APPENDIX 8.7
Leadspread Modeling Results

TABLE 8.7.1
COMMERCIAL WORKER
ON-SITE LEAD EXPOSURE
MISSION BAY LANDFILL
SEA WORLD DRIVE
SAN DIEGO, CALIFORNIA

INPUT	
MEDIUM	LEVEL
Lead in Air (ug/m^3)	0.028
Lead in Soil/Dust (ug/g)	10.4
Lead in Water (ug/l)	0
% Home-grown Produce	0%
Respirable Dust (ug/m^3)	1.5

OUTPUT							
	Percentile Estimate of Blood Pb (ug/dl)					PRG-99	PRG-95
	50th	90th	95th	98th	99th	(ug/g)	(ug/g)
BLOOD Pb, ADULT	0.2	0.4	0.5	0.6	0.7	NA	NA
BLOOD Pb, OCCUPATIONA	0.3	0.5	0.6	0.7	0.8	NA	NA

EXPOSURE PARAMETERS		
	units	adults
Days per week	days/wk	0
Days per week, occupational		5
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		10
Skin area, residential	cm^2	0
Skin area occupational	cm^2	5700
Soil adherence	ug/cm^2	70
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	50
Soil ingestion, pica	mg/day	
Ingestion constant	(ug/dl)/(ug/day)	0.04
Bioavailability	unitless	0.44
Breathing rate	m^3/day	20
Inhalation constant	(ug/dl)/(ug/day)	0.082
Water ingestion	l/day	0
Food ingestion	kg/day	1.9
Lead in market basket	ug/kg	3.1
Lead in home-grown produce	ug/kg	0.0

PATHWAYS						
ADULTS	Residential			Occupational		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	0.0E+0	0.00	0%	2.7E-5	0.00	0%
Soil Ingestion	0.0E+0	0.00	0%	6.3E-4	0.01	2%
Inhalation, bkgrnd		0.00	0%		0.03	12%
Inhalation	0.0E+0	0.00	0%	1.8E-6	0.00	0%
Water Ingestion		0.00	0%		0.00	0%
Food Ingestion, bkgrnd		0.23	100%		0.23	85%
Food Ingestion	0.0E+0	0.00	0%			0%

TABLE 8.7.2
CONSTRUCTION WORKER
ON-SITE LEAD EXPOSURE
MISSION BAY LANDFILL
SEA WORLD DRIVE
SAN DIEGO, CALIFORNIA

INPUT	
MEDIUM	LEVEL
Lead in Air (ug/m^3)	0.028
Lead in Soil/Dust (ug/g)	20.8
Lead in Water (ug/l)	0
% Home-grown Produce	0%
Respirable Dust (ug/m^3)	1.5

OUTPUT							
	Percentile Estimate of Blood Pb (ug/dl)					PRG-99	PRG-95
	50th	90th	95th	98th	99th	(ug/g)	(ug/g)
BLOOD Pb, ADULT	0.2	0.4	0.5	0.6	0.7	NA	NA
BLOOD Pb, OCCUPATIONAL	0.4	0.6	0.8	0.9	1.1	NA	NA

EXPOSURE PARAMETERS		
	units	adults
Days per week	days/wk	0
Days per week, occupational		5
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		10
Skin area, residential	cm^2	0
Skin area occupational	cm^2	5700
Soil adherence	ug/cm^2	70
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	330
Soil ingestion, pica	mg/day	
Ingestion constant	(ug/dl)/(ug/day)	0.04
Bioavailability	unitless	0.44
Breathing rate	m^3/day	20
Inhalation constant	(ug/dl)/(ug/day)	0.082
Water ingestion	l/day	0
Food ingestion	kg/day	1.9
Lead in market basket	ug/kg	3.1
Lead in home-grown produce	ug/kg	0.0

PATHWAYS						
ADULTS	Residential			Occupational		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	0.0E+0	0.00	0%	2.7E-5	0.00	0%
Soil Ingestion	0.0E+0	0.00	0%	4.1E-3	0.09	24%
Inhalation, bkgrnd		0.00	0%		0.03	9%
Inhalation	0.0E+0	0.00	0%	1.8E-6	0.00	0%
Water Ingestion		0.00	0%		0.00	0%
Food Ingestion, bkgrnd		0.23	100%		0.23	66%
Food Ingestion	0.0E+0	0.00	0%			0%

TABLE 8.7.3
ADULT AND CHILD RECREATIONAL USER
ON-SITE LEAD EXPOSURE
MISSION BAY LANDFILL
SEA WORLD DRIVE
SAN DIEGO, CALIFORNIA

INPUT	
MEDIUM	LEVEL
Lead in Air (ug/m^3)	0.028
Lead in Soil/Dust (ug/g)	10.4
Lead in Water (ug/l)	0
% Home-grown Produce	0%
Respirable Dust (ug/m^3)	1.5

