Federal Court  Cour fédérale

Date: 20170606

Docket: T-1639-15

Citation: 2017 FC 554

Ottawa, Ontario, June 6, 2017

PRESENT: The Honourable Madam Justice Elliott

BETWEEN:

CANADIAN UNION OF PUBLIC EMPLOYEES, AIR CANADA COMPONENT

Applicant

and

AIR CANADA

Respondent

JUDGMENT AND REASONS

I. Overview and Facts

[1] The question in this judicial review is whether the presence of airborne chemicals arising from the pyrolysis of jet engine oil and hydraulic fuel, in quantities not precisely measured but sufficient to create a distinct "dirty socks" odour, constituted a "danger" as defined by subsection 122(1) of the *Canada Labour Code*, RSC 1985, c L-2, as it appeared between January 1, 2010, and December 13, 2012 [the Code].

[2] In a decision dated August 27, 2015, an Appeals Officer of the Occupational Health and Safety Tribunal Canada [Tribunal] dismissed appeals from the findings of two health and safety officers [HSOs] under subsection 129(7) of the Code that a danger did not exist: *Diaz Delgado et al v Air Canada*, 2015 OHSTC 15 [the Decision]. The result of the Decision is that three employees in Air Canada's flight attendant bargaining unit [Employees] were not permitted to refuse to work under section 129 of the Code. The Employees' bargaining agent, the Canadian Union of Public Employees, Air Canada Component [CUPE] now applies for judicial review of the Decision.

[3] At the same hearing that led to the Decision, the Tribunal heard two parallel appeals brought by Air Canada to three sets of directions issued by an HSO under subsection 145(1) of the Code, which allows an HSO to issue directions to an employer where the HSO finds that the employer has contravened a health and safety provision of the Code. While one of the directions was rescinded by the Tribunal, it upheld two other directions made on the basis that Air Canada had failed to warn its employees of a "known or foreseeable health hazard" or to investigate in the prescribed manner a situation where its employees "may be exposed to hazardous substances": *Air Canada v Canadian Union of Public Employees*, 2015 OHSTC 14 [the Companion Decision].

[4] Air Canada has not applied for judicial review of the Companion Decision, but the question of whether the same situation can reasonably be a "known or foreseeable health hazard" but not a "danger" is a significant area of contention between the parties.

[5] For the reasons set out below, this application is granted. The Tribunal acknowledged that the underlying facts in the Decision and the Companion Decision are identical. The findings

made by the Tribunal flow from a critical analysis that is contradictory as between the two decisions. As a result, it is not possible to know whether the same outcome would prevail if the analysis had been consistent between the two decisions. For that reason, the Decision must be reconsidered to either correct the inconsistency or clarify and explain the reasons for the apparent conflict.

[6] The facts and the expert evidence before the Tribunal are set out in great detail in the Decision and the Companion Decision, both of which are reported and available online. I will therefore summarize them here only briefly and will refer to specific passages throughout these reasons as may be appropriate in the context.

A. The Work Refusal on Fin 415

[7] The work refusals at issue in this judicial review took place on two aircraft, Fin 415 and Fin 214. On June 23, 2011, Fin 415 was scheduled to fly from Edmonton to Vancouver as flight AC 239, and then from Vancouver to Toronto as flight AC 1162. Francisco Diaz Delgado was to serve as the Service Director for both flights, with a crew of two other flight attendants. The Decision addresses the Fin 415 refusals.

[8] During the first 15 minutes of inbound flight AC 239, Mr. Diaz Delgado noticed a smell he described at various times as being like "blue cheese", "dirty sock" and a "smelly gym bag". The smell dissipated after those 15 minutes but returned on the aircraft's approach and landing. After checking the cabin logbook, Mr. Diaz Delgado saw that an odour had previously been noticed in the cabin on June 18 and 19. In Vancouver, he exercised his statutory refusal to work on flight AC 1162 under the Code, as did the other two flight attendants. He maintained this

refusal despite the view of the flight's captain and the maintenance team that the smell represented no danger.

[9] Air Canada brought in replacement crew members, including Meng Liang as Service Director and two other flight attendants. They overheard Mr. Diaz Delgado explain to the Crew Manager and members of the workplace committee his reasons for refusing to work. Mr. Liang was concerned that the aircraft mechanics could not pinpoint the defect that was causing the odour. As a result, the replacement crew also refused to work on AC 1162. After the captain of the flight explained that the odour would only be present for a short period of time on takeoff and landing, three of the refusing crew members agreed to work on AC 1162, but Mr. Diaz Delgado and Mr. Liang maintained their refusal.

[10] The refusals were referred to an HSO. Noting that the smell had been present on flights on June 18, 19, 22 and 23, and that maintenance had found fluid in the wheel well on June 24, the HSO determined that the leak was most likely Skydrol LD4 [Skydrol]. Skydrol is not a dangerous good, but in vapour or mist form can cause adverse health effects. The HSO noted that the concentration of any chemicals causing the odour had not been measured and crew members had only complained of the smell rather than any illness symptoms. The HSO concluded that there was no danger under the Code.

