Occupational Health and Safety Tribunal Canada

Tribunal de santé et sécurité au travail Canada

Date: 2019-02-07
Case No.: 2011-38
2012-22

Between:

Francisco Diaz Delgado, Meng Liang and Hadin Blaize, Appellants

and

Air Canada, Respondent

Indexed as: *Delgado v. Air Canada*

Matter:	Appeals under subsection 129(7) of the *Canada Labour Code* of two decisions rendered by a health and safety officer
Decision:	The two decisions are rescinded.
Decision rendered by:	Mr. Jean-Pierre Aubre, Appeals Officer
Language of decision:	English
For the appellants:	Mr. James Robbins, Counsel, Cavalluzzo LLP
For the respondent:	Ms. Rhonda R. Shirreff, Counsel, Norton Rose Fulbright Canada LLP
Citation:	2019 OHSTC 3

REASONS

[1] This decision concerns the redetermination of two appeals brought under subsection 129(7) of the *Canada Labour Code* (*Code*) against two decisions that a danger does not exist rendered under subsection 129(4) of the *Code*.

[2] Health and Safety Officer (HSO) Rochelle Blain rendered the first decision that a danger does not exist on July 18, 2011, following an investigation prompted by the work refusal of five of the respondent's employees. Mr. Francisco Diaz Delgado and Mr. Meng Liang, two of the employees who had filed a work refusal, filed an appeal of HSO Blain's decision on July 28, 2011.

[3] HSO Mary Pollock rendered the second decision that a danger does not exist on March 12, 2012, following an investigation prompted by the work refusal of Ms. Hadin Blaize, another of the respondent's employee. Ms. Blaize filed an appeal of HSO Pollock's decision on April 13, 2012.

Background

[4] The parties do not dispute the facts that gave rise to the present appeals. At the outset of the original hearing, the parties opted to file a statement of agreed facts as exhibit for each of the two appeals. I will refer extensively to those statements in describing the events that led to the appeals.

Statement of Agreed Facts between Messrs. Delgado and Liang and the Respondent

[5] At all material times Mr. Delgado, Yan-Yee Yip, Marie-Claude Lemieux, Nadia Cabrera-Griffin, Mr. Liang, Jessica Bondy and Megumi Martin were flight attendants employed by the respondent and members of the flight attendants bargaining unit represented by CUPE.

[6] On June 23, 2011, Mr. Delgado was the service director on flight AC 239 from Edmonton to Vancouver using aircraft Fin 415, operated by Flight Attendants Yip and Lemieux. Mr. Delgado noted in his report that during the first 15 minutes of the flight and before landing, there was an odour in the cabin akin to "blue cheese". Mr. Delgado further described the odour in his refusal to work registration form as a smell of "dirty socks" or "smelly gym bag". The HSO report indicates that following flight AC 239, Mr. Delgado and Flight Attendants Yip and Lemieux were scheduled to operate the Vancouver to Toronto leg (AC 1162) on the same aircraft, Fin 415. The three employees exercised their statutory right to refuse to operate that flight, citing their concern about the safety of the aircraft due to the odour in the cabin during flight AC 239. In his refusal to work registration form, Mr. Delgado also noted that the cabin logbook entries for Fin 415 indicated that an odour had previously been noticed in the cabin, including on June 18 and 19, 2011.

[7] Cabin Crew Manager Chelsea Bardock was advised of the refusal and spoke to Fin 415 Captain Henri Asselin and the aircraft line maintenance (Maintenance) about the crew members concerns. In a witness statement dated July 5, 2011, Captain Asselin described the odour on flight AC 239 as lasting for two minutes during engine start and for about eight minutes during approach and landing and, from the cockpit, as being faint, short-lived and unobtrusive.

[8] It appears from a joint employer/employee work place committee report (AC-WPC report), as well as from the work refusal summary form, that Captain Asselin advised that Fin 415 was safe for flight AC 1162, and that the odour noted on flight AC 239 would also be noticeable during takeoff and landing on flight AC 1162. A separate witness statement from Captain Asselin, this one dated July 4, 2011, indicates that on flight AC 1162 of Fin 415, faint and unobtrusive odours had been present for approximately two minutes during engine start, 10 minutes during the approach phase, and that Maintenance had deemed Fin 415 serviceable, airworthy and safe to operate flight AC 1162.

[9] The AC-WPC report shows that Maintenance believed the odour in the cabin was caused by the presence of oil, without knowing exactly where, in the air circulation system. Although Crew Manager Bardock explained to the crew that operating Fin 415 for flight AC 1162 presented no danger, as so informed by Captain Asselin and Maintenance, the refusing employees disagreed and maintained their work refusals. Upon being informed of the continued work refusals, members of the work place committee attended at the aircraft. The AC-WPC report indicates that a number of other flight attendants who would have operated flight AC 1162 chose to also refuse to work upon being briefed about the reasons for the refusal to work.

[10] Replacement crew members Service Director Meng Liang and Flight Attendants J. Bondy and M. Martin were eventually assigned to operate flight AC 1162 and were present when Mr. Delgado explained to Crew Manager Bardock and members of the work place committee the reasons for his work refusal and the history of Fin 415 documented in the cabin defect logbook. This resulted in the work refusal by Mr. Liang, as well as that of the other replacement crew members.

[11] Mr. Liang's work refusal registration form indicates that he chose to refuse to work "after debriefing from previous crew, knowing the same aircraft had a funny, unknown strong odour during (the Edmonton/Vancouver leg); the mechanics wouldn't be able to locate or pinpoint the defect why/where the odour was from."

[12] The witness statement of Maintenance Team Leader R. McKellar is to the effect that:

- Maintenance suspected the smell on Fin 415 during the Edmonton/Vancouver flight to be caused by oil in the pneumatic system and had contacted Maintenance Operations Control (MOC) regarding any history of such smell;

- Maintenance was aware of the issue and fleet management had requested downtime in Toronto for further troubleshooting; and

- There was no high oil consumption in Fin 415 engines or Auxiliary Power Unit (APU).

[13] Furthermore, as per the work place committee report and the refusal form, Mr. McKellar informed that:

- It could only take a few drops of oil to produce a smell;

- The oil source "could be a smear, a stain, drops or bearing";

- A maintenance check of Fin 415 in Vancouver showed that there was no excessive oil quantities or high oil consumption in the engines or the APU and oil consumption was normal;

- There is no Minimum Equipment List (MEL) for air quality; and

- The aircraft is safe.

[14] According to these same two documents, Captain Asselin explained to the crew members who were maintaining their refusal to work that the odour would be present for approximately 10 to 15 minutes only on takeoff and landing. Some of the crew members (Lemieux, Bondy and Martin) then opted to operate flight AC 1162 while Mr. Delgado, Mr. Liang and others (Yip and Cabrera-Griffin) continued to refuse to operate flight AC 1162 on Fin 415, although indicating that they were willing to perform work that would not require them to operate on Fin 415. As a result, HSO Blain was advised of the continuing refusals.

[15] The Air Canada Maintenance reports covering June 18 to 26, 2011, as well as the HSO report, note the following "snags" and maintenance interventions for that period on Fin 415:

- June 18, 2011 - On descent at 10,000 feet, an odour in J class was reported as coming from the air conditioning system ("mouldy smell from galley"). Two forward filters were replaced in Toronto on June 19, 2011, and the aircraft was considered serviceable;

- June 19, 2011 - A bad odour reported on descent. Maintenance ran the airpacks for half an hour and was unable to detect any obnoxious smell throughout the aircraft;

- June 19, 2011 - With reference to the two previous items, it is reported that a strong odour of "dirty socks/feet" and "smelly gym bag" was noticeable to passengers approximately 10 minutes before landing and passengers in J/C class were gagging. Maintenance reported that it operated the APU with bleed on and airpacks on, but were "unable to detect";

- June 20, 2011 - Maintenance action was requested concerning the two above-noted incidents, said action being deferred in Toronto the same day. The Maintenance log refers to inspecting the APU and ducts with black light;

- June 22, 2011 - A "dirty sock smell" was reported as coming from the air conditioning system. Maintenance noted the event as well as an existing outstanding "snag". The HSO report noted a log entry for that date stating that Maintenance had found a hydraulic leak coming from the yellow hydraulic bay, had replaced the yellow manifold main check valve and carried out a leak check. Maintenance reported that a leak had likely trickled down from the wheel well keel beam onto the fuselage and into the APU inlet; and

- June 23, 2011 - A “dirty sock smell” was reported as coming from the air conditioning system during the first and last 15 minutes of flight, with the Maintenance log reporting the matter deferred on that date in Edmonton.

