting satisfactory at muster station(s)?	50	6	3	56	11%

Note – the “% of No” is based on the totals of yes and no responses. It does not include “N/A” responses.