Occupational Health and Safety Tribunal Canada

Tribunal de santé et sécurité au travail Canada

Ottawa, Canada K1A 0J2

Citation: Lower Lakes Towing Ltd., 2014 OHSTC 2

Date: 2014-02-18
Case No.: 2012-88
Rendered at: Ottawa

Between:

Lower Lakes Towing Ltd., Appellant

Matter:	Appeal under subsection 146(1) of the *Canada Labour Code* of a direction issued by a health and safety officer
Decision:	The direction is varied
Decision rendered by:	Mr. Michael McDermott, Appeals Officer
Language of decision:	English
For the Appellant:	Mr. Marc D. Isaacs, Counsel, Isaacs & Co.

REASONS

[1] This decision concerns an appeal brought under subsection 146(1) of the *Canada Labour Code* (the Code) of a direction issued by Health and Safety Officer (HSO) David Louden on November 22, 2012, pursuant to subsection 145(1) of the Code. The appellant is Lower Lakes Towing Ltd. of Port Dover, Ontario. There is no respondent.

Background

[2] The subject direction was issued by the HSO following an inspection of a work place operated by the appellant. More specifically, the work place is the Motor Vessel (MV) Saginaw docked at the time of the HSO's inspection at Thunder Bay, Ontario. The HSO concluded that certain provisions of the Code were being contravened. Pursuant to paragraph 145(1)(*a*), he directed the employer to terminate the contraventions no later than March 15, 2013, and, pursuant to paragraph 145(1)(*b*), to ensure that the contraventions do not continue or reoccur.

[3] The first and third contraventions identified in the three part direction are cited in the appeal.

The first contravention reads:

> **1. Paragraph 125(1) (*t*) of the Canada Labour Code, Part II (Part II) and section 211(1) of the Maritime Occupational Health and Safety Regulations (MOHSR).**
>
> The unloading boom, fitted on the vessel, does not meet the requirement that a failure of any part of the equipment will not result in loss of control of the equipment or create a hazardous condition. To be corrected.

The third contravention reads:

> **3. Paragraph 125(1) (*p*) of Part II, and section 12(9 & 10) & section 17 of the MOHSR, and ANSI/ASSE A10.11 – 1989 (R1998).**
>
> The construction and installation of the safety net, deployed under the means of access used to board or disembark from the vessel, does not meet all of the regulatory requirements. To be corrected.

[4] The MV Saginaw is described as a Great Lakes bulk cargo vessel built in 1953 and originally named the John J. Boland. The name change followed Lower Lakes Towing Ltd. taking ownership in 1999. At approximately 11:30 p.m. on December 31, 2011, the vessel was engaged in loading coal at Thunder Bay Terminals with the unloading boom extended outboard to starboard. The HSO reports that "the static slewing wire failed (pulled out of the end socket), resulting in loss of control of the unloading boom". The boom swung "over to the port side of the vessel … collided with the dead-man (stop) and collapsed over the port side". Damage was caused both to the vessel and to the dock. Nobody was hurt but the HSO observes that the incident "could conceivably have caused

serious injury or fatality to personnel on board the ship, or on the dock". The HSO notes two previous occasions when the vessel's unloading boom had collapsed, one in December 1973 and the other in April 2010. His file also records with respect to the more recent occurrence that the starboard slewing cable had been replaced on December 30, 2011, the eve of the unloading boom incident.

[5] Following the incident, HSO Louden called at Thunder Bay Terminals on or about January 3, 2012, to carry out an inspection on board the MV Saginaw regarding compliance with provisions of the Code and the Maritime Occupational Health and Safety Regulations (MOHSR). He was accompanied by two colleagues from Transport Canada who conducted inspections under the authority of the Canada Shipping Act (CSA). On January 5, 2012, HSO Louden sent a detailed e-mail to Mr. Andrew Vary, then Lower Lakes Towing's Engineering Superintendent, to which he attached a suggested assurance of voluntary compliance (AVC) with respect to subsection 211(1) of the MOHSR with a proposed completion date of April 1, 2012. The e-mail also sought confirmation of whether or not the MV Saginaw's unloading boom had been thoroughly examined pursuant to the relevant Cargo, Fumigation and Tackle Regulations (CF&T Regs) under the CSA. The HSO reports receiving no response from the company to his e-mail or its attachment.