[16] HSO Blain’s report noted a log entry for June 24, 2011, stating that while troubleshooting a cabin air smell, Maintenance had found that the keel beam of a wheel well was wet along the belly of the aircraft to the APU inlet, that it had washed down and dried the subject area, and that fittings in the MLG wheel well area were checked for leaks, with no leak being found.

[17] A June 26, 2011 Maintenance report for Fin 415 states, *inter alia*:

- APU found wet with oil, checked for oil leaks with black light and cleaned;
- APU run and leak checked again—no leaks found and unable to find oil leak on APU;
- APU air duct has no oil;
- Decontamination stage 1 completed;
- Both recirculation filters replaced;
- Duct between pressure regulating valve and over pressure valve checked with no evidence of oil; and
- High power ground run bleeds operated individually with no obvious smell observed.

[18] HSO Blain conducted an investigation into the work refusals in Vancouver and rendered a decision that a danger does not exist in regards to operating flight AC 1162 onboard Fin 415 on June 23, 2011. The “Facts” section of her report notes:

- The hydraulic leak was most likely Skydrol LD4, the composition of this oil being listed on the MSDS and not meeting the classification of a Dangerous Goods. If heated, the temperature and vapours would need to be known and measured in order to determine the level of concentration. In vapour or mist form, it may cause eye, skin and respiratory tract irritation;
- The ceiling values for Skydrol LD4 on the MSDS are based on a time-weighted average of 8 hours a day for 40 hours a week. No measurements were taken for the odour or concentrations on flight AC 239 Fin 415 from Edmonton to Vancouver, nor was the exposure time determined;
- There is no way of determining if the Skydrol LD4 was the only product causing odour. While there may have been other products or bi-products as contributing factors to the odour, there is no way to determine this as no measurements were taken and exposure time was not determined;

- A representative from the manufacturer of Skydrol LD4 (Solutia) stated that the "base stock" (first three components listed on MSDS under "composition") would likely be very irritating when inhaled with no reported long-term health effects;

- Crew members only complained of an odour and reported no illness or symptoms from said odour, whether in person when refusing or in their written refusal statements.

Statement of Agreed Facts between Ms. Blaize and the Respondent

[19] At all material times, Ms. Blaize was a flight attendant employed by the respondent and member of the flight attendant bargaining unit represented by CUPE. On January 4, 2012, she operated flight AC 119 from Toronto to Calgary onboard an Airbus A320 identified as Fin 214. She was scheduled to operate the following leg of the flight, AC 215, from Calgary to Vancouver. HSO Pollock's report notes that while operating flight AC 119, Ms. Blaize noticed an odour in the aft section of the aircraft which she described as "similar to vomit/strong smelly feet/shoes", occurring during pushback and dissipating "a few minutes/a while" after takeoff. According to Ms. Blaize, during the flight, "the O2/air was dry" from the wing area to the aft section of the aircraft, making it "a bit harder to take deep breaths" and causing her "some possible side effects of nausea".

[20] According to HSO Pollock's report, once the aircraft doors were closed and the aircraft was on the active runway, the director of flight AC 119 informed Ms. Blaize that there was a cabin defect log entry for Fin 214 on or about December 28 or 30. The log indicated that a problem about an inoperative airpack or possible oil leakage had been deferred. Upon arrival in Calgary, Ms. Blaize learned that the same aircraft (Fin 214) would be used for the next leg of the flight to Vancouver (AC 215). She proceeded to exercise her right to refuse to work, as she felt uncomfortable because of the odour on flight AC 119 and unsafe because of the cabin defect log for Fin 214. Ms. Blaize was the only member of the cabin crew that had operated the inbound flight to Calgary who was scheduled to operate the next leg (AC 215) to Vancouver.

[21] The respondent's cabin crew manager, Ms. Tracey Ibbott, was informed by the employee co-chair of the work place committee, K. Allbright, that Ms. Blaize had declined seeking medical attention in Calgary because she was no longer symptomatic. Having been informed of the respondent's preference that she see a doctor as a precaution, Ms. Blaize informed HSO Pollock having called her family doctor on or about January 5, 2012, without further comment.

[22] Informed of Ms. Blaize's refusal, Ms. Ibbott met with Captain Brent Martell, who was to pilot Fin 214 for flight AC 215, and who indicated that there were snags pertaining to the APU and advised that the APU was inoperable due to a possible oil leak into the air conditioning pack and that any smell associated with the burn-off of the oil leak would dissipate after takeoff. Ms. Ibbott advised Ms. Blaize that there was no fuel leak on Fin 214. Captain Martell also explained the nature of the snags to Ms. Blaize. Captain Martell had been told that the aircraft had an inoperative APU due to a bit of oil seepage, that the odour could be smelled on pushback and landing for two minutes or so, that Fin 214 was cleared to operate and that should suspicious smells be noticed on taxi, he would return immediately to the gate.

[23] While this information caused Ms. Ibbott to conclude that no danger existed, Ms. Blaize advised that she was maintaining her work refusal. She was subsequently provided with the Material Safety Data Sheet (MSDS) for Mobil Jet Oil II as well as a copy of a "Globe" message regarding cabin odours. Furthermore, the following information from Maintenance was obtained:

- The APU and airpack #2 had been deactivated because of the smell;

- On January 3, 2012, both air filters and ozone filters had been changed, as well as the flow control valve on airpack #2; and

- The aircraft was due for an APU change and decontamination in Toronto on the night of January 4, 2012.

[24] Maintenance Control subsequently stated that there had been no report of an odour by the pilots or crew on flight AC 215 who were met upon arrival in Vancouver. The captain advised Cabin Crew Manager Colin Murphy that there was no issue that he was aware of that could be hazardous to the crew and added that the MEL concerning the APU should not present a problem. The flight attendants who operated AC 215 were also met. The two flight attendants who had been seated in the rear of the aircraft stated that they did not smell anything. The service director and the flight attendant seated at the front of the aircraft stated that they had detected a bit of an odour during climb and descent but added that they were fine. According to the flight attendant, the odour smelled a bit like "smelly socks", but that it may just have been because of carpet cleaning. The flight attendant did not have a headache or feel nauseous and added that the crew had a heightened sense of awareness because they had been aware of the issues with Fin 214.

[25] HRSDC (now Employment and Social Development Canada) / Transport Canada was informed of the work refusal on January 4, 2012, and HSO Wylie initiated an investigation on the same day. On February 16, 2012, HSO Wylie later informed the respondent that the file had been reassigned to HSO Pollock, who completed the investigation on March 13, 2012.

[26] Fin 214 had been inspected by Maintenance prior to flight AC 215. The inspection concerned snags related to reported cabin odours on previous flights and the following was reported for the dates ranging from December 28, 2011, to January 4, 2012:

- December 28, 2011 - Two employees operating flight AC 190 reported an odour in the cabin. The first employee noted a strong odour smelling like "musty dirty socks". Maintenance followed up, confirmed that the APU and engine oils checked full, but did not note any smell or history. According to the captain, the aircraft had been de-iced and Maintenance suspected the odour to be from de-icing fluid, found no fault with the aircraft and pronounced it serviceable. According to the second employee, a "dirty/wet/gym socks" smell was noticeable upon boarding and logged accordingly.

- December 31, 2011 - The recirculation filters were replaced with Maintenance attributing the fault to an apparent APU oil leak and, under the MEL, de-activating the APU bleed valve. On the same day, Maintenance stated the APU required "oil monitor" and noted that the aircraft remained under MEL;

- January 1, 2012 - On flight AC 418, a "dirty socks smell" in the cabin was reported on descent at about the same time anti-icing was engaged. Maintenance reported this fixed on January 2, 2012, stating that the APU bleed valve had been deactivated physically and advising the crew to "continue to monitor sock smell";

- January 3, 2012 - A bad smell was reported lasting until after takeoff. No smell was noted during cruise but it reappeared below an altitude of 5000 feet with APU bleed off. According to Maintenance, the APU remained on MEL, the bleed valve was physically locked out, the ECS system decontaminated and the recirculation and ozone filters replaced. Noting that a ground run had generated no odours, Maintenance indicated that the "APU bleed (was) not to be used until APU replacement";

- January 4, 2012 - An employee on flight AC 464 reported a haze in the back galley on takeoff until cruise, stating that it smelled "like something was overheating" and a "smell of dirty socks when pax 2 (airpack) is on". Due to the snag's repetitiveness, Maintenance deferred the matter to Engineering for evaluation. On AC 119 on the same day, a "dirty sock smell" was reported in the cabin and flight deck after engine start. It dissipated during taxi and was not present after takeoff. Again on January 4, 2012, this time on flight AC 215, a flight attendant (R. Del Rosario) reported an odour of "dirty socks/dirty wet carpet" towards the front of the cabin during taxi and takeoff. Maintenance noted that groomers were advised to clean thoroughly and deodorize the cabin; and

- January 5, 2012 - Fin 214 was out of service all day for an APU change.

