

Noteworthy Decision Summary

Decision: WCAT-2015-00574 **Panel:** Debbie Sigurdson **Decision Date:** February 20, 2015

Policy item #31.20 of the Rehabilitation Services and Claims Manual, Volume II – Entitlement to assessment of permanent partial disability award - Long term effects of exposure to hazardous noise – Scientific evidence.

This decision is noteworthy for its interpretation of policy item #31.20 (Amount and Duration of Noise Exposure Required by Section 7) of the *Rehabilitation Services and Claims Manual, Volume II* (RSCM II) in relation to the worker's entitlement to assessment of a permanent partial disability award.

The worker was exposed to hazardous noise for over 30 years. The Workers' Compensation Board, operating as WorkSafeBC (Board), accepted his claim for occupational noise-induced hearing loss. The worker first noted hearing loss in 1988. A Board audiologist gave an opinion that by 1998, when an industrial audiogram was done, any occupational noise-induced hearing loss would be at maximal levels, and any ongoing hearing changes due to noise after that time would be negligible. The Board audiologist also gave the opinion that the progression of the worker's hearing loss and the configuration of his hearing loss evident from an audiogram done in 2013 were not entirely consistent with his work history or the known characteristics of occupational noise-induced hearing loss. Based on the Board audiologist's opinion, the Board concluded the worker was not entitled to a permanent partial disability award for his occupational hearing loss. A review officer confirmed that decision.

Section 7(3) of the *Workers Compensation Act* provides that when the loss of hearing does not amount to total deafness, and there is no loss of earning resulting from the loss of hearing, compensation must be calculated as for a lesser percentage of total disability and based on the percentages set out in Schedule D. Policy item #31.20 of the RSCM II provides that hearing loss in the lower frequencies (up to 2000 hz) continues after 10 years of exposure to hazardous occupational noise, and may even accelerate in those later years; therefore, since the disability assessment under Schedule D relies on frequencies of 500, 1000, and 2,000 hz, no adjustments for duration of exposure are made. The panel agreed with the reasons of the panel in *WCAT-2014-00394* that it is problematic to deny a claim for hearing loss primarily on the basis of a loss of hearing in the lower frequencies because of the statement in policy item #31.20 that loss of hearing at lower frequencies continues and may accelerate after 10 years of exposure. The panel stated that "while scientific research may suggest that hazardous occupational noise does not affect hearing at the lower frequencies, that does not take into account Board policy that specifically recognizes the damage that can occur to lower hearing frequencies in the later years of noise exposure". The panel noted that neither the Board nor WCAT has the discretion to not apply that policy.

The panel concluded the worker was entitled to be assessed for a permanent partial disability award.

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Panel: Debbie Sigurdson, Vice Chair

Introduction

- [1] On February 5, 2014 the Workers' Compensation Board (Board)¹ accepted the worker's claim for occupational noise-induced hearing loss as arising out of and in the course of his employment. The Board officer concluded the worker's hearing test in October 1998 provided the best evidence of the worker's hearing loss caused by his exposure to hazardous occupational noise. The worker was not entitled to a permanent partial disability award for occupational noise-induced hearing loss, as the hearing loss in each ear in 1998 was below an average 28 decibels in the frequency ranges between 500 and 2000 hertz. The worker has received hearing aids.
- [2] On July 8, 2014 a review officer at the Review Division of the Board confirmed the decision to deny the worker a permanent partial disability award for his occupational noise-induced hearing loss². The worker has appealed this decision to the Workers' Compensation Appeal Tribunal (WCAT). He seeks a finding that his measured hearing loss in 2013 and 2014 best represents the damage to his ears from exposure to hazardous occupational noise, such that he is entitled to a permanent partial disability award for his occupational noise-induced hearing loss.
- [3] The worker requested this appeal proceed by way of review of the claim file and consideration of written submissions. Having considered item #7.5 of the WCAT *Manual of Rules of Practice and Procedure*, and having reviewed the issues and evidence, I agree that this appeal can be fairly decided from my review of the claim and written submissions. The issue in this appeal requires consideration of the undisputed facts and expert evidence, and the application of relevant law and policy to that evidence.
- [4] There is no firm of record to this appeal. The worker through his representative has provided written submissions in support of the appeal.

Issue(s)

- [5] Is the worker entitled to a permanent partial disability award for his occupational noise induced hearing loss?

¹ The Board operates as WorkSafeBC.

² Review Reference #R0171402.

Jurisdiction

- [6] Section 239(1) of the *Workers Compensation Act* (Act) provides that a decision made by a review officer under section 96.2 may be appealed to WCAT. Section 250(1) and section 254 of the Act allow WCAT to consider all questions of law and fact arising in an appeal, subject to section 250(2), which requires that WCAT apply the relevant Board policy, and make its decision based on the merits and justice of the case. The *Rehabilitation Services and Claims Manual, Volume II* is the policy applicable to this appeal.
- [7] The standard of proof in compensation matters is the balance of probabilities, subject to the provisions of section 250(4) of the Act. Section 250(4) provides that when the evidence on an issue respecting the compensation of a worker is evenly weighted, the matter is resolved in favour of the worker.