[6] On or about November 21, 2012, HSO Louden conducted a follow-up visit to the vessel related to the earlier incident and the suggested AVC. He enquired as to steps taken to prevent a repeat of the December 31, 2011, accident and was shown a stencilled instruction posted on both port and starboard sides, close to the unloading boom controls that read in bold "When Boom Is Up, Brake Must Be On". When he asked how this would prevent a repetition of the earlier incident, he reports that the Chief Officer replied that it would not. At the conclusion of his inspection the HSO issued the three part direction referred to above. As indicated, two of the three contraventions covered by the direction are germane to this appeal. The first arises from the unloading boom incident of December 31, 2011, and the second relates to concerns about the need for a safety net below the means of access to the moored vessel that the HSO noted during his inspection visit to the vessel on November 21, 2012.

[7] HSO Louden's file includes a copy of the e-mail sent to Lower Lakes Towing on January 5, 2012. The suggested AVC attached to the main message paraphrases subsection 211(1) of the MOHSR and reads in part as follows:

> The employer will ensure that, to the extent that is reasonably practicable, the design and construction of the new unloading boom to be fitted to the vessel is such that, if there is a failure of any part of the equipment, it will not result in loss of control of the equipment or create a hazardous condition. … Completion date is a guide. In any case compliance must be attained prior to the use of the new unloading boom.

The e-mail addressed to Mr. Vary at Lower Lakes Towing was copied by the HSO to Mr. Timothy Black and Mr. Murray Hawe, the colleagues who had visited the MV Saginaw at the same time as Mr. Louden but in the capacity of Marine Safety Inspectors and not as HSOs. Copies were also sent to two other Transport Canada

officials, Mr. J.D Mackrell, Manager Marine Inspection Services, Thunder Bay District, and Mr. Michael Dua, Manager, Marine Inspection Services for Transport Canada's Sarnia District who also has responsibility for Marine Safety and Occupational Health and Safety advisory services at the Ontario regional level.

[8] The HSO's file also includes: several photographs relating to the damaged unloading boom and to the safety net issue; copies of Hazardous Occurrence Reports filed by Lower Lakes Towing with Transport Canada following the 2010 and December 2011 unloading boom incidents; and, a copy of a memorandum sent by HSO Louden on January 18, 2012, to Mr. Mackrell, his Manager at Thunder Bay, and copied to his colleagues Mr. Black and Mr. Hawe. The latter memorandum contains a quite detailed account of the unloading boom failure noting among other things that the replacement of the slewing cable on December 30, 2011, was needed because the old cable "apparently had abrasion damage" and that, while the vessel's Master did produce a manufacturer's test certificate for the wire rope used in the newly fitted slewing cable, "he could not provide a test certificate to show that, when assembled, the wire cable with attached open spelter socket had been tested, as required by C,F&T Regs."

Issue

[9] The issue in this appeal is whether or not HSO Louden erred in issuing a direction finding that the employer, Lower Lakes Towing Ltd., contravened the following provisions: paragraph 125(1)(*t*) of the Code and subsection 211(1) of the MOHSR; and, paragraph 125(1)(*p*) of the Code and section 17 of the MOHSR, and ANSI/ASSE A10.11.

Summary of evidence

[10] A hearing was held in Toronto, Ontario, on August 20 and 21, 2013. The hearing also covered an appeal of a direction issued by the same HSO to the same employer but involving a different vessel and different circumstances. (Decision *Lower Lakes Towing Ltd.*, 2013 OHSTC 37). In addition to HSO Louden, Mr. Kevin Collard, First Officer on board the MV Saginaw at the time the direction was issued, and Mr. Eric MacKenzie, Vice-President, Engineering and Technical Services, Lower Lakes Towing Ltd. at the time of the hearing, testified specific to the appeal involving the MV Saginaw. The appellant entered an Expert Report Brief prepared by Mr. John P. Elder, P. Eng., of Ems-Tech Inc., but did not call Mr. Elder to give oral testimony.

[11] HSO Louden's testimony referred to the narrative summary of events leading to his issuing the direction prepared in response to the Tribunal's request for his Investigation Report. The contents of that summary are reflected in the background information given above. In cross-examination, the HSO agreed that Lower Lakes Towing took ownership of the MV Saginaw in 1999 and acknowledged that the vessel would have been subject to annual inspections under the CSA and certain of its regulations since that time. He said that he was not aware of any modifications to the vessel having been requested by Transport Canada following these inspections. He testified that he had spoken to a naval architect colleague before issuing the direction and had also consulted with a person

outside the Department knowledgeable about wire rope and spelters, but had not written reports on the conversations. He said that he had not consulted anyone with respect to boom design nor had he consulted the technical staff at Lower Lakes Towing, although in the latter respect he pointed out that he had suggested an AVC to them but received no response. Questioned on what he did to investigate how redundancy of systems could be met, the HSO said that he had visited other ships and had noted one case where another shipping company's vessel had some doubling arrangements but no notes were produced on the matter.