[27] According to Mr. Murphy, Service Director Brigitte Forget, who had operated flight AC 215 following Ms. Blaize's refusal on January 4, 2012, reported that on the subsequent leg of the flight, AC 100, she and the crew noticed an odour in the cabin described as "dampness/smelly feet". Ms. Forget provided the following particulars:

- The first officer had been in the washroom for a long time and when coming out, had indicated feeling very unwell and having vomited numerous times;

- Ms. Forget and all three flight attendants had noticed a strong unpleasant odour during the flight that she described as dampness/smelly feet and also a smell similar to "body odour" in the flight deck, although the pilots appeared to be very hygienic; and

- Ms. Forget and the cabin crew had headaches, and she felt nauseated and light-headed, although she sometimes gets headaches on flights. However, by the end of the flight, she had a "metal" or "oil" taste in her mouth. She could not sleep when she got to her hotel. She was now feeling fine although tired from lack of sleep.

[28] As stated above, HSO Pollock rendered a decision that a danger does not exist on March 26, 2012. Her investigation report states, *inter alia*:

- Air Canada had developed processes and procedures to manage smell events since November 2011 and thus, with these processes and procedures, Air Canada was in a position to identify the product Ms. Blaize had been exposed to during flight AC 119;

- Air Canada had committed to strict maintenance and troubleshooting investigation procedures to address smell events;

- Air Canada's industrial hygienist had conducted and finalized the hazardous substance investigation directed by Transport Canada on November 4, 2011 and the information had been shared with the Inflight Group via Globe, an online method of communicating with cabin crews;

- Ms. Blaize had been provided with a copy of the MSDS for Mobil Jet Oil II. According to that MSDS, Mobil Jet Oil II is not expected to produce adverse health effects under normal conditions of use and with appropriate hygiene practices. The product may decompose at elevated temperatures or under fire conditions and give off irritating and/or harmful carbon monoxide gases/vapours/fumes. Symptoms from acute exposure to these decomposition products may include headache, nausea, eye, nose and throat irritation;

- HRSDC industrial hygienist confirmed that Mobil Jet Oil is not a controlled product, nor a hazardous substance;

- It is not uncommon for individuals to react to said odour and some individuals may experience more severe reactions than others. The odour can be significant for short periods of time but disappears after several minutes. A low threshold does not mean that it is harmful, nor does the fact that something smells mean that it is hazardous to one's health;

- Regarding the situation resulting in Ms. Blaize's refusal, Air Canada had locked the APU bleed valve on December 31, 2011, replaced the filters and did a decontamination run on January 3, 2011. While a decontamination run burns off residual oil in the air conditioning system, a bad smell can still be present due to the heat generated during that procedure. Although an air pack (#2) was inoperative, the Air Canada maintenance technical support manager (E. Bérubé) and the Transport Canada maintenance inspector confirmed that having one inoperative air pack would not make a difference to air quality.

[29] I heard the appeals of the two decisions that a danger does not exist together in Toronto from June 3 to 7, 2013, and from September 11 to 13, 2013, along with two other appeals, given the commonality of documentary evidence and testimony. On August 27, 2015, I dealt with the two other appeals in the decision *Air Canada v. Canadian Union of Public Employees,* 2015 OHSTC 14. I will hereafter refer to this decision as the companion decision.

[30] On August 27, 2015, I rendered a second decision (the decision), this time dealing with Messrs. Delgado and Liang and Ms. Blaize's appeals, in which I upheld the decisions of absence of danger rendered by HSOs Blain and Pollock mentioned above. The appellants applied to the Federal Court for judicial review of this decision. On June 6, 2017, the Federal Court set aside the decision, remitted the matter to the undersigned for redetermination and specified that the

redetermination was to be limited to the evidence originally before the undersigned and the transcript of the original appeal, though allowing the parties to make additional submissions.

[31] On October 3, 2017, the Tribunal communicated with the parties to make them aware of my availability to redetermine the two appeals in accordance with the Federal Court's instructions. On December 21, 2017, I directed the parties to inform me of their intention to file submissions. The appellants and the respondent filed additional submissions that I will summarize below. Messrs. Delgado and Liang and Ms. Blaize are acting through the Air Canada component of the Canadian Union of Public Employees (CUPE).

Issue

[32] At the outset of these appeals, the question to be decided was enunciated by the undersigned to be whether, at the time of their work refusals, the appellants were exposed to a danger as defined under subsection 122(1) of the *Code* applicable at that time. This was described as being the "generic" question to be addressed in such appeals. The undersigned specified that while the circumstances of each refusal, including the refusals dealt with in the companion decision, may have slightly varied from one another, central to these appeals was the fact that every work refusal had originated with the refusing employees either smelling, or being informed of an odour on the involved aircrafts described as "smelly wet gym bag" or "dirty socks". All the evidence presented in the four appeals dealt singularly with that matter. The undersigned thus identified the specific issue to be determined as being whether the said odour served to indicate a danger to those employees that justified their refusal to work. At the present juncture, the question to be decided remains the same.

[33] However, following the decision of the Federal Court in *Canadian Union of Public Employees v. Air Canada*, 2017 FC 554, wherein the Court, having come to the conclusion that the analysis made by the undersigned in the decision and the companion decision evidenced a contradiction that made it impossible to know whether the outcome in both decisions would have been the same had the analysis been consistent between the two, determined that the decision needed to be redetermined to either correct the inconsistency, or clarify and explain the reasons for the apparent conflict. As regards this reconsideration, the Court alluded to the time and expense that would be involved in a *de novo* rehearing of the evidence and considered the existing evidentiary record as more than sufficient for a fair redetermination. The Court therefore decided that the redetermination would be restricted to the evidence originally before the undersigned, the "transcript" of the original appeals, as well as whatever additional submissions the parties might choose to make.

Submissions from the Parties

A) Appellants' Submissions

[34] The appellants' submissions are constructed around the rationale of the Federal Court's decision in the judicial review of the initial Tribunal decision in this case and the conclusion by the Court that there was an inconsistency between that decision and what the Court referred to as the "companion" decision which, on similar facts and common evidence, decided on the validity

of “contravention” directions challenged at appeal by employer Air Canada and was not subjected to judicial review.

[35] While the Court did ask the Tribunal to explain or correct the inconsistency between the decision and the companion decision, the appellants have put forth that the so-called inconsistency cannot be explained and thus, must be corrected and the original decisions of absence of danger overturned. The appellants submit that the Tribunal applied an inappropriate standard of proof for causation in the decision, namely scientific certainty, while it applied the correct standard of proof in the companion decision, namely balance of probabilities.

[36] Based on this submission, the appellants assert that the same standard of proof should have been applied in the decision and in the companion decision, since the standard of proof in making a finding on a "no danger" appeal pursuant to subsection 129(7) of the *Code* and an appeal of a direction based on a contravention pursuant to subsection 146(1) of the *Code* is the same: the balance of probabilities. The appellants thus contend that if the appeals officer had applied the appropriate standard of proof for causation in the decision, he would have arrived at a result consistent with the companion decision, and made findings of “danger” since both cases turn on the likelihood of contaminated bleed air causing illness or injury to exposed employees where proper weight and reliance is put on the Material Safety Data Sheet (MSDS) in addressing the issue of causal link.

[37] The appellants then note that the purpose of the investigation is not to determine whether the hazard exists, but to determine the cause of the hazard and more importantly, to prevent recurrence, this in accordance with the preventative purpose of the *Code* which, when invoked in the companion decision, correctly led to a finding of foreseeable hazard requiring investigation. Accordingly, the appellants suggest that the right of employees to refuse dangerous work should be upheld when the same facts lead to the conclusion that there is a likelihood of endangerment to employees from a foreseeable hazard.

[38] The appellants contend that the companion decision was correctly decided and that the decision should be corrected by making a finding of danger to ensure consistency since there is no adequate explanation for the inconsistency.

