

April 2, 2001

Dave Black  
TOC Management Services  
895 Country Club Road, Suite A-160  
Eugene, Oregon 97401

Mr Black:

This letter is in response to your letter of March 19, 2001, requesting clarification of OAR 437-002-1910.95(d)(1)(ii), and (d)(2)(i), and if compliance with these standards can be achieved with a sound level meter, and what was meant by the term “representative personal sampling” as stated in 1910.95(d)(1)(ii).

Before we talk about compliance with the standard, and the differences between a sound level meter and a noise dosimeter and how they apply to “representative personal sampling”, it is important to note that the standard is based on an eight hour average exposure of 90 decibels. The sound level meter and Appendix G of the noise standard are merely tools to help you determine if personal noise sampling is needed.

A sound level meter does not measure the amount of noise encountered continuously as the individual goes through the eight hour workday. A sound level meter measures the noise level in the immediate area, and provides immediate results. It is not a personal representative sample because it does not average out the exposure the individual will receive in an eight hour period. Therefore, a sound level meter will not bring you into compliance with OAR 437-002-1910.95 (d)(1)(ii), and (d)(2)(i). You can however use a sound level meter to help you determine where the highest levels of noise are in the work area. This will help you develop a sound level map to determine where personal monitoring may be needed or if it is needed.

A noise dosimeter continually measures and averages the noise an employee encounters throughout the workday. It is worn by the individual and measures the sound near the entrance to the ear. The noise dosimeter is giving you a “representative personal sample” of the noise exposure that this person is receiving. You can then use this information along with the formula in Appendix A to calculate the employee’s Time Weighted Average (TWA) to see if they are over 85 decibels. You can also take area samples with a noise dosimeter then use the results along with Appendix A to determine if employees are being overexposed to noise. If you determine that overexposures would occur, then you can take the necessary steps to protect employees hearing instead of performing personal monitoring. Either the personal monitoring or area monitoring using a noise dosimeter would meet the intent of OAR437-002- 1910.95(d)(1)(i).

It is difficult to measure impact/impulse noise with a sound level meter because there is no specific duration that can be assigned to this type of noise. The impact/impulse noise could be every second, or every half second and therefore could be extremely difficult to calculate. Your noise dosimeters usually calculate high and low impact/impulse noises. If you have an instrument that reads peak sound levels every second then you are at least getting an idea of what impact/impulse noise levels may be there.

If you have any questions or if we can be of further assistance, please contact Clint Mc Bride at (503) 378-3272.

Sincerely,

Marilyn K. Schuster, Manager  
Standards and Technical Resources Section  
Oregon Occupational Safety and Health Division

C:\WINDOWS\TEMP\davenoise.wpd