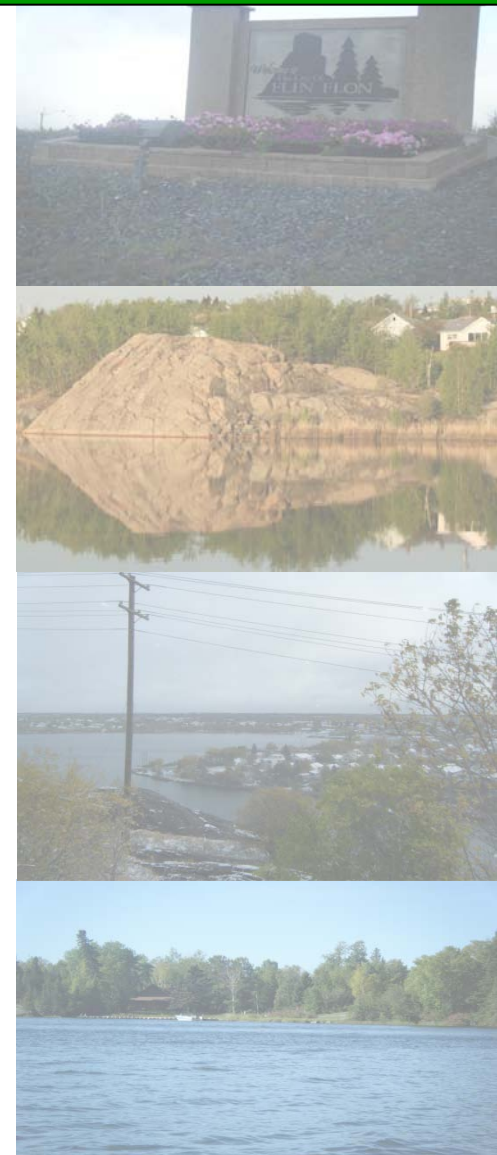


**APPENDIX L**

**IEUBK MODELLING RESULTS**



## APPENDIX L: IEUBK MODELLING RESULTS

The following sections provide the output results of the IEUBK modeling for each of the COI.

### L-1.0 IEUBK RESULTS FOR WEST FLIN FLON

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

#### Air

Indoor Air Pb Concentration: 30.000 percent of outdoor.

Other Air Parameters:

Age Outdoors (hours)	Time Rate (m <sup>3</sup> /day)	Ventilation Absorption (%)	Lung Pb Conc (µg Pb/m <sup>3</sup> )	Outdoor Air Pb Conc (µg Pb/m <sup>3</sup> )
.5-1	1.000	2.000	32.000	0.340
1-2	2.000	3.000	32.000	0.340
2-3	3.000	5.000	32.000	0.340
3-4	4.000	5.000	32.000	0.340
4-5	4.000	5.000	32.000	0.340
5-6	4.000	7.000	32.000	0.340
6-7	4.000	7.000	32.000	0.340

#### Diet

Age	Diet Intake(µg/day)
.5-1	3.100
1-2	3.400
2-3	3.700
3-4	3.900
4-5	4.000
5-6	4.200
6-7	4.600

#### Drinking Water

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.600 µg Pb/L

Soil & Dust

Age	Soil (µg Pb/g)	House Dust (µg Pb/g)
.5-1	370.000	260.000
1-2	370.000	260.000
2-3	370.000	260.000
3-4	370.000	260.000
4-5	370.000	260.000
5-6	370.000	260.000
6-7	370.000	260.000

Alternate Intake

Age	Alternate (µg Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

Maternal Contribution: Infant Model

Maternal Blood Concentration: 2.500 µg Pb/dL

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.072	1.401	0.000	0.416
1-2	0.117	1.509	0.000	1.021
2-3	0.211	1.667	0.000	1.078
3-4	0.227	1.781	0.000	1.113
4-5	0.227	1.876	0.000	1.187
5-6	0.317	1.990	0.000	1.264
6-7	0.317	2.191	0.000	1.293

