ONTARIO COURT OF JUSTICE

Central West Region
Brampton Ontario

B E T W E E N :

HER MAJESTY THE QUEEN

-and-

7506406 CANADA INC. (ORNGE)

REASONS FOR JUDGMENT

Duncan J.

1. Just after midnight on May 31 2013, an air ambulance helicopter crashed shortly after take-off from the airport at Moosonee Ontario on James Bay. Tragically, the two pilots, Captain Don Filliter and First Officer Jacques Dupuy and two paramedics, Dustin Dagenais and Chris Snowball, were killed.

2. The helicopter was operated by Ornge air ambulance service. Ornge is a non-profit company contracted to the Ontario Ministry of Health to provide air ambulance service, both fixed wing (airplane) and rotor-wing (helicopter), in the province. The defendant numbered company is a federal corporation owned by Ornge that operates the rotor-wing division.

3. The defendant corporation was originally charged in an information sworn May 29 2014 with 17 counts under the *Canada Labour Code.* Many of these counts were withdrawn at the start of the trial and others were withdrawn or amended during the trial. An earlier ruling in this case details the circumstances surrounding those events: see *2017 ONCJ 726.*

4. At the end of the evidence the defendant stood charged with six remaining counts, all contrary to sections 124 and 148 of the *Canada Labour Code,* of failure to ensure employee safety in three particularized ways. Later, in written and oral submissions, the Crown furthered narrowed the case by seeking convictions on only 3 counts:

- Count 3: that on or about May 31 2013, 7506406 Canada Inc **failed to ensure employee safety**, contrary to section 124 of the Canada Labour Code Part II, by **failing to provide pilots with a means to enable them to maintain visual reference while operating at ni**ght, thereby committing an offence contrary to section 148(1) of the Canada Labour Code Part II.

- Count 4: that on or about May 31 2013, **failed to ensure employee safety**, contrary to section 124 of the Canada Labour Code Part II, by **failing to provide pilots with a means to enable them to maintain visual reference while operating at night,** resulting in the deaths of Donald Mark Filliter and Jacques Dupuy and thereby committing an offence contrary to section 148(2) of the Canada Labour Code Part II.

- Count 10: that on or about May 31 2013 7506406 Canada Inc **failed to ensure the health and safety of its employees**, contrary to section 124 of the Canada Labour Code Part II by **failure to provide adequate supervision for daily flight activities at Moosonee, by eliminating the position of Base Manager** thereby committing an offence under Subsection 148(1) of the Canada Labour Code Part II.

5. It can be seen that counts 3 and 4 are substantially identical but for the added element of causation of death in count 4.

The accident:

6. The evidence overwhelmingly points to the crash being an instance of "controlled flight into terrain" (CFIT) that is, there was no mechanical failure or

external influence, such as a weather event, that caused or contributed to the accident.

7. The cockpit voice recording discloses that just after passing 300 feet the pilot flying (PF), executed a turn toward the destination, placing the helicopter at an angle of 30 degrees. The pilot monitoring (PM) was going through the post take-off check list and then,16 seconds after the turn was made, noticed and mentioned the steepness of the turn. The PF said "Oh, too much sorry". An alarm sounds[1]. The PM said "We're descending let's climb". The PF said "Climb". There was no indication of alarm or panic. The crash is heard immediately after the PF's last comment. [2]

8. I accept the assessment and opinion of the witnesses, including the Crown expert Mr. Stockhausen, that the direct cause of the crash was a turn that was too steep and made at too low an altitude. This caused the helicopter to descend and, although the instruments would have shown the loss of altitude at a time when there should have been gain, the pilot monitoring the instruments was engaged in post take-off procedures and didn't notice until too late. Had the pilots been able to see the ground, the approaching peril would have been obvious to both pilots and would have been corrected in time without difficulty.

The positions of the parties:

9. The Crown's simple position on counts 3 and 4 is that the accident would not have occurred had the pilots been able to see the ground using night vision

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[1] This alarm was likely an alert that the landing gear was not down as the helicopter was getting close to ground.

[2] Cockpit voice recordings are subject to a statutory privilege protecting release or publication of the recorded conversation, subject to Court order. See *Air France v GTA Airport Authority 2010 ONCA 596*. Orders of exception were made for the purpose of this trial.

goggles (NVGs) and that it was the duty of their employer Ornge to ensure their safety by providing those goggles. The defence position on these counts is that the defendant complied with all legal and regulatory requirements and provided for an acceptable level of safety consistent with the standard of care that prevailed in the helicopter aviation industry at the time.

10. The Crown's position on count 10 is that Ornge's decision to discontinue the position of Base Manager at Moosonee removed an important safety net that, among other things, ensured safe pairings of pilots and co-pilots for flights. The defence position is that there was no reduction in safety caused by the decision.

Background:

11. Helicopter emergency medical services (HEMS) had been based out of Moosonee since at least the 1980's. The operator at that time was Huisson Aviation. Coincidentally, Don Filliter, the captain of the fatal flight, had himself been a Base Manager at Moosonee with Huisson in those early days. In 1999 Canadian Helicopters Limited (CHL) took over Moosonee, adding it to the HEMS operations that it had been conducting elsewhere in the province since the 1970's. CHL handled all aspects of the operation, the medical as well as the flying.[3] When Ornge became involved it handled the medical side and contracted the flying and related duties to CHL[4]. The helicopter fleet was owned by CHL and consisted of about a dozen Sikorsky S76 A airframes stationed at 7 bases across the province – Toronto, Ottawa, London, Kenora, Thunder Bay, Sudbury and Moosonee.

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[3] Trottier May 4 P 51-52

[4] There was no evidence as to exactly when Ornge entered the picture.