B. The Work Refusal on Fin 214

[11] On January 4, 2012, Fin 214 was scheduled to fly from Toronto to Calgary as AC 119, and then from Calgary to Vancouver as AC 215. Hadin Blaize was scheduled to work as a flight attendant on both flights. Fin 214 was also scheduled to fly a third leg, AC 100, but Ms. Blaize was not scheduled to work on that flight. As the aircraft pushed back from the gate, Ms. Blaize

noticed a smell she described as "similar to vomit/strong smelly feet/shoes". While the aircraft was preparing for takeoff, Ms. Blaize was informed by the flight's Service Director that there was a defect entry in the log indicating that an inoperative airpack or possible oil leakage had been detected and maintenance deferred. The smell dissipated either during or shortly after takeoff. However, Ms. Blaize did find the air in the rear half of the aircraft to be dry, causing her some mild nausea.

[12] On arriving in Calgary, Ms. Blaize discovered that Fin 214 would be the aircraft for the next flight. She exercised her right to refuse to work. The other crew members of AC 119 were not scheduled to work on AC 215. By this time, Ms. Blaize's symptoms had gone away and she did not seek medical attention in Calgary. However, at the urging of Air Canada that she see a doctor, Ms. Blaize saw her family doctor the next day.

[13] The crew on AC 215 did not experience any symptoms, though the Service Director and a flight attendant at the front of the plane noticed a mild "smelly socks" odour. However, on AC 100, the entire crew noticed a strong unpleasant odour. The first officer became very unwell and vomited numerous times, and the entire crew experienced headaches. One of the flight attendants experienced nausea and light-headedness and by the end of the flight had a metal or oil taste in her mouth and was unable to sleep in her hotel room that night.

[14] According to Fin 214's maintenance log, an unpleasant odour had been described on the aircraft during takeoff and landing on December 28, 2011, and January 1, 3 and 4, 2012. On an earlier flight on January 4, one of the crew noticed not only a smell during takeoff, but also a haze in the rear galley.

[15] The work refusal was investigated by an HSO, who determined that the smell at issue was likely caused by Mobil Jet Oil II [Jet Oil]. While Jet Oil was not expected to produce adverse health effects under normal conditions of use, it could decompose at elevated temperatures, and the resulting vapours could be irritating or harmful. The HSO found that a low threshold of vapours was not necessarily harmful, and that a smell did not indicate a hazard to health. The HSO therefore found that there was no danger under the Code.

C. Evidence on the Appeals to the Tribunal

[16] The Employees' appeals proceeded on an agreed statement of facts. Expert evidence was also tendered by both sides, and a further expert provided evidence at the invitation of the Tribunal. The same evidence was used for both the Decision and the Companion Decision. The expert evidence is briefly summarized here, and included in more detail where relevant to the parties' arguments.

(1) David Supplee

[17] David Supplee, a former certified and lead Airbus mechanic at U.S. Airways was invited to testify by the Tribunal. He testified into the workings of the relevant aircraft ventilation systems as well as the possible sources of air contamination. His evidence was largely uncontested. Mr. Supplee explained that outside air enters the engines where it is compressed by fans and reaches high temperatures. It is then bled out of each engine through two valves and travels through ventilation ducts to a "pre-cooling" system and then into two air packs that cool the hot bleed air.

[18] On the basis of Mr. Supplee's evidence, the Tribunal determined that the likely source of the contamination causing the odour was oil that had filtered through leaky seals in the jet engine

or auxiliary power unit [APU], a sort of miniature engine that is used to start the main engines, or from a compressor in the air packs. Because the "bleed air" from the engines is quite hot, it would have vaporized or pyrolyzed the oil, then mixed with the recirculated air from the cabin, and contaminated the air in the cabin.

[19] Moreover, once the engines cool down, much of the vaporized oil would condense all along the air system. This makes the source of the contamination very difficult to track down, and prevents the crew from stopping the contamination by shutting down an air pack or a bleed valve from one of the engines. As long as hot bleed air comes into the system, it would re-vaporize the oil residue and contaminate the cabin. Mr. Supplee also testified that a fume event did not necessarily indicate a large oil leak. Rather, even a few drops of oil entering the bleed air can create a fume event. He indicated that a sign of an oil leak would be increased oil consumption by an engine. In normal operation an aircraft engine would consume 1 to 2 quarts of oil per day but, a leaking bearing would increase the consumption to 3 or 4 quarts per day.

[20] Based on Mr. Supplee's uncontested evidence, the Tribunal found that the fume events at issue in this application were caused by the leakage and pyrolysis of oil or hydraulic fluid into the bleed air, and that this pyrolysis caused the presence in the cabin air of an unknown concentration of potentially harmful chemicals.

[21] The parties do not contest this finding on judicial review, but disagree about the interpretation of the rest of the expert evidence and about whether it should have led to a danger finding.

(2) Dr. Clifford P. Weisel

[22] Dr. Weisel, who gave evidence for the Employees, was recognized as an expert in exposure science. In addition to testifying about the source of the air contamination, he also identified several potentially hazardous compounds that could be released by the pyrolysis of Jet Oil or hydraulic fluid. Some of these compounds would create a rancid odour, though other hazardous compounds would have no scent. Based on the documented air quality problems in the aircraft, Dr. Weisel was of the opinion that oil had leaked into the bleed air of the aircraft, and the smell was caused by a mixture of chemicals including the engine oil and unknown products of the oil's pyrolysis. He indicated that oil leak events or incidents occur at an average frequency of 1% of flight cycles.