[39] The appellants noted three specific issues arising from the inconsistency identified in the Federal Court decision: (1) inappropriate standard of proof for causation; (2) the fact that the decisions appeared to apply different evidentiary standards without explicitly identifying them; and (3) the fact that the decision did not address the application of the purpose of the *Code* or explain whether purpose could account for the different results in the decision and the companion decision. The appellants submit that the right of employees to refuse dangerous work should be upheld when the same facts lead to the conclusion that there is a likelihood of endangerment to employees from a foreseeable hazard.

[40] In view of the inappropriate standard of proof for causation, the appellants submit that the Tribunal should reassess the expert evidence, and in particular the uncontested medical evidence, not through the lens of “scientific certainty” or “scientific precision” according to the methodology of toxicology, but according to scientific methods used to study work place

exposures. In the appellants' opinion, this could be done by relying on the MSDS or by considering both the MSDS and consistency of expert evidence with it.

[41] The appellants insist that applying a balance of probabilities rather than scientific certainty would lead to consistent results between the two decisions and a finding that there was danger in the present appeals.

[42] In what concerns the appellants' argument about the fact that the decisions appeared to apply different evidentiary standards, the appellants maintain that there is only one standard of proof and only one threshold of evidence applicable to both decisions: the civil standard of a balance of probabilities, and that accordingly, the treatment of the MSDS should be consistent in both the decision and the companion decision. It is therefore the appellant's submission that the Tribunal should consider the MSDS and its consistency with expert evidence in this case on a balance of probabilities which would support a finding of danger and address the issues of the proper standard of cause and effect raised by the Federal Court.

[43] Finally, the appellant adds that the preventative purpose of the *Code* requires the Tribunal to find "danger" and uphold the right of employees to refuse work, where the Tribunal has found that there is a foreseeable health hazard and a likelihood of endangerment to employees, and asks that the decision be redetermined and finding of "danger" be made.

Respondent's Submissions

[44] The respondent submits that the apparent inconsistency or conflict between the decision and the companion decision noted at judicial review can be easily clarified and explained for the following reasons: (1) the Tribunal's jurisdiction in the companion decision was materially limited; (2) HSO Pollock did not issue any directions under subsection 145(2) of the *Code* as she was required to do when she concluded that a danger existed in the circumstances of the Laporte and Martinez work refusals: and (3) the underlying facts in the decision and the companion decision, while very similar in many respects, were not identical and the Tribunal did not characterize them as being identical. The respondent also submits that the decision was clearly supported by the expert evidence that was before the Tribunal.

Jurisdiction

[45] In what concerns the respondent's argument that the Tribunal had limited jurisdiction in the companion decision, the respondent notes that HSO Pollock's October 2011 investigation report and direction with respect to the Laporte work refusal states that Air Canada contravened paragraph 125.1(f) of the *Code* and section 5.4 of the *Aviation Occupational Health and Safety Regulations,* SOR/2011-87 (*Regulations*), and points out that paragraph 125.1(f) of the *Code* requires an employer to conduct an investigation and assessment in the manner prescribed where employees may be exposed to a hazardous substance, while section 5.4 of the *Regulations* sets out the prescribed manner. The appeals officer confirmed the Laporte direction in the companion decision.

[46] In HSO Pollock's December 23, 2011, investigation report and directions with respect to the Martinez work refusal, it is stated that Air Canada contravened paragraph 125(1)(s) and subsection 125.2(1) of the *Code*. Paragraph 125(1)(s) requires an employer to ensure that each

employee is made aware of every known or foreseeable health or safety hazard in the area where an employee works. The appeals officer also confirmed this direction in the companion decision.

[47] Subsection 125.2(1) requires an employer to provide information regarding any controlled product to which the refusing employee may have been exposed to any physician or other medical professional who requests that information in order to make a medical diagnosis of, or render treatment to, an employee in an emergency. The appeals officer rescinded this direction as no physician or other medical professional had made any such request in the context of Ms. Martinez's work refusal.

[48] The respondent argues that in her directions with respect to the Martinez and Laporte work refusals, the conclusion by HSO Pollock that the source of the "dirty sock" odour in each case presented a danger and triggered the obligations in paragraphs 125(1)(s) and 125.1(f) of the *Code* had been arrived at without the benefit of the extensive expert evidence that was subsequently available to the Tribunal at appeal in the present cases.

[49] According to the respondent, the appeals officer was unable to address HSO Pollock's danger findings in the Laporte and Martinez work refusals because HSO Pollock did not issue any directions under subsection 145(2) of the *Code,* as is required when there is a "danger" finding. Rather, for reasons HSO Pollock did not provide in either the Laporte or the Martinez investigation report and directions, she issued her directions under subsection 145(1) of the *Code.*

[50] Although Air Canada attempted to appeal HSO Pollock's danger findings in the Laporte and Martinez work refusals, the respondent refers to a letter sent by the Tribunal on April 18, 2012, in which the appeals officer stated that, pursuant to subsections 129(7) and 146(1) of the *Code,* only directions and "no danger" decisions may be appealed because the *Code* does not contain any provision that permits an employer to appeal the type of stand-alone danger findings rendered by HSO Pollock with respect to the Laporte and Martinez work refusals. The respondent argues that consequently, although the Tribunal had jurisdiction to hear Air Canada's appeals of the Martinez and Laporte directions, it was without jurisdiction to consider HSO Pollock's danger findings because they had been issued under subsection 145(1) instead of under subsection 145(2).

[51] According to the respondent, it is this jurisdictional issue in the companion decision that lies at the heart of what appeared to the Federal Court to be an inconsistency or conflict between the decision and the companion decision. Because HSO Pollock’s danger findings were issued under subsection 145(1) of the *Code*, the respondent describes them as being essentially set in stone since the Tribunal could not overturn these findings based on the expert evidence before it nor could it ignore these findings when it considered Air Canada’s appeals of the Martinez and Laporte directions.

[52] The respondent explains that since HSO Pollock's danger findings in the Martinez and Laporte work refusals had to stand, the Tribunal was essentially left with no option in the companion decision but to find that Air Canada had an obligation in the context of the Martinez work refusal to inform employees of every known or foreseeable health or safety hazard, as

required by paragraph 125(1)(s) of the *Code*; and in the context of the Laporte work refusal, an obligation to conduct an investigation and assessment where employees may be exposed to a hazardous substance, as required by paragraph 125.1(f) of the *Code*.

[53] The Tribunal's inability under the *Code* to consider whether HSO Pollock's stand-alone danger findings were supported by the evidence before it stands in sharp contrast to the jurisdiction afforded by subsection 129(7) of the *Code* to consider and confirm the no danger finding by HSO Blain in the Delgado/Liang work refusal as well as the no danger finding by HSO Pollock in the Blaize work refusal.

[54] The respondent claims that the Tribunal accepted that the concentration of the substances causing the "dirty socks" odour and the duration of the odour on both the Delgado/Liang and Blaize flights at issue were insufficient to pose a danger because of the extensive expert testimony and reports that were unavailable to HSO Blain and HSO Pollock during their respective investigations of the Delgado/Liang and Blaize refusals. Accordingly, in the decision, the Tribunal confirmed HSO Blain's and HSO Pollock's no danger findings.

Commonality between the Decision and the Companion Decision

[55] In expressing its concern that there is an inconsistency or conflict between the decision and the companion decision, the Federal Court stated that the "Tribunal acknowledged that the underlying facts in the Decision and the Companion Decision are identical". The respondent submits with respect that this statement does not accurately reflect how the Tribunal characterized the underlying facts.

