





Table 5-1

DRAFT-FINAL

**Estimated Air Concentrations  
ESSROC  
Logansport, Indiana**

Chemical	Maximum Exposure Area		
	LWDF Concentration	Kiln Stack Emissions Concentration	Final Concentration
	(ug/m3)	(ug/m3)	(ug/m3)
2,3,7,8 TCDD		1.44E-11	1.44E-11
2,3,7,8-PeCDD		5.08E-11	5.08E-11
2,3,7,8-HxCDD		3.77E-10	3.77E-10
2,3,7,8-HpCDD		1.09E-09	1.09E-09
OCDD		5.65E-10	5.65E-10
2,3,7,8-TCDF		4.41E-10	4.41E-10
1,2,3,7,8-PeCDF		2.63E-10	2.63E-10
2,3,4,7,8-PeCDF		4.41E-10	4.41E-10
2,3,7,8-HxCDF		7.44E-10	7.44E-10
2,3,7,8-HpCDF		2.68E-10	2.68E-10
OCDF		7.50E-11	7.50E-11
Antimony		1.65E-06	1.65E-06
Arsenic		1.98E-06	1.98E-06
Barium		1.80E-05	1.80E-05
Beryllium		7.17E-08	7.17E-08
Cadmium		2.58E-05	2.58E-05
Chromium (VI)		8.45E-08	8.45E-08
Chromium, total		4.78E-06	4.78E-06
Lead		3.63E-04	3.63E-04
Elemental Mercury		7.04E-08	7.04E-08
Divalent Mercury		1.74E-05	1.74E-05
Nickel		4.89E-06	4.89E-06
Selenium		6.32E-06	6.32E-06
Silver		1.81E-06	1.81E-06
Thallium		2.27E-06	2.27E-06
Acetone	6.27E-02	3.37E-04	6.30E-02
Acrylonitrile		9.38E-05	9.38E-05
Allyl Chloride		1.45E-05	1.45E-05
Benzene	4.04E-04	1.47E-03	1.88E-03
Bromodichloromethane		2.92E-07	2.92E-07
Bromomethane		2.58E-05	2.58E-05
Bromoform		5.42E-07	5.42E-07
1,3-Butadiene		2.70E-04	2.70E-04
2-Butanone	2.58E-02	8.73E-06	2.58E-02
n-Butyl Alcohol	7.41E-05		7.41E-05
Carbon disulfide		1.03E-04	1.03E-04
Carbon tetrachloride		6.40E-06	6.40E-06
Chlorobenzene	7.99E-04	1.86E-05	8.18E-04

Table 5-1

DRAFT-FINAL

Estimated Air Concentrations  
ESSROC  
Logansport, Indiana

Chemical	Maximum Exposure Area		
	LWDF Concentration	Kiln Stack Emissions Concentration	Final Concentration
	(ug/m3)	(ug/m3)	(ug/m3)
Chloroethane		6.50E-06	6.50E-06
Chloroform	5.44E-04	6.03E-06	5.50E-04
Chloromethane		2.72E-04	2.72E-04
Cumene (isopropylbenzene)		6.89E-07	6.89E-07
Dibromochloromethane		3.35E-07	3.35E-07
1,2-Dichlorobenzene		6.79E-07	6.79E-07
1,4-Dichlorobenzene		3.54E-06	3.54E-06
1,1-Dichloroethane		3.07E-07	3.07E-07
1,2-Dichloroethane		4.95E-07	4.95E-07
1,1-Dichloroethene		5.85E-07	5.85E-07
cis 1,2-Dichloroethene		5.13E-07	5.13E-07
trans 1,2-Dichloroethene		5.11E-07	5.11E-07
1,2-Dichloropropane		4.93E-07	4.93E-07
cis 1,3-Dichloropropene		3.00E-07	3.00E-07
trans 1,3-Dichloropropene	1.28E-03	3.64E-07	1.28E-03
Dichlorodifluoromethane		4.09E-06	4.09E-06
Ethyl Acetate	9.32E-03		9.32E-03
Ethylbenzene	1.67E-03	1.69E-05	1.69E-03
Isobutyl Alcohol	6.18E-04		6.18E-04
Methyl Alcohol	3.72E-02		3.72E-02
Methylene Chloride	7.74E-02	3.72E-04	7.78E-02
n-Hexane	4.36E-04	1.80E-05	4.54E-04
Styrene	2.55E-04	5.19E-05	3.07E-04
1,1,2,2-Tetrachloroethane		5.48E-07	5.48E-07
Tetrachloroethylene	1.46E-03	2.94E-06	1.46E-03
1,1,1-Trichloroethane		2.17E-06	2.17E-06
1,1,2-Trichloroethane	7.41E-05		7.41E-05
Trichloroethene	1.38E-03	1.19E-06	1.38E-03
Trichlorofluoromethane	1.51E-02	5.97E-06	1.51E-02
Toluene	2.60E-02	7.52E-04	2.68E-02
Xylene (m/p)	8.23E-03	2.10E-05	8.25E-03
o-Xylene		6.32E-06	6.32E-06
Vinyl acetate	3.29E-04	4.70E-07	3.29E-04
Vinyl chloride		4.54E-05	4.54E-05
Acenaphthene		5.12E-07	5.12E-07
Anthracene		8.28E-06	8.28E-06
Benzoic Acid		3.94E-05	3.94E-05
Benzo(a)pyrene		1.13E-06	1.13E-06



Table 5-1

DRAFT-FINAL

**Estimated Air Concentrations  
ESSROC  
Logansport, Indiana**

Chemical	Maximum Exposure Area		
	LWDF Concentration	Kiln Stack Emissions Concentration	Final Concentration
	(ug/m3)	(ug/m3)	(ug/m3)
Benzo(a)anthracene		1.38E-06	1.38E-06
Benzo(b)fluoranthene		1.99E-06	1.99E-06
Benzo(k)fluoranthene		9.52E-07	9.52E-07
Benzo(g,h,i)perylene		1.34E-06	1.34E-06
Benzyl Alcohol		4.66E-06	4.66E-06
Bis(2-ethyl hexyl)phthalate		1.28E-04	1.28E-04
Butyl benzyl phthalate		5.29E-06	5.29E-06
4-Chloroaniline		2.41E-06	2.41E-06
2-Chloronaphthalene		2.47E-06	2.47E-06
2-Chlorophenol		2.55E-06	2.55E-06
Chrysene		7.83E-06	7.83E-06
Dibenz(a,h)anthracene		3.61E-07	3.61E-07
Dibenzofuran		4.86E-05	4.86E-05
1,2-dichlorobenzene		3.00E-06	3.00E-06
1,3-dichlorobenzene		2.82E-06	2.82E-06
1,4-dichlorobenzene		5.52E-06	5.52E-06
3,3-Dichlorobenzidine		3.21E-06	3.21E-06
Dimethylphthalate		1.37E-06	1.37E-06
Diethyl phthalate		6.05E-06	6.05E-06
2,4-Dimethylphenol		8.81E-07	8.81E-07
di-n-butylphthalate		4.39E-06	4.39E-06
Di-n-octyl phthalate		3.58E-06	3.58E-06
4,6-Dinitro-2-methylphenol		8.07E-06	8.07E-06
2,4-Dinitrophenol		3.21E-06	3.21E-06
2,4-Dinitrotoluene		1.63E-06	1.63E-06
2,6-Dinitrotoluene		2.07E-06	2.07E-06
Fluoranthene		2.19E-05	2.19E-05
Fluorene		2.52E-06	2.52E-06
Hexachlorobenzene		1.35E-06	1.35E-06
Hexachlorobutadiene		1.63E-06	1.63E-06
Hexachlorocyclopentadiene		1.41E-06	1.41E-06
Hexachloroethane		1.72E-06	1.72E-06
Indeno(1,2,3-cd)pyrene		1.58E-06	1.58E-06
2-Methylphenol		1.14E-05	1.14E-05
4-Methylphenol		1.32E-05	1.32E-05
2-Methylnaphthalene		1.56E-05	1.56E-05
Naphthalene		2.14E-04	2.14E-04
2-Nitroaniline		1.65E-06	1.65E-06

