

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

Chemical
CAS No.
(numbers only,
no dashes)

ENTER

Initial
soil
conc.,
 C_R
($\mu\text{g/kg}$)

Chemical

95476

o-Xylene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_t
(cm)

ENTER

Average
soil
temperature,
 T_s
($^{\circ}\text{C}$)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

15

400

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil type
Lookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	2.33E+03	2.33E+03	1.53E+05	2.33E+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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN
Version 3.1; 02/04Reset 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_R
($\mu\text{g/kg}$)

Chemical

95476

o-Xylene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F

(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_i

(cm)

ENTER

Average
soil
temperature,
 T_s

(°C)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v (cm²)

15

800

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil typeLookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A (g/cm³)

ENTER

Vadose zone
soil total
porosity,
 n^V

(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V (cm³/cm³)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V

(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate) Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C

(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}

(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	4.60E+03	4.60E+03	1.53E+05	4.60E+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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN
Version 3.1; 02/04Reset 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_R
($\mu\text{g/kg}$)

Chemical

106423

p-Xylene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_t
(cm)

ENTER

Average
soil
temperature,
 T_S
($^{\circ}\text{C}$)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

15

250

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil typeLookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	1.19E+03	1.19E+03	1.70E+05	1.19E+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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

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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

Chemical
CAS No.
(numbers only,
no dashes)

ENTER
Initial
soil
conc.,
 C_R
($\mu\text{g/kg}$)

Chemical

106423

p-Xylene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_1
(cm)

ENTER

Average
soil
temperature,
 T_S
($^{\circ}\text{C}$)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

15

400

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil type

Lookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	1.88E+03	1.88E+03	1.70E+05	1.88E+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_{source} and C_{building} on the INTERCALCS 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

Chemical
CAS No.
(numbers only,
no dashes)

ENTER

Initial
soil
conc.,
 C_R
($\mu\text{g/kg}$)

Chemical

106423

p-Xylene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_I
(cm)

ENTER

Average
soil
temperature,
 T_S
($^{\circ}\text{C}$)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

15

800

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil type

Lookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	3.72E+03	3.72E+03	1.70E+05	3.72E+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_{source} and C_{building} on the INTERCALCS 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 ☒

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_R ($\mu\text{g/kg}$)	Chemical
129000		Pyrene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to top of contamination, L_t (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	250	15	SC		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Vadose zone soil organic carbon fraction, f_{oc}^V (unitless)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SC	1.63	0.385	0.197	0.002	5

MORE
↓

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	3.24E+08	3.24E+08	2.84E+05	NOC

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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

NOC = NOT OF CONCERN. The contaminant is a solid at the soil temperature and not of concern for this pathway.

MESSAGE: Risk/HQ or risk-based soil concentration is based on a route-to-route extrapolation.

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

Chemical
CAS No.
(numbers only,
no dashes)

ENTER

Initial
soil
conc.,
 C_R
($\mu\text{g/kg}$)

Chemical

108883

Toluene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_I
(cm)

ENTER

Average
soil
temperature,
 T_S
($^{\circ}\text{C}$)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)

15

250

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil type

Lookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	2.52E+03	2.52E+03	2.65E+05	2.52E+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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN
Version 3.1; 02/04Reset 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_R
($\mu\text{g/kg}$)

Chemical

108883

Toluene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F
(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_I
(cm)

ENTER

Average
soil
temperature,
 T_S
($^{\circ}\text{C}$)

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 K_v
(cm^2)

15

400

15

SC

MORE
↓

ENTER

Vadose zone
SCS
soil typeLookup Soil
Parameters

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

SC

1.63

0.385

0.197

0.002

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(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

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	3.97E+03	3.97E+03	2.65E+05	3.97E+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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

END

DATA ENTRY SHEET

SL-SCREEN
Version 3.1; 02/04Reset 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_R
($\mu\text{g/kg}$)

Chemical

108883

Toluene

MORE
↓

ENTER

Depth
below grade
to bottom
of enclosed
space floor,
 L_F

(15 or 200 cm)

ENTER

Depth below
grade to top
of contamination,
 L_t
(cm)

800

ENTER

Average
soil
temperature,
 T_s
($^{\circ}\text{C}$)

15

ENTER

Vadose zone
SCS
soil type
(used to estimate
soil vapor
permeability)

SC

OR

ENTER

User-defined
vadose zone
soil vapor
permeability,
 k_v
(cm^2)MORE
↓

ENTER

Vadose zone
SCS
soil typeLookup Soil
Parameters

SC

ENTER

Vadose zone
soil dry
bulk density,
 ρ_b^A
(g/cm^3)

1.63

ENTER

Vadose zone
soil total
porosity,
 n^V
(unitless)

0.385

ENTER

Vadose zone
soil water-filled
porosity,
 θ_w^V
(cm^3/cm^3)

0.197

ENTER

Vadose zone
soil organic
carbon fraction,
 f_{oc}^V
(unitless)

0.002

ENTER

Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER

Averaging
time for
carcinogens,
 AT_C
(yrs)

70

ENTER

Averaging
time for
noncarcinogens,
 AT_{NC}
(yrs)

30

ENTER

Exposure
duration,
ED
(yrs)

30

ENTER

Exposure
frequency,
EF
(days/yr)

350

ENTER

Target
risk for
carcinogens,
TR
(unitless)

1.0E-05

ENTER

Target hazard
quotient for
noncarcinogens,
THQ
(unitless)

1

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 conc., C _{sat} (µg/kg)	Final indoor exposure soil conc., (µg/kg)
NA	7.82E+03	7.82E+03	2.65E+05	7.82E+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_{source} and C_{building} on the INTERCALCS worksheet are based on unity and do not represent actual values.

END