SL-SCREEN Version 3.1; 02/04	CALCULATE RISH	K-BASED SOIL CON	ICENTRATION (e	nter "X" in "YES" bo	x)		
Reset to Defaults	CALCULATE INC	YES	X OR FROM ACTUAL S	OIL CONCENTRAT	"ION (enter "X" in	"YES" box and initia	I soil conc. below)
	0,1200211211101	YES	1101117107120	1	.0.1 (0.110) 7/ 11	TEO DOX GIRO IIIMO	
	ENTER	ENTER Initial					
	Chemical CAS No.	soil conc.,					
	(numbers only, no dashes)	С <sub>в</sub> (µg/kg)		Chemical			
	95476			o-Xylene			
	ENTER	ENTER	ENTER	ENTER		ENTER	7
MORE V	Depth below grade to bottom of enclosed space floor, L <sub>F</sub> (15 or 200 cm)	Depth below grade to top of contamination, L <sub>t</sub> (cm)	Average soil temperature, T <sub>S</sub> (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm <sup>2</sup> )	
	15	400	15	SC	= = 7 [	(GIII )	
	ENTER	ENTER	ENTER	ENTER	ENTER		ENTER
MORE ↓	Vandose zone SCS soil type	Vadose zone soil dry bulk density, ρ <sub>b</sub> <sup>A</sup>	Vadose zone soil total porosity,	Vadose zone soil water-filled porosity, θ <sub>w</sub> <sup>V</sup>	Vadose zone soil organic carbon fraction, f <sub>∞</sub> <sup>V</sup>		Average vapor flow rate into bldg. (Leave blank to calculate)
	Lookup Soil Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		Q <sub>soil</sub> (L/m)
	SC	1.63	0.385	0.197	0.002		5
MORE	ENTER Averaging	ENTER Averaging	ENTER	ENTER	ENTER Target	ENTER Target hazard	
Ψ.	time for carcinogens, AT <sub>c</sub>	time for noncarcinogens, AT <sub>NC</sub>	Exposure duration, ED	Exposure frequency, EF	risk for carcinogens, TR	quotient for noncarcinogens, THQ	
	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)	=
	70	30	30	350	1.0E-05	1 culate risk-based	
END						ncentration.	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

# INCREMENTAL RISK 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	2.33E+03	2.33E+03	1.53E+05	2.33E+03	

(unitless)
noncarcinogen
indoor air,
intrusion to
from vapor
quotient
Hazard

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

SL\_oXy\_RiskBased\_4m 1 of 1

SL-SCREEN Version 3.1; 02/04	CALCULATE RISI	K-BASED SOIL COM	NCENTRATION (e	nter "X" in "YES" bo	x)		
Reset to Defaults	CALCULATE INC	YES	X OR FROM ACTUAL S	OIL CONCENTRAT	TION (enter "X" in	"YES" box and initia	al soil conc. below)
		YES		]			
	Chemical CAS No. (numbers only,	ENTER Initial soil conc., C <sub>B</sub>					
	no dashes)	(μg/kg)		Chemical			
	95476			o-Xylene			
MORE	ENTER Depth	ENTER	ENTER	ENTER		ENTER	7
,	below grade to bottom of enclosed space floor, L <sub>F</sub> (15 or 200 cm)	Depth below grade to top of contamination, L <sub>t</sub> (cm)	Average soil temperature, T <sub>S</sub> (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR =	User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm <sup>2</sup> )	
	15	800	15	SC	T		$\exists$
	FNTED	ENTER	ENTED	FAITER	ENTED		FAITED
MORE ↓	ENTER Vandose zone SCS soil type	ENTER Vadose zone soil dry bulk density,	Vadose zone soil total porosity,	Vadose zone soil water-filled porosity,	Vadose zone soil organic carbon fraction,		ENTER Average vapor flow rate into bldg. (Leave blank to calculate
	Lookup Soil Parameters	Pb <sup>A</sup>	n <sup>V</sup>	$\theta_w^V$	f <sub>oc</sub> V		Q <sub>soil</sub>
	Farameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		(L/m)
	SC	1.63	0.385	0.197	0.002		5
	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
MORE	Averaging	Averaging	ENIER	ENIER	Target	Target hazard	
Ψ	time for	time for	Exposure duration,	Exposure frequency,	risk for	quotient for	
	carcinogens, AT <sub>C</sub>	noncarcinogens, AT <sub>NC</sub>	ED	EF	carcinogens, TR	noncarcinogens, THQ	
	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)	_
	70	30	30	350	1.0E-05	_1	
					Used to cal	culate risk-based	
FND						ncentration	

