

CANADIAN RAILWAY OFFICE OF ARBITRATION

CASE NO. 2791

Heard in Calgary, Wednesday, 13 November 1996

concerning

CANADIAN PACIFIC LIMITED

and

**CANADIAN COUNCIL OF RAILWAY OPERATING UNIONS
(BROTHERHOOD OF LOCOMOTIVE ENGINEERS)**

DISPUTE:

Dismissal of Locomotive Engineer J.T. Taverna, Revelstoke, B.C.

JOINT STATEMENT OF ISSUE:

Following an investigation conducted on October 6, 1995, in connection with a head on collision involving Train Extra 5807 West (819-021), mile 119.9 Mountain Subdivision at 0640 October 1, 1995, Engineer Taverna was dismissed from service.

The Council appealed the dismissal on the grounds that Engineer Taverna was suffering from fatigue which caused him to become confused and disoriented.

The Council requests the reinstatement of Engineer Taverna into Company service with full compensation of wages and benefits.

The Company declined the Council's request.

FOR THE COUNCIL:

(SGD.) D. C. CURTIS
GENERAL CHAIRMAN

FOR THE COMPANY:

(SGD.) J. COPPING
FOR: DISTRICT GENERAL MANAGER, BC DISTRICT

There appeared on behalf of the Company:

M. E. Keiran	– Manager, Labour Relations, Calgary
J. C. Copping	– Labour Relations Officer, Calgary
R. V. Hampel	– Labour Relations Officer, Calgary
R. E. Wilson	– Director, Labour Relations, Calgary
S. Seeney	– Manager, Labour Relations, Calgary
R. M. Smith	– Labour Relations Officer, Calgary

And on behalf of the Council:

R. J. Lewis	– Vice-General Chairman, Revelstoke
D. C. Curtis	– General Chairman, Calgary
T. G. Hucker	– International Vice-President, Ottawa
R. S. McKenna	– General Chairman, Barrie
J. Flegel	– Vice-General Chairman,

AWARD OF THE ARBITRATOR

The record discloses that on September 30, 1995 Locomotive Engineer Taverna was ordered at Field for 22:10, to taxi to Golden where he would begin his assignment on Extra 5807 West. On the assignment from Golden he was accompanied in the cab of the locomotive by Conductor L.K. Boettger.

As reflected in the disciplinary investigation conducted by the Company on October 6, 1995, in the period immediately prior to the assignment of September 30, the grievor's work record was as follows:

September 18th to 24th – Annual Vacation

September 25th ordered Revelstoke for 2010, arrived at Field 0300 September 26th and booked personal rest until 0800.

September 26th ordered Field for 0945, arrived Revelstoke 1540 and booked personal rest until 1600 on September 27th.

September 27th ordered Revelstoke 2200 on TCS turn to Field arriving back at Revelstoke at 0815 and booked personal rest until 1400 September 29th.

September 29th ordered Revelstoke at 2230 and then cancelled and booked personal rest until 0500 September 30th.

September 30th ordered Revelstoke for 0700, arriving at Field 1433 and booked personal rest until 1800, and ordered at Field for 2210 to taxi to Golden.

The record discloses that the grievor and Conductor Boettger arrived at Golden at 2250, and took charge of their train. Their train was in fact delayed at Golden some four and one-half hours because of a traffic tie-up at the MacDonald Tunnel and the requirement to await two westbound 400 series trains before proceeding. The grievor's movement emerged from the tunnel at Ross Peak at or about 0540 on the morning of October 1, 1995. As the grievor's train approached the signal at the east end of Greeley, the signal displayed a clear to stop indication. This communicated to the crew that they should proceed, being prepared to stop at the next signal. The signal was properly called and acknowledged by the conductor and locomotive engineer. There can be no doubt that the grievor was well aware of the distances and signal locations on the territory, of which he said, during his disciplinary investigation: "I know it like the back of my hand."