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
.5-1	7.004	8.892	4.8
1-2	10.925	13.572	5.6
2-3	11.094	14.050	5.2
3-4	11.244	14.365	5.0
4-5	8.554	11.844	4.2
5-6	7.777	11.349	3.6
6-7	7.384	11.185	3.2

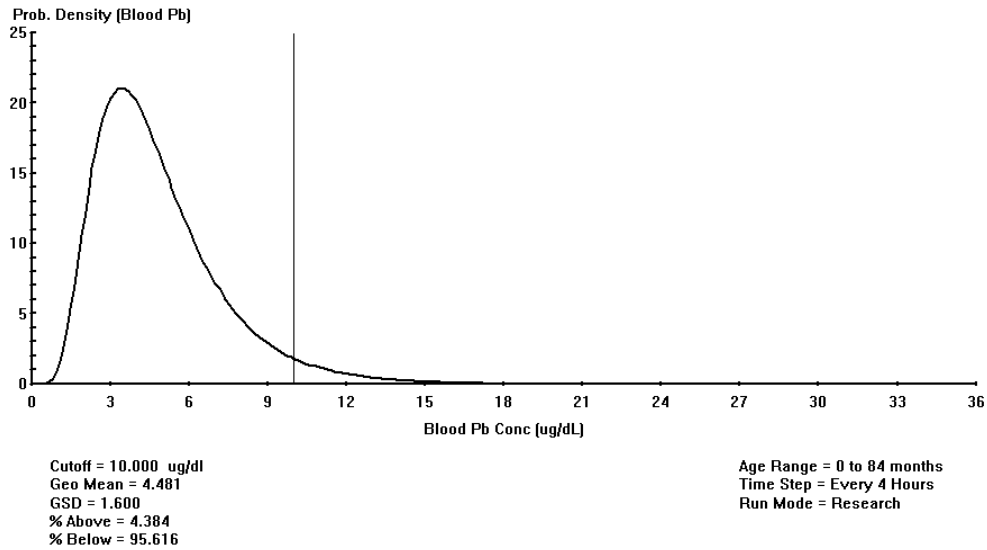


Figure L-1 West Flin Flon Density Curve with a BLL of Concern of 10 µg/dL

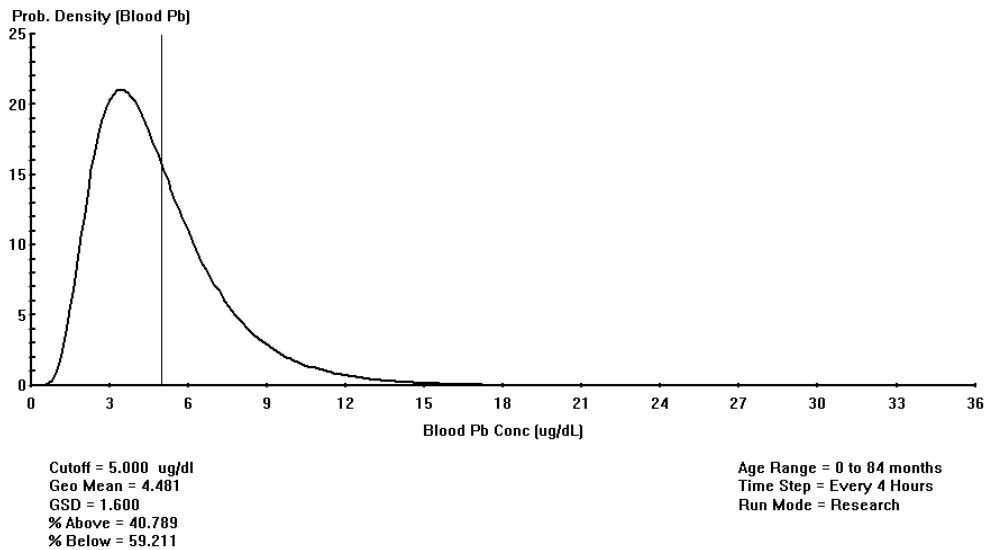


Figure L-2 West Flin Flon Density Curve with a BLL of Concern of 5 µg/dL

## L-2.0 IEUBK RESULTS FOR EAST FLIN FLON

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

### Air

Indoor Air Pb Concentration: 30.000 percent of outdoor.

Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m <sup>3</sup> /day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m <sup>3</sup> )
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

### Diet

Age	Diet Intake(µg/day)
.5-1	3.100
1-2	3.400
2-3	3.700
3-4	3.900
4-5	4.000
5-6	4.200
6-7	4.600

### Drinking Water

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.600 µg Pb/L

Soil & Dust

Age	Soil ( $\mu\text{g Pb/g}$ )	House Dust ( $\mu\text{g Pb/g}$ )
.5-1	160.000	320.000
1-2	160.000	320.000
2-3	160.000	320.000
3-4	160.000	320.000
4-5	160.000	320.000
5-6	160.000	320.000
6-7	160.000	320.000

Alternate Intake

Age	Alternate ( $\mu\text{g Pb/day}$ )
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

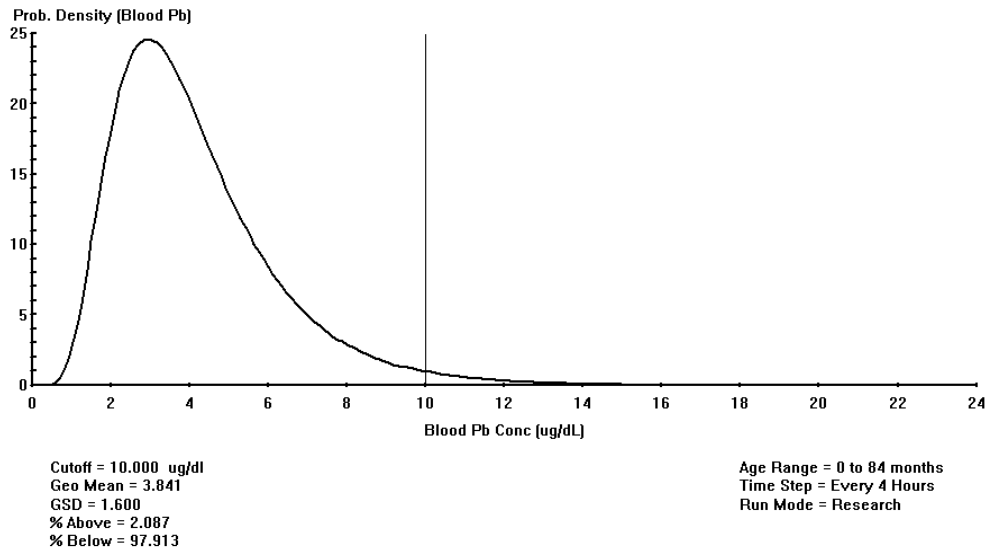
Maternal Contribution: Infant Model

Maternal Blood Concentration: 2.500  $\mu\text{g Pb/dL}$

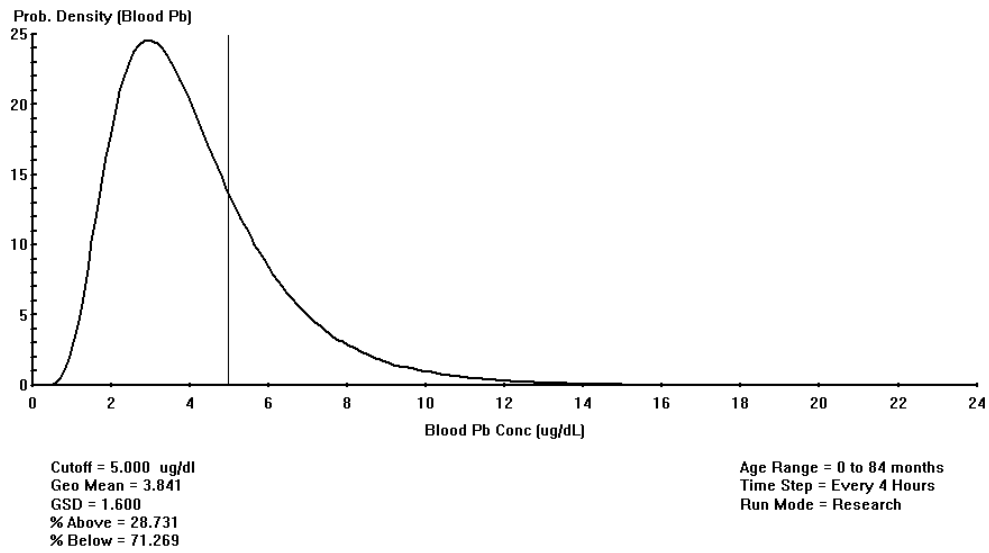
CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air ( $\mu\text{g/day}$ )	Diet ( $\mu\text{g/day}$ )	Alternate ( $\mu\text{g/day}$ )	Water ( $\mu\text{g/day}$ )
.5-1	0.021	1.421	0.000	0.422
1-2	0.034	1.535	0.000	1.038
2-3	0.062	1.692	0.000	1.094
3-4	0.067	1.805	0.000	1.128
4-5	0.067	1.893	0.000	1.197
5-6	0.093	2.004	0.000	1.273
6-7	0.093	2.205	0.000	1.301

Year	Soil+Dust ( $\mu\text{g/day}$ )	Total ( $\mu\text{g/day}$ )	Blood ( $\mu\text{g/dL}$ )