OUTPUT							
	Percentile Estimate of Blood Pb (ug/dl)					PRG-99	PRG-95
	50th	90th	95th	98th	99th	(ug/g)	(ug/g)
BLOOD Pb, ADULT	0.2	0.4	0.5	0.6	0.7	4033	5695
BLOOD Pb, CHILD	0.6	1.1	1.3	1.6	1.8	439	640
BLOOD Pb, PICA CHILD	0.6	1.1	1.3	1.6	1.8	439	640
BLOOD Pb, OCCUPATIONAL	0.2	0.4	0.5	0.6	0.7	NA	NA

EXPOSURE PARAMETERS			
	units	adults	children
Days per week	days/wk	3	
Days per week, occupational		0	
Geometric Standard Deviation		1.6	
Blood lead level of concern (ug/dl)		10	
Skin area, residential	cm^2	5700	2800
Skin area occupational	cm^2	0	
Soil adherence	ug/cm^2	70	3000
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001	
Soil ingestion	mg/day	100	200
Soil ingestion, pica	mg/day		200
Ingestion constant	(ug/dl)/(ug/day)	0.04	0.16
Bioavailability	unitless	0.44	
Breathing rate	m^3/day	3	2
Inhalation constant	(ug/dl)/(ug/day)	0.082	0.192
Water ingestion	l/day	0	0
Food ingestion	kg/day	1.9	1.1
Lead in market basket	ug/kg	3.1	
Lead in home-grown produce	ug/kg	0.0	

PATHWAYS						
ADULTS	Residential			Occupational		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	1.6E-5	0.00	0%	0.0E+0	0.00	0%
Soil Ingestion	7.5E-4	0.01	3%	0.0E+0	0.00	0%
Inhalation, bkgrnd		0.00	1%		0.00	0%
Inhalation	1.6E-7	0.00	0%	0.0E+0	0.00	0%
Water Ingestion		0.00	0%		0.00	0%
Food Ingestion, bkgrnd		0.23	96%		0.23	100%
Food Ingestion	0.0E+0	0.00	0%			0%

CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	3.5E-4	0.00	1%		0.00	1%
Soil Ingestion	6.0E-3	0.06	10%	6.0E-3	0.06	10%
Inhalation	2.5E-7	0.00	0%		0.00	0%
Inhalation, bkgrnd		0.00	1%		0.00	1%
Water Ingestion		0.00	0%		0.00	0%
Food Ingestion, bkgrnd		0.54	88%		0.54	88%
Food Ingestion	0.0E+0	0.00	0%		0.00	0%

TABLE 8.7.4
TRANSIENT
ON-SITE LEAD EXPOSURE
MISSION BAY LANDFILL
SEA WORLD DRIVE
SAN DIEGO, CALIFORNIA

INPUT	
MEDIUM	LEVEL
Lead in Air (ug/m^3)	0.028
Lead in Soil/Dust (ug/g)	10.4
Lead in Water (ug/l)	0
% Home-grown Produce	0%
Respirable Dust (ug/m^3)	1.5

OUTPUT							
	Percentile Estimate of Blood Pb (ug/dl)					PRG-99	PRG-95
	50th	90th	95th	98th	99th	(ug/g)	(ug/g)
BLOOD Pb, ADULT	0.3	0.6	0.7	0.8	0.9	NA	NA
BLOOD Pb, OCCUPATIONAL	0.2	0.4	0.5	0.6	0.7	NA	NA

EXPOSURE PARAMETERS		
	units	adults
Days per week	days/wk	7
Days per week, occupational		
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		10
Skin area, residential	cm^2	5700
Skin area occupational	cm^2	
Soil adherence	ug/cm^2	800
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	
Ingestion constant	(ug/dl)/(ug/day)	0.04
Bioavailability	unitless	0.44
Breathing rate	m^3/day	20
Inhalation constant	(ug/dl)/(ug/day)	0.082
Water ingestion	l/day	0
Food ingestion	kg/day	1.9
Lead in market basket	ug/kg	3.1
Lead in home-grown produce	ug/kg	0.0

PATHWAYS						
ADULTS	Residential			Occupational		
Pathway	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	4.4E-4	0.00	2%	0.0E+0	0.00	0%
Soil Ingestion	1.8E-3	0.02	6%	0.0E+0	0.00	0%
Inhalation, bkgrnd		0.05	15%		0.00	0%
Inhalation	2.5E-6	0.00	0%	0.0E+0	0.00	0%
Water Ingestion		0.00	0%		0.00	0%
Food Ingestion, bkgrnd		0.23	77%		0.23	100%
Food Ingestion	0.0E+0	0.00	0%			0%