Locomotive Engineer Taverna was then under an obligation to handle his train so as to be prepared to stop at the signal located at mileage 119.9S of the Mountain Subdivision. As his movement approached that area it encountered heavy fog. The grievor relates that at that point he became confused as to his precise location. He relates that his attempts at trying to determine his whereabouts, including looking out the side window to find a landmark, distracted him from the operation of stopping. He relates that when he finally did locate a landmark, he realized that he was in a perilous situation, causing him to apply the train's emergency brakes. He recounts that at that same time Conductor Boettger called to him, too late, that the signal was red.

It does not appear disputed that a brake application was made at a distance of some 1,378 feet from the stop signal, at which point the grievor's movement was travelling at 34.3 mph. The grievor then broadcast an emergency call to a train approaching in the opposite direction, urging its crew to abandon their train as a head on collision seemed inevitable. Not without some difficulty, Locomotive Engineer Taverna and Conductor Boettger jumped clear of their train and ran up an adjacent embankment as their movement then proceeded into a head on collision with Extra 5597 East at the crossover switch at Greeley, Mileage 119.9, at approximately 0640 on the morning of October 1, 1995. Fortunately there was no serious injury to the members of either crew.

During the course of the ensuing disciplinary investigation Locomotive Engineer Taverna, who is fifty-two years of age and has some sixteen years of service, maintained that his failure to stop at the signal at Greeley was caused by mental confusion prompted by a circadian dysrhythmia, compounded by the foggy conditions. The Council refers the Arbitrator to a report, apparently conducted under the jurisdiction of the Railway Transport Committee of the Canadian Transport Commission concerning an incident at Romford, Ontario in 1991 (report no. R91T0162) which defines circadian dysrhythmia as a sleep-related condition "... which can adversely affect employees' vigilance, information processing capabilities, communication skills and irritability ...". In short, Locomotive Engineer Taverna asserts that his inability to bring his movement under control, and to observe the stop signal, was caused by an

involuntary loss of his own ability to function and make critical judgments, a condition brought on by sleep deprivation and irregular sleep patterns.

In further support of the grievance, the Council tendered in evidence before the Arbitrator a letter from Dr. Susan Johnson, a registered clinical psychologist, dated October 10, 1996. Dr. Johnson relates that she met with Mr. Taverna following the events of October 1, 1995, during which he recounted the incident to her. Her letter comments, in part: "His description was very much like those documented in sleep deprivation research." Dr. Johnson goes on to give a brief explanation of circadian rhythm sleep disorder, a condition recognized by the **DSM-IV**, the generally accepted professional text dealing with psychological and psychiatric disorders. In this respect, her letter reads, in part, as follows:

... The diagnostic criteria from the DSM-IV describes Circadian Rhythm Sleep Disorder as:

- A.) a persistent or recurrent pattern of sleep disruption leading to excessive sleepiness or insomnia that is due to a mismatch between the sleep-wake schedule required by a person's environment and his or her circadian sleep-wake pattern.
- B.) the sleep disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning.
- C.) the disturbance does not occur exclusively during the course of another Sleep Disorder or other mental disorder.
- D.) the disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

Shift Work Type: insomnia during the major sleep period or excessive sleepiness during the major awake period associated with night shift work or frequently changing shift work.

If Mr. Taverna were experiencing circadian rhythm sleep disturbance and hypnagogic or hypnopompic phenomena at the time immediately preceding the accident, it would have played a significant role in the train mishap.

In further support of its submission on behalf of the grievor, the Council refers the Arbitrator to "**CANALERT '95 – Alertness Assurance in the Canadian Railways**". That study, described as the "Phase II Report, May 1996" is the product of an extensive survey of the problem of employee fatigue in railway operations in Canada. The study was undertaken jointly by CN, CP Rail, VIA Rail and the Brotherhood of Locomotive Engineers. It is an extensive and impressive study which documents the causes and manifestations of fatigue in locomotive engineers, with recommendations for reducing the risk of alertness problems.