Table 5-1

DRAFT-FINAL

**Estimated Air Concentrations  
ESSROC  
Logansport, Indiana**

Chemical	Maximum Exposure Area		
	LWDF Concentration (ug/m3)	Kiln Stack Emissions Concentration (ug/m3)	Final Concentration (ug/m3)
Nitrobenzene		8.92E-07	8.92E-07
n-Nitrosodiphenylamine		2.17E-06	2.17E-06
n-Nitroso-di-n-propylamine		1.44E-06	1.44E-06
2,2-oxybis(1-Chloropropane)		2.78E-06	2.78E-06
Pentachlorophenol		2.03E-06	2.03E-06
Phenanthrene		1.39E-04	1.39E-04
Phenol		5.55E-05	5.55E-05
Pyrene		2.29E-05	2.29E-05
1,2,4-Trichlorobenzene		9.38E-07	9.38E-07
2,4,5-Trichlorophenol		1.29E-06	1.29E-06
2,4,6-Trichlorophenol		4.01E-06	4.01E-06
3,3'-Tetra CB		4.83E-11	4.83E-11
2,3,4,4',5-Penta CB		1.46E-10	1.46E-10
2,3',4,4',5-Penta CB		1.67E-10	1.67E-10
2',3,3',4,4'-Penta CB		6.04E-12	6.04E-12
2,3,3',4,4'-Penta CB		2.62E-11	2.62E-11
3,3',4,4',5-Penta CB		6.63E-12	6.63E-12
2,3',4,4',5,5'-Hexa CB		8.55E-11	8.55E-11
2,3,3',4,4',5-Hexa CB		1.71E-10	1.71E-10
2,3,3',4,4',5'-Hexa CB		5.21E-11	5.21E-11
3,3',4,4',5,5'-Hexa CB		1.36E-11	1.36E-11
2,2',3,4,4',5,5'-Hepta CB		4.45E-09	4.45E-09
2,2'3,3',4,4',5-Hepta CB		1.62E-09	1.62E-09
2,3,3',4,4',5,5'-Hepta CB		1.86E-11	1.86E-11
Total Mono CB		6.07E-09	6.07E-09
Total Di CB		4.30E-09	4.30E-09
Total Tri CB		5.54E-09	5.54E-09
Total Tetra CB		4.09E-09	4.09E-09
Total Penta CB		3.84E-09	3.84E-09
Total Hex CB		1.39E-08	1.39E-08
Total Hepta CB		2.13E-08	2.13E-08
Total Octa CB		4.83E-09	4.83E-09
Total Nona CB		2.47E-10	2.47E-10
Total Deca CB		4.08E-11	4.08E-11

**Table 5-2**  
**Chemical-Specific Input Parameters**  
**ESSROC**  
**Logansport, Indiana**

DRAFT-FINAL

Chemical	Kds (mL/g)	Source	Fv unitless	Source	ksg (yr-1)	Source
<b>Metals</b>						
Antimony	45	(a)	0	(a)	0	(a)
Arsenic	29	(a)	0	(a)	0	(a)
Barium	41	(a)	0	(a)	0	(a)
Beryllium	790	(a)	0	(a)	0	(a)
Cadmium	75	(a)	0	(a)	0	(a)
Chromium (VI)	19	(a)	0	(a)	0	(a)
Chromium, total	1.80E+06	(a)	0	(a)	0	(a)
Lead	9.00E+02	(a)	0	(a)	0	(a)
Mercury (Divalent)	5.80E+04	(a)	1	(a)	0	(a)
Methyl Mercury	7.00E+03	(a)	0	(a)	0	(a)
Nickel	65	(a)	0	(a)	0	(a)
Thallium	71	(a)	0	(a)	0	(a)
<b>Semi-Volatile Compounds</b>						
Acenaphthene	4.90E+01	(a)	1	(a)	2.45E+03	(a)
Benzo(a)pyrene	9.69E+03	(a)	2.65E-01	(a)	4.77E-01	(a)
Benzo(a)anthracene	2.60E+03	(a)	8.81E-01	(a)	3.72E-01	(a)
Benzo(b)fluoranthene	8.36E+03	(a)	8.22E-01	(a)	4.15E-01	(a)
Bis(2-ethyl hexyl)phthalate	1.11E+03	(a)	1	(a)	5.50E+02	(a)
2-Chlorophenol	3.87	(a)	1	(a)	0	(a)
Dibenz(a,h)anthracene	1.79E+04	(a)	1.10E-02	(a)	2.69E-01	(a)
1,4-dichlorobenzene	6.16	(a)	1	(a)	1.41	(a)
2,4-Dinitrophenol	1.00E-04	(a)	0.999	(a)	9.62E-01	(a)
2,4-Dinitrotoluene	5.10E-01	(a)	0.999	(a)	1.41	(a)
2,6-Dinitrotoluene	4.19E-01	(a)	1	(a)	1.41	(a)
Fluoranthene	4.91E+02	(a)	0.992	(a)	5.75E-01	(a)
Hexachlorobenzene	8.00E+02	(a)	1	(a)	1.21E-01	(a)
Hexachlorobutadiene	1.20E+04	(a)	1	(a)	1.21E-01	(a)
Hexachlorocyclopentadiene	9.51E+01	(a)	1	(a)	9.03	(a)
Naphthalene	1.19E+03	(a)	1	(a)	5.27	(a)
2-Nitroaniline	3.93	(a)	1	(a)	0	(a)
Nitrobenzene	1.19	(a)	1	(a)	1.28	(a)
n-Nitroso-di-n-propylamine	1.70E-01	(a)	1	(a)	4.23E+03	(a)
Pentachlorophenol	5.05	(a)	1	(a)	1.42	(a)
Phenol	2.20E-01	(a)	1	(a)	2.53E+01	(a)
Pyrene	6.80E+02	(a)	0.196	(a)	4.56E+04	(a)



**Table 5-2**  
**Chemical-Specific Input Parameters**  
**ESSROC**  
**Logansport, Indiana**

DRAFT-FINAL

Chemical	Kds (mL/g)	Source	Fv unitless	Source	ksq (yr-1)	Source
1,2,4-Trichlorobenzene	1.66E+01	(a)	1	(a)	1.41	(a)
2,4,5-Trichlorophenol	1.13E+01	(a)	1	(a)	0.367	(a)
<b>Dioxins/Furans</b>						
2,3,7,8-TCDD	2.69E+04	(a)	9.78E-01	(a)	4.29E-01	(a)
2,3,7,8-PeCDD	2.69E+04	(a)	2.19E-01	(a)	0	(a)
2,3,7,8-HxCDD	1.00E+05	(c)	5.96E-02	(c)	1.09E-01	(a)
2,3,7,8-HpCDD	1.20E+05	(c)	1.62E-02	(c)	1.09E-01	(a)
OCDD	2.40E+05	(a)	1.69E-03	(a)	1.09E-01	(a)
2,3,7,8-TCDF	2.09E+04	(a)	7.68E-01	(a)	3.57E-01	(a)
1,2,3,7,8-PeCDF	3.80E+04	(a)	3.64E-01	(a)	3.57E-01	(a)
2,3,4,7,8-PeCDF	2.00E+05	(a)	2.63E-01	(a)	3.57E-01	(a)
2,3,7,8-HxCDF	1.50E+05	(b)	5.47E-02	(b)	1.10E-01	(a)
2,3,7,8-HpCDF	5.10E+05	(b)	3.47E-02	(b)	1.10E-01	(a)
OCDF	3.72E+06	(a)	1.67E-03	(a)	1.10E-01	(a)
<b>Polychlorinated Biphenyls</b>						
3,3'-Tetra CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3,4,4',5'-Penta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3',4,4',5'-Penta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2',3,3',4,4'-Penta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3,3',4,4'-Penta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
3,3',4,4',5'-Penta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3',4,4',5',5'-Hexa CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3,3',4,4',5'-Hexa CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3,3',4,4',5',5'-Hexa CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,2',3,4,4',5,5'-Hepta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,2',3,3',4,4',5'-Hepta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
2,3,3',4,4',5,5'-Hepta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)

