



TSB Recommendation M23-01

Regulatory surveillance for tugs of 15 gross tonnage or less

The Transportation Safety Board of Canada recommends that the Department of Transport expand its surveillance program to include regular inspections of tugs of 15 gross tonnage (GT) or less to verify that these vessels are complying with regulatory requirements.

Marine transportation safety investigation report	M21P0030
Date the recommendation was issued	08 March 2023
Date of the latest response	02 June 2023
Date of the latest assessment	August 2023
Rating of the latest response	Satisfactory in Part
File status	Active

All responses are those of the stakeholders to the TSB in written communications and are reproduced in full. The TSB corrects typographical errors in the material it reproduces without indication but uses brackets [] to show other changes or to show that part of the response was omitted because it was not pertinent.

Summary of the occurrence

On 10 February 2021, the tug *Ingenika*, with 3 crew members on board, was towing the loaded barge *Miller 204* in the Gardner Canal when the tug sank approximately 16 nautical miles west-southwest of Kemano Bay, British Columbia (BC). The barge subsequently drifted and went aground about 2.5 nautical miles southwest from where the tug sank. The search and rescue operation located 1 surviving crew member on land and recovered the bodies of the 2 other crew members from the water. The barge was recovered; the tug was not found. At the time of the occurrence, the tug had 3500 L of diesel fuel in tanks on board.

The Board concluded its investigation and released report M21P0030 on 08 March 2023.

Rationale for the recommendation

At September 2022, there were approximately 1343 tugs of 15 GT or less registered in Canada, approximately 1035 of which were registered in BC. Since 2015, the TSB has investigated 6

occurrences involving tugs of 15 GT or less operating on the west coast of Canada that have raised issues around the adequacy of regulatory surveillance.¹

TC does not certify tugs of 15 GT or less, nor are these vessels required to undergo regular inspections. By comparison, before being certified by TC under the *Vessel Safety Certificates Regulations*, tugs of greater than 15 GT but of less than 150 GT are required to be inspected every 4 years, and tugs of 150 GT and greater are required to be inspected annually. Although TC has set an annual target of inspecting 3% of tugs of 15 GT or less nationwide, most will go years between inspections and may never be inspected over the life of the vessel. For example, the *Ingenika* was built in 1968 and had been in operation for over 50 years before this occurrence; the investigation found that there were no records of TC performing an inspection at any point in the tug's operational life.

The TSB also recently investigated another occurrence involving a tug of 15 GT or less, the *Risco Warrior*,² which was built in 1961 and had never been inspected. That investigation found that, in the absence of comprehensive regulatory surveillance and enforcement, there is a risk that tugs of 15 GT or less will continue to be operated with unsafe equipment and operating practices. While vessel owners and operators have the primary responsibility to manage safety, it is vital that TC provide effective oversight and proactively intervene to ensure that vessel owners and operators comply with regulations and standards and can manage the safety of their operations effectively.

From April to October 2022, TC conducted 30 risk-based monitoring inspections of tugs of 15 GT or less. Overall, 21 of these inspections resulted in a total of 62 deficiencies, including 13 related to lifesaving equipment, 12 related to structure or stability, 8 related to crew certificates, 6 related to fire safety, and 5 related to navigation safety.

From April to October 2022, TC also conducted 120 statutory inspections of tugs of greater than 15 GT. Sixty-four of these inspections resulted in the identification of deficiencies. Statutory inspections are generally more comprehensive than risk-based monitoring inspections. In addition, TC conducted 30 risk-based monitoring inspections of tugs of greater than 15 GT on the basis of findings from the statutory inspections. Of these 30 risk-based monitoring inspections, 19 resulted in the identification of deficiencies.

In 2018–19, TC conducted a concentrated inspection campaign on domestic vessels. According to the campaign report,³ 83 vessels were inspected nationwide, 49 of which were inspected under the annual inspection category and 34 through quadrennial inspections per the *Hull Inspection Regulations*.⁴ Nineteen of the vessels inspected were tugs, but none were of 15 GT or

¹ TSB marine transportation safety investigation reports M20P0230, M19P0246, M17P0244, M16P0241, M16P0062, and M15P0037.

² TSB Marine Transportation Safety Investigation Report M20P0230.

³ Transport Canada, 2018/2019 Concentrated Inspection Campaign Report.

⁴ The *Hull Inspection Regulations* were repealed in 2021, but were in force at the time of the concentrated inspection campaign.

less. The data showed that vessels inspected every 4 years had more deficiencies than those inspected annually.

