

**APPENDIX A**

**Table 7**

**DEFAULT VALUES FOR CALCULATING MEDIUM-SPECIFIC CONCENTRATIONS FOR LEAD**

| <b>[Input Values Used in UBK Model for Lead<br/>(for residential exposure scenario)]</b> |   |   |  |
|--|---|---|--|
| <b>Geometric Standard Deviation (GSD)</b>  | <b>1.42<br/>(default)</b>                 | <b>Drinking water intake</b>                    | <b>Model default</b>                   |
| <b>Outdoor air lead concentration</b>  | <b>0.2 µg/m<sup>3</sup><br/>(default)</b> | <b>Soil lead level</b>                          | <b>495 µg/g</b>                        |
| <b>Indoor air lead concentration (% of outdoor)</b>                                      | <b>30</b>                                 | <b>Indoor dust lead level</b>                   | <b>495 µg/g</b>                        |
| <b>Time spent outdoors</b>   | <b>Model default</b>                      | <b>Soil/dust ingestion weighting factor (%)</b> | <b>45</b>                              |
| <b>Ventilation rate</b>  | <b>Model default</b>                      | <b>Paint lead intake</b>                        | <b>Model default</b>                   |
| <b>Lung absorption</b>   | <b>Model default</b>                      | <b>Maternal contribution method</b>             | <b>Infant model</b>                    |
| <b>Dietary lead intake</b>   | <b>Model default</b>                      | <b>Mother's blood lead at birth</b>             | <b>7.5 µg/dL blood (model default)</b> |
| <b>GI method/bioavailability</b>   | <b>Non-linear</b>                         | <b>Target blood lead level</b>                  | <b>10 µg/dL blood</b>                  |
| <b>Lead concentration in drinking water</b>  | <b>4.00 µg/L (default)]</b>               |   |  |

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

**[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.]*

| <b><u>Input Values Used in IEUBK Model for Lead</u></b><br><b><u>(for residential exposure scenario)</u></b> |  |                     |
|--|--|---------------------|
| <b><u>Parameter</u></b>  | <b><u>Value</u></b>  |                     |
| <b><u>Outdoor Air Pb Concentration (<math>\mu\text{g}/\text{m}^3</math>)</u></b>                             | <b><u>Constant Value: 0.1</u></b>                          |                     |
| <b><u>Dietary Lead Intake (<math>\mu\text{g}/\text{day}</math>)</u></b>                                      | <b><u>Age (Years)</u></b>                                  | <b><u>Input</u></b> |
|  | <b><u>0-1</u></b>  | <b><u>2.66</u></b>  |
|  | <b><u>1-2</u></b>  | <b><u>5.03</u></b>  |
|  | <b><u>2-3</u></b>  | <b><u>5.21</u></b>  |
|  | <b><u>3-4</u></b>  | <b><u>5.38</u></b>  |
|  | <b><u>4-5</u></b>  | <b><u>5.64</u></b>  |
|  | <b><u>5-6</u></b>  | <b><u>6.04</u></b>  |
|  | <b><u>6-7</u></b>  | <b><u>5.95</u></b>  |
| <b><u>Water Consumption (L/day)</u></b>  | <b><u>Age (Years)</u></b>                                  | <b><u>Input</u></b> |
|  | <b><u>0-1</u></b>  | <b><u>0.4</u></b>   |
|  | <b><u>1-2</u></b>  | <b><u>0.43</u></b>  |
|  | <b><u>2-3</u></b>  | <b><u>0.51</u></b>  |
|  | <b><u>3-4</u></b>  | <b><u>0.54</u></b>  |
|  | <b><u>4-5</u></b>  | <b><u>0.57</u></b>  |
|  | <b><u>5-6</u></b>  | <b><u>0.6</u></b>   |
|  | <b><u>6-7</u></b>  | <b><u>0.63</u></b>  |
| <b><u>Use Alternate Water Value?</u></b>   | <b><u>NO</u></b>   |                     |
| <b><u>Lead concentration in drinking water (<math>\mu\text{g}/\text{L}</math>)</u></b>                       | <b><u>0.9</u></b>  |                     |
| <b><u>MEDIA</u></b>  | <b><u>ABSORPTION FRACTION</u></b><br><b><u>PERCENT</u></b> |                     |
| <b><u>Soil</u></b>   | <b><u>30</u></b>   |                     |
| <b><u>Dust</u></b>   | <b><u>30</u></b>   |                     |
| <b><u>Water</u></b>  | <b><u>50</u></b>   |                     |
| <b><u>Diet</u></b>   | <b><u>50</u></b>   |                     |
| <b><u>Alternate</u></b>  | <b><u>0</u></b>  |                     |
| <b><u>Calculate PRG</u></b>  |  |                     |
| <b><u>Select Age Group for Graph</u></b>   | <b><u>0 to 84 months</u></b>                               |                     |
| <b><u>Change Cutoff</u></b>  | <b><u>5</u></b>  |                     |
| <b><u>Change GSD</u></b>   | <b><u>1.6</u></b>  |                     |
| <b><u>Probability of Exceeding the Cutoff</u></b>  | <b><u>5</u></b>  |                     |

**Note: Change Cutoff is the Target Blood Lead Level**

| <b><u>Input Values Used in the Adult Lead Model (ALM)</u></b><br><b><u>(for non-residential exposure scenario)</u></b> |  |                                |                     |
|--|--|--------------------------------|---------------------|
| <b><u>Variable</u></b>   | <b><u>Description of Variable</u></b>              | <b><u>Units</u></b>            | <b><u>Value</u></b> |
| <b><u>PbB<sub>fetal, 0.95</sub></u></b>  | <b><u>Target PbB in fetus</u></b>                  | <b><u>ug/dL</u></b>            | <b><u>5</u></b>     |
| <b><u>R<sub>fetal/maternal</sub></u></b>   | <b><u>Fetal/maternal PbB ratio</u></b>             | <b><u>--</u></b>               | <b><u>0.9</u></b>   |
| <b><u>BKSF</u></b>   | <b><u>Biokinetic Slope Factor</u></b>              | <b><u>ug/dL per ug/day</u></b> | <b><u>0.4</u></b>   |
| <b><u>GSD<sub>i</sub></u></b>  | <b><u>Geometric standard deviation<br/>PbB</u></b> | <b><u>--</u></b>               | <b><u>1.8</u></b>   |
| <b><u>PbB<sub>0</sub></u></b>  | <b><u>Baseline PbB</u></b>                         | <b><u>ug/dL</u></b>            | <b><u>0.6</u></b>   |
| <b><u>IR<sub>s</sub></u></b>   | <b><u>Soil ingestion rate</u></b>                  | <b><u>g/day</u></b>            | <b><u>0.050</u></b> |
| <b><u>AF<sub>s, D</sub></u></b>  | <b><u>Absorption fraction</u></b>                  | <b><u>--</u></b>               | <b><u>0.12</u></b>  |
| <b><u>EF<sub>s, D</sub></u></b>  | <b><u>Exposure frequency</u></b>                   | <b><u>days/yr</u></b>          | <b><u>219</u></b>   |
| <b><u>AT<sub>s, D</sub></u></b>  | <b><u>Averaging time</u></b>                       | <b><u>days/yr</u></b>          | <b><u>365</u></b>   |