Decision No. 97-008

CANADA LABOUR CODE
PART II
OCCUPATIONAL SAFETY AND HEALTH

Review under section 146 of the Canada Labour Code, Part II
of a direction issued by a safety officer

Applicant:	Vancouver International Airport Authority Richmond, B.C. Represented by: Jim Grant Occupational Safety & Health Coordinator
Respondent:	Public Service Alliance of Canada (PSAC) Represented by: Ken Neros Health and Safety Representative Union of Canadian Transport Employees Represented by: Alan H. Phillips Regional Vice-President
Interested Party:	Transport Canada, Safety and Security Represented by: J. (Joe) Hessberger Inspector Civil Aviation Enforcement
Mis en Cause:	Derek Peters Safety Officer Human Resources Development Canada
Before:	Serge Cadieux Regional Safety Officer Human Resources Development Canada

An oral hearing was held in Vancouver, B.C., on July 8, 1997. Following the hearing and at the request of the parties, I visited Pier 08L in the presence of the safety officer and employer and employee representatives.

Background

On January 16, 1997, safety officer Derek Peters issued a direction (see APPENDIX) to the Vancouver International Airport Authority (hereafter the Airport Authority). The safety officer had conducted an inspection of 08L Lighting Pier and found the employer to be in contravention of paragraph 125(b) of the Canada Labour Code, Part II (hereafter the Code) and subsection 2.4(2) of

the Canada Occupational Safety and Health Regulations (hereafter the Regulations). According to the safety officer "There are no guardrails installed on the sections of the lighting pier containing the light standards".

In his "Investigation Report" the safety officer described the work place named in the direction and the circumstances of his investigation in the following terms:

> "Lighting pier O8L, at the far west end of airport grounds - new runway. The site is secured by chain link fence and locked gate. The pier consists of a prefabricated concrete drive area running the length of the pier approximately 300 meters long. Majority of the structure is over the water (Georgia Strait) by a height of 3-5 meters, depending on the tide. Adjacent to the pier are adjoining light-pod areas approximately 4 x 5 meters which contain the light standards. These pods are surrounded on three sides by a raised concrete curb[1]. Electricians, ground crews and field supervisors of YVR and occasionally Wildlife Officials employed by Transport Canada access this site.
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> November 14, 1996 met with Gary Collins, Safety Officer and Jim Grant, OSH Coordinator for Vancouver Airport Authority (YVR). Accompanying me was Michael O'Byrne, Labour Program. We were responding to an inquiry as to the safety of the site. After inspecting the area and discussing possible remedies, I concluded that a safety process needed to be developed for snow and ice removal of the area, personnel floatation devices should be worn by all personnel accessing the site and that guard rails be installed to ensure the safety of all workers working on the light-pods. An A.V.C[2]. was received from the employer and the first two items were remedied promptly. Discussions with the employer resulted in a short extension of time being given to install guard rails. Subsequently, the employer informed this officer that they would not be installing guard rails. A Direction was given to the employer on January 16, 1997. On January 30, 1997, the employer confirmed that they would comply with the guard rails installation but wished our decision to be reviewed by the Regional Safety Officer."

The concern of the safety officer was the possibility of employees falling from the pier, an unguarded structure, into the water while at work. The possibility of using fall-arrest devices was considered but it was thought to be an inappropriate solution because employees work alone most of the time. If an employee fell from the pier, he would remain hanging on the side of the pier in a precarious position. Therefore, guardrails were viewed as the appropriate solution to protect employees who must work on the pier.

The safety officer testified that his decision to issue the direction respecting guardrails was made in consideration of the wild life report prepared by Transport Canada, System Safety, which indicated there is no significant increase of bird strikes on aircraft due to the presence of birds in the area. Mr. Grant quickly replied that the survey referred to above never considered or

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[1] The concrete curb has a height of approximately 9 inches and surrounds the whole perimeter of the pier which includes the main span for driving and the adjacent light-pod areas.

[2] A.V.C. means Assurance of Voluntary Compliance. The A.V.C. is a written promise by an employer that a contravention of the legislation will be corrected.

mentioned pier 08L, a newly constructed structure. The Airport Authority hired a wildlife biologist with a doctorate degree (Ph.D.) to research and study this particular situation. Mr. Grant asserts that the report of this wildlife expert indicates an increase risk of bird strikes due to the addition of a perching structure i.e. the guardrails, on the pier.