TC also focused on tugs in a concentrated inspection campaign conducted in BC from January to March 2017. Thirty tugs of 15 GT or less and 30 tugs of greater than 15 GT were selected for inspection. TC concluded that tugs of 15 GT or less had significantly more instances of regulatory non-compliance than tugs of greater than 15 GT.⁵

For tugs of 15 GT or less, the onus is on the authorized representative (AR) to ensure compliance with the regulations and the safe operation of the vessel. However, in its Watchlist 2022, the TSB highlighted that many ARs of small vessels, such as the *Ingenika*, have limited awareness of key sections of the *Canada Shipping Act, 2001* and of the broader regulatory framework. Other ARs may not be motivated to comply with regulations, given that it is well known that TC is unlikely to inspect their vessels and so the probability of enforcement is low.

Recognizing the level of risk present, in 2016, the Board issued a safety concern⁶ on the issue of regulatory surveillance for tugs of 15 GT or less. On 25 June 2022, TC pre-published the proposed *Marine Safety Management System Regulations*, which will require tugs of 15 GT or less to develop a safety management system and obtain a Canadian safety management certificate. TC also developed and implemented the Small Vessel Compliance Program for Tugs (SVCP-T), which provides a simplified description of regulatory requirements and useful information that companies and ARs can use to evaluate their regulatory compliance. Although these are encouraging initiatives, neither are a replacement for vessel inspections under a broader program of regulatory surveillance, which would provide an opportunity to examine a vessel and its equipment to verify that it is in compliance with the regulatory requirements and being operated safely. Without adequate surveillance by TC, shortcomings in the safety management and operations of tugs of 15 GT or less will continue to go unaddressed, leading to accidents. Therefore, the Board recommends that

the Department of Transport expand its surveillance program to include regular inspections of tugs of 15 gross tonnage (GT) or less to verify that these vessels are complying with regulatory requirements.

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Previous responses and assessments

N/A

⁵ Transport Canada, "Findings of the Pacific Region Spot Check Campaign," Presentation delivered at Pacific Canadian Marine Advisory Council meeting (22 March 2018).

⁶ TSB Marine Investigation Report M15P0037.

Latest response and assessment

June 2023: response from Transport Canada

Transport Canada (TC) agrees with the safety recommendation M23-01. The Department will continue to take steps toward expanding its surveillance program of tugs 15 GT or less, to verify that these vessels comply with applicable regulatory requirements. TC will also continue to work, in conjunction with government, labour, and industry partners, to advance initiatives aimed at enhancing a culture of safety among owners and operators of small tugs, helping to address operational issues on board these vessels beyond deficiencies which can be identified through inspections.

TC will enhance its oversight posture toward tugs of 15 GT or less through a risk-based approach that will see inspectorate resources re-prioritized and re-distributed to increase the number of monitoring inspections conducted on board these vessels. Under its current monitoring model for small vessels, TC annually inspects approximately 2.5% of the small tug fleet. Through a targeted increase and re-allocation of inspection resources, TC will aim to increase this proportion to 10%, which will result in 129 tugs being subject to a risk-based inspection each year, quadruple the current number that will receive an annual inspection from TC. This approach will ensure that vessels representing the highest risk receive regular inspections.

TC will also undertake a series of measures to expand its range of oversight activities. This includes advancing initiatives, such as a pilot program, underway since February 2023, to leverage its National Aerial Surveillance Program as an additional tool for gathering information to support oversight and enforcement activities on small commercial vessels. This initiative will allow TC to collect data on tug and barge during their operations, helping establish indicators for when follow-up inspections, and compliance and enforcement actions, may be required.

In parallel with expanding its approach toward small vessel oversight, TC will continue to promote the new component of its Small Vessel Compliance Program which is specific to owners and operators of tugs. This online tool, launched in January 2022, provides owners and operators of these vessels with an easy-to-use tool to better understand and meet their legal obligations and regulatory requirements. TC has issued a Ship Safety Bulletin to publicize the program and will continue to raise awareness among vessel owners and operators through regional education, inspection, and compliance campaigns.