[12] With respect to the December 31, 2011, unloading boom failure, HSO Louden agreed that the slewing cable separated from the spelter socket but that he had not sought laboratory testing as to the reasons for the separation. He acknowledged that Lower Lakes Towing does not manufacture the spelter socket or the slewing wire. Concerning the other two unloading boom incidents on board the MV Saginaw, in 1973 and 2010 respectively, the HSO agreed that he was unaware of their specific causes. Questioned on the phrasing of the direction, the HSO agreed that he had not included the words "reasonably practicable" in the text and acknowledged that they are contained in the relevant regulation. Questioned on the lack of specificity in the direction and the absence of suggested corrective action, he replied that as an HSO he is instructed to identify contraventions and non-compliance but not to prescribe corrective measures.

[13] Mr. Kevin Collard, an experienced and qualified Great Lakes mariner, was on duty on board the MV Saginaw on or about November 21, 2012, when the HSO visited the vessel. He testified that his responsibilities as First Officer included undertaking navigation watches, overseeing cargo operations and crew safety. Questioned about the means of getting on and off the vessel when it is moored, Mr. Collard explained that there is a fixed and powered forty foot ladder positioned aft. It appears that this ladder is the principal means of access but that when the vessel is moved, in order to allow loading along the length of the deck, it may begin to pass the end of the dock at times rendering the fixed ladder inaccessible. He further explained that at such times a shorter, moveable twenty-four foot ladder may be used and positioned at appropriate places as the vessel moves along the dock. A safety net is placed under the ladder. When necessary to re-position the ladder, both the platform and the net must also be moved. Mr. Collard explained that when the shorter ladder is being moved the safety net hangs on the side of the vessel and is re-positioned when the ladder is fixed in its next place.

[14] In sum, Mr. Collard's testimony is to the effect that positioning of the moveable ladder was underway when the HSO came upon the scene and took a photograph of its location. At that time he maintains that the net was hanging down the side of the vessel and that the ladder was not in use as a means of access. He testified that he was overseeing the process and when the HSO attempted to board the vessel he ordered him not to do so until the net was properly in place. The remainder of his evidence was in response as to whether or not Mr. Collard and the HSO had previously encountered each other. Mr. Collard recalled that they had met before in the course of work, a recollection not shared by the HSO.

[15] Mr. Eric MacKenzie is an experienced marine engineer who in the course of a lengthy career has served as Chief Engineer on board vessels plying the Great Lakes. He described his current responsibilities at Lower Lakes Towing as management and oversight of matters related to the basic structure of the company's vessels, their engines, ballast systems and technical machinery including self-unloading booms. During his examination in chief he was referred to Mr. Elder's Expert Report Brief and was able to use its photographs and drawings to illustrate his testimony. A video presentation concentrating on the slewing system and the boom was also introduced while Mr. MacKenzie was giving evidence. He gave a comprehensive description of the self-unloading process and of the various parts of the system it employs. While it was helpful to my understanding of the process to have this account, I do not find it necessary to give more than a thumb-nail sketch here of the overall system while paying more attention to the wire rope slewing component that is most germane to the appeal.

[16] In brief and mainly lay terms but based on my understanding of Mr. MacKenzie's evidence, the main elements of a self-unloading system start with bulk cargo being discharged from the holds to a conveyor belt within the vessel below that carries the cargo aft along a tunnel to the transfer area where it meets the elevator system, in the case of MV Saginaw a bucket system. That system elevates the cargo to the unloading boom where it is ultimately discharged from the spout into whatever storage facility or transportation vehicle awaits its arrival. I was told that the unloading boom, when not in use rests in and is secured to its saddle facing forward atop the hold hatches. When required for unloading or when needed to be moved to permit loading, the boom is raised vertically by the luffing system and then moved laterally, to port or starboard as the case maybe, by the wire rope slewing system.

[17] Testimony and comment with respect to the wire rope slewing cable indicates that a static wire is bonded into spelter sockets at either end. One spelter socket is anchored to the vessel's superstructure and the other is fixed to a double sheave. The sheave is fixed to the running wires that are attached to the boom by means of a second sheave enabling the boom to be moved. I was given to understand that, on its path from the anchor point on the vessel to the first sheave, the static cable runs around a bollard known as the "dead man stop" to allow for perpendicular pull. I asked Mr. MacKenzie if the wire and sheave combination resembled a standard if somewhat sophisticated block and tackle. He agreed and observed that it serves the same purpose of giving mechanical advantage to the slewing system.