## RISK-BASED SOIL CONCENTRATION CALCULATIONS:

## INCREMENTAL RISK 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)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	4.60E+03	4.60E+03	1.53E+05	4.60E+03	] NA	NA

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

SL\_oXy\_RiskBased\_8m 1 of 1

SL-SCREEN Version 3.1; 02/04	CALCULATE RISI	K-BASED SOIL CON	NCENTRATION (e	nter "X" in "YES" bo	x)		
Reset to		YES	X OR	]			
Defaults	CALCULATE INC	REMENTAL RISKS	FROM ACTUAL S	OIL CONCENTRAT	TION (enter "X" in	'YES" box and initia	al soil conc. below)
		YES		]			
	ENTER	ENTER					
	01	Initial					
	Chemical CAS No.	soil					
	(numbers only,	conc.,					
	no dashes)	C <sub>R</sub> (μg/kg)		Chemical			
	no dasnes)	(µg/ng)		Chemical			
	106423			p-Xylene			
							_
MORE	ENTER	ENTER	ENTER	ENTER		ENTER	
WORE	Depth below grade			Vadose zone		User-defined	
	to bottom	Depth below	Average	SCS		vadose zone	
	of enclosed	grade to top	soil	soil type		soil vapor	
	space floor,	of contamination,	temperature,	(used to estimate	OR	permeability,	
	L <sub>F</sub>	L <sub>t</sub>	Ts	soil vapor		, k <sub>v</sub>	
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )	
	(10 01 000 011)	(311)		pomiousiny)	= :=		_
	15	250	15	SC			
1	ENTER	ENTER	ENTER	ENTER	ENTER		ENTER
MORE	Vandose zone	Vadose zone	Vadose zone	Vadose zone	Vadose zone		Average vapor
Ψ	SCS	soil dry	soil total	soil water-filled	soil organic		flow rate into bldg.
	soil type	bulk density,	porosity,	porosity,	carbon fraction,		(Leave blank to calculate
	Lookup Soil	$\rho_b^{A}$	n <sup>v</sup>	$\theta_w^V$	f <sub>oc</sub> V		$Q_{soil}$
	Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		(L/m)
	SC	1.63	0.385	0.197	0.002		5
		1.03	0.363	0.197	0.002		5
	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	
MORE	Averaging	Averaging			Target	Target hazard	
4	time for	time for	Exposure	Exposure	risk for	quotient for	
<del>:</del>	carcinogens,	noncarcinogens,	duration,	frequency,	carcinogens,	noncarcinogens,	
	ATc	AT <sub>NC</sub>	ED	EF	TR	THQ	
	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)	
	70	30	30	350	1.0E-05	1	
			V-7				
END						culate risk-based ncentration.	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

# INCREMENTAL RISK 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)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
NA	1.19E+03	1.19E+03	1.70E+05	1.19E+03	NA	NA NA

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

1 of 1 SL\_pXy\_RiskBased\_2.5m

SL-SCREEN Version 3.1; 02/04	CALCULATE RISH	K-BASED SOIL CON	ICENTRATION (e	nter "X" in "YES" bo	x)		
Reset to Defaults	CALCULATE INCF	YES	X OR FROM ACTUAL S	OIL CONCENTRAT	ION (enter "X" in	"YES" box and initia	al soil conc. below)
		YES		]			30, 20 million 1995 submitted to 4 million 1995 €
	ENTER Chemical	ENTER Initial soil					
	CAS No.	conc.,					
	(numbers only, no dashes)	C <sub>R</sub> (μg/kg)		Chemical			
	110 dasiles)	(μg/kg)		Chemical			
	106423			p-Xylene			
- MODE	ENTER	ENTER	ENTER	ENTER		ENTER	7
MORE ↓	Depth below grade to bottom of enclosed space floor,	Depth below grade to top of contamination,	Average soil temperature,	Vadose zone SCS soil type (used to estimate	OR	User-defined vadose zone soil vapor permeability,	
	L <sub>F</sub>	L	Ts	soil vapor	0.,	k <sub>v</sub>	
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )	
	15	400	15	SC	- ] [		7
	ENTER	ENTER	ENTER	ENTER	ENTER		ENTER
MORE 🗸	Vandose zone SCS	Vadose zone soil dry	Vadose zone soil total	Vadose zone soil water-filled	Vadose zone soil organic		Average vapor flow rate into bldg.
	soil type	bulk density,	porosity.	porosity,	carbon fraction,		(Leave blank to calculate)
	Lookup Soil	$\rho_b^A$	n <sup>v</sup>	$\theta_{w}^{V}$	f <sub>oc</sub> V		Q <sub>soil</sub>
	Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		(L/m)
	SC	1.63	0.385	0.197	0.002		5
	30	1.03	0.365	0.197	0.002		5
MORE	ENTER Averaging	ENTER Averaging	ENTER	ENTER	ENTER Target	ENTER Target hazard	
₩.J.	time for	time for	Exposure	Exposure	risk for	quotient for	
·	carcinogens,	noncarcinogens,	duration,	frequency,	carcinogens,	noncarcinogens,	
	AT <sub>C</sub>	AT <sub>NC</sub>	ED	EF	TR	THQ	
	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)	_
	70	30	30	350	1.0E-05	1	
END						culate risk-based	
END					SOII CO	niceillation.	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