Mr. Peters did acknowledge that if it was determined that the installation of guardrails did pose a threat to incoming aircraft, they were prepared to consider other alternatives. The solution chosen in the instant case was believed to be, on balance, the most appropriate solution given the behavior of birds in the area and the report which seems to indicate that bird strikes are a rare event. In response to a question regarding his qualifications to interpret bird behavior, Mr. Peters acknowledged that he was not by any means a bird expert and did not claim to be one. He was interpreting to the best of his ability the Transport Canada survey report.

Request for Review of the Direction

The Airport Authority requested a review of the direction, in a timely fashion, on January 28, 1997. However, the request was only received in the Office of the Regional Safety Officer on May 14, 1997, three and a half months later. In fact, this Office was made aware of the request only because Mr. Grant inquired personally about the status of his request. The unreasonable and unexplained delay caused confusion as to the independent nature of the review process and seriously prejudiced the right of the Airport Authority to a fair hearing to address their concerns with the direction not to mention the possibility of an aviation incident.

As a result of the above, the Airport Authority wrote to the undersigned and indicated it intended to abandon the appeal and comply with the direction notwithstanding it believed that compliance with the direction could result in an aviation incident. The Airport Authority would comply with the direction, said Mr. Grant in the letter, but would hold the Department of Human Resources Development Canada (HRDC) responsible for any accident that occurred as a result of compliance with the said direction. Following a discussion I had with Mr. Grant and Mr. Neros, the parties agreed to have this matter resolved by the review process provided by the legislation.

Submission for the Employer

The detailed written submission filed by Mr.Grant on June 26, 1997 is on record. Mr. Grant explained that the requirement to install guardrails around the light pods on the approach pier to runway 08L increased the potential for risk to aircraft and passengers. It should be said that the pier in question is located in a historic breeding and migratory area for many different species of waterfowl such as mallards, geese and ducks to name only a few.

The concern of Mr. Grant is that installing guardrails on the pier will invite different species of birds such as eagles, owls and falcons. The guardrails will provide those raptors with an opportunity to use the guardrails as an elevated perch from which to hunt the waterfowl, the type of birds that are currently most visible in this area. Those latter birds are web-footed birds and this characteristic prevents them from grasping and roosting on raised structures. Such is not the case of raptors who can and will likely use the guardrails as perches. Mr. Grant stated that:

> "At present, these species (the raptors) are not evident on the pier as their only perching area would be the light towers which emanate sufficient light to discourage the birds from perching. The introduction of these raptor species raises the concern that they will disturb the waterfowl into the air. Snow geese[3] are known to circle at 200 feet in height when disturbed. The Airport Authority obviously does not want birds circling at 200 feet above the main approach to the runway, as this is directly in the glide path for most incoming aircraft. Additionally, these raptor species of birds are generally larger than waterfowl and can cause significant damage to aircraft if they strike the leading edges or are ingested into the engines during the most critical portion of an aircraft's maneuver to land."

Mr. Grant reported that estimates for 1997 indicate that more than 100,000 aircraft will overfly the lighting pier on their descent to the runway. He asserts that the danger that birds present to aircraft is very real. He further explained that single strikes involving geese or raptors can create serious hazards (engine fire, incapacitated pilots, structural damage) and flocks of birds have cause fatal accidents[4].

Following the "issuance" of the Assurance of Voluntary Compliance, the Airport Authority undertook to assess the risk to the limited number of employees who have restricted access to the pier and to develop Safe Work Practices (SWP) for these employees that would eliminate the need for guardrails. Mr. Grant stated that "*copies of this SWP were forwarded to HRDC for review, however these administrative controls were rejected by HRDC in favour of the engineered solution*." Essentially, the SWP would ensure that only designated qualified people have access to the pier, that they would be provided with floatation devices, that there would be a minimum of two employees when work is required at the site and an employee must exit the vehicle, that access to the light pods by an employee in a vehicle would follow a strict exiting procedure and that employees would be in radio communication with Operations of the Airport Authority.

