

Appendix A
Fish Consumption Hazards Associated with Candidate Surface Water Bodies ¹

Receptor	Method Used	Hazard Quotients ()		
		Tobico Marsh	Kawkawlin River	Saginaw River
Recreational Fisher	USEPA	1.1E-2	1.5E-2	1.4E-3
	MDEQ	1.6E-3	3.4E-3	8.1E-4
Recreational Fisher Child	USEPA	7.6E-3	1.1E-2	1.0E-3
	MDEQ	1.1E-3	2.4E-3	5.8E-4

¹ Values represent hazard quotients associated with consumption of fish pathway.

Appendix B
IEUBK Output Files

LEAD MODEL FOR WINDOWS Version 1.0

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=====
Model Version: 1.0 Build 263
User Name: JB
Date: 09/04/2007
Site Name: Karn/Weadock
Operable Unit: Proposed ASCPC Boiler
Run Mode: Site Risk Assessment
=====

```

```

-----
# Air Data
Background: No Lead Paint
# Water Data
Background: No Lead Paint
# Soil/Dust Data
Background: No Lead Paint
# Run the Model
Background: No Lead Paint

```

```

=====
The time step used in this model run: 4 - Every 15 Minutes (96 times a day).

```

***** Air *****

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m ³ /day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m ³)
.5-1	1.000	2.000	32.000	0.010
1-2	2.000	3.000	32.000	0.010
2-3	3.000	5.000	32.000	0.010
3-4	4.000	5.000	32.000	0.010
4-5	4.000	5.000	32.000	0.010
5-6	4.000	7.000	32.000	0.010
6-7	4.000	7.000	32.000	0.010

***** Diet *****

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

***** Drinking Water *****

Water Consumption:

Age Water (L/day)

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: 19.600 ug Pb/L

***** Soil & Dust *****

Age Soil (ug Pb/g) House Dust (ug Pb/g)

Age	Soil (ug Pb/g)	House Dust (ug Pb/g)
.5-1	21.000	15.700
1-2	21.000	15.700
2-3	21.000	15.700
3-4	21.000	15.700
4-5	21.000	15.700
5-6	21.000	15.700
6-7	21.000	15.700

***** Alternate Intake *****

Age Alternate (ug Pb/day)

Age	Alternate (ug 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 ug Pb/dL

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.002	2.615	0.000	1.854
1-2	0.003	2.695	0.000	4.570
2-3	0.006	3.045	0.000	4.783
3-4	0.007	2.955	0.000	4.919
4-5	0.007	2.868	0.000	5.144
5-6	0.009	3.035	0.000	5.442
6-7	0.009	3.357	0.000	5.546

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	0.436	4.907	2.7
1-2	0.683	7.952	3.3
2-3	0.687	8.522	3.2
3-4	0.694	8.574	3.0
4-5	0.518	8.536	2.8
5-6	0.468	8.954	2.7
6-7	0.442	9.355	2.6

LEAD MODEL FOR WINDOWS Version 1.0

=====
Model Version: 1.0 Build 263
User Name: JB
Date: 09/05/2007
Site Name: Karn/Weadock
Operable Unit: Proposed ASCPC Boiler
Run Mode: Site Risk Assessment

Air Data
Background: Lead Paint in Good Condition
Water Data
Background: Lead Paint in Good Condition
Soil/Dust Data
Background: Lead Paint in Good Condition
Run the Model
Background: Lead Paint in Good Condition

=====
The time step used in this model run: 4 - Every 15 Minutes (96 times a day).

***** Air *****

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m ³ /day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m ³)
.5-1	1.000	2.000	32.000	0.010
1-2	2.000	3.000	32.000	0.010
2-3	3.000	5.000	32.000	0.010
3-4	4.000	5.000	32.000	0.010
4-5	4.000	5.000	32.000	0.010
5-6	4.000	7.000	32.000	0.010
6-7	4.000	7.000	32.000	0.010

***** Diet *****

Age	Diet Intake(ug/day)
.5-1	5.530
1-2	5.780
2-3	6.490
3-4	6.240
4-5	6.010
5-6	6.340
6-7	7.000

***** 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: 19.600 ug Pb/L

***** Soil & Dust *****

Age Soil (ug Pb/g) House Dust (ug Pb/g)

```
-----
.5-1    21.000    200.000
1-2     21.000    200.000
2-3     21.000    200.000
3-4     21.000    200.000
4-5     21.000    200.000
5-6     21.000    200.000
6-7     21.000    200.000
```

***** Alternate Intake *****

Age Alternate (ug 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 ug Pb/dL

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.002	2.548	0.000	1.806
1-2	0.003	2.613	0.000	4.430
2-3	0.006	2.965	0.000	4.656
3-4	0.007	2.887	0.000	4.806
4-5	0.007	2.825	0.000	5.066
5-6	0.009	2.998	0.000	5.376
6-7	0.009	3.322	0.000	5.488

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	2.806	7.162	3.9
1-2	4.374	11.420	4.7
2-3	4.420	12.048	4.5
3-4	4.476	12.175	4.3
4-5	3.368	11.266	3.8
5-6	3.051	11.434	3.5
6-7	2.891	11.709	3.3

LEAD MODEL FOR WINDOWS Version 1.0