12. At some point in time, Ornge decided to take over the flying part of the operation as well. In 2008 Ornge ordered 12 new helicopters from manufacturer Augusta Westland for a price of between 120 and 140 million dollars. Apart from this order, the first clear sign that Ornge intended to take over was its recruiting in late 2010 of personnel, including Paul Archer, to take charge of the flying operation. In 2011 the contract between Ornge and CHL was not renewed. A number of key personnel at CHL were brought over to Ornge. But Ornge experienced difficulty perfecting its application for an operating certificate which was not finally granted until early in 2012. In the meantime it leased back the helicopters to CHL and continued the former arrangement until Ornge was legally ready to take over. The takeover was gradual, from base to base. Ornge started operating in Moosonee in March or April of 2012. [5]

13. At the time of transition between CHL and Ornge there was a change in the regulatory supervision. CHL had been under the Quebec region of Transport Canada while Ornge was placed under the Ontario region. The two regional offices had somewhat different interpretations of the regulations and there was an immediate need for Ornge to bring itself up to the compliance standards of the Ontario region. Transport Canada itself recognized that sudden change would be too disruptive for the operation and instructed Ornge to make gradual steady changes. [6]

14. The transition from CHL to Ornge was far from smooth. Many important positions were not filled promptly or at all, leaving those who had been hired "over-tasked" and stressed. Former CHL employees were unhappy with the change of corporate culture. Many left. Recruits for two of the top positions

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[5] Eaton Apr 27 P 70
[6] Eaton April 27 P 72

were rejected by Transport Canada because they lacked some basic qualifications. While this was going on there was a scandal and investigation involving top Ornge executives that was receiving much public attention and criticism.

Flying out of Moosonee:

15. Moosonee was not a high volume base. The pace was said to be "leisurely." [7] Most of the flying was done in daylight and most (80%) of the flying both day and night, consisted of short "river hops" – 3 or 4 minute flights from the Moosonee base on the shore of James Bay to the hospital at Moose Factory on a nearby island. Moosonee was considered a starter position for new hires, though there were also some very experienced pilots stationed there. Pilots were assigned and lived there in two week rotations. Some maintained concurrent employment elsewhere such as Captain Filliter who continued to be Chief Pilot at the Ministry of Natural Resources while he worked part time for Ornge at Moosonee.

16. Notwithstanding the slow pace, flying out of Moosonee could be very challenging, particularly at night. Throughout the North there is a lack of cultural lighting, - no towns, no farms, no houses, no cars – to provide a light source and a visual indication of the ground. On an overcast night with no moonlight the darkness can be complete – cave darkness, "inside the cow" darkness.

17. There are two sets of rules and procedures in helicopter aviation – visual flight rules (VFR) and instrument flight rules (IFR). The former requires that the pilots be able to have "visual reference to the surface"[8] when flying; the latter does not

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[7] Trottier May 4 P 26

[8] CARS regulation 602.114; 602.115 requiring "visual reference to the surface";

– it is flying on instruments. Some pilots are only trained and licensed for VFR flights and some helicopters only have VFR capability. All pilots and helicopters with CHL and Ornge were certified and capable of instrument flight.

18. The captain of each flight decides whether it will be conducted under VFR or IFR. At Moosonee and throughout the North, a long standing practice had developed of declaring a night flight to be under VFR but in fact conducting it as if it was IFR that is, flying on instruments. This was necessary because to qualify as an official IFR flight there had to be an alternate airport available for the flight and a weather report from the destination airport – neither of which were possible in the remote locations. The "tongue in cheek" VFR designation was accepted by everyone as a necessary bending of the rules if the medical mission of the operation was to be fulfilled. Further, it was technically legitimate because the helicopters were equipped with searchlights that gave some reference to the ground. Transport Canada was fully aware of this quasi deceit and at least tacitly approved.

19. When flying in total darkness pilots can lose their orientation and be subject to a number of illusions – that they are turning when going straight, that they are going up when they are going down – and so on. The misperception can be so strong that there can be a tendency to disbelief the instruments that are telling them otherwise. Flying at night is inherently higher risk than flying in daytime. The risk is particularly elevated in "black hole" situations – landing and taking off where there is no ground lighting at all – but also in situations such as Moosonee where taking off in certain directions takes the pilots from a condition of visibility on an illuminated runway immediately into total darkness. As one

witness said, it requires the flying crew to be on their "A" game. This is the situation that pertained on the incident flight.

20. With respect to the helicopters, at the time of the accident there were two S 76's based in Moosonee. One was down for repairs. The remaining one with registered designation C-Gimy had been at Moosonee continuously since at least 1999 when CHL began there. It had been manufactured in 1980. It was very basic but capable – the old workhorse of the fleet. While it complied with all regulations, it lacked some upgraded equipment that could have increased the margin of safety. It had no modern GPS; it had no auto pilot;[9] it had no Ground Proximity Warning System (GPWS) also known as TAWS (Terrain Awareness Warning System); it had no enhanced search lights.[10]

21. Nevertheless, C-Gimy itself had almost 15 years continuous service without serious incident and CHL could boast an excellent safety record over 30 years of operation in Moosonee and places just like it.[11] One of the blemishes on that record was a serious but non-fatal accident that occurred during a black hole landing at Snake Lake in the Temagami district in 2008. As a result of that incident CHL conducted a thorough review of its entire safety management system. Significantly it did not identify take-offs from airports such as Moosonee to be high risk nor did it recommend the use of NVGs for its operations.

22. The new AW139 helicopters ordered in 2008 were more powerful and more sophisticated than the S76. It was said that the difference was comparable to that between a new Porsche and a 60's VW Beetle. The overall plan was to phase out

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[9] It had a very basic AFCS (automatic flight control system). See Agreed Statement of Fact para 34-36.
[10] Trottier May 4 P 87; Re searchlight see below and Eaton memo ex 5
[11] Trottier May 4 P 52

the aging Sikorskys as delivery of the new AW139s was received. The first one arrived in 2010 and was assigned to another base. But the new helicopters soon proved to be maintenance heavy and the S76 aircraft had to remain in service.[12] There was some evidence that there was never any intention to put a 139 in Moosonee and in fact there may have been an intention to close the Moosonee base altogether.