[23] Dr. Weisel also gave evidence about the quantity of oil that would be necessary to reach threshold limit values [TLVs], being the levels at which a worker can be exposed to a chemical without suffering adverse health effects. Specifically, he was of the opinion that one gram of pyrolyzed oil would produce enough formaldehyde in the air of the cabin to reach the TLV-C level, the ceiling limit of a chemical that should not be exceeded for any length of time. Given the oil consumption of jet engines, Dr. Weisel believed that a leak undetectable in routine maintenance would be sufficient to cause the cabin air to reach the TLV-C level of formaldehyde.

[24] Dr. Weisel concluded that as the aircrafts in question were documented to a have had air quality problems associated with oil leakage into the bleed air it was a reasonable expectation of the cabin crew that working a subsequent flight, on the same aircraft without that aircraft having received proper maintenance to identify and repair the source of the oil leakage, would result in

the crew and passengers being exposed to a mixture of hazardous and toxic chemicals. These chemicals would have been composed of engine oil and unknown pyrolysis products of the oil.

(3) Dr. Robert Harrison

[25] Dr. Harrison also gave evidence for the Employees, and was qualified as an expert in occupational medicine as well as toxicology, the latter over the objections of Air Canada. Dr. Harrison has consulted with over 50 aircraft crew members who had been exposed to bleed air contamination during a fifteen year period and has authored a guide for health practitioners on exposure to bleed air contaminants.

[26] Dr. Harrison found that after exposure to bleed air and other contaminants, acute symptoms may be experienced including cough, shortness of breath, nausea, chest pain, headache, dizziness and confusion. The symptoms indicate toxic effects to the respiratory and central nervous systems. Physical examination may show wheezing or crackles in the lungs, and urological testing may show impairment in balance, gait and coordination. Persistent symptoms may show abnormal pulmonary function and impaired concentration, memory and other cognitive abnormalities.

[27] Dr. Harrison's opinion was that using the accepted methodology of occupational medicine, the Employees had a reasonable expectation that they were exposed to toxic contaminants and that they may develop either acute and/or chronic health problems as result. Although he noted that odours can be useful in determining the presence of a particular gas or vapour they are an unreliable indicator of toxicity because of the variable relationship of odour threshold and the minimum concentration which would reduce toxic effects. However, he believed that the presence of smells/odours associated with toxic compounds combined with the

symptoms of illness that can be caused by those compounds indicated that the pyrolyzed oil on these aircraft had caused illness, once the other possible causes of the symptoms had been ruled out.

(4) Dr. Richard Carl Pleus

[28] Dr. Pleus was the sole expert put forward by Air Canada, and he was qualified as an expert in toxicology. Dr. Pleus's evidence was to the effect that a smell is not indicative of a hazard, since many odorous compounds are not harmful while many harmful compounds have no odour. His opinion was also based on the belief that there is no binary relationship between toxic and non-toxic chemicals. Rather, the "dose makes the poison." The question is whether, knowing the composition of Jet Oil and Skydrol, sufficient quantities of pyrolyzed by-products would have entered the cabin for a sufficient time to cause adverse health effects. According to Dr. Pleus's evidence, to reach levels sufficient to cause chronic illness, there would need to have been enough contaminants in the air circulation system to create a visible haze in the cabin. Since only smells were reported on Fin 415, and smells could be created at chemical concentrations well below harmful levels, Dr. Pleus did not believe the evidence established a harmful level of contaminants in the cabin. Moreover, Dr. Pleus' opinion was that given the considerable amount of air introduced into the cabin, there would be constant dilution and short duration for exposure to any chemical agent.

[29] Dr. Pleus also attempted to answer why the crew members displayed adverse health symptoms after exposure to the odour. One possible explanation was a psychological response to foul odours: in layman's terms, a sufficiently noxious smell can cause someone to vomit or experience other symptoms even if the smell is not caused by a harmful chemical. The other

explanation he offered was psychogenic illness, where misunderstood or false information can cause sufficient anxiety in a patient to trigger real symptoms. This explanation was rejected by the Tribunal.

II. **The Tribunal's Decisions**

A. The Decision

[30] The Tribunal identified what it called a generic question: whether at the time of the work refusals the Employees were exposed to a danger as defined by the Code. On reviewing the evidence the Tribunal found that all the refusals originated with smelling or, being informed of, an odour of "dirty socks" or "a smelly wet gym bag". The Tribunal next identified the specific issue as being whether the odour served to indicate a danger that justified the Employees to refuse to work.

