

APPENDIX A

Table 7

DEFAULT VALUES FOR CALCULATING MEDIUM-SPECIFIC CONCENTRATIONS FOR LEAD

[Input Values Used in UBK Model for Lead] [(for residential exposure scenario)]			
[Geometric Standard Deviation] [(GSD)]	[1.42] [(default)]	[Drinking water intake]	[Model default]
[Outdoor air lead concentration]	[0.2 µg/m³] [(default)]	[Soil lead level]	[495 µg/g]
[Indoor air lead concentration] [(% of outdoor)]	[30]	[Indoor dust lead level]	[495 µg/g]
[Time spent outdoors]	[Model default]	[Soil/dust ingestion weighting factor] [(%)]	[45]
[Ventilation rate]	[Model default]	[Paint lead intake]	[Model default]
[Lung absorption]	[Model default]	[Maternal contribution method]	[Infant model]
[Dietary lead intake]	[Model default]	[Mother's blood lead at birth]	[7.5 µg/dL blood] [(model default)]
[GI method/bioavailability]	[Non-linear]	[Target blood lead level]	[10 µg/dL blood]
[Lead concentration in drinking water]	[4.00 µg/L] [(default)]		

[Input Values Used in SEGH Equation] [(for nonresidential exposure scenario)]	
[Concentration of lead in soil (S)]	[987 µg/g]
[Target blood lead level in adults (T)]	[20 µg/dL blood]
[Geometric standard deviation of blood lead distribution (G)]	[1.4]
[Baseline blood lead level in target population (B)]	[4 µg/dL blood]
[Number of standard deviations corresponding to degree of protection required for the target population (n)]	[1.645 (for 95% of population)]
[Slope of blood lead to soil lead relationship (δ)]	[7.5 µg/dL blood per µg/g soil]

[REFERENCE]

[WIXSON, B.G. (1991). The Society for Environmental Geochemistry and Health (SEGH) Task Force Approach to the Assessment of Lead in Soil. Trace Substances in Environmental Health . 11-20.]

<u>Input Values Used in IEUBK Model for Lead</u> <u>(for residential exposure scenario)</u>		
<u>Parameter</u>	<u>Value</u>	
<u>Outdoor Air Pb Concentration ($\mu\text{g}/\text{m}^3$)</u>	<u>Constant Value: 0.1</u>	
<u>Dietary Lead Intake ($\mu\text{g}/\text{day}$)</u>	<u>Age (Years)</u>	<u>Input</u>
	<u>0-1</u>	<u>2.26</u>
	<u>1-2</u>	<u>1.96</u>
	<u>2-3</u>	<u>2.13</u>
	<u>3-4</u>	<u>2.04</u>
	<u>4-5</u>	<u>1.95</u>
	<u>5-6</u>	<u>2.05</u>
	<u>6-7</u>	<u>2.22</u>
<u>Water Consumption (L/day)</u>	<u>Age (Years)</u>	<u>Input</u>
	<u>0-1</u>	<u>0.2</u>
	<u>1-2</u>	<u>0.5</u>
	<u>2-3</u>	<u>0.52</u>
	<u>3-4</u>	<u>0.53</u>
	<u>4-5</u>	<u>0.55</u>
	<u>5-6</u>	<u>0.58</u>
	<u>6-7</u>	<u>0.59</u>
<u>Use Alternate Water Value?</u>	<u>NO</u>	
<u>Lead concentration in drinking water ($\mu\text{g}/\text{L}$)</u>	<u>4</u>	
<u>MEDIA</u>	<u>ABSORPTION FRACTION</u> <u>PERCENT</u>	
<u>Soil</u>	<u>30</u>	
<u>Dust</u>	<u>30</u>	
<u>Water</u>	<u>50</u>	
<u>Diet</u>	<u>50</u>	
<u>Alternate</u>	<u>0</u>	
<u>Calculate PRG</u>		
<u>Select Age Group for Graph</u>	<u>0 to 84 months</u>	
<u>Change Cutoff</u>	<u>TBD</u>	
<u>Change GSD</u>	<u>1.6</u>	
<u>Probability of Exceeding the Cutoff</u>	<u>5</u>	

<u>Input Values Used in the Adult Lead Model (ALM)</u> <u>(for non-residential exposure scenario)</u>			
<u>Variable</u>	<u>Description of Variable</u>	<u>Units</u>	<u>Value</u>
<u>PbB_{fetal, 0.95}</u>	<u>Target PbB in fetus</u>	<u>$\mu\text{g}/\text{dL}$</u>	<u>TBD</u>
<u>R_{fetal/maternal}</u>	<u>Fetal/maternal PbB ratio</u>	<u>--</u>	<u>0.9</u>
<u>BKSF</u>	<u>Biokinetic Slope Factor</u>	<u>$\mu\text{g}/\text{dL}$ per $\mu\text{g}/\text{day}$</u>	<u>0.4</u>
<u>GSD_i</u>	<u>Geometric standard deviation PbB</u>	<u>--</u>	<u>1.8</u>
<u>PbB₀</u>	<u>Baseline PbB</u>	<u>$\mu\text{g}/\text{dL}$</u>	<u>0.6</u>

<u>IRs</u>	<u>Soil ingestion rate</u>	<u>g/day</u>	<u>0.050</u>
<u>AFs, D</u>	<u>Absorption fraction</u>	<u>--</u>	<u>0.12</u>
<u>EFs, D</u>	<u>Exposure frequency</u>	<u>days/yr</u>	<u>219</u>
<u>ATs, D</u>	<u>Averaging time</u>	<u>days/yr</u>	<u>365</u>