

# FACSIMILE COVER SHEET

TO: Madhulla Logan COMPANY: \_\_\_\_\_

FAX #: 337-9335 COVER PAGE + 2 PAGES

FROM: Misty K. Itreider SENT BY: \_\_\_\_\_

DATE: 2/10/95 TIME SENT: \_\_\_\_\_

RE: \_\_\_\_\_

revised spread sheets in accordance w/ DTLC  
latest spread sheet -

**COMMENTS:**

- Original to follow by:
- U.S. Mail
  - Express Overnight Mail
  - Courier
  - No Hard Copy to Follow

If you do not receive total number of pages as indicated above,  
please call (510) 522-8188

**LEAD RISK ASSESSMENT SPREADSHEET**  
**CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL**

INPUT		OUTPUT						
MEDIUM	LEVEL	percentiles					PRG-80	PRG-95
		50th	90th	95th	98th	99th	(ug/g)	(ug/g)
LEAD IN AIR (ug/m <sup>3</sup> )	0.15							
LEAD IN SOIL (ug/g)	640.0	BLOOD Pb, ADULT (ug/dl)	2.9	4.5	5.1	6.0	1634.4	2515.3
LEAD IN WATER (ug/l)	15	BLOOD Pb, CHILD (ug/dl)	6.5	10.2	11.6	13.4	218.8	401.5
PLANT UPTAKE (1-YEAR G-NO)	0	BLOOD Pb, PCA CHILD (ug/dl)	39.6	62.1	70.4	81.5	19.2	48.5
RESPIRABLE DUST (ug/m <sup>3</sup> )	500	BLOOD Pb, INDUSTRIAL (ug/dl)	2.8	4.1	4.8	5.4	2254.0	3334.9

**EXPOSURE PARAMETERS**

General	units	residential			Industrial
		adults	children	children with pica	adults
Days per week	default	7	7	7	6
<b>Dermal Contact</b>					
Skin area	cm <sup>2</sup>	3700	2800	2800	5800
Soil adherence	mg/cm <sup>2</sup>	0.5	0.5	0.5	0.5
Route-specific constant	(ug/d)/(ug/m <sup>2</sup> )	0.00011	0.00011	0.00011	0.00011
<b>Soil Ingestion</b>					
Soil ingestion	mg/day	25	55	700	25
Route-specific constant	(ug/d)/(ug/day)	0.0178	0.0704	0.0704	0.0178
<b>Inhalation</b>					
Breathing rate	m <sup>3</sup> /day	20	10	10	20
Route-specific constant	(ug/d)/(ug/m <sup>3</sup> )	0.062	0.192	0.192	0.062
<b>Water Ingestion</b>					
Water ingestion	l/day	1.4	0.4	0.4	1.4
Route-specific constant	(ug/d)/(ug/ml)	0.04	0.16	0.16	0.04
<b>Food Ingestion</b>					
Food ingestion	g/day	2.2	1.3	1.3	2.2
Route-specific constant	(ug/d)/(ug/g)	0.04	0.16	0.16	0.04
Dietary concentration	ug/g	10.0	10.0	10.0	10.0
Lead in product	ug/g	10.0	10.0	10.0	

Short-term Construction Worker After Remediation of LEAD Hot Spots to 1000 mg/

All defaults used except:

- Lead in soil set to 640 mg/kg
- Respirable dust set to 500 ug/m<sup>3</sup> not 50 ug/m<sup>3</sup>

*2 m*

**PATHWAYS, ADULTS**

Pathway	Residential		Industrial		Concentration in medium
	Blood Pb ug/dl	percent of total	Blood Pb ug/dl	percent of total	
SOIL CONTACT:	0.13	4%	0.14	5%	640 ug/g
SOIL INGESTION:	0.28	10%	0.20	8%	640 ug/g
INHALATION:	0.77	27%	0.55	21%	0.47 ug/m <sup>3</sup>
WATER INGESTION:	0.64	23%	0.84	32%	15 ug/l
FOOD INGESTION:	0.88	30%	0.88	34%	10.0 ug Pb/g diet

**PATHWAYS, CHILDREN**

Pathway	Typical		with pica		concentration in medium
	Blood Pb ug/dl	percent of total	Blood Pb ug/dl	percent of total	
SOIL CONTACT:	0.09	1%	0.09	0%	640 ug/g
SOIL INGESTION:	2.48	38%	35.59	30%	640 ug/g
INHALATION:	0.80	14%	0.90	2%	0.47 ug/m <sup>3</sup>
WATER INGESTION:	0.88	15%	0.96	2%	15 ug/l
FOOD INGESTION:	2.08	32%	2.08	5%	10.0 ug Pb/g diet

Note: This is the latest version of the spreadsheet and the route specific constant for inhalation has changed - it is 1.6%/10 for adults and 1.92/10 for children. DTSC made this change.