[31] In addressing these issues, the Tribunal considered the definition of danger at subsection 122(1) of the Code:

> "danger" means any existing or potential hazard or condition or any current or future activity that could reasonably be expected to cause injury or illness to a person exposed to it before the hazard or condition can be corrected, or the activity altered, whether or not the injury or illness occurs immediately after the exposure to the hazard, condition or activity, and includes any exposure to a hazardous substance that is likely to result in a chronic illness, in disease or in damage to the
>
> « danger » Situation, tâche ou risque - existant ou éventuel - susceptible de causer des blessures à une personne qui y est exposée, ou de la rendre malade - même si ses effets sur l'intégrité physique ou la santé ne sont pas immédiats -, avant que, selon le cas, le risque soit écarté, la situation corrigée ou la tâche modifiée. Est notamment visée toute exposition à une substance dangereuse susceptible d'avoir des effets à long terme sur la santé ou le système reproducteur.

reproductive system

[32] The Tribunal also referred to sections 122.1 and 122.2 which set out the purpose of Part II of the Code, which addresses matters of Occupational Health and Safety:

> 122.1 The purpose of this Part is to prevent accidents and injury to health arising out of, linked with or occurring in the course of employment to which this Part applies.
>
> 122.2 Preventive measures should consist first of the elimination of hazards, then the reduction of hazards and finally, the provision of personal protective equipment, clothing, devices or materials, all with the goal of ensuring the health and safety of employees.
>
> 122.1 La présente partie a pour objet de prévenir les accidents et les maladies liés à l'occupation d'un emploi régi par ses dispositions.
>
> 122.2 La prévention devrait consister avant tout dans l'élimination des risques, puis dans leur réduction, et enfin dans la fourniture de matériel, d'équipement, de dispositifs ou de vêtements de protection, en vue d'assurer la santé et la sécurité des employés.

[33] The hearing before the Tribunal took place over several days with the three experts for the parties and the expert called by the Tribunal all giving *viva voce* evidence in addition to their initial and rebuttal written reports. Overall, the Agreed Statement of Facts, expert reports and accompanying evidence of internal documents, reports and studies which were submitted to the Tribunal encompassed 1700 - 2000 pages. The reasons provided by the Tribunal are extensive and detailed. The reasons review the background facts and circumstances of the work refusals, examine and comment upon the various expert reports, identify the issues to be determined, review the submissions of the parties, the pertinent legislative provisions and jurisprudence, make findings on the facts and draw conclusions on the issues.

[34] The first step for the tribunal was to identify the "existing or potential hazard or condition" to be evaluated for risk of injury or illness. While Air Canada argued that a smell

could not be a hazard, the Tribunal found that the hazard complained of was not the smell, but the pyrolyzed Jet Oil or hydraulic fluid that caused the smell. The issue was whether the chemicals released by that pyrolysis could reasonably be expected to cause injury or illness to a person exposed to them.

[35] The Tribunal decided that there was insufficient evidence to establish such expectation. In doing so, it relied largely on Dr. Pleus's formulation that "the dose makes the poison". While the chemicals released by pyrolysis could, at some concentrations, cause symptoms similar to those suffered by some of the Employees, some of the same chemicals are often present during routine flight without adverse health effects. The Tribunal found there was no relationship between the concentration of chemicals sufficient to give off an odour and the concentration high enough to pose a health risk. It concluded that the smell, by itself, could prove the presence of the chemicals but not whether they were concentrated enough to meet the statutory definition of being a danger.

[36] On this issue, the Employees argued that the toxicity of the chemicals in the cabin could be inferred from the symptoms. If you know that a chemical causes certain symptoms when sufficiently concentrated, and someone suffers those symptoms in an environment where that chemical is present, it is reasonable to diagnose the chemical as being the cause of the symptoms. Based on the analysis of Dr. Harrison, it should have been possible for the Tribunal to find that the pyrolyzed Jet Oil or hydraulic fluid actually caused illness to the Employees, and therefore it was reasonable for the Employees to expect that they would suffer further illness from the pyrolyzed oil and hydraulic fluid if they did not refuse to work.

[37] The Tribunal did not accept this argument. While symptoms may have occurred after the Employees were exposed to the odour, the Tribunal was not convinced that the symptoms had been caused by the chemical contamination in the air. While Dr. Harrison was unable to specify the concentrations needed to pose a health risk, Dr. Pleus showed that at concentrations high enough to create a risk to the Employees' health, there would have been a visible haze in the cabin. The Tribunal also felt that the case studies Dr. Harrison relied on to provide his medical opinion were of limited use, since it was unclear what the circumstances were in those other cases.

[38] Part of the reason the Tribunal preferred Dr. Pleus' evidence over Dr. Harrison's appears to have been based on concessions made by Dr. Harrison in cross-examination. Dr. Harrison admitted that a cause-and-effect relationship could not be established between the air contamination and the symptoms without considering each individual's medical history, evidence of exposure and toxicological information about the chemical the individual was exposed to. In the present case, however, Dr. Harrison prepared his opinion solely on information given to him by CUPE. He never obtained or considered the Employees' occupational or medical histories, did not consider potential non-occupational causes of the symptoms and did not conduct a physical examination of any of the Employees. Dr. Harrison admitted that when preparing his medical opinion, he did not follow the methodology he created for his guide for healthcare providers evaluating health effects from contaminated bleed air.

[39] Dr. Harrison had concluded that either the odour or the mechanical investigations of the aircraft were sufficient to cause the Employees to reasonably expect toxic contaminants had been released that could result in health problems. The Tribunal found it was not sufficient to

conclude that employees suffered symptoms as a result of being exposed to a smelly sock odour; what had to be evaluated for potential harmful effects was the contamination, not the odour. The Tribunal also found that the only expert who provided insight into the issue of levels of exposure was Dr. Pleus.