23. In any event, there were not enough of the new 139s to go around and choices had to be made as to which helicopter went to which base. C-Gimy stayed in Moosonee where it had always been and where it was considered a "good fit". The new AW 139s were extremely expensive and putting one in Moosonee when there was not enough of them to cover the whole province did not make sense.[13] Further it was not just a matter of switching airframes. The whole roster of pilots at Moosonee would have to be trained and certified on the 139. Conversely, it was contended that the S76s were not suitable for the South because they lacked the requirements to take off from the H1 helipads, some of which are located on the roofs of urban hospitals – though CHL and Ornge must have worked around this problem before the 139s arrived.

24. Neither the old Sikorskys nor the new AW's were equipped to be flown with night vision goggles (NVGs). The Crown's case with respect to counts 3 and 4 is that they should have been so equipped and the goggles should have been provided.

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[12] A fatal accident involving a 139 in Brazil in August 2011 revealed a problem that greatly reduced the life of the tail rotor from 4000 to 600 hours. There were apparently other unspecified maintenance issues as well.

[13] Eaton Apr 26 P 33

Night Vision Goggles:

25. The evidence before me is that NVGs are a near miraculous game-changing technology that can "turn night into day". They were first developed in the 1970's in the U.S. for military use but were not used by the Canadian forces until approximately 1992.[14] Pilot witnesses with military backgrounds who testified before me were particularly keen on them and made comments to the effect: "I would never fly at night again without them."

26. Having said that, the goggles do have some functional downside. They are not so much goggles but rather tubes that greatly restrict the field of vision – from 180 down to about 40 degrees. The user has to learn to swivel his head around to see a broader field and this unnatural movement, which takes some getting used to, in itself can pose a hazard. The view presented is all green, though newer models can present in black and white. They also require some minimal light to work - otherwise the view becomes snowy and useless. They are cumbersome and uncomfortable to the point where they have been known to cause serious neck and spinal problems in some users. Pilots tend to have a love/hate relationship with them - love the safety they provide but hate almost everything else about them.

27. Beyond issues of function there are many practical obstacles to the acquisition and use of NVGs. They are only made in the USA and are not always available. The military gets priority, followed by other civilian U.S. domestic operators. At times the military demand has made civilian acquisition even in the U.S. impossible or much delayed. The goggles are considered military equipment and their export/import is subject to "ITARS" – regulations that govern international

[14] Eaton Apr 26 P 18

traffick in armaments. Acquisition and importation into Canada requires approval by both American and Canadian authorities. Once they are acquired and imported, their use must be approved by Transport Canada. The operator must develop a training program which also must be approved. Instructors have to be trained, tested by TC and approved. The pilots of course have to be trained tested and approved. Programs for recurrent training would have to be developed and approved as well.

28. There is the further issue of costs. There was no evidence as to how much the goggles themselves cost but it can be assumed that they are not cheap. There was evidence that they require some special type of container for storage when not in use,[15] though again there was no evidence regarding that cost. The most significant cost however is in making the helicopters compatible with goggle use. Every light and illuminated gauge in and on the aircraft has to be changed – including possibly the ones in the back where the patients and paramedics ride.[16] To retrofit a helicopter with this lighting is very expensive. Estimates given in evidence included as much as a million dollars to retrofit a single helicopter, or a hundred thousand dollars to order it as an option on a new airframe. Retrofitting could take months for each unit, during which time of course it would not be available for service.

29. Andrew Eaton had spent 20 years in the Canadian forces flying helicopters. Since 1992 he had used NVGs and was a strong proponent of them. On his retirement from the service in 2007 he joined CHL at Moosonee and immediately questioned – in fact protested - the lack of NVGs. As mentioned above, CHL looked into it but declined to adopt them as "not the right fit". When the

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[15] It was not clear to me whether his was required for proper care of the goggles or for some security reason.
[16] There was some disagreement about this.

transition to Ornge was taking place he became safety manager and again raised the issue with Ornge. In the summer of 2011 he wrote a memo to management (Ex 5) requesting that an NVG program be established. He set out a compelling case for doing so as well as acknowledging the arguments against. He also made recommendations for short term measures to mitigate risk in the absence of NVG's including suggesting provision of enhanced "night sun" search lights.[17] Eaton testified that Ornge was "willing to entertain the possibility of NVGs, but when we looked into it, because the aircraft was not configured for it at the factory, it was going to be a ridiculous amount of money to retrofit the aircraft".[18] The discussion was focused entirely on the emerging 139 machines and there was no specific suggestion that adopting the aging S76s for NVG use be considered. It seems obvious however that had that been suggested it would have been rejected, as the case for incurring the expense for the end-of-life Sikorskys would have been a non-starter.

30. On March 6 2013, less than 3 months before the accident, Paul Archer, assistant chief pilot for Ornge, wrote to Ken Walsh of Transport Canada after test flying a new 139 in dark conditions. He commented about how challenging it was and asked "with all the new technology out there, why are we still electing to do it this way?" (i.e. visually unaided). He ended his note with the comment: "NVGs are the real answer".[19]

Burden of proof:

31. These are offences of strict liability. As such the burden is on the Crown to prove the *actus reus* beyond a reasonable doubt. The defendant then may avoid

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[17] Eaton Apr 26 P35-36; P 61
[18] Eaton Apr 26 P 30-31
[19] Email Ex 74

conviction by proving on a balance of probabilities that it exercised reasonable care or due diligence – that it was not negligent: *R v City of Sault Ste Marie [1978] 2 SCR 1299.* The defence of due diligence is also provided for in section 148(4) of the *CLC.*

32. The first step is to define the *actus reus.* There is a line of cases in Occupational Health and Safety law that maintains that the Crown need only prove that there was an accident or injury and the burden then shifts to the defendant. These cases are thoroughly discussed in *R v Viterra Inc 2017 SKCA 51* at *paras 33-45,* a case relied upon by both parties. The Court there held that while an accident may provide *prima facie* evidence of the *actus reus* in some cases, it does not always do so. Whether it does or does not will depend on the elements of the offence as contained in the enactment and the particulars in the count(s).[20] The Court concluded:

> **45** Following the reasoning in these cases, I find the *actus reus* of a contravention under ss. 124 and 125 of the *Canada Labour Code* is not necessarily established by proof of the injury or death of an employee at the workplace. All of the necessary elements of the *actus reus*, as particularized in the charge, must be proven. In reviewing the particulars in issue here, I do not find any error in the trial judge's articulation of the *actus reus*, namely, that the Crown must prove beyond a reasonable doubt that Viterra failed in the following:
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> - (a) failed to instruct the deceased "on how to unplug a blockage in a receiving pit" (at para 14) of a grain elevator in a manner that provided for his health and safety (counts 1 and 2);
> - (b) failed to ensure the deceased had the necessary training and supervision "to ensure his health and safety when responding to a blockage" inside the receiving pit of a grain elevator (counts 3 and 4); and

[20] A good example referred to in *Viterra at Para 38, 39 is R v Saskatchewan Wheat Pool (1999), 185 Sask R 114 (QB)* where the Court found that the accident was prima facie evidence on a count of failure to ensure safety but not on a count of failure to properly train.

- (c) failed to ensure that the deceased was "aware of the hazard of being engulfed" by free flowing grain in a receiving pit at a grain elevator (counts 5 and 6).

46 The Crown chose to particularize the offences in counts 1 to 4 on the basis that instruction "on how to unplug a blockage inside a receiving pit" and training on how to respond "to a blockage inside the receiving pit" was required. Therefore, the **onus was on the Crown to prove it was necessary** to provide such instruction and training to the deceased. (bolding added).

33. The defence relies on the above passage, particularly the bolded words as authority for the proposition that "... where the count alleges a particular safety measure was missing, the Crown must prove as part of the actus reus both that the measure was missing and that it was necessary:" (*Defence written submission para 11).* This means, the defence submits, that in this case the Crown must prove beyond a reasonable doubt that NVGs were necessary for a safe flight.

34. I disagree. The passage from *Viterra* must be considered in the context of the facts of that case. The counts in that case all alleged failure to provide training instruction and information. The reference to "necessary" refers to the training etc required in relation to the duties and tasks assigned to the particular employee. For example, it would obviously not be necessary to train the bookkeeper in the safe operation of the forklift.[21] In my view *Viterra* does not support the argument that other safety measures, not involving training and the like, such as the ones alleged in the counts in this case, must be shown by the Crown to have been "necessary".

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[21] This would be consistent with other decisions that have held that the training that must be given an employee depends on the job and duties assigned to him: *R v ABS Machining Inc 2015 ONCJ 213; Ontario Ministry of Labour v 679052 Ont Ltd.(Auctioning Reconditioning Centre) [2012] OJ No 5849; R v West Parry Sound [2012] ONCJ 36*

35. More generally, I do not think that the defence submission re *Viterra* is consistent with the law respecting strict liability offences. Placing the burden on the Crown to demonstrate that a certain safety measure was "necessary" amounts to pretty much the same thing as imposing a burden to show that the measures that *were taken* were insufficient or, put another way, to show that the defendant did not exercise due diligence. But that is directly contrary to the main thrust of the law in strict liability offences and has been rejected by the Supreme Court of Canada in *R v Wholesale Travel Group Inc [1991] 3 SCR 154 at paras 199- 203* in particular at para 201:

> **201** It has been suggested that requiring the Crown to prove negligence beyond a reasonable doubt, either as part of its case or after the accused adduces some evidence raising a reasonable doubt as to due diligence, would represent an acceptable compromise: it would, it is said lessen the burden on the accused while still allowing for the effective pursuit of the regulatory objective. I cannot accept this contention. While such an approach would undoubtedly be beneficial to the accused, it would effectively eviscerate the regulatory power of government by rendering the enforcement of regulatory offences impossible in practical terms. Under this approach, the Crown would be forced to prove lack of reasonable care where the accused raises a reasonable doubt as to the possibility of due diligence.

36. In my view, on a proper reading of *Viterra,* what the Crown must prove is guided by the wording of the statute and the wording of the counts[22]. In this case there are two elements to the *actus reus* of each count that the Crown must prove beyond a reasonable doubt: [23]

- Count 3 and 4 - (1) Failure to ensure safety – (2) by failing to provide the pilots with a means to enable them to maintain visual reference while operating at night

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[22] It can be appreciated then that the clear line of division regarding onus from *Sault Ste Marie* becomes blurred when the offence and the count itself is framed in terms of lack of due care. Careless driving would be a stark example. Other examples are more subtle.

[23] At this point I am leaving aside the additional element of causation of death in count 4

- Count 10 - (1) Failure to ensure safety – (2) by failing to provide adequate supervision …by eliminating the position of base manager

Count 10: Base Manager

37. This count raises fewer issues than the others so I will deal with it first. It is set out here again for ease of reference:

> Count 10: that on or about May 31 2013 7506406 Canada Inc **failed to ensure the health and safety of its employees**, contrary to section 124 of the Canada Labour Code Part II by **failure to provide adequate supervision for daily flight activities at Moosonee, by eliminating the position of Base Manager** thereby committing an offence under Subsection 148(1) of the Canada Labour Code Part II.

38. The predecessor company CHL staffed its bases, including Moosonee, with a Base Manager (also referred to at times as Pilot Manager) whose duties included drawing up the fortnightly shift schedule and the pairings of captain and first officer for each shift. He was also considered to be in a position to keep his "finger on the pulse" of the base and its pilots and to trouble-shoot and correct problems, particularly as they may impact safety. When Ornge took over it eliminated the position. Scheduling and pairing was done for all bases from a central office in Toronto.

39. Both models – base manager and centralized scheduling - are used in the HEMS industry. There are pros and cons to each. The Crown's position is that the absence of a base manager deprived the Moosonee operation of an important, up-close, safety check particularly as it related to the suitability of the flight pairings.