Mr. Grant explained at the hearing that during the construction of the pier, the issue of providing guardrails had been raised by the B.C. Workmen's Compensation Board (WCB). After been made aware of the situation described above, the WCB concluded that it would be unwise and unsafe to install guardrails. The WCB allowed the Airport Authority to use Safe Work Practices instead of requiring the installation of guardrails. Also, Mr. Grant confirmed that a ladder was affixed to the face of the pier roughly every 60 meters along its length. The ladders extend down to the water.

Mr. Grant also explained that the area considered is a conservation area and as such, they are not authorized to remove any existing bird species. Hence the concern with the introduction with different species.

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[3] It was mentioned at the hearing that when snow geese or other waterfowl detect the presence of a raptor, such as an eagle for example, their instinctive defense mechanism causes them to raise in the air in a flock at approximately 200 feet and to circle the area.

[4] A military 707 four-engines jet crashed at Anchorage, Alaska in 1995 killing 24 crew. This was directly caused by Canada geese ingested into two engines.

Submission for the Employees

Mr. Neros and Mr. Phillips shared the view that the direction should not be limited to requiring a guardrail around the outside perimeter of the sections of the pier containing the light pods. A guardrail should be required along the whole perimeter of the pier. Employees traveling the main span of the pier may find themselves in a situation where they would have to exit their vehicle at any point on the driving portion of the pier. Exiting a vehicle can only be achieved safely in front of the sections of the pier containing the light pods (left hand side of the vehicle that enters onto the pier) and only for the person sitting on that side of the vehicle. Exiting the vehicle on the opposite side (right hand side of the vehicle) could result in an employee falling in the water because of the narrowness (approximately 13 feet) of the driving portion of the pier.

Mr. Neros was of the view that this situation could adequately be dealt with through engineering controls such as guardrails. Mr. Phillips was not impressed with the Airport Authority's wildlife control program as he felt the program keeps changing as new animals are introduced in the area. His suggestion is that if angle irons are used for the guardrails, this should be sufficient to discourage the birds from perching. There was also the suggestion of using pyrotechnics on the pier to scare away raptors. Both Mr. Neros and Mr. Phillips are not convinced that the introduction of new species of birds will increase the risk of bird strikes particularly since it is possible, in their view, to control perching of these species of birds.

Comments from Mr. Hessberger, Transport Canada

Mr. Hessberger intervened very shortly in the discussions to indicate that it is far more dangerous for a wide body aircraft such as a 747 to take off after having ingested a bird in one of its motors than when an aircraft is on its final landing. The fact that the incoming aircraft has ingested a bird is not as critical because the aircraft is much lighter having come from a destination. The likelihood of that incoming aircraft pulling off a decent landing is much greater than trying to fly away a 747 with an engine out.

Reasons for Decision

The issue to be decided in this case is straightforward. It is, as specified in the direction, whether guardrails are required by Regulations on the pier.

If for any reason I come to the conclusion that guardrails are required, then I believe I would still have to evaluate the appropriateness of supporting this type of engineering control. The reason for this is simple: one cannot protect against a particular risk by creating a greater risk. Considering that an expert in animal behavior advised against installing guardrails as they could be used as perches by raptors with a corresponding increased risk of bird strikes on aircraft, I could not ignore that the solution to one problem could be creating a much greater problem in another area. Common sense must prevail.

The provisions referenced in the direction are paragraph 125(b) of the Code and subsection 2.4(2) of the Regulations. They provide:

125. Without restricting the generality of section 124, every employer shall, in respect of every work place controlled by the employer,

(*b*) install guards, guard-rails, barricades and fences in accordance with prescribed standards;

and

2.4(1) In this section,

"floor opening" means an opening measuring 300 mm or more in its smallest dimension in a floor, platform, pavement or yard

"wall opening" means an opening at least 750 mm high and 300 mm wide in a wall or partition.

(2) Where an employee has access to a wall opening from which there is a drop of more than 1.2 m or to a floor opening, highly visible guardrails shall be fitted around the wall opening or floor opening or it shall be covered with material capable of supporting all loads that may be imposed on it.

Paragraph 125(b) of the Code is the proper provision which authorizes subsection 2.4(2) of the Regulations. The reference is accurate and therefore I will address the application of the specific provision of the Regulations requiring guardrails.

