A legal look at noise hazards in the workplace

Written by Brian Wasyliw

24 September 2014

Noise has been recognized as an occupational hazard for many years. According to the Canadian Centre for Occupational Health and Safety, in heavy industrial and manufacturing environments, as well as in farms, permanent hearing loss is the main occupational health concern. Similarly, the United States Department of Labor states that every year 30 million people are occupationally exposed to hazardous noise.

Workplace sounds can be steady (such as the continuous hum from a ventilation system or a computer), intermittent (sound which comes and goes) or sudden and immediately impactful. Regardless of the source of the noise, employers across Canada have a duty to take all reasonable steps to protect their workers from workplace hazards, including noise hazards. Occupational health and safety legislation in every Canadian jurisdiction has set guidelines to prevent exposure to sound at volumes that can cause hearing damage. The guidelines are typically given as the maximum duration of exposure permitted for various decibel levels in a given period of time known as the “exposure limit."

Exposure limits

The most common exposure limit set by occupational health and safety legislation in Canada is 85 decibels (dB) over eight hours. This means a worker may be exposed to a constant sound not exceeding 85 dB in a standard 8 hour shift. If the noise level is greater than 85 dB, the period of exposure is reduced. For example, exposure limit to the sound of a typical food blender (88dB) is only four hours. On the other hand, the sound of a sudden, very loud noise (say, a gun-shot), may reach or exceed the exposure limit immediately. Important to note is that certain industries (such as mining or construction) are governed by specific regulations so it is critical to know which standards apply to your workplace industry.

To give you an idea of how loud is loud, consider the following common, everyday noises:

Safe Range
•20 dB — buzzing insect
•50 dB — window air conditioner
•70 dB — freight train

Risk range (limit of exposure for 8 hrs)
•90 dB — heavy vehicle
•100 dB — subway station
•110 dB — rock drill

Harmful range
•120 dB — propeller plane
•130 dB — riveting hammer
•140 dB — jet engine at 30m

Hearing conservation program

Employers can address their health and safety obligations related to workplace noise by implementing a hearing conservation program (HCP), comprised of four steps: investigation and assessment; controls; training; and monitoring.

Investigation and assessment: The first step toward developing a HCP is to identify areas in the workplace where high decibel levels or constant background noise are present. Once identified, consider retaining a specialist to obtain measurements of noise duration and intensity, and where necessary, recommend remediation.

Controls: Step two is to set operational or physical improvements knows as controls. These may include dampening devices, sound barriers, ear protection, and in some cases the purchase of quieter equipment. Non-operational controls may include job shifting and personnel rotation to ensure no worker is exposed to excessive noise for an unacceptable amount of time.

Training: Like any other type of occupational due diligence, supervisors and workers should receive training on how to identify noise hazards, and use protective equipment. It is important that everyone in the workplace understand the health effects that can result from exposure to significant noise hazards.

Monitoring: Once controls have been established it is imperative to monitor their effectiveness, including re-assessing the situation at regular intervals, whenever new equipment or procedures are introduced, or if legislative standards change.

Brian Wasyliw is a lawyer with Sherrard Kuzz LLP, one of Canada's leading employment and labour law firms, representing management. He can be reached at (416) 603.0700 (main), (416) 420.0738 (24-hour) or by visiting www.sherrardkuzz.com.