# INCREMENTAL RISK CALCULATIONS:

Hazard quotient from vapor intrusion to indoor air,

						Incremental	Hazard
	Indoor	Indoor	Risk-based		Final	risk from	quotient
	exposure	exposure	indoor	Soil	indoor	vapor	from vapor
	soil	soil	exposure	saturation	exposure	intrusion to	intrusion to
	conc.,	conc.,	soil	conc.,	soil	indoor air,	indoor air,
	carcinogen	noncarcinogen	conc.,	$C_{sat}$	conc.,	carcinogen	noncarcinogen
	(μg/kg)	(μg/kg)	(μg/kg)	(μg/kg)	(μg/kg)	(unitless)	(unitless)
1							
	NA	1.88E+03	1.88E+03	1.70E+05	1.88E+03	NA NA	NA
	NA	1.88E+03	1.88E+03	1.70E+05	1.88E+03	NA NA	NA NA

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

SL\_pXy\_RiskBased\_4m 1 of 1

SL-SCREEN Version 3.1; 02/04	CALCULATE RISH	K-BASED SOIL CON	NCENTRATION (e	nter "X" in "YES" bo	x)		
Reset to Defaults	CALCULATE INC	YES DEMENTAL DISKS	OR EDOM ACTUAL S	OIL CONCENTRAT	TON (optor "V" in	"VES" have and initia	al asil sono bolow)
	CALCULATE INCR	YES	FHOM ACTUAL 3	]	ION (enter X III	TES DOX AND INITIA	ar soil conc. below)
	ENTER Chemical CAS No.	ENTER Initial soil conc.,					
	(numbers only, no dashes)	C <sub>R</sub> (μg/kg)		Chemical			
	106423			p-Xylene			
MORE	ENTER Depth	ENTER	ENTER	ENTER		ENTER	٦
Ψ	below grade to bottom of enclosed space floor, L <sub>F</sub> (15 or 200 cm)	Depth below grade to top of contamination, L <sub>t</sub> (cm)	Average soil temperature, T <sub>S</sub> (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm <sup>2</sup> )	
	15	800	15	SC			_
MORE V	ENTER Vandose zone SCS	ENTER Vadose zone soil dry	ENTER Vadose zone soil total	ENTER Vadose zone soil water-filled	ENTER Vadose zone soil organic		ENTER Average vapor flow rate into bldg.
	soil type Lookup Soil	bulk density, ρ <sub>b</sub> <sup>A</sup>	porosity, n <sup>V</sup>	porosity, θ <sub>w</sub> <sup>V</sup>	carbon fraction, f <sub>∞</sub> <sup>V</sup>		(Leave blank to calculate Q <sub>soil</sub>
	Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		(L/m)
	SC	1.63	0.385	0.197	0.002		5
MORE \$\psi\$	ENTER Averaging time for	ENTER Averaging time for	<b>ENTER</b> Exposure	ENTER Exposure	ENTER Target risk for	ENTER Target hazard quotient for	
	carcinogens,	noncarcinogens, AT <sub>NC</sub>	duration, ED	frequency,	carcinogens,	noncarcinogens,	
	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)	_
	70	30	30	350	1.0E-05	1	
END						culate risk-based ncentration.	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

# INCREMENTAL RISK CALCULATIONS:

Hazard quotient

from vapor intrusion to indoor air, noncarcinogen (unitless)