**Table 5-2**  
**Chemical-Specific Input Parameters**  
**ESSROC**  
**Logansport, Indiana**

Chemical	Kds (mL/g)	Source	Fv unitless	Source	ksg (yr-1)	Source
Total Mono CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Di CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Tri CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Tetra CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Penta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Hex CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Hepta CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Octa CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Nona CB	9.83E+02	(b)	0.993	(b)	5.06	(b)
Total Deca CB	9.83E+02	(b)	0.993	(b)	5.06	(b)

(a) Source: Appendix A-3 of 1998  
HHRAP.

(b) Chemical-specific inputs  
for Aroclor 1254 used for PCBs.

(c) Source: Estimating Exposures  
to Dioxin-Like Compounds, 1995



**Table 5-3**  
**Parameter Values used to Calculate Soil Concentrations**  
**ESSROC**  
**Logansport, Indiana**

Parameter	Source	
	Tilled	Untilled
Sc = Soil concentration (mg/kg)	Equations - 5-1a, 5-1b 5-1c	
Cyv = unitized yearly average air concentration from vapor phase (ug-s/gm3)	Table 4-4	
Cyp = unitized yearly average air concentration from particle phase (ug-s/g-m3)	Table 4-4	
Dyvw = unitized yearly average wet deposition from vapor phase (s/m2-yr)	Table 4-4	
Dydp = unitized yearly average dry deposition from particle phase (s/m2-yr)	Table 4-4	
Dywp = unitized yearly average wet deposition from particle phase (s/m2-yr)	Table 4-4	
ks = soil loss constant (yr <sup>-1</sup> )	Equation 5-2	
Te = total time of combustor emissions (yr)	30	
Z = soil mixing depth (cm)	20	1
BD = representative soil bulk density (g/cm3)	1.4	
u = wind speed (m)	2.8	
ua = viscosity of air (g/cm-s)	0.000181	
pa = density of air (g/cm3)	0.0012	
ksl = soil loss constant due to leaching (yr <sup>-1</sup> )	Equation 5-3	
kse = soil loss constant due to erosion (yr <sup>-1</sup> )	Equation 5-4	
ksr = soil loss constant due to runoff (yr <sup>-1</sup> )	Equation 5-8	
ksg = soil loss constant due to degradation (yr <sup>-1</sup> )	Equation 5-2	
PR = average annual precipitation (cm/yr)	96.5	
I = average annual irrigation (cm/yr)	0	
E = average annual evapotranspiration (cm/yr)	60	
R = average annual runoff (cm/yr)	30	
θ = soil volumetric water content (mL/cm3)	0.25	
Kd = soil-water partition coefficient (L/kg)	Table 5-2	
Xe = unit soil loss (kg/ton)	Equation 5-6	
SD = sediment delivery ratio (unitless)	0.035	
BR = enrichment ratio (unitless)	3	
R = ideal gas constant (atm-L/mole K)	0.08205	
T = temperature degrees K	298	
ES = erosivity factor (yr-1)	180	
K = erodability factor (yr-1)	0.33	
LS = topographic slope factor (unitless)	0.179	
C = cover management factor (unitless)	0.1	
P = supporting practice factor (unitless)	1	

**Table 5-4**  
**Estimated Soil Concentrations**  
**ESSROC**  
**Logansport, Indiana**  
*Units mg/kg*

DRAFT-FINAL

Chemical	Maximum Exposure Area Unfilled	Maximum Exposure Area Tilled
<b>Carcinogens</b>		
2,3,7,8 TCDD	1.2317E-08	6.618E-10
2,3,7,8-PeCDD	1.8306E-08	9.8355E-10
2,3,7,8-HxCDD	9.6903E-08	5.1831E-09
2,3,7,8-HpCDD	2.4947E-07	1.334E-08
OCDD	1.2397E-07	6.6246E-09
2,3,7,8-TCDF	1.1072E-07	5.9591E-09
1,2,3,7,8-PeCDF	1.198E-07	6.4254E-09
2,3,4,7,8-PeCDF	1.7262E-07	9.2252E-09
2,3,7,8-HxCDF	1.8897E-07	1.0102E-08
2,3,7,8-HpCDF	6.4562E-08	3.4487E-09
OCDF	1.2832E-08	6.7745E-10
Arsenic	0.00109267	5.4634E-05
Beryllium	5.8068E-05	2.9034E-06
Benzo(a)pyrene	0.00011246	5.6693E-06
Benzo(a)anthracene	0.00033672	1.7293E-05
Benzo(b)fluoranthene	0.0004276	2.1599E-05
Bis(2-ethyl hexyl)phthalate	0.00129806	6.5044E-05
Dibenz(a,h)anthracene	3.4937E-05	1.764E-06
1,4-dichlorobenzene	0.00011123	1.8804E-05
2,4-Dinitrotoluene	4.4257E-06	2.6614E-06
2,6-Dinitrotoluene	4.8643E-06	3.0919E-06
Hexachlorobenzene	0.00076642	4.5297E-05
Hexachlorobutadiene	0.00143314	7.3617E-05
Hexachloroethane	6.733E-05	6.3693E-06
n-Nitroso-di-n-propylamine	1.9069E-06	1.4408E-06
Pentachlorophenol	3.5187E-05	6.6818E-06
3,3'-Tetra CB	1.0539E-09	5.3055E-11
2,3,4,4',5'-Penta CB	3.1888E-09	1.6053E-10
2,3',4,4',5'-Penta CB	3.405E-09	1.7141E-10
2',3,3',4,4'-Penta CB	1.316E-10	6.6251E-12
2,3,3',4,4'-Penta CB	5.702E-10	2.8704E-11
3,3',4,4',5'-Penta CB	1.4458E-10	7.2781E-12
2,3',4,4',5'-Hexa CB	1.8646E-09	9.3867E-11
2,3,3',4,4',5'-Hexa CB	3.7293E-09	1.8773E-10
2,3,3',4,4',5'_Hexa CB	1.1404E-09	5.7409E-11
3,3',4,4',5,5'-Hexa CB	2.9726E-10	1.4964E-11
2,2',3,4,4',5,5'-Hepta CB	9.7015E-08	4.8838E-09
2,2',3,3',4,4',5-Hepta CB	9.6744E-08	4.8702E-09