40. As for the "finger on the pulse", at the time of the accident, while there was no pilot Base Manager there were a number of senior experienced pilots and employees whose positions and presence in my view collectively filled any gap that may have been left. There was a Base Manager who was a paramedic. There was also a training pilot at the base. There was a very experienced pilot who was also the base safety officer.[24] These positions provided points of contact between the people at the base and the larger organization and covered many of the functions of the pilot base manager. [25] In addition as mentioned above, Don Filliter had himself been Base Manager at Moosonee for Huisson Aviation. [26]

41. There was also evidence that pilots as a group are very safety conscious – for obvious reasons – it is their lives that are at risk. There are no risk-taking heroes or cowboys among them. They do not hesitate to ask questions on the one hand- or to give advice or correction on the other - and to bring up safety concerns. Don Filliter in particular was described as "safer than safe". In this atmosphere and with all the responsible senior people around (with nothing else to do in Moosonee) it seems to me that there would be little additional pulse-taking role for the Base Manager.

42. As for pairings, while the Crown expert Mr. Stockhausen had originally opined that both pilots were weak and ought not to have been paired for night flight, he was presented with substantial additional information in cross-examination and conceded that "they were probably more proficient than I thought" and they were

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[24] Macleod Apr 26 P 80
[25] Stockhausen May 10 P 80 - 84
[26] Ibid P 62

proficient enough to be doing the flight.[27] Further it was an agreed fact that the two pilots met all requirements to be paired together.[28]

43. I am not satisfied that elimination of the Base Manager position compromised safety of the Moosonee operation. Accordingly this count is dismissed.

Counts 3 and 4: Proof of actus reus:

44. The counts are set out here again for convenience of reference:

> Count 3: that on or about May 31 2013, 7506406 Canada Inc **failed to ensure employee safety**, contrary to section 124 of the Canada Labour Code Part II, by **failing to provide pilots with a means to enable them to maintain visual reference while operating at night**, thereby committing an offence contrary to section 148(1) of the Canada Labour Code Part II.
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> Count 4: that on or about May 31 2013, **failed to ensure employee safety**, contrary to section 124 of the Canada Labour Code Part II, by **failing to provide pilots with a means to enable them to maintain visual reference while operating at night,** resulting in the deaths of Donald Mark Filliter and Jacques Dupuy and thereby committing an offence contrary to section 148(2) of the Canada Labour Code Part II.

45. The first element is failure to ensure safety. The word "ensure" means "to make certain; to secure" (*Concise Oxford Dictionary)*. In aviation, it is not possible to completely eliminate risk and therefore to ensure safety. Accordingly "safety" in aviation is qualified as meaning:[29]

> ... the state in which risk of harm to persons or to property is reduced to and maintained at or below an acceptable level.

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[27] Ibid P 110
[28] ASF para 66
[29] Stockhausen May 9 P 101

46. When an accident has occurred, I think a *prima facie* case that safety was not ensured to an acceptable level has been made out.

47. The second element that the Crown must prove is that the employer failed to provide the pilots with a means to "maintain visual reference" – i.e. to see the ground.

48. The defence makes two points. First it is argued that the whole premise underpinning these counts is flawed because visual reference to the ground is not required for legal flight, as discussed in paragraphs 17-18 above. A great deal of aviation occurs without it. Helicopters can legally fly under instruments as well as with vision. The incident flight was an instrument flight though nominally under VFR as explained above. The Crown's point however is that night flying is more difficult and riskier than flying in the day and since the technology was available to turn night into day and reduce the risk to the level of a daylight flight, the failure to provide that technology was a failure to ensure safety. It can be seen that the implication of this submission may be that all (or almost all) IFR night flight would be considered unsafe and hence illegal under the *CLC*. However, at least for the purpose of this case I accept the proposition and reject the argument that the premise is flawed.

49. The second point made by the defence is that the Crown has failed to prove that the pilots were not given a means to have visual reference to the ground. Almost all of the evidence and submissions of counsel on these counts focused on the failure to provide the pilots with night vision goggles. But there was also evidence of two other means of having visual reference to the ground.

50. First, the incident helicopter was equipped with a search light that could have and should have been used during take-off.[30] The light on the S76 was in fact better than the ones on the newer AW139 aircraft.[31]. Estimates varied as to the altitude to which the searchlight could be effective – from "the first few hundred feet after take-off;[32] to 1000 feet (common cruising altitude);[33] where it could provide at least some illumination.[34] It is unknown whether this light was used on the incident flight, though it was certainly "provided" as alleged in the counts.

51. There was also very brief reference in the evidence to a suggestion that the helicopters could be equipped with an enhanced "night sun" searchlight that "could light up everything we need to see" – apparently a considerably better light than the ones provided on the S76. [35] It was one of the alternative measures suggested in the Eaton memo Ex 5. What little was mentioned about these lights suggests to me that they – or something similar - would have been a good solution to the tension between the risks inherent in night flying and the costs, time and red tape involved with NVGs. For example the West coast HEMS operator Helijet did not use NVGs but did night scene landings using this type of light.[36] I will return to this point at the end of this judgment.

52. Accordingly, of the three means to have visual reference to the ground referred to in the evidence, one was provided and two were not. There is no direct evidence of the relative quality of the view provided by each, though I think the ranking can be inferred. But even if the searchlight on the S76 was the least

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[30] Eaton Apr 27 Re-ex P 100
[31] Pouti X May 5 P 63
[32] Pouti May 5 P 8
[33] Eaton Apr 27 P 27-8
[34] Beatty April 28 P 73
[35] Eaton April 26 P 61; see also Beatty April 28 P 72-73
[36] Eaton April 27 P 55

effective, there was no evidence that it was useless or that it did not provide a means to maintain visual reference to the ground. The evidence is to the contrary. Therefore I am not satisfied beyond a reasonable doubt that the Crown has proven that the defendant failed to provide the pilots with "a" means to see the ground. The searchlight was such a means.

53. But there are two ways to interpret the effect of this finding. First it could be said that the Crown has failed to prove one of the two elements of the offence so logically it has failed to prove the offence and a dismissal must follow. The other is to interpret this second element in conjunction with the first, that is, that the employer failed to provide a means to enable the pilots to maintain visual reference to the ground ***that was sufficient to ensure safety.*** On this interpretation, providing a means to see the ground that was less than what would provide an acceptable level of safety amounted to a *prima facie* case of commission of the *actus reus* of this offence. I infer from the fact that the take-off in question required use of instruments, that the standard search light was not adequate to provide such acceptably safe visibility.

