

Title : RESRAD Default Parameters

File : FCS SOIL UNCERTAINTY ANALYSIS PU-238.RAD

Regression Coefficients for Peak All Pathways

| Description of Probabilistic Variable | Repetition = | | | 1 | | | 2 | | | 3 | | | Position |
|--|--------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | |
| Coefficient of Determination (R-squared) = | | | | 0.99 | 0.99 | 0.99 | | | | 0.92 | 0.92 | 0.92 | in |
| | PRCC | PRCC | PRCC | SRRC | SRRC | SRRC | PCC | PCC | PCC | SRC | SRC | SRC | Variable List |
| Depth of roots | -0.99 | -0.99 | -0.99 | -0.99 | -0.99 | -0.99 | -0.96 | -0.96 | -0.96 | -0.96 | -0.96 | -0.96 | 11 |
| Mass loading for inhalation | 0.26 | 0.37 | 0.31 | 0.03 | 0.04 | 0.04 | 0.10 | 0.16 | 0.06 | 0.03 | 0.05 | 0.02 | 8 |
| Indoor dust filtration factor | 0.33 | 0.30 | 0.29 | 0.04 | 0.03 | 0.03 | 0.04 | 0.12 | 0.06 | 0.01 | 0.03 | 0.02 | 9 |
| Wind Speed | -0.23 | -0.18 | -0.29 | -0.03 | -0.02 | -0.03 | -0.04 | -0.04 | -0.08 | -0.01 | -0.01 | -0.02 | 4 |
| Weathering removal constant of all vegetation | -0.07 | -0.04 | -0.11 | -0.01 | 0.00 | -0.01 | 0.00 | 0.07 | -0.06 | 0.00 | 0.02 | -0.02 | 13 |
| Wet foliar interception fraction of leafy vegetables | 0.00 | 0.07 | 0.10 | 0.00 | 0.01 | 0.01 | -0.01 | 0.03 | -0.03 | 0.00 | 0.01 | -0.01 | 14 |
| Kd of Pu-238 in Unsaturated Zone 1 | 0.06 | 0.03 | 0.03 | 0.01 | 0.00 | 0.00 | 0.05 | -0.03 | -0.06 | 0.01 | -0.01 | -0.02 | 17 |
| Humidity in air | -0.03 | -0.02 | -0.05 | 0.00 | 0.00 | -0.01 | 0.01 | 0.02 | 0.01 | 0.00 | 0.01 | 0.00 | 15 |
| Well pump intake depth | 0.02 | 0.02 | 0.04 | 0.00 | 0.00 | 0.00 | -0.04 | -0.11 | 0.07 | -0.01 | -0.03 | 0.02 | 6 |
| Kd of Pu-238 in Contaminated Zone | -0.02 | 0.02 | 0.07 | 0.00 | 0.00 | 0.01 | 0.03 | -0.03 | 0.07 | 0.01 | -0.01 | 0.02 | 16 |
| Depth of soil mixing layer | 0.00 | -0.04 | -0.04 | 0.00 | 0.00 | 0.00 | 0.03 | -0.01 | -0.03 | 0.01 | 0.00 | -0.01 | 10 |
| Kd of Pu-238 in Saturated Zone | 0.06 | 0.04 | -0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | 18 |
| Evapotranspiration coefficient | -0.02 | -0.04 | 0.00 | 0.00 | 0.00 | 0.00 | -0.02 | 0.02 | -0.01 | -0.01 | 0.01 | 0.00 | 3 |
| Contaminated zone b parameter | 0.03 | -0.02 | -0.04 | 0.00 | 0.00 | 0.00 | -0.01 | -0.03 | -0.06 | 0.00 | -0.01 | -0.02 | 2 |
| Runoff coefficient | 0.10 | -0.01 | -0.07 | 0.01 | 0.00 | -0.01 | -0.06 | 0.05 | -0.09 | -0.02 | 0.01 | -0.03 | 5 |
| b Parameter of Unsaturated zone 1 | -0.04 | 0.06 | -0.04 | 0.00 | 0.01 | 0.00 | -0.08 | -0.09 | 0.02 | -0.02 | -0.03 | 0.01 | 7 |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | -0.03 | 0.08 | -0.03 | 0.00 | 0.01 | 0.00 | -0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 12 |
| Contaminated zone erosion rate | 0.00 | -0.07 | 0.07 | 0.00 | -0.01 | 0.01 | -0.12 | -0.12 | -0.05 | -0.04 | -0.03 | -0.01 | 1 |

The coefficient of determination ranges from 0 to 1; it provides a measure of the variation in the dependent variable (Dose or Risk) that is explained by the variation in the independent variables under the assumed linear regression model.