[18] Questioned on cargo unloading procedures and maintenance records, Mr. MacKenzie agreed that the employer has written procedures for safe handling of the boom that identify personnel authorized to monitor its operations and require a ships officer to be on hand to react to any issues that arise and watch for changing conditions such as wind levels that may call for boom operations to cease. He also agreed that there are written operating procedures specific to the MV Saginaw that among other things require testing to show that the boom can be slewed to port and to starboard when first raised from the saddle. A maintenance history report for the MV Saginaw was entered showing regular maintenance schedules, checks and actions taken over the recent past, including specific reference to replacement of the starboard static cable on December 30,

2011. Mr. MacKenzie also testified that MV Saginaw had been inspected annually by Transport Canada and that to his knowledge there were no deficiency notices outstanding as of December 31, 2011.

[19] With respect to the replacement of that slewing cable, Mr. MacKenzie gave an account of the steps taken once fraying of the starboard static wire was noticed during unloading operations at Sault Ste. Marie on December 28, 2011. In short, he testified that instructions were sent to the Saginaw to secure the boom to the saddle and reduce stress on the wire. Contact was made with a reputable supplier known to Lower Lakes Towing and a rush order was placed for the replacement slew line and open spelter sockets. It was Mr. MacKenzie's expectation that the slewing cable and spelter sockets would be tested by the supplier after being assembled. The supplier provided a test certificate dated December 29, 2011, delivered with the order. The certificate indicates that break loads or breaking strengths of the cable had passed testing but does not indicate that a proof load test of the assembled slewing wire was made. The appellant contends that it is the responsibility of the supplier to carry out both tests and it was its understanding that the supplier had done so.

[20] Mr. MacKenzie noted that bonding of the slewing wire to the spelter sockets is now generally accomplished using a resin rather than lead sealing as used to be the case. Resin was used in this instance. Once the starboard static cable was replaced, it was recorded in the ships records. I was told that, with the repair made, the MV Saginaw completed its unloading operations at Sault Ste. Marie and departed for Thunder Bay.

[21] Mr. MacKenzie's evidence with respect to the incident at Thunder Bay on December 31, 2011, was in the main consistent with the description given in the background section above. He did specify and photographic evidence shows that the wire parted from the spelter socket anchored to the vessel's superstructure. He also gave additional explanation of the slight list to port that was being maintained to compensate for the unloading boom being extended out to starboard to allow for loading the holds. With the static cable loose, the boom swung across the vessel towards port side.

[22] Questioned about the collapse of the MV Saginaw's unloading boom in 2010, Mr. MacKenzie stated that the incident did not relate to the slewing wire system. Rather the boom had been lifted by the luffing wires and it fell to the deck when those wires failed. He added that damage to the boom had been repaired and that the system was tested in accordance with the procedures of Lower Lakes Towing's tackle manual that are based on the requirements of the relevant regulations.

[23] Responding to questions as to how compliance with the direction and conformity with subsection 211(1) of the MOHSR might be achieved, Mr. Mackenzie doubted the possibility. He testified that he had never in his career encountered a vessel equipped with a redundant slew line system. He said that there is not a lot of space available on board the vessels for installing two slewing and luffing systems and that he believed it would create hazards if such were to be attempted. He maintained that boom failures are very rare, recalling only a couple in his experience with one being attributable to human error. In his opinion, the slewing line incident on board the MV Saginaw on December

31, 2011, was attributable to errors in the assembly of the static slewing cable purchased by Lower Lakes Towing.

[24] The Expert Report Brief prepared by Mr. John B. Elder, P. Eng., was entered by counsel for the appellant. Mr. Elder holds a Bachelor of Applied Science in Civil Engineering from Waterloo University, Waterloo, Ontario. He has 35 years of professional experience in the bulk material handling field with concentration on the design and selection of handling systems for use on dry bulk self-unloading vessels. He has worked in a large number of countries around the world and is currently Vice-President, Marketing, Sales and Product Development with Ems-Tech Inc. in Belleville, Ontario, a position he has held since 2008.

[25] Mr. Elder summarizes the task assigned to him by the appellant as,

> to provide expert commentary regarding the practicality of modifying the self-unloading system currently in place on board the MV Saginaw. More specifically, we have been asked to consider whether, in our expert opinion, it is possible or practical to add or install redundancy as it would relate to the boom slewing system that is currently in place on the vessel.

In responding to the task, Mr. Elder first provides a brief account of the presence on the Great Lakes since 1902 of self-unloading vessels using natural, synthetic or wire rope systems to hoist or slew their conveyor booms. He adds that, for reasons of strength, only wire rope is used for the systems today. The report refers to the appearance on the Lakes in 1976 of the hydraulic rotary slewing actuator that now dominates the industry. The record indicates that, of the 85 self-unloaders plying the Great Lakes, the majority employ the hydraulic rotary slewing actuator with fifteen, including the MV Saginaw, having booms that are slewed by wire rope systems. Mr. Elder's account of the operating method of the wire rope slewing systems is essentially in accord with that given above. He writes, "the system comprises static cables, running cables, sheaves and wire rope winches. Running cables are cables that run over sheaves and drums while static cables are those that don't".

