

TABLE T-17
EXPOSURE PARAMETERS: TRESPASSER (11-17 yrs old)
VALUES USED FOR EVALUATION OF LEAD IN SOIL

Exposure Route	Parameter Code	Parameter Definition	Units	RME Value	RME Rationale/ Reference	Intake Equations
General Parameters	Cs	Chemical Concentration in Soil/Sediment	mg/kg or ug/g	chem-specific	--	
	EF	Exposure Frequency	days/week	0.033	assume once a month (12/year)	
	ED	Exposure Duration	years	7	assume 11-17 yr olds	
	BW	Body Weight	kilograms	53.8	Cal-EPA 2000/USEPA 1997	
Incidental Ingestion	IR-S	Ingestion Rate of Soil/Sediment	mg/day	100	Cal-EPA 2000	Lead Spread Version 7
	IR-W	Ingestion Rate of Drinking Water	l/kg-bw/day	0.013	Cal-EPA 2000	
			l/day	0.70	= 0.013 x 53.8 kg	
	IngC	Ingestion Constant	(ug/dL)/(ug/day)	0.16 ^a	Ryu, et al. 1983 in Lead Spread v7	
IR-F	Ingestion Rate of Food	kg/day	1.9	assume default adult value from Lead Spread v7		
Dermal Contact	SA	Surface Area Available for Contact	cm ²	4,600 ^b	USEPA 1997	Lead Spread Version 7
	AF	Adherence Factor	ug/cm ²	200	USEPA 2002	
Outdoor Air Inhalation	IR-A	Inhalation Rate	m ³ /day	12.5 ^c	Cal-EPA 2000	Lead Spread Version 7
	InhC	Inhalation Constant	(ug/dL)/(ug/day)	0.192 ^d	USEPA 1986 in Lead Spread v7	

NOTES:

na: not applicable; -- not available

a) Default value for children in Lead Spread version 7, which is more conservative for 11-17 year olds than the adult default value of 0.04.

b) Value is the 25% adjusted 95th percentile total surface area for children 11 to 17 years old (USEPA, 1997).

c) Value is the mean inhalation rate for adult males and females (>12 yrs old) (CalEPA, 1996).

d) Default value for children in Lead Spread version 7, which is more conservative for 11-17 year olds than the adult default value of 0.08.

Sources: Cal-EPA 2000. Air Toxics Hot Spots Program Risk Assessment Guidelines Part IV. Technical Support Document, Exposure Assessment and Stochastic Analysis. September.

USEPA 1997. Exposure Factors Handbook. Volumes I-III. An update to Exposure Factors Handbook EPA/600/8-89/043-May 1989. EPA/600/P-95-002Fa. August.

USEPA 2002. Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.