Upon a request for further clarification by the TSB on 04 July 2023, TC provided the following information:

TC Commitment	Proposed Timeline
Ingenika	

<p>Increase oversight of small tugs to 10%</p>	<p>Work is ongoing. Targets for the National Oversight Plan this fiscal year have been set and will be closely followed.</p> <p>Tentative timeline</p> <ul style="list-style-type: none"> • End of 2023/24 Fiscal Year: Results from the National Oversight Plan, expanding small tug oversight, will be set.
<p>Ongoing work with partners on safety awareness (e.g., Pacific Coast Tow and Workboat Advisory Group)</p>	<p>Work is ongoing to identify and advance new and existing initiatives.</p> <p>Transport Canada is supporting work to develop a digital application to provide educational resources to assist tug operators and crew to safely operate their vessels. The advancement of the digital application, as well as potential timelines for its implementation, will be guided by industry partners.</p>
<p>Safety initiative for tug operators</p>	<p>Work is ongoing to advance a safety initiative, modeled off the “FishSafe” program, to provide tug operators and crew with the knowledge and tools necessary to safely operate their vessels.</p> <p>Transport Canada has begun to advance this work, but timelines will be dependent on ongoing collaborative work with the province of British Columbia and the tug industry.</p>
<p>National Aerial Surveillance Program (NASP)</p>	<p>Work is ongoing to finalize the development and implementation of using the NASP to expand oversight, as well as formalize the collection and analysis of data from the program.</p> <p>Tentative Timeline:</p> <ul style="list-style-type: none"> • Summer 2023: Implementation of NASP surveillance. • Fall 2023/Winter 2023: Results from data analysis completed.
<p>Marine Safety Management System Regulations</p>	<p>Work is ongoing to finalize updates to the <i>Marine Safety Management System Regulations</i>, which will require all tug operators to develop and implement a certified safety management system on board their vessels</p> <p>Tentative Timeline:</p> <ul style="list-style-type: none"> • Fall 2023: Publication in the <i>Canada Gazette</i> Part II
<p>Expand existing Memorandum of Understanding with WorkSafe BC</p>	<p>Work will continue into 2024 to expand the scope of the existing Memorandum of Understanding between the Department and the Province of British Columbia respecting worker safety on board certain commercial vessels.</p> <p>Tentative Timeline</p> <ul style="list-style-type: none"> • Implementation of the updated MOU is targeted for early 2024.
<p>Increase awareness of and enrollment in the Small Vessel Compliance Program</p>	<p>Work is ongoing to identify and advance new initiatives to promote enrollment.</p>

August 2023: TSB assessment of the response (Satisfactory In Part)

Transport Canada (TC) has outlined various initiatives it will undertake to address this recommendation. The Department has indicated that it will re-allocate inspection resources to quadruple the percentage of inspections conducted each year of the small tug fleet, and that it will continue its pilot program to leverage the National Aerial Surveillance Program to support oversight and inspections. It will also continue to promote its online Small Vessel Compliance Program, which aids vessel owners and operators to better understand and meet their legal and regulatory requirements. However, notable gaps exist as to details around the initiatives identified including the rationale for inspecting one vessel over another, identifying issues with registration, or details on how surveillance or enforcement tools will be used to increase compliance in the industry.

The Board is encouraged by the Department's plan to increase the proportion of small vessels subject to risk-based inspections and to review the proposed target to be set by the end of the 2023/24 fiscal year. The Board acknowledges the increase in the eventual target, which would rise from 2.5% to 10% of the small tug fleet. Nonetheless, details were not provided regarding how these vessels will be targeted. However, combining the increased vessel inspections with other approaches to regulatory surveillance, such as TC's use of its National Aerial Surveillance Program, may offset the low frequency of risk-based inspections. Efforts to build awareness of the SVCP-T may improve knowledge of safety requirements among vessel owners and operators. Finally, TC is also currently working on developing an application which would provide educational resources to help tug operators and crew ensure they are operating safely and following regulations. However, whether the targeted parties will use the application and its efficiency in reducing risks to operations remains to be determined.

TC's proposed and planned initiatives are encouraging and, without delays, could address some of the underlying safety deficiency. While the increased target for small tug inspections is positive, the criteria that will be used to establish risk-based inspections are not defined. Furthermore, the Board is concerned that these initiatives may still result in many small tugs being overlooked when it comes to regular inspections. Without a broader program of regulatory surveillance and inspections by TC, the operation of many tugs may continue to pose a high risk to safety and the environment due to lack of oversight and verification of compliance.

Therefore, the Board considers TC's response to Recommendation M23-01 to be **Satisfactory In Part**.

File status

The TSB will monitor the actions taken by Transport Canada.

This deficiency file is **Active**.