[26] On the main issue, the report notes that when booms are designed, "there is no specific attempt to provide redundancy." It is also noted that the "design of the boom and associated hoisting and slewing appliances follow strict guidelines and rules set forth in relevant design codes and regulations published by the Classification Societies." Particular mention is made of the American Bureau of Shipping (ABS) standards and the more demanding safe stress levels they set for running and static wire ropes compared to those set for the steel structure of the boom.

[27] In concluding sections, the report first observes that the absence of redundancy applies equally to hydraulic rotary actuator slewing systems and to wire rope systems. It refers to an incident where, due to operator error, the actuator failed and the boom swung free. For the Saginaw incident where the rope connection failed, the prospect of "faulty termination" is raised. Both incidents are termed rare occurrences and Mr. Elder adds, "to the best of my knowledge, neither event has occurred before." The conclusions also

explore possible redundancy or back-up measures but, without dismissing them entirely, raise issues of practicability, costs and additional safety concerns they might entail such that the feasibility and value of pursuing them are questioned and significantly discounted. Quoting Mr. Elder's third conclusion may serve to illustrate the point.

> If we are to restrict our thinking to traditional slewing systems that exist today, i.e. rope slew systems and hydraulic slewing actuators, yes, it is possible to add tag lines to provide back-up in the event of failure of the primary slew system. I am not convinced, however, that this will actually yield a safer system as the complications of installing and managing this secondary rope system, could far outweigh the perceived benefits. More ropes, handling of these heavy ropes, are not something that anyone wants to see or be involved with. Accidents will surely happen. This said, the cost of installing additional wire rope winches, bollards and the wire rope would be considerable, and the resulting benefit would be questionable at best.

The report includes other comments in this vein, for example, "every layer of equipment added is another layer of maintenance and another potential failure location, and this is even more concerning when one considers the environment within which the system must operate." Finally emphasis is put on training in the industry the contribution of which is duly noted, "much attention has been given to training and prevention of operator error…. additional training, in combination with preventive maintenance programs that are in place, is having a positive impact because the incidence of boom failure is much less today than it was 30 years ago."

Appellant's submissions

[28] The appellant made oral and written submissions at the conclusion of the hearing and subsequently submitted additional written representations. The submissions contain comments on the HSO's credibility that I will address below. Apart from that, I describe first the submissions relating to the safety net. The appellant argues that the ladder providing means of access to the vessel was not in use for that purpose when the HSO determined that the safety net was not deployed as required. It is submitted that the evidence shows that it is normal for a vessel the length of MV Saginaw to be moved along the dock to permit loading of cargo and that the ladder must be lifted and the net shifted to facilitate such movement. When the procedure is complete, the ladder and the net are re-positioned. It is submitted that there is no evidence of anyone using the ladder as a means of access at the time and that the First Officer was in place to ensure that nobody would do so until the net was re-installed. It is argued that the photograph taken by the HSO showing the net not in position is a split second shot out of context with the manoeuvre. The appellant submits that the order should be rescinded.

[29] With respect to the contravention relating to the unloading boom, the appellant's submissions effectively pursue two arguments: one, the section of the MOHSR found by the HSO to have been contravened does not apply to the self-unloading boom; two, in the event that I decide it does apply, compliance with the regulation is limited to the extent

practicable and it is argued that it is not practicable for the appellant to comply with its terms.

[30] In the first place it is submitted that section 211 of Part 19, Division 2, of the MOHSR speaks to forklifts, front end loaders and other types of mobile equipment used for moving cargo and not to self-unloading booms. In support of the submission reference is made to succeeding sections of Division 2 and their details of such items as shatterproof glass in windows and doors, overturning protection for vehicles, seat belts and other requirements that suggest a mobile vehicle or machine that is not fixed to the vessel's structure. It is argued that a self-unloading boom is more appropriately classified as "tackle" under the Cargo, Fumigation and Tackle Regulations (CFTR) and that a self-unloading boom would fit within the definition of a "category 5 lifting appliance", under section 300 which reads:

> *"Category 5 lifting appliance" means a vehicle, ramp installed on a vessel or a continuous loading or unloading system or appliance.*

It is further argued that confirmation the MOHSR do not apply to the boom is found in section 210 of those regulations that reads:

> 210. This part does not apply to or in respect of the inspection and certification of tackle used in the loading or unloading of vessels.

In sum, the appellant submits that, since the self-unloading boom is governed by the CFTR and not Part 19 and section 211 of the MOHSR, the order is based on a regulatory requirement that does not apply and is invalid.