[56] The respondent points out that at paragraph 193 of the companion decision, although the Tribunal acknowledges that the evidence presented in both sets of appeals was "identical", it stops short of characterizing the underlying facts in both sets of appeals as "identical", stating:

> I have however alluded repeatedly to parallel appeals by Air Canada employees regarding whether a danger was present in essentially identical circumstances as the present appeals by Air Canada; and the evidence presented in both sets of cases are identical; a fact that should not be ignored by the appellant.
>
> [Respondent's underlining]

[57] Further, the respondent indicates that the Tribunal did not characterize the underlying facts as "identical" in the decision, but rather expressed that there is "a commonality of documentary evidence and testimony" between the set of CUPE appeals and the set of Air Canada appeals in the first paragraph of the decision when referring to Air Canada's appeal of HSO Pollock's decisions with respect to the Martinez and Laporte work refusals. Still in the first paragraph of the decision, the Tribunal wrote that: "The circumstances of the latter appeals are very similar to the appeals dealt with in the present decision. A separate decision will be issued to deal with these Air Canada appeals." [Respondent's underlining]

[58] Finally, the respondent points to paragraph 159 of the decision where the appeals officer stated:

> [159] The question to be decided by the undersigned in the present appeals is whether at the time of Air Canada employees Delgado, Liang and Blaize's work refusals, they were exposed to a danger, as defined by subsection 122(1) of the Code. For lack of a better description, I would qualify this as being the "generic" question to be addressed in these appeals. However, while the circumstances of each refusal may vary slightly from one refusing employee to another, and this includes refusals by flight attendants LaPorte and Martinez dealt with in the parallel decision mentioned at the outset, central to all cases is the fact that all those refusals originated with the employees either smelling or being informed of an odour on the aircrafts described as "smelly wet gym bag" or "dirty socks".
>
> [Respondent's underlining]

Expert Evidence

[59] Finally, the respondent argues that the decision is clearly supported by the expert evidence that was before the Tribunal. Dr. Pleus's credentials as an expert in toxicology were unsurpassed by either of CUPE's expert witnesses. Dr. Pleus concluded with a reasonable degree of scientific certainty after rigorously applying the four-part toxicological risk assessment methodology accepted by the scientific community that the dose and exposure duration that Flight Attendants Delgado, Liang and Blaize could reasonably have experienced were insufficient to endanger their health and safety.

[60] The respondent states that the Federal Court's concern about an apparent inconsistency or conflict between the decision and the companion decision can be easily explained and that the Tribunal's conclusion in the decision that there was no danger in the circumstances of either the Delgado/Liang or Blaize work refusals should not be altered.

Appellants' Reply

Jurisdiction

[61] The appellants consider that the respondent's argument related to jurisdiction does not address the question of inconsistency raised by the Federal Court because there is no question that the Tribunal had jurisdiction over the appeal of the directions in the companion decision.

[62] To support its position, the appellant argues that the Federal Court noted that the directions under appeal in the companion decision were, as confirmed by the Tribunal, dependent on the likelihood of health endangerment and found that the words "danger" and "endanger" were the same, one being the noun and the other a verb. The appellants then go on to state that the Federal Court did not suggest that the decision and the companion decision were decided under the "danger" provisions, or that the Tribunal was required to accept that there had been findings of danger in the cases dealt with in the companion decision, affecting its ability to decide on the appeals of directions in the companion decision.

[63] The appellants clarify that HSO Pollock's findings of danger in the cases under appeal in the companion decision did not form the basis for the Tribunal's decision to uphold the directions since the Tribunal noted that the directions were not issued under subsection 145(2) of the *Code*, but were rather "contravention directions" issued pursuant to subsection 145(1) of the *Code*, and as such were "independent" of the HSO's danger findings.

[64] The overall point of the appellants concerning the respondent's jurisdiction argument is that there is no jurisdiction issue, but rather unexplained "contradictory outcomes" in two decisions involving identical evidence and very similarly worded statutory provisions.

Commonality between the Decision and the Companion Decision

[65] The appellants submit that the respondent's argument about the fact that the apparent inconsistency between the decision and the companion decision can be explained because the underlying facts between the two decisions were not identical is untenable.

[66] The first problem identified by the appellants in the respondent's submissions is that the appellants do not point to any factual differences between the decisions that are material to the different results, the reason being, in the appellant's opinion, that none exist. The second problem, according to the appellants, is that the inconsistencies that were of concern in the Federal Court decision are not based on factual differences between the cases and that this redetermination process is not an appeal of the Federal Court decision. It is the appellant's view that both Air Canada and, with the greatest respect, this Tribunal are obliged to accept the Federal Court's findings.

[67] Another problem raised by the appellants in their reply submissions is that the respondent's argument fails to address the differential treatment of the same facts. Finally, the appellants state that the fact that the respondent did no point to a single material factual difference illustrates that factual differences did not play a role in the Tribunal's reasoning.

[68] The appellants reiterate that the decision should be redetermined and findings of danger be made in the appeals under consideration.

Analysis

[69] Before addressing the issues raised by the Federal Court in the judicial review of the decision, I find it necessary to address a statement made by the appellants in their reply submissions. The appellants state that the Tribunal, to be more specific, the undersigned, is not sitting in appeal of the Federal Court's decision and is therefore *obliged* to accept the Federal Court's findings, since the inconsistency between the decision and the companion decision cannot be explained and thus, the decision must be changed.

[70] I have no hesitation in concurring with the appellants that this redetermination process is not an appeal of the Federal Court's decision. However, in concluding that an apparent inconsistency exists between the decision and the companion decision, two decisions based on identical facts, the Federal Court stated that the contradiction was "not intelligible unless there is

a clear explanation of the difference between the decisions." In the decision, I concluded that a danger does not exist, and in the companion decision, I concluded that a contravention to the *Code* exists. The apparent inconsistency raised by the Federal Court seems to be primarily based on equating my conclusion regarding the employer's need to investigate "if there is the likelihood that the health and safety of an employee is or may be *endangered* by exposure to a hazardous substance" [emphasis added], to a finding of danger.

[71] The Federal Court's comment allows the undersigned, in seeking to provide an explanation, to offer a differing interpretation as to the purport of the decision, and thus to explain the apparent inconsistency. In my opinion, the issuing of a direction relative to a contravention of paragraph 125.1(f) of the *Code* and subsection 5.4(1) of the *Regulations* does not amount to a finding of *danger*, as defined under subsection 122(1) of the *Code*.

Consistency between the Decision and the Companion Decision

[72] The rules of statutory interpretation dictate that it is the wording of the *Code*, through which the *Regulations* are made and invoked, that determines the meaning and purport of the *Regulations* and not the other way around. In order to address the issue of inconsistency raised in judicial review, I must not only examine the text of the *Regulations* where the words "likelihood" and "endangered" appear, but also the whole text of this secondary statutory provision and its stated purpose of investigating. I must do so to assess whether such "likelihood" exists in light of the complete text of the *Code* on which the enforcement is invoked in this case. The Federal Court correctly described the word "endangered" as the verb form of danger, but one must point out that in the companion decision, the appeals officer was not considering whether a "danger" existed, but only whether a contravention to the *Code* and its regulations had occurred.

[73] In my opinion, a simple examination of the terminology used in the provisions involved in the direction and in the definition of "danger" should clarify the intention of the appeals officer in the companion decision. What the appeals officer intended in the companion decision was not to come to a finding of "danger", but rather to conclude that the employer had failed to take the proper investigative steps towards establishing whether a "danger" actually existed in the circumstances claimed by the employees. Paragraph 125.1(f) of the *Code* reads as follow:

125.1 Without restricting the generality of section 124 or limiting the duties of an employer under section 125 but subject to any exceptions that may be prescribed, every employer shall, in respect of every work place controlled by the employer and, in respect of every work activity carried out by an employee in a work place that is not controlled by the employer, to the extent that the employer controls the activity,	**125.1** Dans le cadre de l'obligation générale définie à l'article 124 et des obligations spécifiques prévues à l'article 125, mais sous réserve des exceptions qui peuvent être prévues par règlement, l'employeur est tenu, en ce qui concerne tout lieu de travail placé sous son entière autorité ainsi que toute tâche accomplie par un employé dans un lieu de travail ne relevant pas de son autorité, dans la mesure où cette tâche, elle, en relève :

[…]	[…]
(f) where employees may be exposed to hazardous substances, investigate and assess the exposure in the manner prescribed, with the assistance of the work place committee or the health and safety representative; and	**f)** dans les cas où les employés peuvent être exposés à des substances dangereuses, d'enquêter sur cette exposition et d'apprécier celle-ci selon les modalités réglementaires et avec l'aide du comité local ou du représentant;

[My underlining]

[74] Paragraph 125.1(f) of the *Code* reads in part in English "where employees *may be* exposed [emphasis added]" and in the French text of the legislation "*dans les cas où les employés* peuvent être [*peut-être* in the adverb form] exposés [emphasis added]". In both languages, the words "may be" and "*peuvent être*" are simply expressing a possibility. The *Canadian Oxford Dictionary*, 1st Ed, defines the word "may" as "expressing possibility", and the French dictionary *Le Petit Robert*, 2004, defines "*peut-être*", which is the adverb singular form of "*peuvent être*", as an "*adverbe de modalité marquant le doute, indiquant que l'idée exprimée par la proposition ou une partie de la proposition est une simple possibilité*".

