**Section 1100.605 Maximum Allowable Concentrations for Chemical Constituents in Uncontaminated Soils**

a) Except as provided for background concentrations in subsection (b), the maximum allowable concentrations for chemical constituents in uncontaminated soil must be determined pursuant to this subsection (a).

1) The maximum allowable concentration for a chemical constituent in uncontaminated soil will be the lowest Tier 1 chemical-specific soil value of the exposure routes for residential and construction worker receptors set forth in 35 Ill. Adm. Code 742.Appendix B, Tables A and B (e.g., soil ingestion exposure route, outdoor inhalation exposure route, soil component of the groundwater ingestion exposure route, construction worker exposure route). Class I values must be used when determining the lowest Tier 1 chemical-specific value for the soil component of the groundwater ingestion exposure route. Before making the comparison among exposure routes to determine the lowest value for ionizing organic chemical constituents and inorganic chemical constituents, the requirements of subsections (a)(2) and (a)(3) must be satisfied, as applicable.

2) For ionizing organic constituents, the lowest pH-dependent value for the soil component of the Class I groundwater ingestion exposure route in 35 Ill. Adm. Code 742.Appendix B, Table C between column range 6.25 to 6.64 and column range 8.75 to 9.0 must be substituted for the pH-neutral value provided for the soil component of the Class I groundwater ingestion exposure route in 35 Ill. Adm. Code 742.Appendix B, Table A before determining the lowest Tier 1 chemical-specific soil value pursuant to subsection (a)(1) of this Section.

3) For inorganic constituents, the remediation objectives for the soil component of the Class I groundwater ingestion exposure route in Appendix B, Tables A and B are based on the contaminant concentration resulting from an extraction test and are not directly comparable to the remediation objectives provided for the ingestion and inhalation exposure routes, which are based on total concentrations. The following values, based on total concentrations, must be substituted for the extraction test values in Table A before determining the lowest Tier 1 chemical-specific soil value pursuant to subsection (a)(1) of this Section:

A) The lowest chemical-specific, pH-dependent value for the soil component of the Class I groundwater ingestion exposure route in 35 Ill. Adm. Code 742.Appendix B, Table C between column range 6.25 to 6.64 and column range 8.75 to 9.0; or

B) For inorganic constituents that are listed in 35 Ill. Adm. Code 742.Appendix B, Table A but not in Appendix B, Table C, the extraction test values for the soil component of the groundwater ingestion exposure route in Appendix B, Table A may be multiplied by 20 (i.e., 20 liters/kilogram, the liquid to solid ratio in the extraction test assuming complete constituent leaching) to enable direct comparison with the ingestion and inhalation exposure route values. The resulting value must be substituted for the extraction test value before determining the lowest Tier 1 chemical-specific soil value pursuant to subsection (a)(1) of this Section.

4) If the lowest Tier 1 soil value for a chemical is less than the Acceptable Detection Limit (ADL), the ADL will serve as the lowest soil value.

5) The total concentration of organic contaminants may not exceed the attenuation capacity of the soil as determined in accordance with 35 Ill. Adm. Code 742.215(b)(1) and (b)(1)(A) using a default value of 2000 mg/kg for the natural organic carbon fraction (foc).

b) Background concentrations from 35 Ill. Adm. Code 742.Appendix A, Tables G and H may be used as the maximum allowable concentrations at locations specified by the tables if the most stringent exposure route value for the chemical constituent, as determined pursuant to subsection (a) of this Section, is lower than the chemical's applicable background value listed in Table G or H. The chemical's applicable background value in Table G or H must be established based on the location of the fill operation where the soil is placed.

c) For chemicals not listed in 35 Ill. Adm. Code 742.Appendix B, Table A, B or C, the values may be obtained from the Agency by making a request for chemical-specific values.

1) The Agency will develop these objectives based upon USEPA's toxicity value hierarchy as specified in OSWER Directive 9285.7-53, incorporated by reference in Section 1100.104. USEPA's Integrated Risk Management System (IRIS), incorporated by reference in Section 1100.104, is the first tier of this hierarchy.

2) Calculation of the maximum allowable concentrations must use the applicable risk-based soil screening level equations from 35 Ill. Adm. Code 742.Appendix C, Table A. Default exposure durations and contact rates from 35 Ill. Adm. Code 742.Appendix C, Table B must be used in making these calculations.

3) If the person making the request of the Agency disagrees with the Agency's decision, the person who made the request may file an appeal of the Agency's decision with the Board pursuant to Section 40(a) of the Act and 35 Ill. Adm. Code 105.

d) Other provisions of 35 Ill. Adm. Code 742 (e.g., institutional controls, engineered barriers, exposure route exclusions, site-specific evaluations, local area background calculations) may not be used to exclude or otherwise alter exposure routes or exposure route values for the purpose of determining the maximum allowable concentrations under this Part.

e) For purposes of this Part, the Agency shall publish at its website a list of chemical-specific values for maximum allowable concentrations of chemical constituents in uncontaminated soils based on the methodology for determining those values set forth in this Section. In addition, the Agency shall publish at its website a list of chemical-specific values for chemicals not listed in 35 Ill. Adm. Code 742.Appendix B, Tables A, B or C when values are calculated by the Agency in accordance with subsection (c) of this Section or of 35 Ill. Adm. Code 742.510(c).

(Source: Added at 36 Ill. Reg. 13892, effective August 27, 2012)