

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	NA
Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)	NA

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., $C_{sat}$ (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	1.40E+03	1.40E+03	1.50E+05	1.40E+03

MESSAGE SUMMARY BELOW:  
 MESSAGE: The values of Csource and Cbuilding on the INTERCALC's worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN  
VERSION 3.1; 02/01

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES  X  
OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES

ENTER Initial soil conc.,  $C_0$  (ug/kg)  
100303

Chemical n-Xylene

MORE ↓

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Depth below grade to bottom of enclosed space floor, if contamination is at 145 or 200 cm ( $L_p$ )	Depth below grade to top of contamination ( $L_t$ ) (cm)	Average soil temperature, $T_s$ ( $^{\circ}$ C)	Vadose zone SCS soil type used to estimate soil vapor permeability	OR	User-defined vadose zone soil vapor permeability, $k_v$ ( $cm^2$ )
15	400	15	SC		

MORE ↓

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Vadose zone SCS soil type	Vadose zone soil dry bulk density, $\rho_b^A$ ( $g/cm^3$ )	Vadose zone soil total porosity, $n^V$ (unitless)	Vadose zone soil water-filled porosity, $\theta_w^V$ ( $cm^3/cm^3$ )	Vadose zone soil organic carbon fraction, $f_{oc}^V$ (unitless)	Average vapor flow rate into bldg. (leave blank to calculate) $C_{air}$ ( $l/m$ )
SC	1.63	0.305	0.197	0.002	5

MORE ↓

ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, noncarcinogens, ATc (yr)	Averaging time for carcinogens, noncarcinogens, ATnc (yr)	Exposure duration, ED (yr)	Exposure frequency, EF (days/yr)	Target hazard risk for carcinogens, noncarcinogens, TR (unitless)
70	30	30	350	1.0E-05

END

Used to calculate risk-based soil concentration

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	soil saturation C <sub>sat</sub> (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	2.23E+03	2.23E+03	1.54E+05	2.23E+03

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	NA

MESSAGE SUMMARY BELOW:

MESSAGE: The values of C<sub>source</sub> and C<sub>building</sub> on the INTERCALC5 worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN  
Version 3.1, 02/04

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES  X  
OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and Initial soil conc. below)

YES

ENTER ENTER  
Initial soil conc.,  
CAS No. C<sub>p</sub>  
(numbers only, μg/kg)  
NO dashes!

108303  m-Xylene

ENTER Depth below grade to bottom of enclosed space floor, L <sub>p</sub> (15 or 200 cm)	ENTER Depth below grade to top of contamination space floor, L <sub>t</sub> (cm)	ENTER Average soil temperature, T <sub>s</sub> (°C)	ENTER Vadose zone SCS soil type used to estimate soil vapor permeability	ENTER User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm <sup>2</sup> )
15	800	15	SC	

MORE ↓

ENTER Vadose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup> (g/cm <sup>3</sup> )	ENTER Vadose zone soil total porosity, n <sub>v</sub> (unitless)	ENTER Vadose zone soil water-filled porosity, θ <sub>w</sub> (cm <sup>3</sup> /cm <sup>3</sup> )	ENTER Vadose zone soil organic carbon fraction, f <sub>oc</sub> (unitless)	ENTER Average vapor flow rate into bldg. (leave blank to calculate) Q <sub>plb</sub> (L/m)
SC	1.65	0.585	0.197	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT <sub>c</sub> (Yr)	ENTER Averaging time for noncarcinogens, AT <sub>nc</sub> (Yr)	ENTER Exposure duration, ED (Yr)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	30	350	1.0E-05	1

Used to calculate risk-based soil concentration.

MORE ↓

END

RESULTS SHEET

INCREMENTAL RISK CALCULATIONS:

Incremental risk from vapor intrusion to indoor air, carcinogen (unit/less)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unit/less)
NA	NA

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen (µg/kg)	Indoor exposure soil conc., noncarcinogen (µg/kg)	Risk-based indoor exposure soil conc., (µg/kg)	Soil saturation conc., C <sub>sat</sub> (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	4.41E+03	4.41E+03	1.50E+05	4.41E+03

MESSAGE SUMMARY BELOW:  
 MESSAGE: The values of C<sub>source</sub> and C<sub>building</sub> on the INTERCALCS worksheet are based on empty and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN  
Version 3.1; 02/01

Reset to Defaults

CALCULATE RISK-BASED SOIL CONCENTRATION (enter "X" in "YES" box)

YES  X OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL SOIL CONCENTRATION (enter "X" in "YES" box and initial soil conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER initial soil conc., C <sub>i</sub> (µg/lug)	ENTER chemical
95476		O-Xylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L <sub>f</sub> (15 or 200 cm)	ENTER depth below grade to top of enclosed space floor, L <sub>t</sub> (cm)	ENTER Average soil temperature, T <sub>s</sub> (°C)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	ENTER User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm <sup>2</sup> )
15	250	15	SC	

MORE ↓

ENTER Vadose zone SCS soil type (Lookup Soil Parameters)	ENTER Vadose zone soil dry bulk density, P <sub>b</sub> <sup>A</sup> (g/cm <sup>3</sup> )	ENTER Vadose zone soil total porosity, n <sup>v</sup> (unitless)	ENTER Vadose zone soil water-filled porosity, θ <sub>w</sub> <sup>v</sup> (cm <sup>3</sup> /cm <sup>3</sup> )	ENTER Vadose zone soil organic carbon fraction, f <sub>oc</sub> (unitless)	ENTER Average vapor flow rate into bldg. (leave blank to calculate) Q <sub>avg</sub> (L/m)
SC	1.63	0.365	0.197	0.002	5

MORE ↓

ENTER Averaging time for carcinogens, AT <sub>c</sub> (yrs)	ENTER Averaging time for noncarcinogens, AT <sub>nc</sub> (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)
70	30	30	350	1.0E-05	1

Used to calculate risk-based soil concentration.

END

RESULTS SHEET

RISK-BASED SOIL CONCENTRATION CALCULATIONS:

Indoor exposure soil conc., carcinogen ( $\mu\text{g}/\text{kg}$ )	Indoor exposure soil conc., noncarcinogen ( $\mu\text{g}/\text{kg}$ )	Risk-based indoor exposure soil conc., ( $\mu\text{g}/\text{kg}$ )	Soil saturation conc., $C_{\text{sat}}$ ( $\mu\text{g}/\text{kg}$ )	Final indoor exposure soil conc., ( $\mu\text{g}/\text{kg}$ )
NA	1.48E+03	1.48E+03	1.53E+05	1.48E+03

MESSAGE SUMMARY BELOW:  
 MESSAGE: The values of Csource and Cbuilding on the INTERCALCS worksheet are based on unity and do not represent actual values.

END