[75] Under paragraph 125.1(f) of the *Code*, the recognition of the possibility of exposure dictates that an investigation and an assessment of that exposure be conducted in the manner prescribed by the regulation made pursuant to the *Code*, and for the purpose stated therein. At this stage, prior to the investigation, what one remains with is only a possibility of exposure. The nature, extent and dangerousness of the exposure is to be ascertained through the prescribed investigation. The provision that completed the contravention of paragraph 125.1(f) of the *Code* confirmed in the companion decision was subsection 5.4(1) of the *Regulations*. That provision must be read in light of the obligation that is put on every employer at section 5.3 of the *Regulations* to "keep and maintain a record of all hazardous substances that are used, handled or stored for use on board an aircraft". Paragraph 5.4(1)(a) of the *Regulations* reads as follows:

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; and	**a)** nomme une personne qualifiée pour faire enquête sur la situation;

[My underlining]

[76] Paragraph 5.4(1)(a) of the *Regulations* thus stipulates that "if there is a *likelihood* that the health or safety of an employee is or *may be endangered* by exposure to a hazardous substance [emphasis added]" ["*risque d'être compromise*"], the employer will be obliged to "appoint a qualified person to carry out an investigation *in that regard*" [emphasis added] ["*sur la situation*"]. Moreover, pursuant to paragraphs 5.4(2)(g) and 5.4(2)(h) of the *Regulations*, the employer must

take into account "the concentration or level of the hazardous substance to which an employee is likely to be exposed", and "whether the concentration of an airborne chemical agent or the level of ionizing or non-ionizing radiation is likely to exceed 50% of the values referred to in section 5.16 or the limits referred to in subsection 5.19(2)". Those obligations have to do with the exposure limits that must not be exceeded for an airborne chemical agent, as established by the American Conference of Governmental Industrial Hygienists in *Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs).* The exceeding concentration or level represents the danger.

[77] While it is exact to say that the word "likelihood" in the English version of the provision carries the meaning of "probability", the analysis of this paragraph must take into account the whole of the provision which has, as a purpose, the investigation and the assessment of such "likelihood" or *risque* ("investigation in that regard" and "*enquête sur la situation*"). The word "likelihood" is rendered in the French version by "*risque*", which is defined in the *Le Petit Robert* as meaning "*danger éventuel plus ou moins prévisible*".

[78] This being said, the reading as a whole of the *Code* and the *Regulations* in the direction at the centre of the issue does, when expressed in the simplest of terms, demonstrate a conclusion that can be expressed as a finding of the possibility of a probability (*possibilité d'un "risque"*). This conclusion is somewhat removed from the positive characteristic of a conclusion of "danger", which is premised on a higher evidentiary threshold of the existence or potential existence of a hazard that can reasonably be expected to cause injury or illness.

[79] I repeat the reference to *Parks Canada Agency and Mr. Doug Martin and Public Service Alliance of Canada,* Decision No.02-009 (May 23, 2002) that I made in the decision:

> [189] […] As held *in Parks Canada Agency and Mr. Doug Martin and Public Service Alliance of Canada* Decision No. 02-009 (May 23, 2002), risk must be distinguished from danger as defined by the *Code*. Risk is exposure to the possibility of injury or illness. A danger requires not only exposure to injury or illness but also a reasonable expectation that an injury or illness will occur before the hazard or condition can be corrected or the activity altered.

[80] If the undersigned were to accept the apparent reasoning of the Federal Court that the presence of the word "endangerment" in a provision of the *Regulations* equates to a finding of "danger", it is my opinion that in any case where the employer would be in contravention of a provision where the same terminology is used, a conclusion of "danger" would *ipso facto* be entailed. I am of the view that a finding of "danger" requires a more extensive analysis and examination to determine whether the hazard that brings into application a provision such as section 5.4 of the *Regulations* is sufficiently serious to meet the definition of "danger".

[81] I find support for this opinion in the words of the appeals officer in *Correctional Service of Canada v. Ketcheson,* 2016 OHSTC 19:

> [115] […] The contravention of a provision of the Code or of the *Canada Occupational Health and Safety Regulations* (the Regulations) is not the basis of a work refusal unless the contravention is of sufficiently high risk so as to constitute a "danger". There was no reference by the parties or the intervenor to these alleged contraventions. The response to a

> contravention is a "contravention direction" under subsection 145(1) of the Code not a "danger direction" under subsection 145(2).

[82] In the companion decision, the HSO had not issued a "danger direction". The appeals officer solely considered the "contravention direction" that had been issued, from the standpoint of whether a contravention to the *Code* had occurred or not. In the decision, the appeals officer was examining whether there was foundation to a claim of "danger". Concluding that a likelihood of endangerment exists is different from concluding that a danger as defined under the *Code* exists.

The Balance of Probabilities

[83] Having provided reasons that allow the decision and the companion decision to be read with the consistency that is warranted by each of their contexts, I will now have a second look at the evidence submitted by the parties in the decision. The Federal Court expressed that I appear not to have applied the appropriate standard of proof for causation, which is the balance of probabilities. The Federal Court's opinion seems to stem mainly from the statement that I made regarding the nature of proof required to show the causal relationship required under the definition of "danger" between a hazard, condition or activity, and the effect that it can have on an employee's health and safety:

> [180] [...] 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.

[84] The Federal Court took this statement to mean that the appeals officer was applying a scientific certainty evidentiary standard, while the reasonable expectation of illness occurring could be established by expert opinions or through inference arising logically and reasonably from known facts in applying the balance of probabilities standard of proof. It bears noting in this regard that I made this statement relative to Dr. Harrison's opinion. Dr. Harrison submitted that in the absence of specific data relative to cabin air having been collected, the "mechanical investigations alone were sufficient to reasonably expect that toxic air contaminants were released into the cabin air and could result in health problems". He left aside the fact that the other two expert witnesses who provided the bulk of evidence in this case had provided essentially only scientific and medical evidence through their reports and testimony.

[85] The evidence received and considered is described clearly and extensively in the decision and thus, does not need be repeated in these reasons. However, the redetermination must take into account, as in the decision, that no air sampling or testing was ever conducted in the specific instances of the refusals that eventually brought about the decision. Given the absence of such evidence, the body of evidence that was considered by the appeals officer, with the exception of the testimony of one highly experienced witness called to provide technical explanations but who was not recognized as an expert witness by the appeals officer, was restricted to scientific and medical opinions, inferences, deductions and assumptions formulated by experts whose views and opinions, very learned no doubt, were nonetheless aligned with the positions taken by each of the parties in the case that had called them.

[86] In short, the evidence on which the decision is based, leaving aside the statements of agreed facts that were limited to the individual circumstances of the refusing employees, came from the testimony of four witnesses. Three of these witnesses were experts who, in the absence of concrete data, could only provide opinion testimony, albeit learned. The fourth witness was Mr. Supplee, whom I would describe as a technical witness for ease of comprehension. Mr. Supplee's testimony served, in short, to explain the functioning of the air circulation system on board the aircrafts. It also gave clarification as to the provenance of the objectionable smell and the contaminated bleed air, and raised that this smell could be engendered by very small amounts of jet oil and/or hydraulic fluid. In the decision, I stated the following in regard to Mr. Supplee's testimony:

> [168] Furthermore on this point, I retain the evidence and testimony provided by Mr. Supplee to the effect that the likely cause of the cabin air contamination could be attributed to faulty seals in the aircraft engines or APU, resulting in the leakage of jet oil, hydraulic fluid and other contaminants such as pyrolyzed compounds and residual combination products, as well as other external fumes and de-icing substances.

