

Title : RESRAD Default Parameters

File : FCS SOIL UNCERTAINTY ANALYSIS PU-240.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) = | | | | 0.91 | 0.94 | 0.95 | | | | 0.56 | 0.64 | 0.61 | in |
| | PRCC | PRCC | PRCC | SRRC | SRRC | SRRC | PCC | PCC | PCC | SRC | SRC | SRC | Variable List |
| Depth of roots | -0.95 | -0.97 | -0.98 | -0.95 | -0.97 | -0.97 | -0.74 | -0.79 | -0.78 | -0.73 | -0.79 | -0.78 | 11 |
| Kd of Pu-240 in Saturated Zone | -0.20 | -0.20 | -0.19 | -0.06 | -0.05 | -0.04 | -0.02 | -0.04 | -0.05 | -0.02 | -0.02 | -0.03 | 18 |
| Mass loading for inhalation | 0.14 | 0.21 | 0.18 | 0.04 | 0.05 | 0.04 | 0.05 | 0.09 | 0.05 | 0.03 | 0.05 | 0.03 | 8 |
| Kd of Pu-240 in Contaminated Zone | -0.19 | -0.13 | -0.09 | -0.06 | -0.03 | -0.02 | -0.05 | -0.05 | -0.01 | -0.03 | -0.03 | -0.01 | 16 |
| Indoor dust filtration factor | 0.08 | 0.18 | 0.15 | 0.02 | 0.04 | 0.03 | -0.03 | 0.06 | 0.01 | -0.02 | 0.03 | 0.01 | 9 |
| Runoff coefficient | -0.12 | -0.11 | -0.09 | -0.04 | -0.03 | -0.02 | -0.10 | -0.06 | -0.07 | -0.07 | -0.04 | -0.05 | 5 |
| Contaminated zone erosion rate | -0.10 | -0.09 | -0.12 | -0.03 | -0.02 | -0.03 | -0.06 | -0.05 | -0.04 | -0.05 | -0.03 | -0.02 | 1 |
| Evapotranspiration coefficient | -0.11 | -0.09 | -0.10 | -0.03 | -0.02 | -0.02 | -0.10 | -0.05 | -0.10 | -0.07 | -0.03 | -0.06 | 3 |
| Wind Speed | -0.08 | -0.09 | -0.13 | -0.03 | -0.02 | -0.03 | 0.00 | -0.01 | 0.01 | 0.00 | -0.01 | 0.01 | 4 |
| Well pump intake depth | -0.12 | -0.06 | -0.09 | -0.03 | -0.01 | -0.02 | -0.12 | -0.09 | -0.05 | -0.08 | -0.06 | -0.03 | 6 |
| Wet foliar interception fraction of leafy vegetables | 0.06 | 0.14 | 0.04 | 0.02 | 0.03 | 0.01 | 0.02 | 0.11 | 0.01 | 0.02 | 0.07 | 0.00 | 14 |
| Humidity in air | 0.00 | -0.03 | -0.10 | 0.00 | -0.01 | -0.02 | 0.02 | 0.03 | -0.03 | 0.01 | 0.02 | -0.02 | 15 |
| Depth of soil mixing layer | 0.01 | 0.03 | 0.03 | 0.00 | 0.01 | 0.01 | 0.10 | 0.00 | 0.07 | 0.07 | 0.00 | 0.04 | 10 |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | -0.01 | 0.11 | -0.05 | 0.00 | 0.03 | -0.01 | -0.02 | 0.02 | -0.06 | -0.01 | 0.01 | -0.04 | 12 |
| Weathering removal constant of all vegetation | 0.04 | 0.04 | -0.07 | 0.01 | 0.01 | -0.01 | -0.03 | 0.01 | -0.06 | -0.02 | 0.00 | -0.04 | 13 |
| Kd of Pu-240 in Unsaturated Zone 1 | 0.02 | -0.06 | 0.02 | 0.01 | -0.01 | 0.00 | -0.02 | -0.04 | -0.03 | -0.01 | -0.02 | -0.02 | 17 |
| Contaminated zone b parameter | 0.03 | -0.03 | -0.01 | 0.01 | -0.01 | 0.00 | -0.01 | -0.03 | 0.01 | -0.01 | -0.02 | 0.01 | 2 |
| b Parameter of Unsaturated zone 1 | -0.03 | 0.04 | 0.01 | -0.01 | 0.01 | 0.00 | 0.06 | 0.02 | 0.03 | 0.04 | 0.01 | 0.02 | 7 |

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.