Evidence, Reasons and Findings

- [8] In 2013 the worker commenced an application for occupational noise-induced hearing loss, noting that he had worked in noisy environments for several years as a pipefitter and welder. He reported first noticing difficulties hearing in 1988, after which he has experienced a gradual deterioration in his hearing. The worker was last exposed to hazardous occupational noise in 2005 and retired in 2006.
- [9] The worker underwent hearing tests at work in 1996 and 1998, the results of which are summarized on the claim file. Those test results revealed normal hearing in the lower frequencies, with sensorineural hearing loss in the 3000 to 8000 hertz range.
- [10] The worker continued to work in noisy environments between 1998 and 2005. Assessment of the worker's hearing in 2013 and 2014 revealed a worsening of his hearing in both ears and across all hearing frequencies.
- [11] On November 27, 2013 a Board audiologist advisor reviewed the worker's claim and provided an opinion that the recent progression of the worker's hearing loss and the degree of his hearing loss was neither consistent with his work history nor consistent with the known characteristics of occupational noise-induced hearing loss. The Board audiologist advisor referred to scientific literature on occupational noise-induced hearing loss, which indicates:
- Even after 40 years of extreme hazardous noise exposure, hearing in the 250 to 1000 hertz range remains within normal range. Physiologically the low frequencies remain intact despite years of intense hazardous noise exposure.
 - Hazardous occupational noise damages the outer hair cells of the cochlea first at 3000 to 6000 hertz, and later damages the inner hair cells at the same frequencies.

- Hearing loss from 250 to 1000 hertz is incongruent with scientific research regarding the effect of hazardous noise on hearing.
- Occupational noise-induced hearing loss develops in the early years of noise exposure, and then plateaus subsequently.

- [12] The Board audiologist advisor provided an opinion that by 1998 it would be expected that any occupational noise-induced hearing loss would be at maximal levels; any ongoing hearing changes due to noise after 1998 would be negligible. The Board audiologist advisor provided an opinion that the 1998 industrial audiogram provided the best indication of the extent of the worker's occupational noise-induced hearing loss. The progression of the worker's hearing loss and the configuration of his hearing loss evident in 2013 were not entirely consistent with his work history or the known characteristics of occupational noise-induced hearing loss.
- [13] The Board officer and the review officer relied on the Board audiologist advisor's opinion and the 1998 hearing test results to conclude the worker was not entitled to a permanent partial disability award for his occupational noise-induced hearing loss.
- [14] In submissions dated September 16, 2014 the worker noted he had worked in very noisy environments for over 30 years. The worker submitted his most recent hearing tests provide the best evidence of the extent of his hearing loss caused by his employment. The worker disputed that there was any evidence that his hearing loss is caused by a non-compensable condition.
- [15] Occupational noise-induced hearing loss claims are adjudicated under section 7 of the Act. Section 7(1) and policy item #31.00 provide that a worker is entitled to compensation for occupationally-induced neurosensory hearing loss that is non traumatic in origin that arises out of and in the course of employment. Section 7(3) of the Act provides that when the loss of hearing does not amount to total deafness, and there is no loss of earnings resulting from the loss of hearing, compensation must be calculated as for a lesser percentage of total disability and based on the percentages set out in Schedule D.
- [16] There is no dispute that the worker has developed occupational noise-induced hearing loss. The Board has accepted that condition and provided the worker with hearing aids. What is at issue is whether the worker's occupational noise-induced hearing loss meets the threshold required for consideration of a permanent partial disability award as set out in Schedule D (item 105 of the *Permanent Disability Evaluation Schedule*).
- [17] I find the Board audiologist advisor's opinion on the long-term effects of hazardous noise to be problematic in light of the binding effect of Board policy item #31.20. This policy item provides that, generally speaking, the first ten years of occupational noise exposure has a significant effect at the higher frequencies.

[18] With respect to the effect of hazardous noise at lower frequencies, the policy states:

... However, **where lower frequencies are concerned (up to 2,000 hz.) hearing loss continues after that time and may, in fact, accelerate in those later years.** Therefore, since the disability assessment under Schedule D relies on frequencies of 500, 1,000, and 2,000 hz., no adjustments for duration of exposure are made.

[19] I find the Board audiologist advisor's opinion that evidence of hearing loss at the lower frequencies is inconsistent with the characteristics of occupational noise-induced hearing loss to be incongruent with Board policy that specifically recognizes the long term effect of noise on hearing at the lower frequencies. Entitlement to a permanent partial disability award for occupational noise-induced hearing loss requires evidence of hearing loss at the lower frequencies³.

[20] In *WCAT-2014-00394* the panel recognized the discrepancy between scientific research on the characteristics of occupational noise-induced hearing loss and Board policy on non-traumatic hearing loss, particularly as it relates to assessment for a permanent partial disability award. The panel found:

[30] It is problematic though, to deny a claim for hearing loss primarily on the basis that there is a loss of hearing in the lower frequencies (up to 2000 Hertz). One issue is that the policy states that hearing loss in the lower thresholds (up to 2000 Hertz) continues and may even accelerate after 10 years of exposure to noise. This statement may not reflect the most up-to-date research on occupational noise-induced hearing loss but it forms part of the policy respecting compensation for occupational noise-induced hearing loss.