While the Company does not take general issue with the existence of the concept of circadian dysrhythmia, nor of the contents of the Phase II Report of **CANALERT '95**, it submits that, based on the evidence of the case at hand, the grievor was negligent in his handling of his train, and that it was his own errors in judgment which resulted in the collision. The Company notes the grievor's assertion that he expressed to his conductor that he was feeling "tired and drained" at Ross Peak, citing the fact that he did not then book rest by providing three hours' notice to the rail traffic controller, as he could have done under article 23(b)(2) of the collective agreement. More substantially, it points to the fact that, as disclosed by the locomotive's event recorder, the grievor's train exceeded speed limits, on a relatively consistent basis, throughout the trip.

The Company also disputes the grievor's characterization of what occurred as an unanticipated occurrence. It stresses that the grievor reported for duty with the knowledge that he would be working a full ten hours, that he made no attempt to take corrective steps if, as he claims, he felt unusually tired, and in particular did not give notice of his intention to book rest, something which is normally done by a train crew in that situation. It submits that in the circumstances, if the grievor's ability to operate the train was impaired by fatigue, it was incumbent upon him to stop his train and report his condition. Finally, it stresses that there is no medical evidence to support the grievor's claim that he was in fact suffering from circadian dysrhythmia at the relevant time, and was therefore unable to exercise judgment. The Company stresses that it was the grievor's responsibility to be fit for duty, to be aware of his own condition, and to take appropriate steps should he become unable to function. In its submission, he was seriously negligent in his failure to appreciate that he was not in proper control of his train's movement in the minutes immediately prior to the collision on the morning of October 1, 1995.

I turn to consider the merits of the grievance. It is not disputed that the issue of rest, proper sleep management and the safe scheduling of running trades employees has long been a matter of concern for both employers and unions in the Canadian railway industry. In **CROA 1677** this Office had occasion to consider the relationship between rest and the safe operation of train movements, following the unfortunate fatal collision at Hinton, Alberta involving a freight train and a passenger train, on February 8, 1986. That incident resulted in an extensive inquiry under a specially appointed Commission of Inquiry, chaired by the Honourable Mr. Justice René T. Foisy. The report of the Commission examined closely the problems related to work scheduling and rest among running trades employees, and made specific recommendations with respect to work scheduling and minimum periods of rest for employees, with a view to improved safety. Further, in **CROA 1759**, this Office had occasion to review the discipline assessed against a train crew which booked unfit for duty by reason of insufficient sleep at the away-from-home terminal. In those circumstances the Arbitrator concluded that there was no basis the assessment of discipline and commented, in part, as follows:

In the instant case the grievors had four to six hours' sleep in the late morning hours of April 23rd. They then spent approximately ten hours waiting for their call for Train No. 10. It is not disputed that the trip assigned to them would require a further eleven hours to complete. In the aggregate, therefore, they would have found themselves awake for a full twenty-one hours having had only four to six hour's sleep. This is compounded by the fact that they apparently had only four to five hours' rest prior to reporting for duty the day prior, April 22nd. In the circumstances the grievors felt that it was hazardous for them to undertake an assignment which would have involved, in its last two or three hours, operating a train without any sleep at all in the previous nineteen or twenty hours, and with only four to six hours' sleep over a total period in excess of thirty hours.

In these circumstances, having regard to all of the evidence, the Arbitrator is satisfied that the grievors had an honest and valid concern with respect to the safety of undertaking the assignment which they declined, and that they were, on balance, justified in doing so. I must therefore conclude that the Company did not have just cause for the discipline issued against the grievors.

