Table 3-2e
Development of Risk-Based Concentrations (RBCs)
Calculation of Blood Lead Level
Upland and Non-Tidal Wetland Areas
Investigation Area H1 Feasibility Study
Mare Island, Vallejo, California

LEAD RISK ASSESSMENT SPREADSHEET
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

USER'S GUIDE to version 7

INPUT		OUTPUT							
MEDIUM	LEVEL		Percentile Estimate of Blood Pb (ug/dl)					PRG-99	PRG-95
Lead in Air (ug/m^3)	0.028		50th	90th	95th	98th	99th	(ug/g)	(ug/g)
Lead in Soil/Dust (ug/g)	228	BLOOD Pb, CHILD RECREATOR	1.4	2.6	3.0	3.7	4.2	547	758
Respirable Dust (ug/m^3)	1.5	BLOOD Pb, CONSTRUCTION WORKER	1.0	1.8	2.1	2.6	3.0	785	1089

EXPOSURE PARAMETERS

	units	Adult Construction Worker	Child Recreator
Days per week	days/wk	3	
Days per week, Construction Worker		5	
Geometric Standard Deviation		1.6	
Blood lead level of concern (ug/dl)		10	
Skin area, recreational child	cm^2	NA	4590
Skin area, construction worker	cm^2	3300	
Soil adherence	ug/cm^2	300	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001	
Soil ingestion	mg/day	330	200
Ingestion constant	(ug/dl)/(ug/day)	0.04	0.16
Bioavailability	unitless	0.44	
Breathing rate	m^3/day	20	11.1
Inhalation constant	(ug/dl)/(ug/day)	0.082	0.192
Water ingestion	l/day	1.4	0.4
Food ingestion	kg/day	1.9	1.1

PATHWAYS

ADULT CONSTRUCTION WORKER	Occupational		
	Pathway contribution		
Pathway	PEF	ug/dl	percent
Soil Contact	6.8E-5	0.02	2%
Soil Ingestion	4.1E-3	0.95	95%
Inhalation, bkgrnd		0.03	3%
Inhalation	1.8E-6	0.00	0%
CHILD RECREATOR	typical		
	Pathway contribution		
Pathway	PEF	ug/dl	percent
Soil Contact	3.8E-5	0.01	1%
Soil Ingestion	6.0E-3	1.38	98%
Inhalation	1.4E-6	0.00	0%
Inhalation, bkgrnd		0.03	2%