[40] The Tribunal concluded that it had not been demonstrated that the symptoms the flight attendants experienced were the direct result of being exposed to the contaminated air. The Tribunal said that there may be a "mere possibility that exposure to contaminated bleed air would result in illness or injury," remarking that it depended on factors such as duration of the exposure and the concentration and toxicity of the contaminants. The evidence was that the contaminants were unlikely to remain in the cabin air for very long because of vaporization. Certain compounds would need to be present in a significantly large quantity in order to cause adverse effects and, that was unlikely given the amount of Jet Oil required for the engine and the fact that the aircraft are routinely maintained.

[41] Finally, the Tribunal found that in all cases where fume events were reported the maintenance personnel took appropriate action to address and resolve the issue. It was therefore even less likely that injury or illness would occur before the hazard could be corrected.

[42] The Tribunal held that there was no danger to the flight attendants and the decision by the HSO was upheld.

B. The Companion Decision

[43] While the Employees were unsuccessful in appealing the HSO's assessment that there was no danger, Air Canada had mixed success on its appeals in the Companion Decision. Air

Canada's appeals related to two danger findings made in the course of issuing directions, but the Tribunal found that it would not review the danger findings; it would only consider the appropriateness of the directions themselves, since the validity of the directions did not depend on whether there was a danger.

[44] The Tribunal overturned one of the directions but upheld two others. The first upheld direction related to Air Canada's obligation under paragraph 125.1(s) of the Code to "ensure that each employee is made aware of every known or foreseeable health and safety hazard in the area where the employee works". While the material safety data sheet [MSDS] for Jet Oil indicated that it was a "Non-Hazardous Substance", the text also indicated that this was under normal conditions of use, which the Tribunal found did not include oil leakage and pyrolysis.

[45] The same MSDS also said that at elevated temperatures, the oil could decompose and give off irritating or harmful fumes, creating symptoms that included headache, nausea, eye, nose and throat irritation. The Tribunal concluded that this description from the MSDS was a "foreseeable health hazard" once pyrolyzed oil was detectible by smell in the cabin. The Code required Air Canada to make affected employees specifically aware of the hazard created by pyrolyzed Jet Oil and Air Canada had failed to do so, making the HSO's direction warranted.

[46] The second direction upheld by the Tribunal concerned the interplay of paragraph 125.1(f) of the Code with section 5.4 of the *Aviation Occupational Health and Safety Regulations*, SOR/2011-87 [*AOHSR*]. Paragraph 125.1(f) requires an investigation in prescribed form "where employees may be exposed to hazardous substances". Section 5.4 of the *AOHSR* sets out the prescribed form of investigation, but states that the obligation is triggered "[i]f there

is a likelihood that the health and safety of an employee is or may be endangered by exposure to a hazardous substance".

[47] The Tribunal found that these were different thresholds, and a scenario might trigger paragraph 125.1(f) of the Code without triggering section 5.4 of the *AOHSR*. However, the scenario needed to satisfy both sections in order to create a duty for the employer to investigate. Therefore the direction to investigate could only be upheld if there was "a likelihood that the health and safety of an employee is or may be endangered by exposure" to the pyrolyzed Jet Oil in the cabin air.

[48] In trying to overturn the direction, Air Canada relied on the same arguments it made about why there was no danger to the Employees: even if there was exposure to a hazardous substance, there must be a likelihood of endangerment to the employee. Dr. Pleus's expert evidence was that odours could be detected at non-toxic levels and the dose detected that gave rise to the direction would not be sufficient to endanger employee health and safety. In addition, in the employee complaint that triggered the direction, no health symptoms were associated with the exposure.

[49] The Tribunal rejected this argument, finding that symptoms of illness were not required. What was required was not a certainty but a possibility of endangerment that rose to the level of likelihood. Having regard to the evidence and that the only obligation being triggered was to investigate, the Tribunal found that there was a sufficient likelihood of health endangerment to trigger the obligation to investigate and upheld the direction.

III. **Issues and Standard of Review**

[50] The issue before the Tribunal was stated as being whether the dirty socks smell represented or served to indicate a danger that justified the refusal to work by the Employees. Although the parties have each phrased the issues somewhat differently, they are in agreement that the question before the Court is whether the decision of the Tribunal was reasonable.

A. Components of a reasonableness review of the decision of this Tribunal

[51] The standard of review of a decision by an appeals officer has previously been determined to be reasonableness. This applies to the factual findings, the interpretation of the definition of "danger" under Part II of the Code, and the application of that interpretation to the facts as found. In conducting the reasonableness review a significant degree of deference is owed by the Court to the Tribunal: *P&O Ports Inc v International Longshoremen's and Warehousemen's Union, Local 500*, 2008 FC 846 at para 16.

[52] The Federal Court of Appeal has found it is not the role of the reviewing court to weigh the evidence which was before the Tribunal, nor is the Court to come to a conclusion about whether the evidence rose to the level of a reasonable expectation of injury. Those tasks belong to the Appeals Officer. The reviewing court is required to determine whether the Tribunal had regard to the relevant evidence and applied the relevant provisions of the Code to that evidence: *Martin v Canada (Attorney General),* 2005 FCA 156 at para 42 [*Martin*]. CUPE alleges the Tribunal did have not have regard to relevant evidence and it also made findings in the absence of evidence.

