

Title : RESRAD Default Parameters
File : FCS BURIED PIPE INSITU UA TC-99.RAD

Regression Coefficients for Peak All Pathways

| Description of Probabilistic Variable | Repetition = | | | | | | | | | | | | Position in Variable List |
|--|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------------------|
| | Coefficient of Determination (R-squared) = | | | | | | | | | | | | |
| | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | |
| | 0.69 | 0.67 | 0.66 | | | | | | | 0.54 | 0.49 | 0.55 | |
| | PRCC | PRCC | PRCC | SRRC | SRRC | SRRC | PCC | PCC | PCC | SRC | SRC | SRC | List |
| Well pump intake depth | -0.77 | -0.76 | -0.76 | -0.67 | -0.67 | -0.68 | -0.61 | -0.57 | -0.63 | -0.52 | -0.50 | -0.54 | 18 |
| Evapotranspiration coefficient | 0.58 | 0.54 | 0.56 | 0.39 | 0.37 | 0.39 | 0.56 | 0.52 | 0.56 | 0.46 | 0.43 | 0.46 | 3 |
| Kd of Tc-99 in Saturated Zone | -0.26 | -0.28 | -0.19 | -0.15 | -0.17 | -0.11 | -0.17 | -0.14 | -0.16 | -0.12 | -0.11 | -0.11 | 17 |
| Runoff coefficient | 0.23 | 0.26 | 0.20 | 0.13 | 0.15 | 0.12 | 0.20 | 0.17 | 0.15 | 0.14 | 0.12 | 0.10 | 5 |
| Depth of roots | 0.21 | 0.23 | 0.22 | 0.12 | 0.13 | 0.13 | 0.05 | 0.09 | 0.13 | 0.04 | 0.07 | 0.09 | 10 |
| Kd of Tc-99 in Contaminated Zone | 0.16 | 0.18 | 0.14 | 0.09 | 0.11 | 0.08 | 0.10 | 0.16 | 0.14 | 0.07 | 0.11 | 0.09 | 16 |
| Weathering removal constant of all vegetation | -0.08 | -0.14 | -0.09 | -0.05 | -0.08 | -0.05 | -0.10 | -0.13 | -0.05 | -0.07 | -0.09 | -0.03 | 12 |
| Contaminated zone erosion rate | -0.11 | -0.04 | -0.03 | -0.06 | -0.03 | -0.01 | -0.03 | -0.03 | 0.03 | -0.02 | -0.02 | 0.02 | 1 |
| Cover erosion rate | -0.05 | -0.02 | -0.05 | -0.03 | -0.01 | -0.03 | -0.01 | -0.08 | -0.03 | -0.01 | -0.06 | -0.02 | 15 |
| Wet weight crop yield of fruit, grain and non-leafy vegetables | -0.01 | -0.03 | -0.05 | -0.01 | -0.02 | -0.03 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 11 |
| Indoor dust filtration factor | -0.01 | -0.02 | -0.04 | -0.01 | -0.01 | -0.02 | -0.03 | -0.06 | -0.05 | -0.02 | -0.04 | -0.04 | 8 |
| Wet foliar interception fraction of leafy vegetables | -0.06 | 0.01 | -0.01 | -0.03 | 0.00 | -0.01 | -0.07 | 0.03 | -0.08 | -0.05 | 0.02 | -0.05 | 13 |
| b Parameter of Unsaturated zone 1 | -0.08 | 0.01 | 0.01 | -0.05 | 0.01 | 0.00 | -0.10 | 0.03 | 0.03 | -0.07 | 0.02 | 0.02 | 6 |
| Humidity in air | -0.01 | 0.00 | 0.05 | 0.00 | 0.00 | 0.03 | 0.03 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 14 |
| Depth of soil mixing layer | -0.07 | 0.08 | 0.03 | -0.04 | 0.04 | 0.01 | -0.07 | 0.07 | 0.00 | -0.05 | 0.05 | 0.00 | 9 |
| Wind Speed | 0.02 | -0.04 | 0.05 | 0.01 | -0.02 | 0.03 | -0.02 | -0.05 | 0.03 | -0.02 | -0.04 | 0.02 | 4 |
| Contaminated zone b parameter | -0.02 | 0.00 | 0.02 | -0.01 | 0.00 | 0.01 | -0.05 | 0.01 | 0.02 | -0.03 | 0.01 | 0.01 | 2 |
| Mass loading for inhalation | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.08 | 0.05 | -0.02 | 0.05 | 0.03 | -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.