Indoor exposure soil conc., carcinogen n (µg/kg)	Indoor exposure soil conc., oncarcinogen (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)	risk from vapor intrusion to indoor air, carcinogen (unitless)
--	---	---	---	--	---

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

SL\_pXy\_RiskBased\_8m 1 of 1

SL-SCREEN Version 3.1; 02/04	CALCULATE RISH	K-BASED SOIL CON	CENTRATION (	enter "X" in "YES" bo	x)		
Reset to Defaults	CALCULATE INCR	YES REMENTAL RISKS	X OR FROM ACTUAL S	OIL CONCENTRAT	TION (enter "X" in	"YES" box and initia	al soil conc. below)
		YES		1			
	Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C <sub>R</sub> (μg/kg)		Chemical			
	129000			Pyrene			
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 contamination,  L <sub>t</sub> (cm)	Average soil temperature, Ts (°C)	Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR =	User-defined vadose zone soil vapor permeability, k, (cm²)	
	15	250	15	SC			_
MORE ¥	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, ph (g/cm³)	ENTER Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$	ENTER Vadose zone soil organic carbon fraction, fov (unitless)		ENTER Average vapor flow rate into bldg. Leave blank to calculate) Q <sub>sol</sub> (L/m)
	SC	1.63	0.385	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	
END					The second secon	culate risk-based	

## RISK-BASED SOIL CONCENTRATION CALCULATIONS:

## INCREMENTAL RISK 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)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinoge (unitless)
NA	3.24E+08	3.24E+08	2.84E+05	NOC	NA	l NA

MESSAGE SUMMARY BELOW:

MESSAGE: The values of Csource and Cbuilding 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.

1 of 1

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

END

SL\_Pyr\_RiskBased\_2.5m

SL-SCREEN Version 3.1; 02/04	CALCULATE RISH	(-BASED SOIL CON	ICENTRATION (e	nter "X" in "YES" bo	ox)		
Reset to		YES	X OR	]			
Defaults	CALCULATE INC	REMENTAL RISKS	FROM ACTUAL S	OIL CONCENTRAT	TION (enter "X" in '	"YES" box and initia	al soil conc. below)
		YES					
	ENTER	ENTER Initial					
	Chemical	soil					
	CAS No. (numbers only,	conc., C <sub>B</sub>					
	no dashes)	(μg/kg)		Chemical			
	Tio addition	(69.197		Cricinida			
	108883			Toluene			
	ENTER	ENTER	ENTER	ENTER		ENTER	_
MORE	Depth						
4	below grade	765 - 778 V V		Vadose zone		User-defined	
	to bottom of enclosed	Depth below grade to top	Average soil	SCS soil type		vadose zone soil vapor	1
	space floor,	of contamination,	temperature,	(used to estimate	OR	permeability,	
	L <sub>F</sub>	L	Ts	soil vapor		k <sub>v</sub>	
	(15 or 200 cm)	(cm)	(°C)	permeability)		(cm <sup>2</sup> )	
					_		
	15	250	15	SC			
	ENTER	ENTER	ENTER	ENTER	ENTER		ENTER
MORE	Vandose zone	Vadose zone	Vadose zone	Vadose zone	Vadose zone		Average vapor
Ψ	SCS	soil dry	soil total	soil water-filled	soil organic		flow rate into bldg.
	soil type	bulk density,	porosity, n <sup>V</sup>	porosity,	carbon fraction,		(Leave blank to calculate)
	Lookup Soil Parameters	$\rho_b^A$		$\theta_w^{v}$	$f_{oc}^{V}$		$Q_{soil}$
	T didilictors	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		(L/m)
	SC	1.63	0.385	0.197	0.002		5
		1.03	0.005	0.107	0.002		
MORE	ENTER Averaging	ENTER Averaging	ENTER	ENTER	ENTER Target	ENTER Target hazard	
WORL	time for	time for	Exposure	Exposure	risk for	quotient for	
	carcinogens,	noncarcinogens,	duration,	frequency,	carcinogens,	noncarcinogens,	
	ATC	AT <sub>NC</sub>	ED	EF	TR	THQ	
	(yrs)	(yrs)	(yrs)	(days/yr)	(unitless)	(unitless)	_
	70	30	30	350	1.0E-05	1	
					Lload to sel	culate risk-based	
END						ncentration.	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