[87] In the decision, I also drew attention to the fact that there was no difference of opinion between the parties as to the nature of the hazard, namely the contamination of the cabin air:

> [168] [...] Based on the constituents of these fluids, which include TCP and TOCP among others, and those substances or compounds that may be the result of pyrolyzation, I am satisfied that the cabin air in Fin 415 and 214 that presented the odour was contaminated with chemical substances. It needs to be pointed out in this respect that while there may be differences of opinion between the expert witnesses as to the nature of those substances, they are of one mind as to the fact that there was contamination of the cabin air. Thus, for the purposes of my danger analysis, the hazard that could cause injury or illness is contaminated bleed air. <u>However this does not signify, in and of itself, that danger to health was present to the employees.</u>
>
> [My underlining]

[88] In addition, I clearly identified the common elements that surrounded the circumstances of the appeals and this has not been questioned:

> [176] [...] In all cases it is most likely that the dirty sock smell came from the presence of vapourized Mobil Jet Oil and Skydrol in the cabin air [...]. This likely occurred as the result of a mechanical failure with the oil seals. In all cases the employee exposure to the fume events were of short duration and the route of their exposure was inhalation, as pointed out by both parties. Air Canada maintenance generally followed Airbus recommended procedure in seeking and correcting <u>the causes</u> of the air contamination.
>
> [My underlining]

[89] In the case of the three experts, their evidence is exposed at length in the decision and does not need to be repeated. The Federal Court stated that the redetermination of the decision can be conducted on the basis of the evidence as received and recounted in the decision. I remain nonetheless cognizant of the following fact that I stated in the decision:

> [171] [...] Stated differently, given the commonality of facts and information derived from each case and the opportunity afforded to each expert to draw conclusions according to their individual scientific specialty, some permeability between their opinions needs to be accepted and the appeals officer must decide how far such permeability can extend and the effect it may have on the final decision.

[90] The Federal Court considered the appeals officer's assessment of the evidence to be ill based due to the previously cited comment about medical and scientific evidence. Essentially, where a medical and scientific evidence has been submitted in support of a position, lay evidence may not be sufficient to overcome the former. I have always been mindful that accepting scientific evidence as the most convincing does not in any way alter the standard of proof to one of scientific certainty; the standard of proof remains the balance of probabilities.

[91] I have taken a second look at the evidence submitted by the experts with the balance of probabilities clearly in mind. Taken as a whole, with the common recognition that the cabin air was contaminated by chemical substances, with the recognition that odour is indicative of the presence of such substances but not of their degree of toxicity from the standpoint of dangerousness to health, I find that their opinion evidence is not persuasive as to the existence of a danger in the cases at hand. In order to make this finding, I also take into consideration the indicators in the MSDSs and TLVs applicable to the substances involved, as well as the recognition of the presence of sub-substances resulting from pyrolyzation.

[92] Stated differently, the opinions formulated by the expert witnesses, even if learned opinions, are not, in my opinion, of such individual persuasiveness to tip the balance in favor of a finding of danger. Without repeating the evidence proffered by each expert, I have retained the following as particularly significant to this conclusion. In the case of Dr. Weisel for the appellant, central to his testimony was the following, taken in the conclusions section of his report:

> Further, oil leakage into the bleed air results in a mixture of chemicals being released into aircraft cabin air that includes hazardous and toxic chemicals. The cabin crew was asked to work on an aircraft with a known oil leakage whose source was not identified and appropriately repaired after they smell an odor associated with that oil leakage.
>
> It is my opinion that the odors that the cabin crew smelled were caused by leakage of engine oil into the bleed air while the APU was operated and that these odors were caused by chemicals that were part of a mixture of hazardous and toxic chemicals. This mixture would have been composed of engine oil or pyrolisis products of the oil.

[93] At page 4 of his report, Dr. Weisel also stated:

> However, no comprehensive set of in-flight measurements of the compounds or their concentrations during upset conditions, such as when odor episodes occur due to engine oil entering the bleed air during commercial flights, have been reported. Neither have epidemiological studies been conducted to document whether cabin crew or passengers become ill (either with acute or chronic problems) when exposed to air containing odors on commercial aircraft relating to oil entering bleed air. This is, at least in part, because these events occur at a relatively low

> frequency. Thus a very large number of flights would have to be evaluated to collect air samples and health data from the crew and passengers to include flights with incidents in order to evaluate if health effects are related to these episodes.
>
> [My underlining]

[94] In the decision, the appeals officer accepted the conclusions arrived at by Dr. Weisel, as well as his views as to whether exposure translated into health effects:

> [177] The union's expert Dr. Weisel concluded that where there was a smell present, there was a reasonable expectation that the cabin crew working on the aircraft would be exposed to a mixture of compounds associated with oil leakage into the bleed air of the aircraft if it did not receive proper maintenance to identify and repair the oil leakage. He points out that the contents of the mixture likely contained isomers of TCP, DPP, various hydrocarbons and pyrolysis products of the engine oil. He also relies on information from the Golder Associate report which indicates that the APU was emitting compounds that reduced the cabin air quality in the test flight that was conducted for that study.
>
> [178] I am satisfied by the evidence presented that there was indeed a mixture of chemicals in the cabin air, as a result of pyrolisis of engine oil and that the employees were exposed to this mixture. However, given that it was not determined with any specificity what compounds were in that mixture or in what concentration, it does not necessarily follow that the mixture was toxic to employees. Indeed, Dr Weisel admits in his report that epidemiological studies have not been conducted to document whether cabin crew or passengers become ill when exposed to air containing odours related to oil entering bleed air. Furthermore he concedes that a large number of flights would have to be evaluated in order to determine if health effects are in fact related to these episodes.
>
> [My underlining]

[95] The appeals officer opined, in regards to the episodes referred to in the above citation, that it would be somewhat of a leap, in the absence of the information noted by Dr. Weisel, to conclude that such exposure to contaminated bleed air results in health effects that would qualify as illness or injury to an employee.

[96] Dr. Harrison testified for the appellant. Dr. Harrison's testimony was clearly intended to complement Dr Weisel's. Dr. Harrison focused his analysis on a qualitative evaluation of case studies of patients who had experienced similar exposure to contaminated air on aircrafts. He relied on his experience with these patients, as well as on his published guide for health care providers relating to exposure to aircraft bleed air and other contaminants, to establish the symptoms that can arise from these contaminants and their possible effects. The appeals officer found that it was difficult to consider Dr. Harrison's case studies to be determinative of the issue at hand because of the manner in which he collected and analysed his data. Dr. Harrison also had no knowledge of the circumstances (length, repetition, duration, intensity, etc.) surrounding the exposure to contaminants by the patients. His testimony could not support a finding that the flight attendants who refused to work had reasonable cause to expect that they may have

developed acute or chronic health problems because of exposure to toxic air contaminants aboard the aircraft. Nonetheless, Dr. Harrison's mentions the following in the “Comments and Conclusions” section of his report:

> As summarized in my healthcare providers guide, after exposure to bleed air and other contaminants aboard aircraft, cabin crew may experience acute symptoms including cough, shortness of breath, nausea, chest pain, headache, dizziness and confusion. These symptoms indicate toxic effects to the respiratory and central nervous systems. Physical examination may show wheezing or crackles in the lungs and neurological testing may show impairment in balance, gait, and coordination. If symptoms persist, objective testing may show abnormal pulmonary function and impaired concentration, memory and other cognitive abnormalities.

[97] In the cases at hand, none of the refusing employees suffered the symptoms enunciated by Dr. Harrison, with the exception of seemingly mild and transient inconveniences. Nonetheless, Dr. Harrison concluded the following:

> Therefore, the Air Canada flight attendants who refused work had reasonable cause to expect that they may develop either acute and/or chronic health problems as a result of exposure to toxic air contaminants aboard the aircraft.

[98] Finally, with the recognition that there had been some mechanical problem with the aircraft, but that no air measurements or sampling had been obtained in each of the instances where employees had refused to work, Dr. Harrison offered the opinion that: “mechanical investigations alone were sufficient evidence to reasonably expect that toxic air contaminants [had been] released into the cabin air and could result in health problems.”

[99] The testimony of Dr. Pleus, who testified for the respondent, was summarized at length in the decision and it suffices here to recall the principles on which his opinions were founded and the general conclusion arrived at. His analysis was grounded on the toxicological principle “that the mere presence of a chemical in the environment or an exposure medium does not justify an inference that exposure to that chemical could or will have an adverse, toxicological effect”. He also stated the fundamental tenet of toxicology, which is “the dose makes the poison”. The further grounding principle of his analysis was that “for most and possibly all chemical agents, an exposure threshold for toxicological effects exists”, meaning that “before harm can result from an exposure to an agent, exposure must be of sufficient concentration and duration to reproduce the necessary internal dose that exceeds that threshold.”