**Table 5-4**  
**Estimated Soil Concentrations**  
**ESSROC**  
**Logansport, Indiana**  
*Units mg/kg*

Chemical	Maximum Exposure Area Untilled	Maximum Exposure Area Tilled
2,3,3',4,4',5,5'-Hepta CB	4.1076E-10	2.0678E-11
Noncarcinogens		
Antimony	0.00187395	9.3697E-05
Arsenic	0.00179536	8.9768E-05
Barium	0.01962978	0.00098149
Beryllium	0.00011519	5.7593E-06
Cadmium	0.0340081	0.0017004
Chromium (VI)	6.0953E-05	3.0477E-06
Chromium, total	0.00808395	0.0004042
Lead	0.60115374	0.03005769
Divalent Mercury	0.05940683	0.00297034
Methyl Mercury	0.00059001	2.95E-05
Nickel	0.00622859	0.00031143
Selenium	0.00140713	7.0356E-05
Thallium	0.00295554	0.00014778
Acenaphthene	2.0704E-05	1.244E-06
Bis(2-ethyl hexyl)phthalate	0.00130199	6.5242E-05
2-Chlorophenol	4.7823E-05	4.782E-05
1,4-dichlorobenzene	0.00011191	1.92E-05
2,4-Dimethylphenol	1.9579E-06	1.4458E-07
2,4-Dinitrophenol	2.1345E-06	1.941E-06
2,4-Dinitrotoluene	4.4292E-06	2.6877E-06
2,6-Dinitrotoluene	4.8677E-06	3.1197E-06
Fluoranthene	0.00420077	0.00022899
Hexachlorobenzene	0.00096404	6.0058E-05
Hexachlorobutadiene	0.00143314	7.3617E-05
Hexachlorocyclopentadiene	1.8421E-05	9.4773E-07
Hexachloroethane	6.8131E-05	6.516E-06
Naphthalene	0.00492315	0.00024721
2-Nitroaniline	4.139E-06	4.139E-06
Nitrobenzene	5.2157E-06	2.407E-06
Phenol	6.9575E-05	1.1697E-05
Pyrene	0.01594688	0.00101024
1,2,4-Trichlorobenzene	3.8492E-05	3.8402E-06
2,4,5-Trichlorophenol	5.9229E-05	1.6298E-05
Total Mono CB	1.3247E-07	6.669E-09
Total Di CB	9.4389E-08	4.7519E-09
Total Tri CB	1.2159E-07	6.1213E-09
Total Tetra CB	8.9765E-08	4.5191E-09



**Table 5-4**  
**Estimated Soil Concentrations**  
**ESSROC**  
**Logansport, Indiana**  
*Units mg/kg*

DRAFT-FINAL

Chemical	Maximum Exposure Area	Maximum Exposure Area
	Untilled	Tilled
Total Penta CB	8.4325E-08	4.2452E-09
Total Hex CB	3.0466E-07	1.5337E-08
Total Hepta CB	4.6787E-07	2.3554E-08
Total Octa CB	1.0636E-07	5.3544E-09
Total Nona CB	5.3207E-09	2.7214E-10
Total Deca CB	8.9493E-10	4.5054E-11

Table 5-5  
Chemical-specific Parameters Used to Estimate Surface Water Concentrations  
ESSROC

Chemical	Diffusion Coefficient in air (Da) (cm <sup>2</sup> /s)	Source	Diffusion Coefficient in water (Dw) (cm <sup>2</sup> /s)	Source	Kdsw (L/kg)	Source	Kdbs (mL/g)	Source	Bio Conc. Factor Fish BCFfish	Source	Bio Accum. Factor Fish BAFfish	Source	Bioaccumulation Factor - Fish BSAFfish	Source
<b>Inorganics</b>														
Antimony	7.73E-02	(a)	8.96E-06	(a)	45	(a)	45	(a)	4.00E+01	(a)	NA	(a)	NA	(a)
Arsenic	1.07E-01	(a)	1.24E-04	(a)	29	(a)	29	(a)	2.00E+01	(a)	NA	(a)	NA	(a)
Barium	7.14E-02	(a)	8.26E-06	(a)	41	(a)	41	(a)	NA	(a)	NA	(a)	NA	(a)
Beryllium	4.39E-01	(a)	5.08E-05	(a)	790	(a)	790	(a)	4.20E+02	(a)	NA	(a)	NA	(a)
Cadmium	8.16E-02	(a)	9.45E-06	(a)	75	(a)	75	(a)	2.50E+02	(a)	NA	(a)	NA	(a)
Chromium (VI)	1.36E-01	(a)	1.58E-05	(a)	19	(a)	19	(a)	3.00E+00	(a)	NA	(a)	NA	(a)
Chromium, total	1.01E-01	(a)	4.63E-05	(a)	1.80E+06	(a)	1.80E+06	(a)	2.83E+02	(a)	NA	(a)	NA	(a)
Lead	5.43E-02	(a)	6.28E-06	(a)	9.00E+02	(a)	9.00E+02	(a)	NA	(a)	8.00E+00	(a)	NA	(a)
Mercury (Divalent)	4.53E-02	(a)	5.25E-06	(a)	1.00E+05	(a)	5.00E+04	(a)	NA	(a)	NA	(a)	NA	(a)
Methyl Mercury	5.28E-02	(a)	6.11E-06	(a)	1.00E+05	(a)	3.00E+03	(a)	NA	(a)	6.80E+06	(a)	NA	(a)
Nickel	1.26E-01	(a)	1.46E-05	(a)	65	(a)	65	(a)	3.07E+02	(a)	NA	(a)	NA	(a)
Thallium	5.48E-02	(a)	6.34E-06	(a)	71	(a)	71	(a)	1.40E+03	(a)	NA	(a)	NA	(a)
<b>Semi-Volatile Compounds</b>														
Acenaphthene	4.21E-02	(a)	7.19E-06	(a)	3.67E+02	(a)	1.96E+02	(a)	6.07E+02	(a)	NA	(a)	NA	(a)
Benzo(a)pyrene	2.18E-02	(a)	5.85E-06	(a)	7.27E+04	(a)	3.87E+04	(a)	NA	(a)	9.95E+03	(a)	NA	(a)
Benzo(a)anthracene	2.47E-02	(a)	6.21E-06	(a)	1.95E+04	(a)	1.04E+04	(a)	NA	(a)	5.10E+03	(a)	NA	(a)
Benzo(b)fluoranthene	2.28E-02	(a)	5.49E-06	(a)	6.27E+04	(a)	3.34E+04	(a)	NA	(a)	9.95E+03	(a)	NA	(a)
Bis(2-ethyl hexyl)phthalate	1.32E-02	(a)	4.22E-06	(a)	8.33E+03	(a)	4.44E+03	(a)	NA	(a)	3.60E+02	(a)	NA	(a)
2-Chlorophenol	5.01E-02	(a)	9.46E-06	(a)	2.90E+01	(a)	1.55E+01	(a)	2.59E+01	(a)	NA	(a)	NA	(a)
Dibenz(a,h)anthracene	1.80E-02	(a)	6.01E-06	(a)	1.34E+05	(a)	7.16E+04	(a)	NA	(a)	1.28E+04	(a)	NA	(a)
1,4-dichlorobenzene	4.14E-02	(a)	8.85E-06	(a)	4.62E+01	(a)	2.46E+01	(a)	2.31E+02	(a)	NA	(a)	NA	(a)
2,4-Dinitrophenol	2.75E-02	(a)	9.06E-06	(a)	7.50E-04	(a)	4.00E-04	(a)	8.4	(a)	NA	(a)	NA	(a)
2,4-Dinitrotoluene	3.09E-02	(a)	7.86E-06	(a)	3.83	(a)	2.04	(a)	5.92	(a)	NA	(a)	NA	(a)



Table 5-5  
Chemical-specific Parameters Used to Estimate Surface Water Concentrations  
ESSROC