# INCREMENTAL RISK CALCULATIONS:

Indoor	Indoor	Risk-based	Soil saturation conc.,	Final	risk from	quotient
exposure	exposure	indoor		indoor	vapor	from vapor
soil	soil	exposure		exposure	intrusion to	intrusion to
conc.,	conc.,	soil		soil	indoor air,	indoor air,
carcinogen	noncarcinogen	conc.,	C <sub>sat</sub>	conc.,	carcinogen (unitless)	noncarcinoger
(μg/kg)	(μg/kg)	(μg/kg)	(μg/kg)	(μg/kg)		(unitless)
NA	2.52E+03	2.52E+03	2.65E+05	2.52E+03	NA	l NA

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

SL-SCREEN Version 3.1; 02/04	CALCULATE RISE	K-BASED SOIL CON	NCENTRATION (e	nter "X" in "YES" bo	ox)		
Reset to Defaults		YES	OR OR	]			
Delaults	CALCULATE INCI	REMENTAL RISKS YES	FROM ACTUAL S	OIL CONCENTRAT	ΓΙΟΝ (enter "X" in	"YES" box and initia	al soil conc. below)
	ENTER  Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C <sub>R</sub> (µg/kg)		Chemical			
	108883			Toluene			
MORE ↓	Depth below grade to bottom of enclosed space floor, L <sub>F</sub> (15 or 200 cm)	ENTER  Depth below grade to top of contamination, L <sub>t</sub> (cm)	ENTER  Average soil temperature, Ts (°C)	ENTER  Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm²)	
	15	400	15	SC			
MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, $\rho_b^A$	ENTER Vadose zone soil total porosity, n <sup>V</sup>	ENTER Vadose zone soil water-filled porosity, $\theta_w^V$	ENTER  Vadose zone soil organic carbon fraction,  foc  V		ENTER  Average vapor flow rate into bldg. (Leave blank to calculate Qooil
	Parameters	(g/cm <sup>3</sup> )	(unitless)	(cm <sup>3</sup> /cm <sup>3</sup> )	(unitless)		(L/m)
	SC	1.63	0.385	0.197	0.002		5
MORE ↓	ENTER Averaging time for carcinogens, ATc (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	
FND					A 25% (EVAL) - 0.7 (EVA.) (EVAL) - 2.7 (EVA.)	culate risk-based	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

# INCREMENTAL RISK 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)	Incremental risk from vapor intrusion to indoor air, carcinogen (unitless)	Hazard quotient from vapor intrusion to indoor air, noncarcinogen (unitless)
--	---	--	---	---	---	--	--

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

SL\_Tol\_RiskBased\_4m

1 of 1

SL-SCREEN Version 3.1; 02/04 Reset to Defaults	CALCULATE INCF	YES  REMENTAL RISKS  YES	X OR	]		'YES" box and initia	al soil conc. below)
	Chemical CAS No. (numbers only, no dashes)	ENTER Initial soil conc., C <sub>R</sub> (µg/kg)		Chemical			
	108883			Toluene			
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 contamination, L <sub>1</sub> (cm)	ENTER  Average soil temperature, Ts (°C)	ENTER  Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR =	User-defined vadose zone soil vapor permeability, k <sub>v</sub> (cm²)	
	15	800	15	SC			
MORE ↓	ENTER Vandose zone SCS soil type Lookup Soil Parameters	ENTER Vadose zone soil dry bulk density, pb <sup>A</sup> (g/cm³)	ENTER Vadose zone soil total porosity, n <sup>V</sup> (unitless)	ENTER  Vadose zone soil water-filled porosity, $\theta_w^V$ $(cm^3/cm^3)$	ENTER  Vadose zone soil organic carbon fraction, foc (unitless)		ENTER  Average vapor flow rate into bldg. (Leave blank to calculate)  Q <sub>soil</sub> (L/m)
	SC	1.63	0.385	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	
END					ACCOMMON STREET	culate risk-based ncentration.	

# RISK-BASED SOIL CONCENTRATION CALCULATIONS:

## INCREMENTAL RISK CALCULATIONS:

Hazard
quotient
from vapor
intrusion to
indoor air,
noncarcinogen
(unitless)

Indoor	Indoor	Risk-based	Soil saturation conc.,	Final	risk from
exposure	exposure	indoor		indoor	vapor
soil	soil	exposure		exposure	intrusion to
conc.,	conc.,	soil		soil	indoor air.
carcinogen	noncarcinogen	conc.,	C <sub>sat</sub>	conc.,	carcinogen (unitless)
(μg/kg)	(µg/kg)	(µg/kg)	(μg/kg)	(µg/kg)	
NA	7.82E+03	7.82E+03	2.65E+05	7.82E+03	NA

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

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