[53] With respect to the Tribunal's interpretation of the definition of danger in the Code, in *Martin* the Court of Appeal followed a decision by the Supreme Court of Canada, which found

that "decisions of specialized tribunals, such as the Labour Board, are to be accorded deference both as to the determination of facts and the interpretation of the law; the Court should only interfere if the interpretation placed on legislation by the Tribunal was patently unreasonable": *Martin* at para 13. Of course, since *Dunsmuir v New Brunswick*, 2008 SCC 9 [*Dunsmuir*], the patently unreasonable standard has been folded into the standard of reasonableness.

[54] The Court of Appeal has commented upon the parameters of the tests for a finding of danger: one must ascertain in what circumstances a potential hazard could reasonably be expected to cause injury and to determine that such circumstances will occur in the future as a reasonable possibility (as opposed to a mere possibility), that it must be determined whether it is more likely than not that the scenario asserted will take place in the future, and that it is not necessary to establish the precise time when the hazard will occur, or that it occurs every time: *Canada Post Corporation v Pollard*, 2008 FCA 305 [*Pollard*] at para 16.

[55] More recently the test was put another way by Madam Justice Gleason when she was a member of this Court: for a "danger" to exist, the circumstances must be shown to present a realistic possibility of injury actually occurring: *Martin-Ivie v Canada (Attorney General)*, 2013 FC 772 at para 49.

[56] There is both a subjective and an objective aspect to the issue of whether there is a danger that justifies a refusal to work. In *Laroche v Canada (Attorney General)*, 2013 FC 797 [*Laroche*] it is articulated by Mr. Justice Roy at paragraph 60:

> The appeals officer was asked to consider all of the relevant evidence to determine whether there was danger within the meaning of the Code. If there was no danger, the refusal to work would not have been valid under section 128 of the Code. The concept of danger is dependent on the possibility that a hazard

> arises. For a danger to be the subject of a refusal to work, there must be a reasonable possibility, which implies a measure of objectivity. Subjective fear alone cannot satisfy this test. . . .

[57] In evaluating both the Tribunal's formulation of the test and its application to the evidence, my review is to consider the Decision as a whole, in the context of the underlying record, to determine whether it was reasonable: *Newfoundland and Labrador Nurses' Union v Newfoundland and Labrador (Treasury Board)*, 2011 SCC 62 at para 16.

IV. **Was the decision reasonable?**

A. Positions of the Parties

(1) Inconsistent Findings in the Decision and the Companion Decision

[58] CUPE submits that the Tribunal unreasonably interpreted and applied the definition of "danger" in the Code by making two inconsistent findings: (1) in the Companion Decision, the health or safety of an employee may be endangered by exposure to the contaminated cabin air; (2) in the Decision, those same facts were insufficient to establish a reasonable expectation of illness.

[59] CUPE submits the Decision is unintelligible because the same facts lead to findings of both "likely to endanger" and, "no danger", and there is no evidence or reasoning to distinguish the two decisions from each other. To the contrary, the Tribunal acknowledged the circumstances are the same in each appeal. CUPE submits that if a health hazard is foreseeable, it is likely that the employee will be in danger.

[60] Air Canada objects to the CUPE's suggestion that being "endangered" is the same as being in "danger". CUPE replies that a hazard is not necessarily a danger, rather a hazard in a

workplace from which you cannot get away before it is remedied is a danger. CUPE submits the Tribunal tried to "split the baby down the middle" and in so doing it made an irrational finding.

[61] Air Canada says that the Companion Decision did not address the question of "danger". Though the HSOs in the Companion Decision found a danger, they did not issue directions under subsection 145(2) of the Code, but instead issued directions under subsection 145(1), which only requires a contravention of the Code, regardless of whether that contravention meets the definition of "danger". Air Canada argues that there is no inconsistency between the two decisions, because the Companion Decision only found that the Code had been contravened, not that the contaminated air constituted a danger.

[62] Air Canada also points out that the Code definition of danger requires both exposure to injury or illness and a reasonable expectation that an injury or illness will occur before the hazard or condition can be corrected. Objectively, there must be a reasonable possibility of injury as opposed to a mere possibility or a speculative and subjective assessment by the Employees. In support of these propositions Air Canada refers to both *Martin* and *Verville v Canada (Service correctionnel),* 2004 FC 767.

[63] CUPE relies on the same cases in saying that to ground a finding of a reasonable expectation of danger it is not necessary that "it could be reasonably expected that every time the condition or activity occurs, it will cause injury".

B. Analysis

[64] The task of the Tribunal is to assess the likelihood of an alleged risk materializing. In doing so, it is to weigh the evidence to determine whether it is more likely than not that what an

employee is asserting will take place in the future: *Martin* at para 37; . To make a finding of danger, the Tribunal is to first ascertain the circumstances in which the potential hazard could reasonably be expected to cause injury and then find a reasonable possibility that those circumstances will occur in the future: *Pollard* at para 16.

[65] In the Companion Decision, the Tribunal found that, although a contravention of paragraph 125.1(s) of the Code does not require establishing danger, when pyrolyzed Mobil Jet Oil enters the environmental control system it satisfies the requirement of a "foreseeable health hazard". The direction issued by the HSO was upheld because Air Canada had not made the employee aware of the foreseeable health hazard.