Chemical	Diffusion Coefficient in air (Da) (cm <sup>2</sup> /s)	Diffusion Coefficient in water (Dw) (cm <sup>2</sup> /s)	Source	Kdsw (L/kg)	Source	Kdbs (mL/g)	Source	Bio Conc. Factor Fish BCFfish	Source	Bio Accum. Factor Fish BAFfish	Source	Biota-Sediment Accumulation Factor - Fish BSAFfish	Source
2,6-Dinitrotoluene	3.11E-02	7.76E-06	(a)	3.14	(a)	1.68	(a)	5.92	(a)	NA	(a)	NA	(a)
Fluoranthene	2.75E-02	7.18E-06	(a)	3.68E+03	(a)	1.96E+03	(a)	NA	(a)	1.57E+04	(a)	NA	(a)
Hexachlorobenzene	1.41E-02	7.84E-06	(a)	6.00E+03	(a)	3.20E+03	(a)	NA	(a)	1.79E+03	(a)	NA	(a)
Hexachlorobutadiene	4.60E-02	5.30E-06	(a)	9.44E+04	(a)	5.03E+04	(a)	NA	(a)	5.56E+04	(a)	NA	(a)
Hexachlorocyclopentadiene	1.61E-02	7.21E-06	(a)	7.13E+02	(a)	3.80E+02	(a)	NA	(a)	5.25E+02	(a)	NA	(a)
Hexachlorocyclohexane	1.77E-02	8.88E-06	(a)	1.36E+01	(a)	7.27E+01	(a)	6.29E+02	(a)	NA	(a)	NA	(a)
Naphthalene	5.26E-02	8.92E-06	(a)	8.93E+01	(a)	4.76E+01	(a)	2.15E+02	(a)	NA	(a)	NA	(a)
2-Nitroaniline	4.29E-02	9.81E-06	(a)	2.95E+00	(a)	1.57E+00	(a)	1.50E+01	(a)	NA	(a)	NA	(a)
Nitrobenzene	5.43E-02	9.43E-06	(a)	8.93	(a)	4.76E+00	(a)	5.92	(a)	NA	(a)	NA	(a)
n-Nitroso-di-n-propylamine	5.67E-02	7.75E-06	(a)	1.28	(a)	6.80E-01	(a)	6.39	(a)	NA	(a)	NA	(a)
Pentachlorophenol	1.56E-02	8.01E-06	(a)	38	(a)	20	(a)	NA	(a)	3.97E+02	(a)	NA	(a)
Phenol	8.27E-02	1.03E-05	(a)	1.65	(a)	8.79E-01	(a)	7.81	(a)	NA	(a)	NA	(a)
Pyrene	2.72E-02	7.14E-06	(a)	5.10E+03	(a)	2.72E+03	(a)	NA	(a)	1.19E+04	(a)	NA	(a)
1,2,4-Trichlorobenzene	3.00E-02	8.23E-06	(a)	1.24E+02	(a)	6.64E+01	(a)	6.33E+02	(a)	NA	(a)	NA	(a)
2,4,5-Trichlorophenol	2.91E-02	7.03E-06	(a)	8.45E+01	(a)	4.51E+01	(a)	5.14E+02	(a)	NA	(a)	NA	(a)
Dioxins/Furans													
2,3,7,8-TCDD	1.27E-02	6.81E-06	(a)	2.02E+05	(a)	1.08E+05	(a)	NA	(a)	NA	(a)	9.00E-02	(a)
2,3,7,8-PeCDD	1.21E-02	4.38E-06	(a)	2.02E+05	(a)	1.08E+05	(a)	NA	(a)	NA	(a)	9.00E-02	(a)
2,3,7,8-HxCDD	1.15E-02	4.12E-06	(a)	2.86E+06	(a)	1.52E+06	(a)	NA	(a)	NA	(a)	4.00E-02	(a)
2,3,7,8-HpCDD	1.11E-02	3.89E-06	(a)	7.33E+06	(a)	3.91E+06	(a)	NA	(a)	NA	(a)	5.00E-03	(a)
OCDD	1.06E-02	3.69E-07	(a)	1.80E+06	(a)	9.60E+05	(a)	NA	(a)	NA	(a)	1.00E-04	(a)
2,3,7,8-TCDF	1.79E-02	4.85E-06	(a)	1.57E+05	(a)	8.36E+04	(a)	NA	(a)	NA	(a)	9.00E-02	(a)
1,2,3,7,8-PeODF	1.70E-02	4.51E-06	(a)	2.85E+05	(a)	1.52E+05	(a)	NA	(a)	NA	(a)	9.00E-02	(a)
2,3,4,7,8-PeCDF	1.70E-02	4.51E-06	(a)	3.85E+05	(a)	2.05E+05	(a)	NA	(a)	NA	(a)	9.00E-02	(a)
2,3,7,8-HxCDF	1.62E-02	4.23E-06	(a)	8.22E+05	(a)	4.39E+05	(a)	NA	(a)	NA	(a)	4.00E-02	(a)

Table 5-5  
Chemical-specific Parameters Used to Estimate Surface Water Concentrations  
ESSROC

Chemical	Diffusion Coefficient in air (D <sub>a</sub> ) (cm <sup>2</sup> /s)	Source	Diffusion Coefficient in water (D <sub>w</sub> ) (cm <sup>2</sup> /s)	Source	K <sub>dsw</sub> (L/kg)	Source	K <sub>dbs</sub> (mL/g)	Source	Bio Conc. Factor Fish BCF <sub>fish</sub>	Source	Bio Accum. Factor Fish BAF <sub>fish</sub>	Source	Biota-Sediment Accumulation Factor - Fish BSAF <sub>fish</sub>	Source
2,3,7,8-HpCDF	1.55E-02	(a)	3.99E-06	(a)	3.80E+06	(a)	2.04E+06	(a)	NA		NA		5.00E-03	(a)
OCDF	1.48E-02	(a)	3.78E-06	(a)	2.79E+07	(a)	1.49E+07	(a)	NA		NA		1.00E-04	(a)
<b>Polychlorinated Biphenyls</b>														
3,3'-Tetra CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3,4,4',5'-Penta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3',4,4',5'-Penta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2',3,3',4,4'-Penta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3,3',4,4'-Penta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
3,3',4,4',5'-Penta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3',4,4',5,5'-Hexa CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3,3',4,4',5'-Hexa CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3,3',4,4',5',5'-Hexa CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
3,3',4,4',5,5'-Hexa CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,2',3,3',4,4',5,5'-Hepta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,2',3,3',4,4',5'-Hepta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)
2,3,3',4,4',5,5'-Hepta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA		6.66E+05	(b)	NA	(b)



Table 5-5  
Chemical-specific Parameters Used to Estimate Surface Water Concentrations  
ESSROC

Chemical	Diffusion Coefficient in air (Da) (cm <sup>2</sup> /s)	Source	Diffusion Coefficient in water (Dw) (cm <sup>2</sup> /s)	Source	Kdsw (L/kg)	Source	Kdbs (mL/g)	Source	Bio Conc. Factor Fish BCF <sub>Fish</sub>	Source	Bio Accum. Factor Fish BAF <sub>Fish</sub>	Source	Biota-Sediment Accumulation Factor - Fish BSAF <sub>Fish</sub>	Source
Total Mono CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Di CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Tri CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Tetra CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Penta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Hex CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Hepta CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Octa CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Nona CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)
Total Deca CB	4.00E-02	(b)	4.64E-06	(b)	7.37E+03	(b)	3.93E+03	(b)	NA	(b)	6.66E+05	(b)	NA	(b)

(a) Appendix A-3 of 1998 HIRAP.