54. I think the second interpretation is the correct one and I would therefore find that the second element and the *actus reus* has been proven.[37] I will now go on to deal with the defence of due diligence.

Due Diligence – Scope of the Inquiry:

55. The case on counts 3 and 4 then turns on whether the defence has demonstrated that it exercised due diligence – that it took all reasonable steps to avoid the particular event: [38] that it did ***what was reasonably practicable for a***

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[37] I am leaving aside for now the further issue of direct causation of death.
[38] *R v Sault Ste Marie p 1326*

helicopter operator in the position of this defendant to have done to ensure the health and safety of its employees engaged in night flying out of Moosonee. [39]

56. The scope of the due diligence inquiry is a matter of dispute in this case. The Crown argues that to prove due diligence, the defence must show that its operation was pristine or "all but spotless" when it came to safety. To rebut any suggestion that such was the case, the Crown has devoted much attention to showing or attempting to show that there were many areas where Ornge could be criticized and be found deficient or negligent. Such areas included the lack of experience and competence of Ornge management; the corporate culture said to be insufficiently responsive or attentive to complaints and concerns from the ranks; the failure to fill vacant positions which failure resulted in overwork of some employees; the allowance of gaps in pilot training and neglect of recency standards; the lack of basic instruments and equipment such as auto-pilot and ground warning systems on aging helicopters; the use of poorly considered and poorly written standard operating procedures (SOPs).

57. On the other hand, the defence takes the position that the due diligence inquiry is far more focused and in fact is limited to the specific act or omission in question. It is not an occasion for examination and assessment of the whole universe of the defendant's business operation. A number of cases are cited in support including *R v Thomas Fuller and Sons Ltd. 2012 ONCJ 731* where Paciocco J, as he then was, wrote at para 45:

> **45** It is important to recognize that "due diligence" is not a generic inquiry into the overall reasonableness of the conduct of the accused person. "The [accused person] must show it acted reasonably with regard to the prohibited act alleged [the thing prohibited by the regulatory provision charged] ... not some broader notion of acting reasonably." The legal issue before me is whether, even if the wooden brace was inadequately designed

[39] *R v Bruin's Plumbing and Heating 2003 ABCA 300 at para 7.*

> and constructed to avoid the forces it was likely to be subjected to, Thomas G. Fuller & Sons Ltd. nonetheless exercised due diligence in attempting to ensure that its design and construction were up to the task.[40]

58. I accept the defence position on this important point. For one, the Crown cites no authority for its position. Further, it seems contrary to general and fundamental principle that one charged with an offence is not required to defend his life but rather only the specific allegation. Finally in the specific context of this case it would effectively permit conviction of the defendant for not doing X because it did not do Y, that is, for not providing NVGs because, for example, it did not supply an auto-pilot or it had sloppy SOPs. It would permit the Crown to bring in through the back-door allegations it chose either not to make or not to pursue.[41]

Due Diligence – analysis:

59. The defence position is that NVGs were not required by any regulation, they were not required by Canadian HEMS industry standards and it would not have been feasible for Ornge to have introduced them before the accident. These factors – regulatory compliance, industry standards and practical feasibility – are recognized factors relevant to due diligence.[42] I will analyze the due diligence defence under these headings.

Regulations:

60. It is agreed fact in this case that at the time of the accident, Ornge was in full regulatory compliance; that the helicopter C-Gimy was certified, equipped and

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[40] See also authorities cited in footnote 40 of *R v Thomas Fuller.*
[41] Some of the areas of alleged negligence in other areas of Ornge's operations had been specifically charged in the many original counts but then withdrawn or not pursued,
[42] Lake Simcoe RCA v Saad 2016 ONCJ 328

maintained in accordance with existing regulations and approved procedures including for night flying with passengers; that both pilots met TC's and Ornge's requirements for operation of the flight and instrument flying; that the pilots met both TC and Ornge's requirements to be paired together. [43]

61. All aspects of aviation in Canada are very heavily regulated. Strict standards must be met before an operating certificate is granted. Qualifications of principal personnel are vetted and approved or rejected. All company operations, training manuals and SOPs must be reviewed and approved. Changes to any aspect of the operation must be submitted for approval.[44] In addition, each operator company is assigned a specific individual from Transport Canada to oversee that company's operation. The sum of all of this regulation and over-sight is that the government body responsible for aviation safety was fully aware of every aspect of Ornge's operation including the conditions of flight in northern Ontario, in particular Moosonee, and the equipment being used.

62. But as of 2013, Transport Canada did not require NVGs for helicopter flying in general in Canada, for HEMS operations in Canada or even specifically for Ornge for its northern operations in frequently encountered dark conditions. And as of this writing in 2017 it still has not done so!

63. The defence contends that the decision of the professional, highly involved government regulator to not mandate (or even recommend) NVGs generally or specifically is a highly relevant consideration – possibly a determinative one. The Crown counters that the regulations only set the minimum standards. Over and above that, there is the duty to be safe imposed by the *Canada Labour Code.*

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[43] Agreed Statement of Fact para 33, 64-67
[44] ASF para 7-9

Operators are required to cover any safety gap – the "space" between the regulations and the *CLC*. Regulatory compliance is just the first step in complying with safety. Besides, it is argued, the company's Air Operator's Certificate itself includes a basket requirement that the company conduct a safe operation (Condition J – Ex 59).

64. On this latter point, the defence says that the Crown cannot argue that the Ornge operation was not safe because it has conceded in the agreed statement of fact that Ornge complied with all regulations which would therefore include the basket "be safe" requirement rooted in the regulations and made a condition in the AOC. While there is logic to the defence position, I do not think it can be accepted. It is obvious that the whole prosecution is based on the theory that the defendant was not safe in the ways specified in the counts. There could be no detrimental reliance by the defendant on the alleged concession because clearly the Crown was conceding no such thing. In my view agreed statements of fact should be encouraged and to permit them to be used as a basis for an adversarial "gotcha" argument that ensnares the other party would not further that end.

