**Section 742.APPENDIX C Tier 2 Tables**

**Section 742.TABLE L J&E Equationsa**

|  |  |  |  |
| --- | --- | --- | --- |
| Indoor air remediation objectives (mg/m3) | For carcinogenic contaminants |  | **J&E1** |
| For noncarcinogenic contaminants |  | **J&E2** |
| To convert mg/m3 from parts per million volume |  | Note: 24.45 equals the molar volume of air in liters at normal temperature (25°C) and pressure (760 mmHg). | **J&E3** |
| Soil gas remediation objective (mg/m3) |  |  | **J&E4** |
| Soil Vapor Saturation Limit  (mg/m3-air) |  |  | **J&E5** |
| Groundwater remediation objectives |  |  | **J&E6** |
| Attenuation factor | Attenuation factor when the mode of contaminant transport is both diffusion and advection  Qsoil = 83.33 cm3/sec |  | **J&E7** |
| Attenuation factor when the mode of contaminant transport is diffusion only  Qsoil= 0 cm3/sec |  | **J&E8** |
| Total overall effective diffusion coefficient for vapor transport in porous media for multiple soil layers (cm2/s) |  |  | **J&E9a** |
| In Equation J&E9a, the following condition must be satisfied: |  | **J&E9b** |
| Source to building separation (cm) |  |  | **J&E10** |
| Effective diffusion coefficient for each soil layer (cm2/s) |  |  | **J&E11** |
| Surface area of enclosed space at or below grade (cm2) | For a building with a full concrete slab-on-grade |  | **J&E12a** |
| Surface area of enclosed space at or below grade (cm2) | For a building with a full concrete basement floor and walls |  | **J&E12b** |
| Building ventilation rate (cm3/s) |  |  | **J&E13** |
| Area of total cracks (cm2) |  |  | **J&E14** |
| Effective diffusion coefficient through the cracks (cm2/s) |  |  | **J&E15** |
| Total porosity |  |  | **J&E16** |
| Water-filled soil porosity |  |  | **J&E17** |
| Air-filled soil porosity |  |  | **J&E18** |

a This table contains equations based on the assumption that the existing or potential building has a full concrete slab-on-grade or a full concrete basement floor and walls. This table applies only when the existing or potential building has a full concrete slab-on-grade or a full concrete basement floor and walls. Institutional controls under Subpart J are required to develop remediation objectives pursuant to this table. This table does not apply when the existing or potential building has neither a full concrete slab-on-grade nor a full concrete basement floor and walls, such as a building with an earthen crawl space, an earthen floor, a stone foundation, a partial concrete floor, or a sump. In such cases, site evaluators have the option of excluding the indoor inhalation exposure route under Section 742.312, meeting the building control technology requirements under Subpart L, or proposing an alternative approach under Tier 3.

(Source: Added at 37 Ill. Reg. 7506, effective May 15, 2013)