.5-1	5.742	7.606	4.1
1-2	8.981	11.589	4.8
2-3	9.099	11.948	4.4
3-4	9.205	12.204	4.3
4-5	6.972	10.128	3.6
5-6	6.329	9.699	3.1
6-7	6.003	9.601	2.8



**Figure L-3 East Flin Flon Density Curve with a BLL of Concern of 10 µg/dL**



**Figure L-4 East Flin Flon Density Curve with a BLL of Concern of 5 µg/dL**

### L-3.0 IEUBK RESULTS FOR CREIGHTON

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

#### Air

Indoor Air Pb Concentration: 30.000 percent of outdoor.

Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m <sup>3</sup> /day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m <sup>3</sup> )
.5-1	1.000	2.000	32.000	0.034
1-2	2.000	3.000	32.000	0.034
2-3	3.000	5.000	32.000	0.034
3-4	4.000	5.000	32.000	0.034
4-5	4.000	5.000	32.000	0.034
5-6	4.000	7.000	32.000	0.034
6-7	4.000	7.000	32.000	0.034

#### Diet

Age	Diet Intake (µg/day)
.5-1	3.100
1-2	3.400
2-3	3.700
3-4	3.900
4-5	4.000
5-6	4.200
6-7	4.600

#### Drinking Water

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 3.100 µg Pb/L



Soil & Dust

Age	Soil ( $\mu\text{g Pb/g}$ )	House Dust ( $\mu\text{g Pb/g}$ )
.5-1	250.000	260.000
1-2	250.000	260.000
2-3	250.000	260.000
3-4	250.000	260.000
4-5	250.000	260.000
5-6	250.000	260.000
6-7	250.000	260.000

Alternate Intake

Age	Alternate ( $\mu\text{g Pb/day}$ )
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