Subsection 2.4(2) above refers to “a wall opening from which there is a drop of more than 1.2 m or to a floor opening” and provides specific dimensions for the opening. There is no issue with “floor opening” in this case and therefore I will not dwell on that aspect of subsection 2.4(2) of the Regulations. However, for more certainty, I do not consider that the issue before me concerns any form of floor openings as there are none on the pier.

The safety officer mentioned that the pier is a structure that was constructed and therefore it could be considered a building. While recognizing that he may be stretching the interpretation of a wall opening, the safety officer explained that the sides of the pier would be the wall opening, the opening being the unlimited open space. While I may find the safety officer’s interpretation of “wall opening” rather creative, I do not agree with it.

The word “wall” is an undefined term in the Regulations and therefore the common definition of the dictionary apply. In this case, I will apply the most common definition of “wall” from the Concise Oxford Dictionary, eight edition, 1990, as it applies to a structure that was constructed. “Wall” means **1 a** a continuous and usu. vertical structure of usu. brick or stone, having little width in proportion to its length and height and esp. enclosing, protecting, or dividing a space or supporting a roof. There is nothing in this definition that resembles the interpretation of “wall” envisaged by the safety officer.

To most people, the wall of a building is a visible and tangible structure with specific dimensions which usually divides a space and/or supports a roof. The sides of a pier are clearly not walls. During my visit of the pier, I have seen no structure, constructed with specific dimensions, that

divides a space or supports a roof and which could even remotely be thought of as a wall. It would serve no useful purpose to dwell on the issue of what type of building is envisaged by Part II of the Regulations and, in that regard, attempt to find some logic to the interpretation of the safety officer. Since there are no walls on a pier, subsection 2.4(2) of the Regulations do not apply. Therefore, guardrails are not required on a pier where only employees have access, such as in the instant case.

At the hearing, I invited the parties to consider the application of section 12.11 of the Regulations concerning protection against drowning to the situation before us. It provides:

> **12.11 (1)** Where, in a work place, there is a hazard of drowning, the employer shall provide every person granted access to the work place with
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> (*a*) a life jacket or buoyancy device that meets the standards set out in the Canadian General Standards Board Standard
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> (i) CAN2-65.7-M80, *Life Jackets, Inherently Buoyant Type*, dated April, 1980, or
> (ii) 65-GP-11, *Standard for: Personal Flotation Devices*, dated October, 1972; or
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> (*b*) a safety net or a fall-protection system.
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> **(2)** Where in a work place, there is a hazard of drowning,
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> (*a*) emergency equipment shall be provided and held in readiness;
> (*b*) a person who is qualified to operate all the emergency equipment provided shall be available;
> (*c*) if appropriate, a powered boat shall be provided and held in readiness; and
> (*d*) written emergency procedures shall be prepared by the employer containing
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> (i) a full description of the procedures to be followed and the responsibilities of all persons granted access to the work place, and
> (ii) the location of any emergency equipment.
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> **(3)** Where a work place is a wharf, dock, pier, quay or other similar structure, a ladder that extends at least two rungs below water level shall be affixed to the face of the structure every 60 m along its length.

It should be noted that subsection 12.11(3) is the only provision of the Regulations that makes reference specifically to “a wharf, dock, pier, quay or other similar structure”, thereby indicating the legislator’s awareness of the special needs for these types of structures. In law, a specific provision always supersedes a provision of general application. In this case, the sides of the pier

would require a ladder to be affixed in the manner prescribed as opposed to having guardrails constructed.

The safety officer had manifestly considered the application of section 12.11 of the Regulations since he required the employer to provide each employee accessing the pier with floatation devices. Mr. Grant confirmed that a ladder had been affixed to the sides of the pier during its construction at every 60 meters, at least to the best of his knowledge. As to whether it would be appropriate to have a powered boat held in readiness is not for me to decide. However, it was indicated that such boats were ready to intervene if an incident occurred. The airport's fire emergency services and equipment are made available and the airport's fire department can intervene within minutes of being informed of a hazardous occurrence. The Airport Authority asserts it is in compliance with section 12.11 and, while I have the power to vary a direction, I have no evidence before me that the employer is in contravention of this provision.