(b) Chemical-specific inputs for Aroclor 1254 used for PCBs. NA - not applicable

Tal j-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
Noncarcinogens						
Antimony	Eel River	2.55438E-05	1.10821E-06	6.41353E-07	6.38594E-07	2.87368E-05
Antimony	Wabash River	0.000125518	4.87915E-06	3.15151E-06	3.13795E-06	0.000141208
Antimony	France Park, Swimming lake	0.001377981	3.90605E-05	3.4465E-05	3.44495E-05	0.001550229
Arsenic	Eel River	1.89677E-05	1.39564E-06	9.51027E-07	9.48386E-07	2.75032E-05
Arsenic	Wabash River	9.32103E-05	6.31891E-06	4.6735E-06	4.65052E-06	0.000135155
Arsenic	France Park, Swimming lake	0.001022252	5.54997E-05	5.11274E-05	5.11126E-05	0.001482265
Barium	Wabash River	0	5.42943E-05	3.6215E-05	3.6073E-05	0.001478993
Barium	Eel River	0	1.22554E-05	7.36987E-06	7.34098E-06	0.00030098
Barium	France Park, Swimming lake	0	0.00044162	0.000396083	0.000395921	0.016232763
Beryllium	Wabash River	4.47841E-06	1.15405E-07	1.14716E-08	1.06629E-08	8.42368E-06
Beryllium	Eel River	9.14314E-07	3.05182E-08	2.34204E-09	2.17694E-09	1.71978E-06
Beryllium	France Park, Swimming lake	5.14351E-05	4.12656E-07	1.23432E-07	1.22465E-07	9.6747E-05
Cadmium	Eel River	0.001738334	1.55062E-05	7.0034E-06	6.95334E-06	0.0005215
Cadmium	Wabash River	0.008540791	6.587E-05	3.44091E-05	3.41632E-05	0.002562237
Cadmium	France Park, Swimming lake	0.093942407	0.000459896	0.000376051	0.00037577	0.028182722
Chromium (VI)	Eel River	1.47124E-07	6.40828E-08	4.91307E-08	4.90412E-08	9.31783E-07
Chromium (VI)	Wabash River	7.23015E-07	2.96781E-07	2.41445E-07	2.41005E-07	4.5791E-06
Chromium (VI)	France Park, Swimming lake	7.92429E-06	2.78888E-06	2.64193E-06	2.64143E-06	5.01872E-05
Chromium, total	Wabash River	4.96304E-08	3.92727E-06	3.04798E-08	1.75373E-10	0.000315671
Chromium, total	Eel River	1.10121E-08	1.15487E-06	6.76289E-09	3.89119E-11	7.00415E-05
Chromium, total	France Park, Swimming lake	1.69916E-06	3.24388E-05	1.14078E-07	6.00409E-09	0.010807557
Divalent Mercury	Eel River	0	1.00819E-05	1.2874E-07	1.21453E-08	0.000607266
Divalent Mercury	Wabash River	0	3.75947E-05	6.34802E-07	5.9887E-08	0.002994348
Divalent Mercury	France Park, Swimming lake	0	0.000127434	1.68178E-06	8.40889E-07	0.042044464
Methyl Mercury	Eel River	5.792458265	1.87858E-08	3.54019E-09	3.15112E-10	9.45336E-07
Methyl Mercury	Wabash River	5.799992027	6.76127E-08	1.5084E-08	1.42302E-09	4.26905E-06
Methyl Mercury	France Park, Swimming lake	6.26931285	7.72657E-07	1.40882E-07	7.04408E-08	0.000211322



Tal 3-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
Nickel	Wabash River	0.002216809	1.30242E-05	7.26593E-06	7.22088E-06	0.000469357
Nickel	Eel River	0.000451174	3.035E-06	1.47879E-06	1.46962E-06	9.55255E-05
Nickel	France Park, Swimming lake	0.024367835	9.47622E-05	7.94256E-05	7.93741E-05	0.005159314
Selenium	Wabash River	0.002673708	2.19153E-05	2.07364E-05	2.07264E-05	0.000103632
Selenium	Eel River	0.000544049	4.53746E-06	4.21945E-06	4.21743E-06	2.10872E-05
Selenium	France Park, Swimming lake	0.029276653	0.000230085	0.000226962	0.000226951	0.001134754
Thallium	Eel River	0.000912881	1.3815E-06	6.42729E-07	6.38378E-07	4.53248E-05
Thallium	Wabash River	0.004485248	5.89147E-06	3.15792E-06	3.13654E-06	0.000222694
Thallium	France Park, Swimming lake	0.049321937	4.17986E-05	3.45154E-05	3.44909E-05	0.002448851
Bis(2-ethyl hexyl)phthalate	Wabash River	3.73708E-05	5.87549E-06	1.86821E-07	1.03808E-07	0.000460907
Bis(2-ethyl hexyl)phthalate	Eel River	9.56695E-06	1.9816E-06	4.78262E-08	2.65749E-08	0.000117992
Bis(2-ethyl hexyl)phthalate	France Park, Swimming lake	0.000843923	3.36679E-05	2.5395E-06	2.34423E-06	0.010408382
Acenaphthene	Eel River	8.97379E-08	6.27014E-10	1.53047E-10	1.47838E-10	2.89763E-08
Acenaphthene	Wabash River	2.65136E-07	1.50678E-09	4.52186E-10	4.36797E-10	8.56122E-08
Acenaphthene	France Park, Swimming lake	6.67999E-06	1.74834E-08	1.10452E-08	1.10048E-08	2.15695E-06
2-Chlorophenol	Wabash River	5.9628E-05	2.73775E-06	2.30865E-06	2.30224E-06	3.56847E-05
2-Chlorophenol	Eel River	1.32893E-05	6.4152E-07	5.1453E-07	5.13101E-07	7.95307E-06
2-Chlorophenol	France Park, Swimming lake	0.000225704	9.11055E-06	8.71698E-06	8.71445E-06	0.000135074
1,4-dichlorobenzene	Eel River	0.000117315	7.11548E-07	5.10108E-07	5.07856E-07	1.24932E-05
1,4-dichlorobenzene	Wabash River	0.000379875	2.143E-06	1.65177E-06	1.64448E-06	4.04542E-05
1,4-dichlorobenzene	France Park, Swimming lake	0.002388902	1.34176E-05	1.25124E-05	1.25066E-05	0.000307662
2,4-Dimethylphenol	Wabash River	1.17286E-05	3.39098E-07	3.20745E-07	3.20454E-07	1.61509E-06
2,4-Dimethylphenol	Eel River	2.53822E-06	6.93923E-08	6.44921E-08	6.44337E-08	3.24746E-07
2,4-Dimethylphenol	France Park, Swimming lake	4.04165E-05	1.11971E-06	1.10438E-06	1.10428E-06	5.56555E-06
2,4-Dinitrophenol	Eel River	5.77638E-06	6.8316E-07	6.87665E-07	6.87665E-07	2.75066E-10
2,4-Dinitrophenol	Wabash River	2.87507E-05	3.40581E-06	3.4227E-06	3.4227E-06	1.36908E-09
2,4-Dinitrophenol	France Park, Swimming lake	9.80357E-05	1.1657E-05	1.16709E-05	1.16709E-05	4.66836E-09