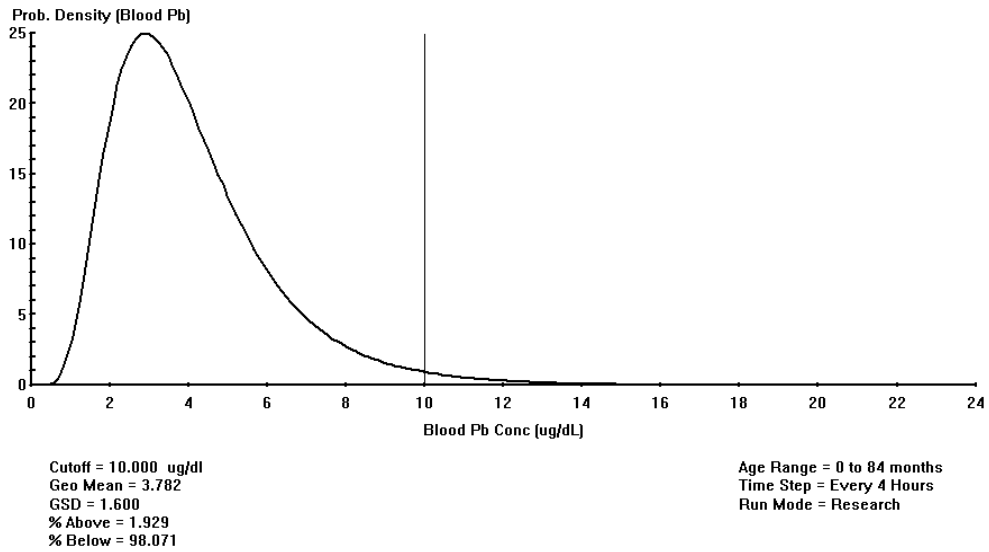
Maternal Contribution: Infant Model

Maternal Blood Concentration: 2.500  $\mu\text{g Pb/dL}$

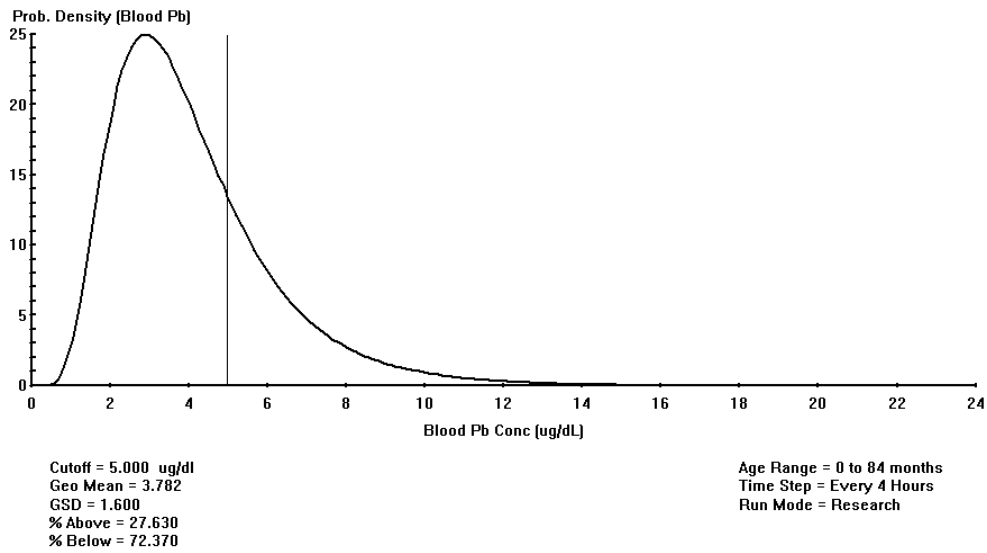
CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air ( $\mu\text{g/day}$ )	Diet ( $\mu\text{g/day}$ )	Alternate ( $\mu\text{g/day}$ )	Water ( $\mu\text{g/day}$ )
.5-1	0.007	1.421	0.000	0.284
1-2	0.012	1.536	0.000	0.700
2-3	0.021	1.694	0.000	0.738
3-4	0.023	1.806	0.000	0.761
4-5	0.023	1.895	0.000	0.808
5-6	0.032	2.007	0.000	0.859
6-7	0.032	2.207	0.000	0.878

Year	Soil+Dust ( $\mu\text{g/day}$ )	Total ( $\mu\text{g/day}$ )	Blood ( $\mu\text{g/dL}$ )
.5-1	5.885	7.598	4.1
1-2	9.215	11.463	4.7
2-3	9.336	11.788	4.4
3-4	9.443	12.033	4.2
4-5	7.155	9.880	3.5
5-6	6.495	9.392	3.0
6-7	6.161	9.277	2.7



**Figure L-5 Creighton Density Curve with a BLL of Concern of 10 µg/dL**



**Figure L-6 Creighton Density Curve with a BLL of Concern of 5 µg/dL**

## L-4.0 IEUBK RESULTS FOR CHANNING

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

### Air

Indoor Air Pb Concentration: 30.000 percent of outdoor.

Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m <sup>3</sup> /day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m <sup>3</sup> )
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

### Diet

Age	Diet Intake (µg/day)
.5-1	3.100
1-2	3.400
2-3	3.700
3-4	3.900
4-5	4.000
5-6	4.200
6-7	4.600

### Drinking Water

Water Consumption:

Age Water (L/day)

.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.600 µg Pb/L

Soil & Dust

Age	Soil ( $\mu\text{g Pb/g}$ )	House Dust ( $\mu\text{g Pb/g}$ )
.5-1	160.000	320.000
1-2	160.000	320.000
2-3	160.000	320.000
3-4	160.000	320.000
4-5	160.000	320.000
5-6	160.000	320.000
6-7	160.000	320.000

Alternate Intake

Age	Alternate ( $\mu\text{g Pb/day}$ )
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

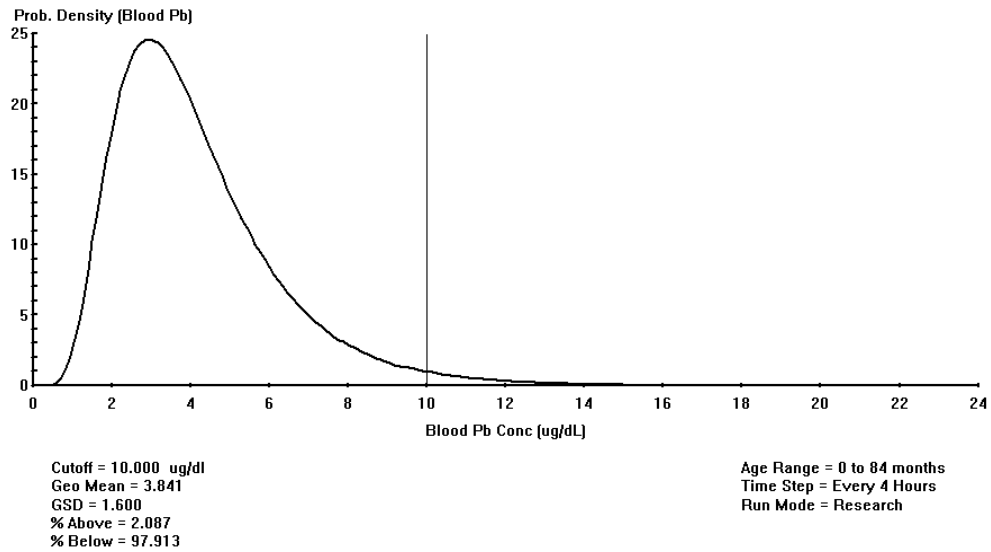
Maternal Contribution: Infant Model

Maternal Blood Concentration: 2.500  $\mu\text{g Pb/dL}$

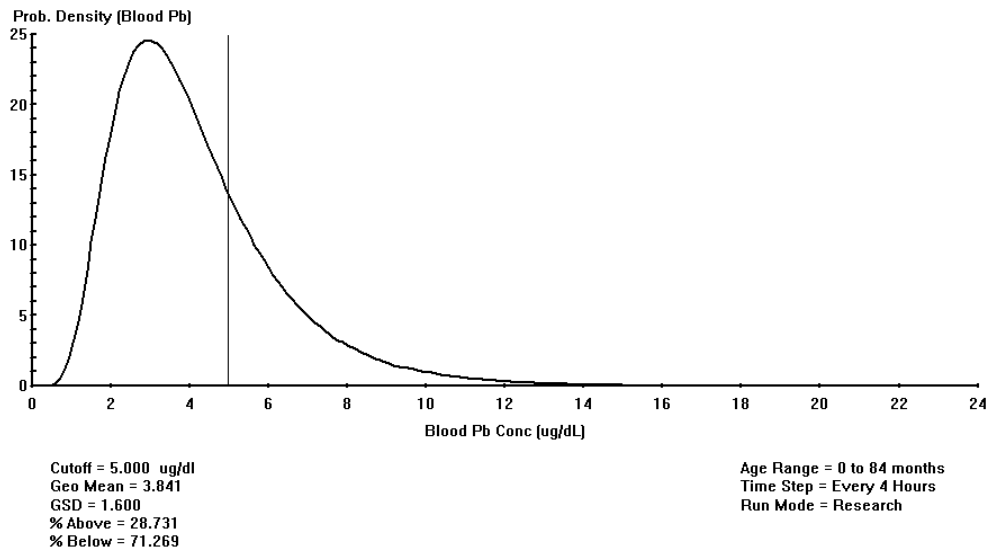
CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air ( $\mu\text{g/day}$ )	Diet ( $\mu\text{g/day}$ )	Alternate ( $\mu\text{g/day}$ )	Water ( $\mu\text{g/day}$ )
.5-1	0.021	1.421	0.000	0.422
1-2	0.034	1.535	0.000	1.038
2-3	0.062	1.692	0.000	1.094
3-4	0.067	1.805	0.000	1.128
4-5	0.067	1.893	0.000	1.197
5-6	0.093	2.004	0.000	1.273
6-7	0.093	2.205	0.000	1.301

Year	Soil+Dust ( $\mu\text{g/day}$ )	Total ( $\mu\text{g/day}$ )	Blood ( $\mu\text{g/dL}$ )
.5-1	5.742	7.606	4.1