[31] In the alternative, it is submitted that the regulation requires redundancy only to the extent reasonably practicable and that nothing in the wording of the contravention or the HSO's investigative file indicates that he considered the practicability of compliance before issuing the direction. It is further submitted that the evidence given at the hearing establishes that there is no reasonably practicable way to add a redundant system. In support of this submission reference is made to the testimony given by Mr. MacKenzie and to Mr. Elder's Expert Brief. The appellant notes that both persons maintained that boom related failures are very rare occurrences and that human failure has sometimes been the cause. Again, it is noted that both persons point to there being insufficient room to install a redundant or secondary system on a vessel such as the MV Saginaw and that to do so would create other safety issues, the prospect of entanglements between systems, more maintenance and the potential for failure of other systems.

[32] On industry practice, the appellant refers to Mr. MacKenzie's testimony indicating that he has never encountered a Great Lakes self-unloader equipped with redundancy and to Mr. Elder's report confirming that this is consistent for both the wire rope slewing systems and those employing a hydraulic rotary actuator. With respect to possible means of installing redundancy the appellant cites Mr. Elder's report and the particular example it gives of tag lines being added to a boom to create a secondary apparatus and notes the reservations he expresses with the following quotation from his text:

> There was considerable concern expressed by the designer regarding: (1) stresses that could be induced into either the boom structure or the existing systems should the tag line or tag lines develop their full potential: (2)the tag lines be mismanaged or misarranged: or, (3) the two systems notably the primary and secondary systems fight with each other.

Other quotes or paraphrases from Mr. Elder's report that the appellant offers in support of its submissions include:

> Any solution would be complex, expensive and bring with it a host of potential failures with no increase in safety. The possible solutions are neither practical nor, on the whole, beneficial.
>
> We were not successful in formulating a design or plan that would provide for securing the boom against rotation in both directions with the boom over the side of the vessel.
>
> The cost of installing additional wire rope winches, bollards, and the wire rope would be considerable, and the resulting benefit would be questionable at best.

[33] For jurisprudence on practicability, the appellant cites the decision of Regional Safety Officer Serge Cadieux in *Alberta Wheat Pool* (92-002). That decision maintains, among other considerations, that there is need to calculate "whether there is a gross disproportion between the benefit of the duty and the cost. If such a disproportion exists, then a conclusion that it (acquitting the duty) is not reasonably practicable should be reached." The appellant submits that under such a test compliance with the direction is not a reasonably practicable possibility and argues, "assuming that s.211 of MOHSR even applies, it has been met as the equipment has been designed and constructed with redundancy to the extent it is reasonably practicable to do so."

Analysis

[34] An initial word on the appellant counsel's challenge to the HSO's credibility is appropriate. I addressed similar comments in the decision referred to in paragraph nine above (2013 OHSTC 37). Points were made here concerning: the time lapse between the HSO issuing the direction and compiling his narrative investigation report; an absence of contemporaneous notes; and, the lack of specificity with respect to corrective action in the language of the direction. More particularly in this case, the appellant argues that there is no evidence to show that the HSO researched the practicability of complying with the direction and notes that the words "to the extent that is reasonably practicable" that are found in the relevant regulation are omitted from the text of the contravention identified.

[35] As noted in the earlier decision, I am more accustomed to seeing HSO Investigation Reports that have been drafted closer to the events and the issuing of a direction. That said, the HSO's file does contain contemporary documents and correspondence with Lower Lakes Towing's management and with colleagues at Transport Canada giving

details of his findings that are reflected in the narrative report he subsequently provided. On the failure to provide specific corrective information in the text of the direction, I accept the HSO's explanation that he has been advised not to prescribe. I note, however, that very early in his proceedings he did send a suggested AVC to the employer which at the least might have triggered discussion but he received no response. On research, although the HSO's testimony referred to conversations he had with a naval architect colleague, he acknowledged that he did not consult anyone with experience in boom design. No notes were made of the conversations he did have neither was there anything on file to detail his claim to have seen some form of doubling on another vessel. Lastly, although a reference to "the extent that is reasonably practicable" was missing from the text of the direction, they were in the suggested AVC sent to the employer some 10 months previously but not replied to. However, there is scant evidence either in the HSO's narrative report or his testimony that he considered fully the practicability of compliance with the direction.