The **CANALERT '95** report which has been placed before the Arbitrator is an impressive study, which will obviously have some importance to the companies and union which sponsored it. The project involved extensive field examination of the condition of locomotive engineers operating on three separate subdivisions, in the service of all three companies. The report finds that a number of factors can improve the incidence of fatigue risk in locomotive engineers. These include resort to time pools for a more regular scheduling of tours of duty; better opportunities for rest both before and after tours of duty which involve service between the hours of 2:00 am and 6:00 am; the possibility of napping, for example during a period of train delay, to improve alertness; bunkhouse modifications; and the use of headsets within the locomotive cab to reduce ambient noise, improve communications between crew members and allow crews to listen to music of their choice to stimulate their alertness. Finally, the experiment made successful use of lifestyle training for crews, and their spouses or companions, to promote a better appreciation for the need for activity and rest habits which are conducive to maintaining alertness while on duty. The report also finds a correlation between fatigue management and improved absenteeism rates, as well as better health for the employees concerned.

The report indicates that, according to prior studies, "sleep problems in locomotive engineers have been shown to occur more frequently than other shift workers." (p 4-1) The factors contributing to on-the-job fatigue within railway operations are cited, at pp. 1-3 to 1-5 as follows:

I OPERATIONAL REQUIREMENTS

- round-the-clock service
- irregular hours
- unpredictable work with little advance notice
- long duty periods
- requirement for sustained alertness

II PHYSIOLOGICAL DETERMINANTS

- time of day
- elapsed time since last consolidated sleep period
- duration of last sleep period

- quality of last sleep period
- timing of sleep periods
- regularity or irregularity of sleep periods
- cumulative effect of sleep restrictions
- age
- morningness/eveningness
- sleep disorders
- physical work environment

It is obviously beyond the scope of this Award to comment extensively on the **CANALERT '95** report. It is of interest, however, that the authors note at p. 6-13, that a computer simulation of human alertness, known as the circadian alertness simulator or CAS, has been developed. It appears that by computer modelling the simulator can make predictions for the rate of fatigue risk for a given trip, based on an employee's work-rest schedule. It is also noteworthy that the report identifies the early morning hours (e.g., from 2:00 am to 6:00 am) as most vulnerable to fatigue deficiencies for running trades crews in railway operations. Consequently, it recommends, in part, at p. 8-2, that a significant period of time be allowed for sleep at an away-from-home terminal where crews have run an outbound train during those hours of greatest sensitivity, or where their return trip will involve running during the same period, tentatively identified as 2:00 am to 6:00 am.

When regard is had to the circumstances of the instant case, the Arbitrator is struck by a number of facts. Firstly, there is no evidence from any witness, apart from the grievor himself, and most particularly none from any professional or expert witness, which would characterize the grievor's work schedule in the days and hours prior to the incident at Greeley as necessarily confirming that he was at high risk of fatigue. As the record discloses, he came off a period of annual vacation on September 24. He had 6.45 hours' rest between the end of his tour of duty on September 26 and the commencement of his next tour at 09:45 on the same day. Significantly, he was then off duty for a period in excess of thirty hours between the end of his tour of duty on September 26 and his return to duty at 22:00 on September 27. Thereafter, having gone off duty at Revelstoke at 08:15 on September 28, he remained off duty, for all practical purposes, for almost forty-eight hours, until he was ordered at Revelstoke at 07:00 on September 30. Although he was ordered for Revelstoke for 22:30 on September 29, the call was cancelled and he remained off duty until the following morning. While the Arbitrator appreciates that the calling times and duty times do not necessarily reflect the grievor's pattern of sleep, this is obviously not a case where an employee can claim that he or she was denied reasonable opportunities for rest during the course of the days leading up to an incident of alleged fatigue. Moreover, the rest which Mr. Taverna had at Field, being from 14:33 to his call time of 22:10, totalling in excess of six hours, would appear to conform generally with the recommendation made in the **CANALERT '95** report, given that he was to undertake work through the midnight to dawn period.