Tal 3-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
2,4-Dinitrotoluene	Eel River	1.84809E-06	3.20684E-07	3.12293E-07	3.12178E-07	6.36844E-07
2,4-Dinitrotoluene	Wabash River	9.18796E-06	1.58401E-06	1.55259E-06	1.55202E-06	3.16612E-06
2,4-Dinitrotoluene	France Park, Swimming lake	3.13673E-05	5.32472E-06	5.29873E-06	5.29853E-06	1.0809E-05
2,6-Dinitrotoluene	Eel River	2.36071E-06	4.07255E-07	3.98889E-07	3.98769E-07	6.69932E-07
2,6-Dinitrotoluene	Wabash River	1.1738E-05	2.0147E-06	1.98337E-06	1.98277E-06	3.33106E-06
2,6-Dinitrotoluene	France Park, Swimming lake	4.00576E-05	6.7926E-06	6.76648E-06	6.76648E-06	1.13677E-05
Fluorene	Eel River	4.40344E-05	2.23739E-07	3.87315E-08	3.66953E-08	1.13022E-05
Fluorene	Wabash River	0.000217901	8.81107E-07	1.9166E-07	1.81584E-07	5.59279E-05
Fluorene	France Park, Swimming lake	0.000834526	1.33928E-06	6.99458E-07	6.95438E-07	0.000214195
Hexachlorobenzene	Eel River	5.17924E-05	1.563E-06	4.56004E-08	2.89343E-08	9.25897E-05
Hexachlorobenzene	Wabash River	0.000191485	4.39348E-06	1.68593E-07	1.06975E-07	0.00034232
Hexachlorobenzene	France Park, Swimming lake	0.001513329	8.9869E-06	8.96161E-07	8.45435E-07	0.002705392
Hexachlorobutadiene	Wabash River	9.96875E-05	1.14736E-06	3.41487E-08	1.79133E-08	9.01994E-05
Hexachlorobutadiene	Eel River	2.60253E-05	3.94827E-07	8.91518E-09	4.6766E-09	2.35467E-05
Hexachlorobutadiene	France Park, Swimming lake	0.00095157	2.76199E-06	1.87135E-07	1.70992E-07	0.000860945
Hexachlorocyclopentadiene	Eel River	3.01732E-06	4.18992E-08	6.14066E-09	5.74727E-09	2.18396E-06
Hexachlorocyclopentadiene	Wabash River	9.9821E-06	1.09404E-07	2.0315E-08	1.90135E-08	7.22514E-06
Hexachlorocyclopentadiene	France Park, Swimming lake	8.67126E-05	3.53871E-07	1.66345E-07	1.65167E-07	6.27634E-05
Hexachloroethane	Wabash River	0.000215642	6.49286E-07	3.43281E-07	3.42833E-07	2.4924E-05
Hexachloroethane	France Park, Swimming lake	0.000752406	1.45503E-06	1.19636E-06	1.19619E-06	8.69633E-05
Hexachloroethane	France Park, Swimming lake	0.001653181	3.19699E-06	2.62863E-06	2.62827E-06	0.000191075
Naphthalene	Eel River	4.03795E-05	3.34719E-07	1.89422E-07	1.87812E-07	8.93985E-06
Naphthalene	Wabash River	0.000128422	9.50434E-07	6.02434E-07	5.97313E-07	2.84321E-05
Naphthalene	France Park, Swimming lake	0.001627782	8.64668E-06	7.57784E-06	7.57108E-06	0.000360383
2-Nitroaniline	Eel River	5.30795E-06	3.60749E-07	3.53963E-07	3.53863E-07	5.55565E-06
2-Nitroaniline	Wabash River	2.61775E-05	1.77087E-06	1.74566E-06	1.74517E-06	2.73992E-06
2-Nitroaniline	France Park, Swimming lake	8.96907E-05	6.00048E-06	5.97956E-06	5.97938E-06	9.38763E-06

Dra. Final  
 Tai 5-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
Nitrobenzene	Wabash River	4.34206E-06	7.75588E-07	7.34085E-07	7.33457E-07	3.49125E-06
Nitrobenzene	Eel River	9.85958E-07	1.78591E-07	1.6669E-07	1.66547E-07	7.92763E-07
Nitrobenzene	France Park, Swimming lake	1.68331E-05	2.88076E-06	2.84368E-06	2.84343E-06	1.35347E-05
Pentachlorophenol	Eel River	0.000117463	3.92008E-07	2.96957E-07	2.95877E-07	5.91754E-06
Pentachlorophenol	Wabash River	0.00053411	1.67576E-06	1.35027E-06	1.34536E-06	2.69073E-05
Pentachlorophenol	France Park, Swimming lake	0.002035419	5.42951E-06	5.12895E-06	5.127E-06	0.00010254
Phenol	Eel River	6.88324E-05	8.88395E-06	8.81477E-06	8.81337E-06	7.74695E-06
Phenol	Wabash River	0.000340944	4.39198E-05	4.36617E-05	4.36548E-05	3.83726E-05
Phenol	France Park, Swimming lake	0.001164035	0.00014926	0.000149047	0.000149044	0.00013101
Pyrene	Eel River	6.99043E-05	2.70601E-07	8.75038E-09	5.87431E-09	1.59781E-05
Pyrene	Wabash River	0.000261298	7.69816E-07	3.27084E-08	2.19578E-08	5.97252E-05
Pyrene	France Park, Swimming lake	0.005494588	4.2411E-06	4.85278E-07	4.6173E-07	0.001255906
1,2,4-Trichlorobenzene	Eel River	4.20944E-05	1.39229E-07	6.72915E-08	6.64999E-08	4.41559E-06
1,2,4-Trichlorobenzene	Wabash River	0.00013762	3.97114E-07	2.19997E-07	2.17409E-07	1.4436E-05
1,2,4-Trichlorobenzene	France Park, Swimming lake	0.00103325	1.95656E-06	1.63433E-06	1.63231E-06	0.000108385
2,4,5-Trichlorophenol	Eel River	0.000118837	4.02466E-07	2.33076E-07	2.31201E-07	1.04271E-05
2,4,5-Trichlorophenol	Wabash River	0.000567834	1.72324E-06	1.1137E-06	1.10474E-06	4.98236E-05
2,4,5-Trichlorophenol	France Park, Swimming lake	0.002023946	4.46741E-06	3.94097E-06	3.93764E-06	0.000177588
Total Mono CB	Eel River	2.63581E-06	2.61664E-10	6.7578E-12	3.95767E-12	1.55536E-08
Total Mono CB	Wabash River	9.74703E-06	7.34867E-10	2.49899E-11	1.46352E-11	5.75162E-08
Total Mono CB	France Park, Swimming lake	0.000131808	2.53859E-09	2.12496E-10	1.9791E-10	7.77786E-07
Total Di CB	Eel River	1.87808E-06	1.86442E-10	4.8151E-12	2.81994E-12	1.10824E-08
Total Di CB	Wabash River	6.94501E-06	5.23612E-10	1.78059E-11	1.04279E-11	4.09818E-08
Total Di CB	France Park, Swimming lake	9.39166E-05	1.80881E-09	1.51409E-10	1.41016E-10	5.54192E-07
Total Tri CB	Eel River	2.41931E-06	2.40172E-10	6.20274E-12	3.6326E-12	1.42761E-08
Total Tri CB	Wabash River	8.94645E-06	6.74508E-10	2.29373E-11	1.34331E-11	5.27921E-08
Total Tri CB	France Park, Swimming lake	0.000120982	2.33008E-09	1.95042E-10	1.81654E-10	7.13902E-07