65. With respect to regulatory compliance, reference can be made to the closely related if not identical question within the law of torts: See *Linden and Feldthusen: Canadian Tort Law 11th ed pp 243-5* where the authors quote an English case[45] dealing with an employer's liability for injuries sustained to a worker. The regulations required that protective goggles be provided by the employer but did not require that their use be enforced:

> There is, in my judgment, no presumption that a statutory obligation abrogates or supersedes the employer's common law duty or that it defines or measures his common law duty either by clarifying it or by cutting it down – or indeed by extending it, It is not necessarily exhaustive of that duty or co-extensive with it and I do not…think it possible

[45] *Bux v Slough Metals Ltd [1974] 1 All ER 262 (CA).*

> to lay down conditions in which it is exhaustive or conclude that it is in this case. The statutory obligation may exceed the duty at common law or it may fall short of it or it may equal it....

66. I take from this that that there is no set rule one way or the other. The duties prescribed by statute or regulation may be less, more or equal to the standard of care required by law (common law, or as here, a statutory equivalent). However it is also implicit from this that the regulations are always relevant to the issue of whether the defendant has exercised due diligence. Further it seems to me to be self-evident that a detailed regulatory scheme that is developed, monitored and enforced by those with expertise in the field should be entitled to substantial weight and consideration on the issue of the standard of care required. [46]

67. Having said that, I do agree with the Crown that there is an undefined area or space between the regulatory scheme and the *CLC* where the general obligation to conduct a safe operation may apply and impose additional obligations.[47] The regulations can't cover everything. I would suggest that one consideration as to whether a certain measure falls outside or within this space is whether the measure goes to a fundamental aspect of the regulated company's operation or whether it is incidental to or a mere addition or refinement to the operation.

Industry practice and standards:

68. Crown witness Kendal Beatty, the former chief pilot at the predecessor company CHL and later at Ornge testified that while he was at CHL he looked

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[46] The sole case relied upon by the Crown, *R v Brampton Brick [2004] OJ No 3015 (CA),* does not deal with a highly regulated industry. There are no specific brick factory regulations at all much less ones composed by experts.

[47] The Crown fairly concedes that he can find no case where a conviction has been imposed in any aviation case for breach of such additional obligation.

into NVGs and concluded that they were "not the right fit" for them based on the nature of their operation at the time – doing flights from airport to airport, all of them lit.[48] NVGs were just starting to get a foothold in civilian HEMS in Canada around the time he left Ornge in June 2012.[49] At the time of the accident, May 2013, the use of NVGs was not the industry standard in Canadian HEMS operations with only one of four Canadian HEMS operators using them. The one company that used them, STARS in Western Canada, was required to do night scene landings, something the other companies were not doing – hence STARS' unique enhanced need for NVGs.[50]

69. However, apart from HEMS, other helicopter operations in the province of Ontario, including the Ministry of Natural Resources, were using them. Don Filliter used them extensively in his work with that Ministry.

70. In the U.S., a series of fatal accidents in 2007- 8 led to an inquiry and the recommendation and adoption of NVGs by close to 100% of the HEMS industry. But there are significant differences between the American and Canadian situation. In the U.S. most HEMS missions are flown by a single pilot who is not instrument trained whereas in Canada two pilots trained and certified in instrument flying are required by law. In addition, qualification standards and recurrent training requirements for pilots are more rigorous in Canada. So while the defendant and most of the Canadian HEMS industry lagged behind the U.S. with respect to NVGs, there were, in turn, safety features in Canadian practice that were lacking in the U.S. [51]

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[48] Beatty April 28 P 74
[49] Beatty April 28 P 76
[50] See Memo Exhibit 5 P 2 para 3
[51] In the U.S, HEMS pilots do night site landings, for example, at an accident scene. Not so in most of Canada. The difference in use of NVGs between the two countries is at least in part a function of the different flying tasks

71. Apart from NVGs, there seems to be no standard within the North American HEMS industry to equip helicopters with all reasonably available technology that would enhance safety. So for example; helicopters may lack auto pilot or GPWS or TAWS (both ground proximity warning systems) or explosion-proof fuel tanks – yet still be considered to be flying within acceptable levels of safety even though any of these features would significantly reduce the risk of accident or the survivability of an accident should one occur.[52] Even practices that seem to be fraught with additional risk are treated as acceptable within the industry. For example, as mentioned, in the U.S. it is considered acceptable to fly with a single pilot who has no instrument training. If instrument flying conditions are encountered (ie bad weather) in flight, the recommended response is to go high, go straight and call for help! [53] That hardly seems satisfactory.

72. As the above examples reveal, what is an acceptable level of safety within the industry is given a rather generous interpretation.

73. In summary, with respect to industry practice and standards, the industry recognizes that it is impossible to eliminate all risk; the goal is to reduce and maintain risk at an acceptable level; what is acceptable is highly variable; "acceptable" is not equated with optimal level of safety or least possible level of risk; and the best equipment or technology that will ensure the highest level of safety is not always provided.

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required – and vice versa – the tasks taken on coincide with the equipment available to do the task. One of the arguments against NVGs by CHL was that if they had them they may be required to do night scene landings.

[52] Stockhausen, cross May 9 P112 - 133

[53] Ibid P 117-118

Feasibility:

74. The defendant argues that it was not feasible – indeed not possible - for it to have an NVG program in place in the short time between its assumption of the flying operation and the accident. That period is anywhere from 18 months to 10 months depending on when one starts the clock.[54] The Crown argues that the defendant has not shown how long it would have taken and therefore lacks the factual basis for this argument. But I think it would be difficult if not impossible for either party to demonstrate how long it would have taken, due to the unknowable factor of availability of the goggles at the time acquisition might have been attempted.