1-2	8.981	11.589	4.8
2-3	9.099	11.948	4.4
3-4	9.205	12.204	4.3
4-5	6.972	10.128	3.6
5-6	6.329	9.699	3.1
6-7	6.003	9.601	2.8



**Figure L-7 Channing Density Curve with a BLL of Concern of 10 µg/dL**



**Figure L-8 Channing Density Curve with a BLL of Concern of 5 µg/dL**

## L-5.0 IEUBK RESULTS FOR THE TYPICAL BACKGROUND SCENARIO

The time step used in this model run: 1 - Every 4 Hours (6 times a day).

### Air

Indoor Air Pb Concentration: 30.000 percent of outdoor.

Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m <sup>3</sup> /day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m <sup>3</sup> )
.5-1	1.000	2.000	32.000	0.003
1-2	2.000	3.000	32.000	0.003
2-3	3.000	5.000	32.000	0.003
3-4	4.000	5.000	32.000	0.003
4-5	4.000	5.000	32.000	0.003
5-6	4.000	7.000	32.000	0.003
6-7	4.000	7.000	32.000	0.003

### Diet

Age	Diet Intake (µg/day)
.5-1	2.260
1-2	1.960
2-3	2.130
3-4	2.040
4-5	1.950
5-6	2.050
6-7	2.220

### Drinking Water

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 1.900 µg Pb/L

Soil & Dust

Multiple Source Analysis Used

Average multiple source concentration: 3.760 µg/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700

Outdoor airborne lead to indoor household dust lead concentration: 100.000

Use alternate indoor dust Pb sources? No

Age	Soil (µg Pb/g)	House Dust (µg Pb/g)
.5-1	5.000	3.760
1-2	5.000	3.760
2-3	5.000	3.760
3-4	5.000	3.760
4-5	5.000	3.760
5-6	5.000	3.760
6-7	5.000	3.760

