

Figure: 30 TAC §350.76(c)(4)

Equation for Adult Lead Exposure Commercial/Industrial Land Use (Tiers 2 & 3 only)		
${}^{Soil}Soil_{Ing} = {}^{Soil}RBEL_{Ing}$		
${}^{Soil}RBEL_{Ing} (\mu g / g) = \frac{(PbB_{95\ fetal} / (R \times (GSD_i)^{1.645})) - PbB0}{BKSF \times ((IR_{sf} \times AF_s \times EF_s / 365) + (K_{sd} \times IR_d \times AF_d \times EF_d / 365))}$		
Parameter	Definition (units)	Defaults
PbB <sub>95 fetal</sub>	95th Percentile PbB in Fetus (μg/dL)	10
R	Mean Ratio of Fetal to Maternal PbB	0.9
GSD <sub>i</sub>	Individual Geometric Standard Deviation	1.91
PbB0	Baseline Blood Lead Value (μg/dL)	1.64
BKSF	Biokinetic Slope Factor (μg/dL per μg/day)	0.4
IR <sub>s</sub>	Soil Ingestion Rate (g/day)	0.025
IR <sub>d</sub>	Dust Ingestion Rate (g/day)	0.025
K <sub>sd</sub>	Ratio of Concentration in Dust to that in Soil	***
EF <sub>s</sub>	Soil Exposure Frequency (days/yr)	250
EF <sub>d</sub>	Dust Exposure Frequency (days/yr)	250
AF <sub>s</sub>	Absolute Absorption Fraction of Lead in Soil	0.10
AF <sub>d</sub>	Absolute Absorption Fraction of Lead in Dust	0.10
***Based on direct measurement data on the concentrations of lead in both soil and dust at the affected property.		