[66] With respect to the second direction, which had been issued in connection with paragraph 125.1(f) of the Code and section 5.4 of the *AOHSR*, the Tribunal confirmed that "the conduct of the investigation under section 5.4 of the AOHSR is dependent on the likelihood of health endangerment, which, in the circumstances of a work refusal, applies to the health of the refusing employee or employees". Subsection 5.4(1) refers to the likelihood of an employee's health being endangered:

Hazard Investigation	Enquêtes sur les risques
5.4 (1) If there is a likelihood that the health or safety of an employee is or may be endangered by exposure to a hazardous substance, the employer shall, without delay,	5.4 (1) Si la santé ou la sécurité d'un employé risque d'être compromise par l'exposition à une substance dangereuse, l'employeur, sans tarder :
(a) appoint a qualified person to carry out an investigation in that regard;	a) nomme une personne qualifiée pour faire enquête sur la situation;

[67] In arriving at the finding that an investigation was required, the Tribunal did not accept the argument by Air Canada that there was no likelihood of endangerment to the Employees. Paragraph 125.1(f) requires that an employer investigate and assess hazardous substances to which "employees may be exposed" in the workplace. The Tribunal acknowledged that no substance that could explain the odour was definitively identified. It held that a definitive identification was not required under paragraph 125.1(f) of the Code because the word "may" modifies the word exposure. It also found that not knowing the exact nature of the contaminants was not speculative and such an allegation would create a circular argument as, on that basis, there would never be investigations because by nature an investigation is inquiring into matters that are not known.

[68] Although the specific contaminants were not known, the Tribunal found that the odours were commonly associated with oil contamination of the environmental control system. The Tribunal concluded that it was sufficient to trigger the application of the obligation to investigate in the *AOHSR* even though not every scenario that met the test in paragraph 125.1(f) of the Code would meet the more onerous requirements to trigger an investigation in the *AOHSR*. Necessarily, the Tribunal found that there was a likelihood of endangerment to the health of the Employees.

[69] In the Decision, the Tribunal found that the hazard presented to the Employees was contaminated bleed air. The contamination was caused by leakage of Jet Oil, hydraulic fluid and other contaminants, such as pyrolyzed compounds, resulting in an unknown mixture of chemicals. In both decisions the Tribunal differentiated the odour from the actual contaminant as the contaminants caused the odour.

[70] In determining that there was no danger to the Employees, the Tribunal made two critical findings in the Decision. At paragraph 180 the Tribunal explains that an important causal relationship exists:

> [. . .] The definition of danger provided by the Code establishes a causal relationship between a hazard, condition or activity in the work place and the effect that it can have on an employee's health and safety.
>
> [my emphasis]

[71] In the next sentence the Tribunal establishes the nature of the proof required to show that causal relationship:

> It follows that, for me to arrive at the conclusion of danger in circumstances of air contamination there must be either medical or scientific evidence that points to a causal link between the environmental conditions of the work place and the possibility of injury or illness to an employee; without this, such a conclusion is simply speculative.
>
> [my emphasis]

[72] One of the problems with this conclusion is that causation is proven on a balance of probabilities; that standard of proof does not require scientific certainty: *Ediger v Johnston*, 2013 SCC 18 at para 36. The reasonable expectation of an illness occurring can be established by expert opinions or thorough inference arising logically and reasonably from known facts. Another problem is that while the Tribunal recited factors it would apply in determining the likelihood that a hazard would cause illness before it could be corrected, there is little evidence of it actually applying those factors in the analytical portion of its reasons.

[73] It appears that consideration of an inference was open to the Tribunal. In the Companion Decision, when finding that there was a foreseeable health hazard, the Tribunal relied upon

statements in the MSDS for Jet Oil. In the Decision, at paragraph 107, the MSDS was considered as well:

> The MSDS for Mobil Jet Oil II does report however that decomposition products can be harmful. Those are listed as carbon monoxide, phosphorous oxides, aldehydes, smoke, fume and incomplete combustion products. At elevated temperature and under fire conditions, the oil may decompose and give off irritating and/or harmful gases, vapours or fumes. The possible symptoms from acute exposure to these decomposition products in a confined space may include headache, nausea, eye, nose and throat irritation.
>
> [my emphasis]

[74] It is not clear that the Tribunal actually considered the factors in assessing whether a danger entitling the employees to refuse to work had been shown to exist. At paragraph 181 of the Decision the Tribunal found that although actual illnesses were suffered by some of the Employees there was not enough information to prove cause and effect:

> [. . .] A number of employees incurred or suffered from a number of symptoms, such as nausea, burning eyes or scratchy throat, and I am not suggesting that this was not the case. Dr. Harrison described those as illnesses and while the listing of what constitutes illness in the scientific literature may serve to characterize actual states as illness, this is not sufficient in the present context to arrive at a finding of danger where one does not have the necessary information to establish a cause and effect relationship between those symptoms and the factual conditions on the involved aircrafts. . . .
>
> [my emphasis]

[75] The symptoms suffered by some of the Employees are identical to the symptoms the MSDS for Jet Oil indicated may be caused when it is pyrolyzed. Given the Tribunal's requirement for cause and effect to be shown between the contaminants in the cabin air and the health effects feared by the Employees, it is concerning that these relevant facts were not

mentioned and analyzed. While the Tribunal is presumed to have assessed even evidence it does not mention, a failure to mention sufficiently important evidence can leave the Court with an inference that the evidence was overlooked rather than rejected: *Cepeda-Gutierrez v Canada (Minister of Citizenship and Immigration)* (1998), 157 FTR 35 at para 17. In the Companion Decision, the listed health effects of pyrolyzed Jet Oil was sufficient evidence for the Tribunal to find a likelihood of health endangerment on a flight where the employee suffered no health symptoms, but the Tribunal was unwilling to infer the cause of actual symptoms in the Decision without proof of chemical concentrations in the cabin.