Alternate Intake

Age	Alternate (µg Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

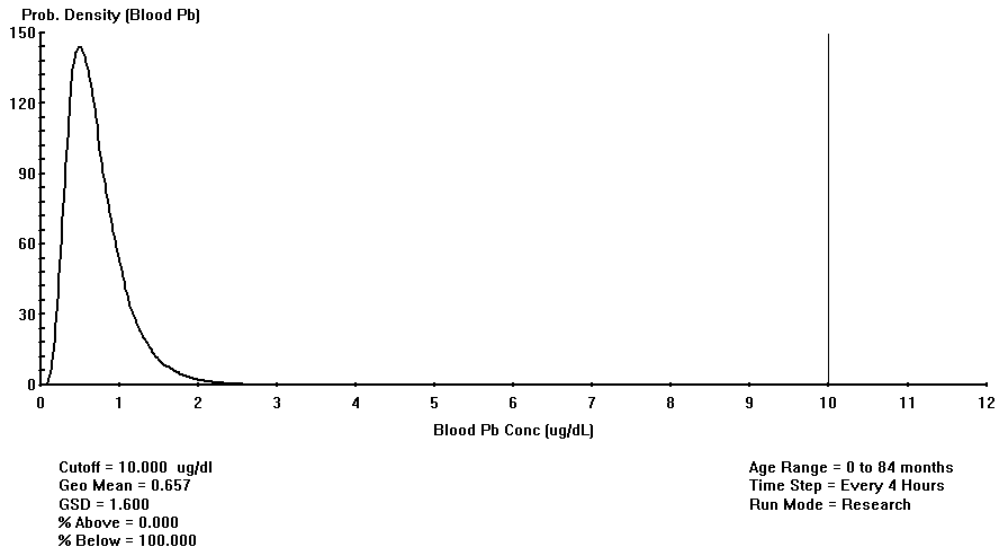
Maternal Contribution: Infant Model

Maternal Blood Concentration: 2.500 µg Pb/dL

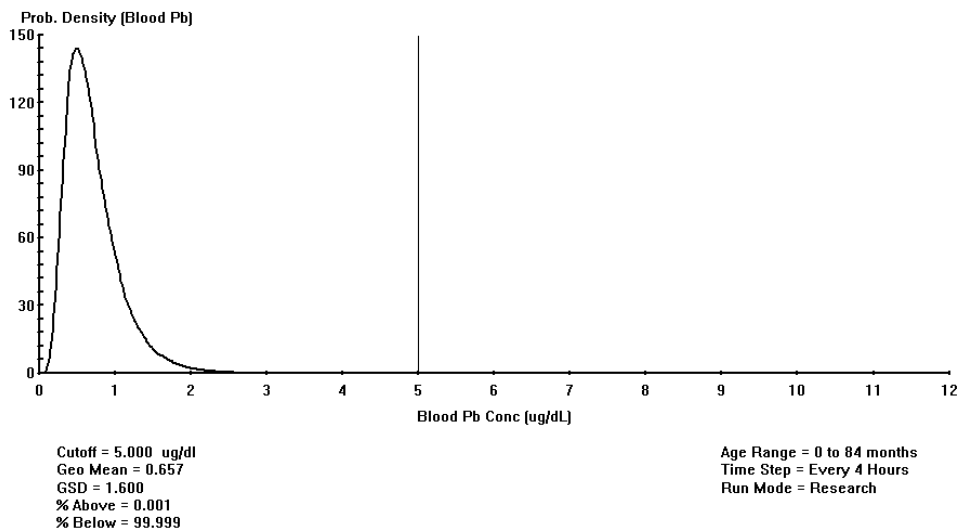
CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.001	1.112	0.000	0.187
1-2	0.001	0.966	0.000	0.468
2-3	0.002	1.052	0.000	0.488
3-4	0.002	1.009	0.000	0.498
4-5	0.002	0.966	0.000	0.518
5-6	0.002	1.017	0.000	0.547
6-7	0.002	1.101	0.000	0.556

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
.5-1	0.108	1.408	0.8
1-2	0.172	1.608	0.7
2-3	0.173	1.714	0.6
3-4	0.173	1.682	0.6
4-5	0.128	1.615	0.5
5-6	0.116	1.681	0.5
6-7	0.109	1.769	0.5



**Figure L-9 Typical Background Density Curve with a BLL of Concern of 10 µg/dL**



**Figure L-10 Typical Background Density Curve with a BLL of Concern of 5 µg/dL**