```

=====
Model Version: 1.0 Build 263
User Name: JB
Date: 09/05/2007
Site Name: Karn/Weadock
Operable Unit: Proposed ASCPC Boiler
Run Mode: Site Risk Assessment
    
```

```

-----
# Air Data
ASCPC Boiler Emissions: No Lead Paint
# Diet Data
ASCPC Boiler Emissions: No Lead Paint
# Water Data
ASCPC Boiler Emissions: No Lead Paint
# Soil/Dust Data
ASCPC Boiler Emissions: No Lead Paint
# Run the Model
ASCPC Boiler Emissions: No Lead Paint
    
```

```

=====
The time step used in this model run: 4 - Every 15 Minutes (96 times a day).
    
```

***** Air *****

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m ³ /day)	Lung Absorption (%)	Outdoor Air Pb Conc (ug Pb/m ³)
.5-1	1.000	2.000	32.000	0.010
1-2	2.000	3.000	32.000	0.010
2-3	3.000	5.000	32.000	0.010
3-4	4.000	5.000	32.000	0.010
4-5	4.000	5.000	32.000	0.010
5-6	4.000	7.000	32.000	0.010
6-7	4.000	7.000	32.000	0.010

***** Diet *****

Age	Diet Intake(ug/day)
.5-1	5.532
1-2	5.782
2-3	6.492
3-4	6.242
4-5	6.012
5-6	6.342
6-7	7.002

***** 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: 19.600 ug Pb/L

***** Soil & Dust *****

Age Soil (ug Pb/g) House Dust (ug Pb/g)

```
-----
.5-1      21.010      15.710
1-2      21.010      15.710
2-3      21.010      15.710
3-4      21.010      15.710
4-5      21.010      15.710
5-6      21.010      15.710
6-7      21.010      15.710
```

***** Alternate Intake *****

Age Alternate (ug 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 ug Pb/dL

CALCULATED BLOOD LEAD AND LEAD UPTAKES:

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5-6	0.009	3.036	0.000	5.442
6-7	0.009	3.358	0.000	5.546

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	0.436	4.908	2.7
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4-5	0.518	8.537	2.8
5-6	0.468	8.955	2.7
6-7	0.443	9.356	2.6

LEAD MODEL FOR WINDOWS Version 1.0

```

=====
Model Version: 1.0 Build 263
User Name: JB
Date: 09/05/2007
Site Name: Karn/Weadock
Operable Unit: Proposed ASCPC Boiler
Run Mode: Site Risk Assessment
    
```

```

-----
# Air Data
ASCPC Boiler Emissions: Lead Paint in Good Condition
# Diet Data
ASCPC Boiler Emissions: Lead Paint in Good Condition
# Water Data
ASCPC Boiler Emissions: Lead Paint in Good Condition
# Soil/Dust Data
ASCPC Boiler Emissions: Lead Paint in Good Condition
# Run the Model
ASCPC Boiler Emissions: Lead Paint in Good Condition
    
```

```

=====
The time step used in this model run: 4 - Every 15 Minutes (96 times a day).
    
```

***** Air *****

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4-5	4.000	5.000	32.000	0.010
5-6	4.000	7.000	32.000	0.010
6-7	4.000	7.000	32.000	0.010

***** Diet *****

Age	Diet Intake(ug/day)
.5-1	5.532
1-2	5.782
2-3	6.492
3-4	6.242
4-5	6.012
5-6	6.342
6-7	7.002

***** Drinking Water *****

Water Consumption:

Age Water (L/day)

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

Drinking Water Concentration: 19.600 ug Pb/L

***** Soil & Dust *****

Age Soil (ug Pb/g) House Dust (ug Pb/g)

```
-----
.5-1      21.010      200.000
1-2      21.010      200.000
2-3      21.010      200.000
3-4      21.010      200.000
4-5      21.010      200.000
5-6      21.010      200.000
6-7      21.010      200.000
```

***** Alternate Intake *****

Age Alternate (ug 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 ug Pb/dL

 CALCULATED BLOOD LEAD AND LEAD UPTAKES:

Year	Air (ug/day)	Diet (ug/day)	Alternate (ug/day)	Water (ug/day)
.5-1	0.002	2.549	0.000	1.806
1-2	0.003	2.614	0.000	4.430
2-3	0.006	2.966	0.000	4.656
3-4	0.007	2.888	0.000	4.806
4-5	0.007	2.826	0.000	5.066
5-6	0.009	2.999	0.000	5.376
6-7	0.009	3.323	0.000	5.488

Year	Soil+Dust (ug/day)	Total (ug/day)	Blood (ug/dL)
.5-1	2.807	7.163	3.9
1-2	4.374	11.421	4.7
2-3	4.420	12.049	4.5
3-4	4.476	12.176	4.3
4-5	3.369	11.267	3.8
5-6	3.051	11.435	3.5
6-7	2.891	11.710	3.3