[36] In reference to the substantive issues, the legislative provisions cited by the HSO and relevant to the contraventions in question, read as follows:

Paragraphs 125(1)(*p*) and (1)(*t*) of the Code

> 125(1) Without restricting the generality of section 124, every employer shall, in respect of every work place controlled by the employer and, in respect of every work activity that is carried out by an employee in a work place that is not controlled by the employer, to the extent that the employer controls the activity,
>
> (p) ensure, in the prescribed manner, that employees have safe entry to, exit from and occupancy of the work place;
>
> (t) ensure that the machinery, equipment and tools used by the employees in the course of their employment meet prescribed health, safety and ergonomic standards and are safe under all conditions of their intended use;

Subsection 211(1) of the MOHSR:

> (1) Materials handling equipment must, to the extent that it is reasonably practicable, be designed and constructed so that, if there is a failure of any part of the equipment, it will not result in the loss of control of the equipment or create a hazardous condition.

Subsections 12(9) and (10) of the MOHSR:

> (9) A safety net must be fitted under every part of a ladder, accommodation ladder or gangway, except if,
>
> (a) the ladder or gangway and approaches to it are constructed in a manner that makes the fitting of a safety net unnecessary; or
>
> (b) the fitting of a safety net is not possible.

> (10) Every safety net referred to in subsection (9) must
>
> (a) extend on both sides of the ladder or gangway for a distance of 1.8m;
>
> (b) be kept taut at all times
>
> (c) as far as practicable, protect the entire length of the means of access; and
>
> (d) meet standards referred to in section 17.

Section 17 of the MOHSR reads:

> 17. The design, construction and installation of a safety net referred to in subsection 12(9), paragraphs 16(5)(b) and 147(1)(b) must meet the standards set out in ANSI/ASSE Standard A10.11 – 1989 (R1998), Safety Requirements for Safety Nets.

[37] On the contravention regarding the construction and installation of the safety net deployed under the means of access to the MV Saginaw when moored. I note first the references in the regulation to other provisions of the MOHSR and to ANSI and ASSE, The American National Standards Institute and The American Society of Safety Engineers. I do not address the specific requirements of these provisions or the standards set by these professional bodies because the issue before me relates to a safety net that was absent from its place and not one that was improperly constructed or incorrectly installed contrary to section 17.

[38] Other than that, while I accept that HSO Louden saw what he reported, he appears to have taken as a given that the ladder was being used as a means of access at the time he came upon the scene. The term "means of access" is the heading of section 12 of the MOHSR and important to consideration of the appeal. Subsection 12(1) reads as follows:

> 12(1) Means of access used to board and disembark from a vessel must provide a safe passage between the vessel and shore or between two vessels, as the case may be.

Subsections (9) and (10) of section 12 in my view relate directly to the safe means of access envisaged in subsection (1). In this respect, Mr. Collard was fully credible in the evidence he gave concerning the loading procedure that calls for the access ladder to be moved as the vessel shifts along the dock and that consequently results in the safety net being out of place at certain times. He was equally credible with respect to his keeping watch that nobody would use the ladder until both it and the safety net were properly secured. I find this testimony supportive of the appellant's submission that the ladder was not being used as a means of access to the vessel at the time the HSO took a photograph and determined the safety net being out of position to constitute a contravention. I find in short that, with the ladder not in use as a means of access, there was no companion requirement for a safety net and consequently no contravention of paragraph 125(1)(*p*) of the Code and of the specified provisions of the MOHSR. As such I conclude that the direction should be varied accordingly.

[39] Turning to the self-unloading boom, the appellant's initial submission is that the boom constitutes tackle and as such is governed by the CFTR and not Part 19 of the MOHSR. In the first place, I agree that a self-unloading boom and its slewing system are tackle. As indicated in paragraph 16 above, the similarity of action I perceived between a standard block and tackle and the slewing wire system was confirmed by Mr. Mackenzie. I also agree with appellant's submission that the MV Saginaw's self-unloading boom system falls within the definition of section 300 of the CFTR of a "category 5 lifting appliance" that includes a continuous loading or unloading system. These regulations are replete with references that I do not need to describe in detail concerning the inspection and certification of tackle, including the testing of wire ropes, and the qualifications of persons who may perform the inspections and issue certifications.

[40] That the CFTR govern tackle does not in my view exclude the application of other sets of regulations. For example, the crew accommodation provisions of the MOHSR would apply to the MV Saginaw unless such application is specifically excluded. Similarly, Part 19 of the MOHSR that addresses materials handling and storage would also apply unless specifically excluded. In the latter respect, the appellant submits that section 210 of the MOHSR provides for that exclusion. It reads as follows:

> 210 This Part does not apply to or in respect of the inspection and certification of tackle used in the loading or unloading of vessels.

