WAC 296-817-30015 Use these equations when estimating full-day noise exposure from sound level measurements. You must compute employee's full-day noise exposure by using the appropriate equations from Table 2 "Noise Dose Computation" **when** using a sound level meter to estimate noise dose.

Table 2
Noise Dose Computation

Description	Equation
Compute the noise dose based on several time periods of constant noise during the shift	The total noise dose over the work day, as a percentage, is given by the following equation where C_n indicates the total time of exposure at a specific noise level, and T_n indicates the reference duration for that level. $D = 100 \times \left(\frac{C_1}{T_1} + \frac{C_2}{T_2} + \frac{C_3}{T_3} + \ldots + \frac{C_n}{T_n} \right)$
The reference duration is equal to the time of exposure to continuous noise at a specific sound level that will result in a one hundred percent dose	The reference duration, T, for sound level, L, is given in hours by the equation: $T = \frac{8}{2^{\left(\frac{L-90}{5}\right)}}$
Given a noise dose as a percentage, compute the equivalent eight-hour time weighted average noise level	The equivalent eight-hour time weighted average, TWA_8, is computed from the dose, D, by the equation: $TWA_8 = 16.61 \times \log_{10}\left(\frac{D}{100}\right) + 90$

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050. WSR 15-23-086, § 296-817-30015, filed 11/17/15, effective 12/18/15. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 03-11-060, § 296-817-30015, filed 5/19/03, effective 8/1/03.]