229671

(Assume Homogenous Soil)

(% Pb in Soil) x (Dust AL) = Concentration of Lead at AL

100,000 ppm Lead

(0.1%) x 150 ug/m³ = 15 ug/m³ Lead

OSHA Letter — PM10-AL

$$\frac{(10^6 \text{ mg/kg})\ (\text{PEL mg/m}^3)}{(\text{Soil Contaminant Concentration mg/kg})\ (\text{Safety Factor})} = \text{AL mg/m}^3$$

OSHA PEL

$$\frac{(10^6)(0.05)}{\cancel{(1,600,000)(4)}\ (640,000)} = 78 \text{ ug/m}^3$$

OSHA AL

$$\frac{(10^6)(0.03)}{640,000} = 47 \text{ ug/m}^3$$

	NIOSH 7300	NIOSH 7105	NIOSH 7082
	ICP	GFAAS	Flame AA
LOD	0.06 ug	0.02 ug	2.6 ug
8hr/(1)Liter	0.125 ug/m³	0.04 ug/m³	5.41 ug/m³

6hr sample @ 2 L/min = 720 Liters

8hr sample @ 1 L/min = 480 Liters

$$\frac{(0.06)\,ug\,(L)}{(0.48)\,m^3} = 0.125\ ug/m^3 \quad \text{ICP}$$

(0.96) —— 0.0625

$$\frac{(0.02)}{0.48} = 0.04\ ug/m^3 \quad \text{GFAAS}$$

$$\frac{2.6\ ug}{0.48\ m^3} = 5.41\ ug/m^3 \quad \text{Flame AA}$$