Also, subsection 12.10(1) of the Regulations which prescribes fall-protection equipment for employees who must work near the edges of the pier, an unprotected structure in the instant case, was also discussed at the hearing. It provides:

> **12.10 (1)** Where a person, other than an employee who is installing or removing a fall-protection system in accordance with the instructions referred to in subsection (5), works from
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> (*a*) an unguarded structure that is
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> (i) more than 2.4 m above the nearest permanent safe level, or
> (ii) above any moving parts of machinery or any other surface or thing that could cause injury to an employee upon contact,
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> (*b*) a temporary structure that is more than 6 m above a permanent safe level, or
> (*c*) a ladder at a height of more than 2.4 m above the nearest permanent safe level where, because of the nature of the work, that person cannot use one hand to hold onto the ladder,
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> the employer shall provide a fall-protection system.

The safety officer indicated he believed that requiring this type of protective equipment was not an appropriate solution to the problem. However, considering that guardrails are not required on a pier and considering that some employees may have to work near the edges of the structure in a low tide situation, I would believe that some form of fall-protection equipment or fall-restraint device may be appropriate. Again, this is a matter which merits the safety officer's attention but which was not an issue before me. Thus it will be addressed no further.

Clearly then, in terms of interpreting the legislation on the basis of the evidence adduced, there is little that needs to be added. The direction is not justified in these circumstances and must be rescinded.

DECISION

For all the above reasons, **I HEREBY RESCIND** the direction issued under subsection 145(1) of the Code on January 16, 1997 by safety officer Derek Peters to Vancouver International Airport Authority.

I believe some comments are in order in this case. It seems that everybody intended to do well in this case and therefore there is no need for a diatribe against any one individual or organization. Simply reading this report should teach us a few lessons about what can happen when we loose sight of where our responsibilities really lie. An extremely serious and preventable accident could have occurred if the guardrails had been installed and the migration period had started. Because of this, I feel compelled to close this report with the frightening thought of an incoming wide body aircraft filled with passengers, or any other aircraft for that matter, suddenly facing a large flock of birds in its descent path. I have to ask myself "What if…?" and hope that those that have the authority to effect some changes will also wonder where the system failed.

Decision rendered on July 18, 1997

Serge Cadieux
Regional Safety Officer

APPENDIX

IN THE MATTER OF THE CANADA LABOUR CODE
PART II - OCCUPATIONAL SAFETY AND HEALTH

DIRECTION TO EMPLOYER UNDER SUBSECTION 145(1)

On November 14th, 1996, the undersigned safety officer conducted an inquiry in the work place operated by VANCOUVER INTERNATIONAL AIRPORT AUTHORITY, being an employer subject to the Canada Labour Code, Part II, at the Vancouver International Airport, Richmond, B.C., the said work place being known as 08L - Lighting Pier.

The said safety officer is of the opinion that the following provisions of the Canada Labour Code, Part II, are being contravened:

Subsection 125(b) of the CANADA LABOUR CODE Part III, subsections 2.4(2) of the Canada Occupational Safety and Health Regulations (COSHR) "There are no guardrails installed on the sections of the lighting pier containing the light standards".

Therefore, you are HEREBY DIRECTED, pursuant to subsection 145(1) of the Canada Labour Code, Part II, to terminate the contravention no later than January 31, 1997.

Issued at Vancouver, B.C. this 16th day of January 1997.

DEREK PETERS
Safety Officer

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Decision No.: 97-008

SUMMARY OF REGIONAL SAFETY OFFICER DECISION

Applicant: Vancouver International Airport Authority

Respondent: Public Service Alliance of Canada - PSAC

KEYWORDS

Guardrails, perch, birds, pier, fall, wildlife, aircraft, migratory area, light pods, raptors, safe work practices, engineering controls, rescind.

PROVISIONS

Code: 145(1), 125(b)
Regs: 2.4(2), 12.10, 12.11(1), 12.11(2), 12.11(3)

SUMMARY

A safety officer gave a direction under subsection 145(1) of the Code because a pier containing light pods had no guardrails around it to protect employees at work. The safety officer had referenced subsection 2.4(2) of the COSH Regulations to require the said guardrails. To support his direction the safety officer had interpreted the sides of the pier as the "wall opening" specified in that provision. Upon review the Regional Safety Officer (RSO) found that the sides of the pier are not walls and therefore this provision did not apply. The RSO rescinded the direction indicating that other provisions could apply.