The appellant argues further that "materials handling equipment", as defined in section 209 of the MOHSR, relates to mobile equipment such as a fork lift or pump rather than to an unloading boom fixed to a vessel's superstructure. I accept the appellant's submission in this respect and note that the section headings in Division 2 of Part 19 that refer among other things to protection from overturning, fuel tanks, seat belts, rear view mirrors and warning devices when reversing that overwhelmingly suggest mobile equipment. I also note that section 227, in Division 3 of Part 19, addresses the inspection and testing of materials handling equipment, activities that in the case of tackle used in the loading or unloading of vessels is specifically excluded from application of Part 19 in section 210. In all, I find that section 210 of the CFTR excludes application of Part 19 of the MOHSR to the unloading boom which I have determined to constitute tackle used in the loading or unloading of vessels. Consequently, the HSO's finding of a contravention of that Part, more specifically of subsection 211(1), lacks a legislative foundation and is invalid.

[41] Having accepted the appellant's initial argument and having found that the exclusion in section 210 of the MOHSR of tackle used in the loading and unloading of vessels does apply in this case, it is not necessary to pursue the appellant's alternative submissions. However, given the extensive evidence put before me on the practicability of complying with the direction, I believe that some concluding observations are appropriate. For example, I note the evidence depicts a longstanding industry practice not to provide redundancy for self-unloading boom systems on board Great Lakes vessels. This practice appears not to have been challenged by the competent authorities at Transport Canada's Marine Inspection Services. The largely incident free operation of the booms may be attributed in part to the regular inspection of vessels to verify compliance

with the CFTR and other regulations. Moreover, when boom failures have occurred, testimony indicates that they have reflected individual and specific causes rather than a systemic pattern of structural faults. The direction under appeal if maintained would portend significant costs not just for the MV Saginaw and its owners but potentially for the industry as a whole. Previous appeals officers' decisions, including that cited by the appellant, indicates that costs in terms of time, trouble and money should be taken into account in determining reasonable practicability. As indicated above, scant attention was given to the reasonably practicable caveat in subsection 211(1) before the direction was issued. The HSO should have given full consideration to that caveat before finding the contravention.

[42] In summary, I have found that two of the three contraventions included in the direction under appeal are not justified. That concerning the construction and installation of the safety net fails because the ladder was not in use as a means of escape at the time the contravention was identified. The contravention respecting the unloading boom lacks a legal foundation resulting from the non-applicability of section 211(1) of the MOHSR and therefore of paragraph 125(1)(*t*) of the Code. Rescinding the direction would also impact the remaining contravention that is not covered in the appeal. Consequently, I will exercise my authority to vary rather than rescind the direction.

Decision

[43] For the reasons given above, I hereby vary, pursuant to paragraph 146(1)(*a*) of the Code, the direction issued to the employer by HSO Louden on November 22, 2012, by removing from it the contraventions of paragraph 125(1)(t) of the Code and subsection 211(1) of the MOHSR and of paragraph 125(1)(*p*) and subsections 12(9) and (10) and section 17 of the MOHSR, and ANSI/ASSE A10.11 -1989(R1998). The varied direction will now read as it appears in Appendix 1 to this decision.

Michael McDermott
Appeals Officer

APPENDIX I

In the Matter of the *Canada Labour Code* Part II – Occupational Health and Safety

Direction to the employer under subsection 145(1)
AS VARIED BY APPEALS OFFICER MICHAEL MCDERMOTT

On 21st November, 2012, health and safety officer David Louden conducted an inspection in the work place operated by Lower Lakes Towing Ltd., of Box 1149, 517 Main Street, Port Dover, Ontario, Canada, N0A 1N0, being an employer subject to the *Canada Labour Code*, Part II, the said work place being sometimes known as the motor vessel Saginaw, O.N. 822418, whilst berthed alongside at the P&H Grain Elevator at Thunder Bay, Ontario, Canada.

The said health and safety officer is of the opinion that the following provision of the *Canada Labour Code*, Part II, is being contravened:

Paragraph 125(1)(*p*) of Part II, and section 12(8) of the Maritime Occupational Health and Safety Regulations (MOHSR).

At least one end of the means of access used to board or disembark from the vessel is not securely fastened. To be corrected. Use of unsecured means of access is to cease forthwith. Additional means of access, which meet all regulatory requirements, are to be fitted at midships locations, port and starboard.

Therefore, you are hereby directed, pursuant to paragraph 145(1)(a) of the *Canada Labour Code*, Part II, to terminate the contravention no later than 15th March, 2013.

Further, you are hereby directed, pursuant to paragraph 145(1)(b) of the *Canada Labour Code*, Part II, to take steps, no later than 15th March, 2013, to ensure that the contravention do not continue or reoccur.

Varied at Ottawa, Ontario, this 18th day of February, 2014.

Michael McDermott
Appeals Officer

Cc : M.V. Saginaw – Master
c/o Lower Lakes Towing Ltd.,
Box 1149,
517, Main Street,
Port Dover,
Ontario,
N0A 1N0