**LEAD RISK ASSESSMENT SPREADSHEET I**  
 CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

INPUT		OUTPUT							
MEDIUM	LEVEL		percentiles					PRG-88	PRG-85
			50th	90th	95th	98th	99th	(ug/g)	(ug/g)
LEAD IN AIR (ug/m <sup>3</sup> )	0.15		2.0	3.2	3.6	4.1	4.8	3417.3	5182.5
LEAD IN SOIL (ug/g)	64.0	BLOOD Pb, ADULT (ug/dl)	3.6	5.8	6.4	7.4	8.1	264.7	884.5
LEAD IN WATER (ug/l)	15	BLOOD Pb, CHILD (ug/dl)	8.9	10.8	12.3	14.2	15.6	18.5	41.1
PLANT UPTAKE? (YES/NO)	0	BLOOD Pb, PICA CHILD (ug/dl)	1.9	3.0	3.4	4.0	4.4	482.5	6300.5
RESPIRABLE DUST (ug/m <sup>3</sup> )	50	BLOOD Pb, INDUSTRIAL (ug/dl)							

**EXPOSURE PARAMETERS**

General	units	Residential			Industrial
		adults	children	children with pica	adults
Days per week	days/week	7	7	7	5
Dermal Contact					
Skin area	cm <sup>2</sup>	3700	2800	2800	6800
Soil adherence	mg/cm <sup>2</sup>	0.6	0.5	0.5	0.5
Route-specific constant	(ug/dl)/(ug/cm <sup>2</sup> )	0.00011	0.00011	0.00011	0.00011
Soil ingestion					
Soil ingestion	mg/day	25	55	790	25
Route-specific constant	(ug/dl)/(ug/day)	0.0178	0.0704	0.0704	0.0178
Inhalation					
Breathing rate	m <sup>3</sup> /day	20	10	10	20
Route-specific constant	(ug/dl)/(ug/m <sup>3</sup> )	0.082	0.182	0.182	0.082
Water ingestion					
Water ingestion	l/day	1.4	0.4	0.4	1.4
Route-specific constant	(ug/dl)/(ug/l)	0.04	0.18	0.18	0.04
Food ingestion					
Food ingestion	kg/day	2.2	1.3	1.3	2.2
Route-specific constant	(ug/dl)/(ug/kg)	0.04	0.16	0.16	0.04
Dietary concentration	ug/kg	10.0	10.0	10.0	10.0
Lead in produce	ug/kg	10.0	10.0	10.0	10.0

4262-5

Long-term Worker After Removal of Lead Hot Spots to 1000 mg/kg and reduction of soil concentration by 40% per DTSC guidelines.

ref: - Jim Carlow  
10%

**PATHWAYS, ADULTS**

Pathway	Residential		Industrial		Concentration in medium
	Blood Pb ug/dl	percent of total	Blood Pb ug/dl	percent of total	
SOIL CONTACT:	0.01	1%	0.01	1%	64 ug/g
SOIL INGESTION:	0.03	1%	0.02	1%	64 ug/g
INHALATION:	0.25	12%	0.18	8%	0.15 ug/m <sup>3</sup>
WATER INGESTION:	0.84	42%	0.84	43%	15 ug/l
FOOD INGESTION:	0.88	44%	0.88	43%	10.0 ug Pb/kg diet

**PATHWAYS, CHILDREN**

Pathway	Typical		with pica		concentration in medium
	Blood Pb ug/dl	percent of total	Blood Pb ug/dl	percent of total	
SOIL CONTACT:	0.01	0%	0.01	0%	64 ug/g
SOIL INGESTION:	0.25	7%	3.58	52%	64 ug/g
INHALATION:	0.29	8%	0.29	4%	0.15 ug/m <sup>3</sup>
WATER INGESTION:	0.98	27%	0.98	14%	15 ug/l
FOOD INGESTION:	2.08	59%	2.08	30%	10.0 ug Pb/kg diet