This Office appreciates the importance of safety in railroading, and does not minimize the concerns of employers and unions alike within the industry with respect to dealing with problems of fatigue among employees working in safety sensitive positions, such as running trades employees. However, in this case, as in any case of discipline, a board of arbitration is compelled to proceed on the basis of established rules of evidence. In the normal application of those rules it is not unreasonable to expect the tendering of expert testimony, whether through medical certificates or otherwise, to confirm that an employee was, on the balance of probabilities, suffering from a particular medical or psychological state at any given point in time. It is, very simply, not enough for a party before this Office to adduce in evidence substantial literature describing a given physical phenomenon or condition, complex in its nature, and couple it with an employee's own evidence of having experienced the symptoms of that condition to establish, on an acceptable evidentiary basis, that the condition in fact existed and was operative in the employee at the time.

There is, in the case at hand, no reliable expert testimony upon which the Arbitrator can responsibly base a conclusion to the effect that the incident at Greeley was caused by a decline in Locomotive Engineer Taverna's alertness by reason of fatigue, in circumstances where he would have had no forewarning, nor any ability to control what was happening to him or to his train movement. Significantly, the letter tendered in evidence from Dr. Johnson is clearly expressed in the hypothetical. It does not contain any statement of opinion to the effect that the grievor was in fact experiencing circadian rhythm sleep disturbance at the time he lost control of his train movement. Further, no computer modelling of the grievor's work schedule, for the purposes of fatigue risk evaluation, is tendered in evidence. As important as the evolving science of circadian rhythms and sleep disorders may be to the industry, it

remains incumbent upon this Office to apply standards of proof comparable to those in other cases which normally require the evidence of medical experts or other qualified professionals. On the evidence presented, it is difficult to find that the Council's evidence is sufficient. It does not provide a sufficient link, based on expert evidence, between circadian dysrhythmia, or any other sleep disorder, and the events involving Locomotive Engineer Taverna on the morning of October 1, 1995.

Nor is the objective evidence persuasive. As noted by the Company's representative, although the grievor claims to have felt a substantial degree of fatigue some hours prior to the collision, he made no effort to indicate his intention to book rest, as was his right. Moreover, while much of his evidence during the course of his statement to the Company's investigating officer involved his alleged confusion as to his whereabouts, no good explanation is given for the fact that, as revealed in the event recorder, Locomotive Engineer Taverna released the brake of his train at mileage 119.3, knowing then that he was under a clear to stop instruction. Nor does the grievor's evidence adequately explain the fact that his train ran overspeed for a substantial portion of its trip. While, on the one hand, that might arguably be consistent with diminished alertness, it is equally consistent with a degree of negligence on his part. Although the ultimate burden of proof in this case is upon the Company, there is an evidentiary onus which falls upon an employee who seeks to assert a medical or physiological condition in explanation of his or her unusual actions. In this case that onus has not been discharged. On the facts, absent expert testimony to provide a firm opinion as to the grievor's claim that he suffered circadian dysrhythmia, I am compelled to prefer the characterization of these events advanced by the Company.

In the result, I must find that the grievor was responsible for the loss of control of his train on the occasion of the head-on collision which occurred at Greeley on October 1, 1995. I am not presented with sufficient evidence to conclude that the events which transpired were beyond Locomotive Engineer Taverna's control. Specifically, I must conclude that he was negligent in not taking the necessary steps to control his train's movement when he knew, or reasonably should have known, that he was disoriented and unsure of his location as he approached an anticipated stop signal.

The error committed by Locomotive Engineer Taverna was extremely grave, and could have had fatal consequences. In the circumstances, neither the length of his service or his prior disciplinary record would appear compelling, from the standpoint of mitigation. In the result, I am satisfied that the discharge of the grievor was for just cause, and that this is not an appropriate case for a substitution of penalty.

For the foregoing reasons, the grievance must be dismissed.

November 29, 1996

(signed) MICHEL G. PICHER
ARBITRATOR