[100] Repeating one more time that in all of the cases at hand, be they of the decision or of the companion decision, no air sampling or testing was done and therefore no data existed that could buttress any analysis, the conclusion arrived at by Dr. Pleus, taking into account that an important part of the latter's analysis was made on the basis of results garnered from animal studies, was as follows:

> [...] I assumed that the employees could have been exposed to hydraulic fluid and jet engine oil in the air of the airplane cabin in which they were working, although there were no objective data (e.g. air measurements) to

> support this. The toxicological literature is fundamental to assessing any health risk, whether short term or long term exposures. I focus on particular agents and the mixture of chemical agents that make up these products. I conduct a standard assessment of toxicological risk based on the standards of my profession. Furthermore, I also address foul odors, which were the trigger cited by the individuals in these reports. Foul odors are not good indicators of health risk as odor does not correlate with toxicity. Thus, odors are not reliable indicators of danger in many cases of chemical exposures. While the MSDS [for] Mobil Jet Oil II and Skydrol LD4 indicate that some symptoms are possible with short term exposure [even assuming the alleged exposure was of sufficient dose and duration to cause health effects reported in the MSDS, these health effects would be expected to resolve with exposure to fresh air], the doses and exposure duration that produced these symptoms in the animal studies that are the basis for these assertions are much greater than the employees would have received. Further, available evidence provides no indication that exposures would be sufficient to cause long-term adverse effects.

[101] While Dr. Pleus indicated having based his conclusions on a reasonable degree of scientific certainty, I must specify again that the applicable standard of proof in these cases is the balance of probabilities.

[102] I have already indicated above that the opinions expressed by the experts, formulated based on their expertise but with no data specific to the individual aircraft and employee situations, do not manage, in my opinion, to tip the balance of probabilities in favour of a finding of danger. Were I to leave the matter as is, I would reiterate the decision I originally arrived at, which stated in part:

> [192] Based on the above, I am persuaded that in the circumstances of these appeals, there is not a reasonable expectation that the refusing employees would suffer injury or illness as a result of contaminated bleed air. Namely I find that there is insufficient evidence that the concentration of the chemicals and the duration of the exposure were significantly high and without that I am not convinced that a danger existed on Fin 214 [and Fin 415]
>
> [193] There may indeed be a mere possibility that exposure to contaminated bleed air would result in illness or injury, depending on factors such as duration of exposure and concentration and toxicity of the contaminants. However, I must be convinced that the potential for illness comes from the fact that the employees were exposed to chemical substances in the cabin air.
>
> [194] [...] Thus, it was not demonstrated that the symptoms that the flight attendants experienced were the direct result of being exposed to the contaminated air.

[103] The present decision must however take into account two elements that may not have been sufficiently considered in the original decision, that being first, the preventative nature of the *Code* coupled with the necessary measures needed to achieve the purpose, and second, the particular nature of the right of refusal afforded to employees on aircraft.

Purposive Interpretation of the Code

[104] The nature of the right to refuse to work of employees on an aircraft is particular. Subsections 128(3) and 128(4) of the *Code* make it clear that employees on aircraft may see their right of refusal curtailed once the aircraft is in operation if the person in charge of the aircraft decides that the employee may not cease working, in order to ensure the safe operation of the aircraft. One surmises that the person in charge of the aircraft taking such decision would be the captain after having been informed of a work refusal or intended work refusal.

[105] Concerning exposure to contaminated air, one may surmise that once the aircraft is in operation, whether the Captain allows the work refusal to continue or not, the employee seeking to refuse to work would continue to incur the same exposure to contaminated air, whether in refusal or working status, as long as the aircraft remains in operation. The *Code* defines an aircraft as being in operation "from the time it first moves under its own power for the purpose of taking off from a Canadian or foreign place of departure until it comes to rest at the end of its flight to its first destination in Canada."

[106] In my opinion, the particular nature of the right to refuse to work available to employees on an aircraft serves to explain that if these employees are apprised of circumstances that may have prevailed in previous flights of the aircraft and could possibly occur in subsequent flights of the same aircraft, they may avail themselves of their right of refusal prior to the aircraft coming into operation, and thus prior to themselves being exposed to situations that could materialize during subsequent flights and put them in an exposure situation. This interpretation must be part of the equation in determining whether the refusal action is supported by "danger" in such cases, given that the *Code* must be read as a whole. In these cases, subsections 128(3) and 128(4) must be read together with the definition of "danger" and the statement of purpose in order to allow every provision of the legislation to receive an interpretation that meets its purpose.

[107] The statement of purpose is found at section 122.1 of the *Code*:

> **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.
>
> [My underlining]

[108] As part of the *Code*, which is remedial public welfare legislation that must be read as a whole and be generously interpreted, the purpose needs to be read together with the definition of "danger" and take into account what the undersigned described above as the particular nature of the right of refusal granted to employees working on an aircraft. In such legislation, where protection and prevention are central to the whole purpose, doubt or uncertainty as to outcome, in this case danger, needs to be weighed in favour of those that the legislation is destined to protect.

[109] While I have found that the issuance of a contravention direction in the companion decision did not amount to a finding of danger, and having explained how to read the decision and the companion decision as being without inconsistency, the companion decision nonetheless confirmed the employer's obligation to investigate where refusal to work has pointed to reasons

for doing so. In this respect, I share the view expressed by the appellants to the effect that under the preventative purpose of the legislation, the obligation to investigate cannot be dissociated from the right to refuse to work. The legislation needs to be read and interpreted as a whole and to receive "such fair, large and liberal construction and interpretation as best ensures the attainment of its objects" (*Interpretation Act*, RSC, 1985, c. I-21, s. 12). The objects referred to at section 12 of the *Interpretation Act* are stated in the purpose clause of the *Code*, which clearly evidences the requirement to act before ("prevent") the materialization of the circumstances that could cause "accidents and injury to health".

[110] I concluded above that consideration of the opinions expressed by the expert witnesses did not lead me to a conclusion of danger. However, I must recognize that the combined effect of their opinions, with the other evidence that was proffered, leads to the unquestionable general conclusion that the presence of contaminated air in an aircraft cabin carries the potential to cause illness where certain conditions are met, thus the obligation to investigate under the conditions set by and pursuant to the *Code*. Accordingly, having found that the evidence supports the general conclusion that one can reasonably expect that contaminated cabin air has the potential to cause illness in a context where one cannot predict whether it will turn out to be the case, employees nonetheless could be required to continue working or be forced to remain exposed to the contaminated air, as any other occupant of the aircraft while it remains in operation. Adhering to the purpose of the *Code*, that is why I find that such a finding is sufficient grounds for a finding of "danger" within the meaning of the *Code*.

[111] The decision that was originally submitted to appeal was one of absence of danger where the HSO issued no direction. When an appeals officer concludes that a danger exists, the *Code* provides the latter, at paragraph 146.1(1)(b) of the *Code*, with the authority to issue "any direction that the appeals officer considers appropriate under subsection 145(2) or (2.1)". Given the lengthy period of time that has elapsed since the original filing of the refusals to work and because of the transient nature of the odors that led to these refusals, I find, as it is my authority to do so, that issuing such direction at this time would not be appropriate.

[112] Having disposed of these appeals, I want to make the following remarks. The *Code* provides an appeals officer with "all the powers, duties and immunity of a health officer" at subsection 145.1(2) of the *Code*, and this I submit includes the authority to issue any contravention direction under subsection 145(1) of the *Code*. In the companion decision, the HSO had issued directions under the authority provided by this section of the *Code* and two of those were confirmed by the undersigned. The one most important, in my opinion, is the one that requires the employer to investigate pursuant to paragraph 125.1(f) of the *Code* "where employees may be exposed to hazardous substances", and to do so in the manner prescribed by regulations, in this case, the *Aviation Occupational Health and Safety Regulations*.

[113] In my opinion, in the present cases, the respondent failed to satisfy properly its obligations under paragraph 125.1(f) of the *Code*. I do not consider maintenance inspection and examination, which in the end concludes whether an aircraft is serviceable, a term that brings to mind the notion of non-interruption of service, and not that of occupational health and safety protection, or the opinion of the aircraft captain, whatever it may be, to constitute proper discharge of that obligation. Proceeding in such a manner amounts to bold assertions of

airworthiness and workplace safety through turning a blind eye to a recurring problem of uncertain provenance or consequence. In the companion decision, I stated that:

> [221] [...] 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.

[114] While I consider from a general standpoint that such investigation is required anytime circumstances such as the ones that prevailed in the present cases are raised through a work refusal, one cannot ignore the specificity and individuality of work refusals as well as the lengthy period of time since the initial filing of the refusals to work by the appellants. For these reasons, I will not issue a contravention direction in the present case.

Decision

[115] For all of the reasons stated above, I conclude that the refusing employees in the present appeals were well founded in claiming danger when they exercised their right to refuse to work. Following redetermination of the decision, I rescind the original decisions of absence of danger rendered by HSOs Pollock and Blain.

Jean-Pierre Aubre
Appeals Officer