[31] This policy statement is also consistent with the basis upon which compensation for occupational noise-induced hearing loss is calculated. Pensions for occupational noise-induced hearing loss are based on the average hearing thresholds at 500, 1000 and 2000 Hertz. If, as the audiologist advisor states, there is no change in those thresholds when a worker sustains occupational noise-induced hearing loss, no pensions would ever be awarded. Since there must be a loss at these frequencies in order for a worker to receive compensation for occupational noise-induced hearing loss, it seems incongruent to argue that the presence of hearing loss at those frequencies is evidence that the worker does not have occupational noise-induced hearing loss.

³ Schedule D, Non-Traumatic Hearing Loss, provides for assessment of hearing loss for entitlement to a permanent disability award by obtaining the arithmetic average of thresholds of hearing measured in each ear in turn by pure tone, air conduction audiometry at frequencies of 500, 1000 and 2000 Hertzian Waves.

- [21] I agree with this statement and adopt it.
- [22] There is no dispute the worker continued to be exposed to hazardous occupational noise from 1998 to 2005, at which time he retired. I agree with the worker that the Board audiologist advisor's opinion did not provide an adequate basis in the specific facts of this case and in light of Board policy to conclude the deterioration of the worker's hearing at the lower frequencies was not at least in part due to his further seven years of exposure to hazardous occupational noise. I note that Board policy specifically recognizes the long term effects of hazardous noise on hearing at the lower frequencies.
- [23] While scientific research may suggest that hazardous occupational noise does not affect hearing at the lower frequencies, that does not take into account Board policy that specifically recognizes the damage that can occur to the lower hearing frequencies in the later years of noise exposure. Indeed, this is the basis upon which a permanent partial disability award is assessed. Like the Board, WCAT is required to apply Board policy. Should Board policy not accord with the scientific research on occupational noise-induced hearing loss, neither the Board nor WCAT has the discretion to simply ignore and not apply that policy.
- [24] The worker asserts there is no positive evidence of a non-occupational cause, and therefore the hearing loss as recorded in the 2013 audiogram reflects the hearing loss caused by exposure to hazardous occupational noise. I find that the recent audiograms provide evidence of an additional non-occupational cause for the worker's hearing loss.
- [25] It is a known characteristic of occupational noise-induced hearing loss that hearing loss due to noise exposure does not progress once exposure to noise ceases. The worker was last exposed to hazardous occupational noise in 2005. He underwent hearing tests in 2013 and 2014. The most recent hearing test in February 2014, when compared to the worker's hearing test in June 2013, reveals further deterioration in the worker's hearing, particularly at the lower frequencies of his right ear. If the worker's hearing loss were attributable solely to his exposure to hazardous occupational noise, I would expect the 2014 audiogram to reveal hearing thresholds similar to that apparent on testing in 2013, since the worker had retired and was no longer exposed to hazardous occupational noise. I find the recent audiograms provide positive evidence of a non-occupational cause contributing to the worker's hearing loss.
- [26] Given the changes in the worker's hearing thresholds between 2013 and 2014, it is apparent that those measurements reflect not only the hearing loss caused by exposure to hazardous occupational noise, but hearing loss caused by some other condition. Unfortunately there is no direct evidence of the worker's hearing loss at the date he retired and was no longer exposed to hazardous occupational noise. Often, the Board will rely on the audiometric measurements closest in time to the worker's last exposure to hazardous occupational noise as providing the best evidence of the measurement of hearing loss caused by the employment. In this case, the worker's date of retirement

(and last exposure to hazardous occupational noise) falls within the midpoint of the 1998 and 2013 hearing tests.

- [27] Policy item #31.40 provides guidance, and states, "Where a worker has an established history of exposure to noise at work, and where there are other non-occupational causes or components in the worker's loss of hearing, and where this non-occupational component cannot be accurately measured using audiometric tests, then "Robinson's Tables" will apply. I find this is an appropriate case to apply Robinson's Tables in order to estimate the amount of hearing loss that can be attributed to the worker's exposure to hazardous occupational noise as of the date of his last exposure to hazardous occupational noise in 2005. The worker's entitlement to a permanent partial disability award (if any) should be assessed with the use of Robinson's Tables, taking into account his further seven years of noise exposure after 1998.

Conclusion

- [28] I allow the worker's appeal and vary the Review Division decision. The worker is entitled to consideration of his entitlement to a permanent partial disability award for his occupational noise-induced hearing loss based on the application of Robinson's Tables, taking into account his exposure to hazardous occupational noise ending in 2005.
- [29] The worker has not requested reimbursement of appeal expenses, and from my review, none are apparent. I make no order for reimbursement of expenses.

Debbie Sigurdson
Vice Chair

DS/vm