[76] Whether or not to draw an inference is in the discretion of the Tribunal, and significant deference is owed to the expertise of the Appeals Officer. If the Companion Decision did not exist, the Tribunal's failure to draw an inference of causation would not make the Decision unreasonable. However, the Court cannot ignore that the Decision and Companion Decision were made based on the same evidence applying two very similarly-worded statutory provisions about the likelihood of health endangerment. The Federal Court of Appeal has said that one of the methods a reviewing court can use to assess the reasonableness of an administrative decision is to seek out "badges of unreasonableness". A badge of unreasonableness can raise an apprehension of unreasonableness if not sufficiently explained by the administrative decision-maker: Delios v Canada (Attorney General), 2015 FCA 117 at para 27.

[77] In the unique circumstances of this case, the contradictory findings in the Decision and the Companion Decision are a badge of unreasonableness, and the contradiction was not sufficiently explained so as to maintain the transparency and intelligibility of the Decision. On its face, the Decision is difficult to reconcile with the Companion Decision. The Companion

Decision finds the Employees were endangered while the Decision finds that there was no danger to the Employees. The words danger and endanger are the same with the former being the noun and the latter a verb.

[78] The same hazard—pyrolyzed oil in the bleed air—was present, in the same circumstances, in both decisions. The hazard was made known to the Employees the same way in each decision: by the presence of the odour of smelly socks on aircraft where the immediately prior flights had also experienced the same odour. The odour is known in the industry and in the literature to be caused by oil in the bleed air system. As the facts are identical, to find danger in one decision and no danger in the other is not intelligible unless there is a clear explanation of the difference between the decisions. This is especially the case given that the work refusals took place after the Employees suffered symptoms consistent with the MSDS while in the Companion Decision, the Tribunal found a likelihood of health endangerment despite the absence of any symptoms.

[79] The two decisions involved identical evidence and very similarly-worded statutory provisions. The main difference between them is that the Companion Decision deals with an investigation of a hazardous substance and the Decision addresses a refusal to work. But a decision-maker cannot evaluate evidence differently depending on the consequences of the decision. If the Tribunal believes that a reasonable expectation of illness requires a higher threshold of evidence than a likelihood of health endangerment, then it must say so explicitly. Otherwise the contradictory outcomes between the Decision and the Companion Decision appear to be more the result an unreasonable assessment of the evidence than of divergent statutory interpretations.

[80] Finally, I note that the Tribunal began its analysis in the Decision noting that the definition of danger at subsection 122(1) of the Code and the statement of purpose of the Code at section 122.1 have to be considered in looking at that issue. It acknowledged that the foremost principle to guide the analysis of whether or not danger existed was the preventive purpose of the Code. Unfortunately, after identifying the importance of the purpose, the Tribunal never explained or commented upon how the purpose was served by the findings it made in either of the two decisions. In that respect, on redetermination it may be necessary for the Tribunal to indicate how the purpose applies to the conclusion that there was both a likelihood that health may be endangered and no danger.

[81] As a judge of the reviewing Court, it is not in my purview to say whether the evidence rose to the level of a reasonable expectation of illness or injury and I do not purport to make any such finding. While the Decision is extensive, it must be set aside because it lacks sufficient transparency and justification to explain its inconsistency with the Companion Decision. It is also not clear that the Tribunal applied an appropriate standard of proof for causation. The Tribunal did not address the purpose of the Code and appears to have treated the MSDS differently in the two decisions. The Tribunal may also have failed to consider relevant evidence that could have addressed the causal link it was seeking. It is not possible to determine whether the outcome would be the same if these matters had been addressed. The matter must therefore be returned for redetermination, if possible before the same Appeals Officer.

[82] Given the time and expense that would be involved in a *de novo* rehearing of the evidence, the parties' agreement on the facts and the extensive transcripts of expert cross-examinations, the existing evidentiary record is more than sufficient for a fair redetermination by

the same or a different Appeals Officer. The redetermination will therefore be restricted to the evidence originally before the Appeals Officer and the transcript of the original appeals, though the parties may make additional submissions in the redetermination.

JUDGMENT IN T-1639-15

THIS COURT'S JUDGMENT is that:

1. The application for judicial review is granted with costs to CUPE.
2. The decision of the Appeals Officer is set aside.
3. If the same Appeals Officer is available, he is to redetermine the Employees' appeal.
4. If the same Appeals Officers is not available the appeal is remitted to a different Appeals Officer for redetermination.
5. In either event, the redetermination is to be limited to the evidence originally before the Appeals Officer and the transcript of the original appeal, though the parties may make additional submissions in the redetermination.

"E. Susan Elliott"
Judge

FEDERAL COURT

SOLICITORS OF RECORD

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