75. Having said that, I suspect that the defendant is probably right, particularly if the time period is around a year – but still I would not give effect to this argument. In my view the defendant cannot be heard to say that it did not have sufficient time to do that which it was not attempting to do and had no intention of doing anyway. Accordingly I am not going to give any weight to the argument that it was not feasible to institute an NVG program in the time available.

Conclusion on Due Diligence:

76. The introduction of NVGs was no small step. It was not simply an add-on or enhanced feature or piece of equipment. It was a complete program. It was described by Andrew Eaton as "a paradigm shift in the way you're going to conduct business at night".[55] The process and requirements to be met have been described above.

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[54] Ornge received its operating license in January 2012.But it did not purchase C-Gimy from CHL until July 2012 (see ASF para 28). The accident was May 31 2013.

[55] Eaton Apr 27 P 67

77. In my view no reasonable operator in 2013 would have introduced an NVG program for the aging Sikorskys at Moosonee having regard to all of the circumstances. It was not required or even urged by the regulator; it would have been a momentous change affecting a fundamental aspect of the operation; it was not common practice in Canadian HEMS at that time; the helicopters and the crews were all capable of flying on instruments; there was a long history of flying without NVGs that was considered to be acceptably safe; a recent safety review did not identify lack of NVGs as a risk or recommend their adoption; the remaining life expectancy of the S76s could not begin to justify the cost which, if incurred, would come out of the public purse.

78. Was the defendant negligent in not ordering the new 139s with NVG capability? The defence argues that at the time of the purchase in 2008, CHL was still doing the flying and, since they didn't want NVGs, Ornge cannot be faulted for its decision. But I don't think it is that simple. There is no evidence that Ornge was *not* planning, in 2008, to take over the flying and the fact that they made the purchase strongly suggests that such was the plan. In any event, an acquisition with long term consequences of that magnitude, particularly with public funds, required substantial due diligence. It was not sufficient to simply ask what CHL preferred at that moment in time. There is no evidence that Ornge consulted with anyone about the purchase. Had they done so, as defence expert Downey testified, NVG capability would have been a no-brainer. I find that Ornge was not duly diligent in this regard.

79. But is this relevant? The Crown argues that while the crash involved a Sikorsky, the failure to order the new helicopters with NVG capability was a

crucial decision that flowed through to the tragedy. If a 139 with NVG had been placed in Moosonee, it is submitted, the pilots of the incident flight would have had visual reference to the ground. However, an assessment of due diligence must take into account the position that the defendant found itself in.[56] At the time of the accident Ornge was in a bind, through no fault of its own. There were not enough 139s to go around and choices had to be made, as discussed above. Some latitude must be allowed for those choices and second guessing them in hindsight should be avoided or at least done with caution. I think the standard should be reasonableness – what would a reasonable operator have done? In my view it was not unreasonable for Ornge to make the decision that it did having regard to many of the same reasons given above in paragraph 77.

80. Accordingly, I conclude that while Ornge was negligent in respect of ensuring NVG capability for the 139, that negligence had no bearing on the S 76s, the accident and the charges before me.

81. But that doesn't end the due diligence inquiry. There were other reasonable steps that Ornge could have taken to avoid or lessen the possibility of the accident occurring. There was a lot of evidence presented as to equipment that C-Gimy lacked, such as auto pilot and GPWS, and I find it difficult to understand why these items were not required by the regulator or, absent such requirement, provided by the operator. This is the sort of extra step that in my view *does* fall in the space between regulation and an acceptable level of safety and for which an operator is responsible. A compelling case could be made that the overall lack of automation and safety equipment on C-Gimy was completely unacceptable. It was truly a 1960s Volkswagen – basic, reliable but unsafe. However there is no

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[56] *Brian's Plumbing Ibid para 7*

charge before me alleging that the helicopter was generally under- equipped and unsafe. For the reasons given above regarding the scope of the due diligence inquiry, the focus must be on the specific act alleged - the failure to provide visual reference to the ground. That limitation leaves only one important item of equipment for consideration in regard to due diligence – enhanced search lights.

82. The evidence about these lights, meager though it was, appears[57] to present a strong rebuttal of any claim by the defendant of due diligence. These lights could "light up everything we need to see" and were used to do exactly that by another Canadian HEMS operator. Ornge had been alerted by Eaton's memo to the value of such lights as an alternative short term solution. Why were enhanced lights not acquired and installed by the defendant after economics and practicalities led it to reject NVGs? It was part of the defence burden to answer this question in advancing its defence of due diligence. There was no evidence that it would have been impractical or cost-prohibitive to provide them. Yet there is no evidence that Ornge even considered them.

83. But the problem is this: This case has been all about NVGs. Mr. Devlin for the Crown has fairly conceded that the focus of his case has been entirely on NVGs and he is not seeking conviction on any alternative theory or basis of liability, even though the counts as framed are wide enough to include such alternatives. However he does argue that the defendant's failure to consider, pursue and provide alternative means to provide enhanced visual reference to the ground, such as these lights, should be considered as a factor that tells against any claim of due diligence.

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[57] I have qualified this finding because this was a stealth issue flying beneath the radar of both parties and the court. I am reluctant to make a conclusive finding on this point because, had the issue been recognized, further evidence might have been presented that could affect that conclusion.

84. The difficulty I have is that in this case the two points in the Crown's position cannot co-exist because consideration of the failure to provide enhanced lights as an item of negligence *does* lead to conviction on an alternative basis. It would lead to rejection of the defence and conviction for failure to provide NVGs, thereby effectively substituting failure to provide enhanced lights for the allegation of failure to provide NVGs.

85. In summary,

- I find that the defendant was **not** negligent in failing to provide NVGs for the S76 helicopters.
- I find that the defendant was negligent in not providing NVGs for the AW139s but that that negligence is irrelevant to the S76s and this case.
- I find that the remaining item of negligence relating to the failure to provide enhanced searchlights is relevant but must be disregarded having regard to the particulars of the allegation as charged and presented and for reasons of trial fairness.

86. In the result counts 3 and 4 are dismissed as well.

November 10 2017

B Duncan J

N Devlin, A Hauk *for the Crown*
B Gover, F Schuman *for the defendant*