Tal. 5-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
Total Tetra CB	Eel River	1.78607E-06	1.77308E-10	4.57921E-12	2.68179E-12	1.05394E-08
Total Tetra CB	Wabash River	6.60476E-06	4.97959E-10	1.69336E-11	9.91706E-12	3.8974E-08
Total Tetra CB	France Park, Swimming lake	8.93155E-05	1.7202E-09	1.43991E-10	1.34107E-10	5.27042E-07
Total Penta CB	Eel River	1.67782E-06	1.66562E-10	4.30168E-12	2.51926E-12	9.90067E-09
Total Penta CB	Wabash River	6.20447E-06	4.6778E-10	1.59073E-11	9.31603E-12	3.6612E-08
Total Penta CB	France Park, Swimming lake	8.39024E-05	1.61594E-09	1.35264E-10	1.2598E-10	4.951E-07
Total Hex CB	Eel River	6.06182E-06	6.01775E-10	1.55415E-11	9.10182E-12	3.57702E-08
Total Hex CB	Wabash River	2.24162E-05	1.69004E-09	5.74715E-11	3.36579E-11	1.32276E-07
Total Hex CB	France Park, Swimming lake	0.000303131	5.83824E-09	4.88697E-10	4.55152E-10	1.78875E-06
Total Hepta CB	Eel River	9.30922E-06	9.24151E-10	2.38674E-11	1.39778E-11	5.49328E-08
Total Hepta CB	Wabash River	3.44248E-05	2.59542E-09	8.82599E-11	5.16889E-11	2.03137E-07
Total Hepta CB	France Park, Swimming lake	0.000465523	8.96588E-09	7.50499E-10	6.98984E-10	2.74701E-06
Total Octa CB	Wabash River	7.82564E-06	5.90006E-10	2.00637E-11	1.17502E-11	4.61783E-08
Total Octa CB	Eel River	2.11622E-06	2.10083E-10	5.42567E-12	3.17751E-12	1.24876E-08
Total Octa CB	France Park, Swimming lake	0.000103825	2.03817E-09	1.70608E-10	1.58897E-10	6.24465E-07
Total Nona CB	Wabash River	1.75713E-06	3.33201E-11	3.07905E-12	2.63834E-12	2.45102E-09
Total Nona CB	Eel River	4.91266E-07	1.20878E-11	8.60852E-13	7.37637E-13	6.85265E-10
Total Nona CB	France Park, Swimming lake	1.39746E-05	7.96262E-11	2.1348E-11	2.09829E-11	1.94931E-08
Total Deca CB	Eel River	1.78066E-08	1.76771E-12	4.56553E-14	2.67366E-14	1.05075E-10
Total Deca CB	Wabash River	6.58475E-08	4.9645E-12	1.68823E-13	9.88701E-14	3.88559E-10
Total Deca CB	France Park, Swimming lake	8.90448E-07	1.71498E-11	1.43555E-12	1.33701E-12	5.25445E-09

Estimated Surface Water Concentrations

ESSROC

Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
<b>Carcinogens</b>						
Arsenic	Eel River	1.15541E-05	8.50144E-07	5.79312E-07	5.77704E-07	1.67534E-05
Arsenic	Wabash River	5.67699E-05	3.84853E-06	2.8464E-06	2.8385E-06	8.23164E-05
Arsenic	France Park, Swimming lake	0.000622494	3.37962E-05	3.11337E-05	3.11247E-05	0.000902616
Beryllium	Wabash River	2.29477E-06	5.91343E-08	5.8781E-09	5.46373E-09	4.31635E-06
Beryllium	Eel River	4.70063E-07	1.56899E-08	1.20408E-09	1.1192E-09	8.84166E-07
Beryllium	France Park, Swimming lake	2.62544E-05	2.10634E-07	6.30042E-08	6.25104E-08	4.93832E-05
Benzo(a)pyrene	Eel River	1.2935E-06	8.34971E-08	1.0373E-09	1.3E-10	5.031E-06
Benzo(a)pyrene	Wabash River	6.01741E-06	2.95714E-07	4.82554E-09	6.04765E-10	2.34044E-05
Benzo(a)pyrene	France Park, Swimming lake	0.000141253	1.66773E-06	2.45171E-08	1.41963E-08	0.000549398
Benzo(a)anthracene	Wabash River	6.49677E-05	1.67182E-06	3.65857E-08	1.27388E-08	0.000132483
Benzo(a)anthracene	Eel River	1.33606E-05	4.54067E-07	7.52384E-09	2.61972E-09	2.72451E-05
Benzo(a)anthracene	France Park, Swimming lake	0.000552022	3.49613E-06	1.29346E-07	1.0824E-07	0.001125693
Benzo(b)fluoranthene	Wabash River	3.06995E-05	1.29365E-06	2.16569E-08	3.08538E-09	0.000103052
Benzo(b)fluoranthene	Eel River	6.41607E-06	3.5753E-07	4.5262E-09	6.44831E-10	2.15374E-05
Benzo(b)fluoranthene	France Park, Swimming lake	0.000477788	4.87508E-06	7.81267E-08	4.80189E-08	0.00160383
Bis(2-ethyl hexyl)phthalate	Wabash River	3.73708E-05	5.87548E-06	1.86821E-07	1.03808E-07	0.000460906
Bis(2-ethyl hexyl)phthalate	Eel River	9.56693E-06	1.9816E-06	4.78262E-08	2.65748E-08	0.000117992
Bis(2-ethyl hexyl)phthalate	France Park, Swimming lake	0.000843922	3.36679E-05	2.5395E-06	2.34423E-06	0.010408377
2-Chlorophenol	Wabash River	5.9628E-05	2.73775E-06	2.30865E-06	2.50224E-06	3.56847E-05
2-Chlorophenol	Eel River	1.32893E-05	6.4152E-07	5.1453E-07	5.13101E-07	7.95307E-06
2-Chlorophenol	France Park, Swimming lake	0.000225704	9.11055E-06	8.71698E-06	8.714445E-06	0.000135074
Dibenz(a,h)anthracene	Eel River	1.644E-07	1.52309E-08	1.78066E-10	1.28438E-11	9.19614E-07
Dibenz(a,h)anthracene	Wabash River	7.51354E-07	5.12891E-08	7.92148E-10	5.7137E-11	4.09101E-06
Dibenz(a,h)anthracene	France Park, Swimming lake	3.18433E-05	5.3858E-07	5.82135E-09	2.48776E-09	0.000178123



Tab. 5-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
1,4-dichlorobenzene	Eel River	0.000116611	7.07282E-07	5.0705E-07	5.04811E-07	1.24183E-05
1,4-dichlorobenzene	Wabash River	0.000377596	2.13014E-06	1.64187E-06	1.63462E-06	4.02116E-05
1,4-dichlorobenzene	France Park, Swimming lake	0.002871808	1.33377E-05	1.24378E-05	1.24321E-05	0.000305829
2,4-Dinitrotoluene	Eel River	1.84661E-06	3.20426E-07	3.12042E-07	3.11927E-07	6.36331E-07
2,4-Dinitrotoluene	Wabash River	9.18057E-06	1.58273E-06	1.55134E-06	1.55077E-06	3.16357E-06
2,4-Dinitrotoluene	France Park, Swimming lake	3.13422E-05	5.32046E-06	5.29449E-06	5.29428E-06	1.08003E-05
2,6-Dinitrotoluene	Eel River	2.35907E-06	4.06972E-07	3.98612E-07	3.98492E-07	6.69466E-07
2,6-Dinitrotoluene	Wabash River	1.17299E-05	2.01329E-06	1.98199E-06	1.98139E-06	3.32874E-06
2,6-Dinitrotoluene	France Park, Swimming lake	4.00298E-05	6.7879E-06	6.76201E-06	6.7618E-06	1.13593E-05
Hexachlorobenzene	Eel River	4.12507E-05	1.24437E-06	3.6519E-08	2.30451E-08	7.57442E-05
Hexachlorobenzene	Wabash River	0.000152459	3.49805E-06	1.34232E-07	8.51725E-08	0.000272552
Hexachlorobenzene	France Park, Swimming lake	0.001211673	7.19551E-06	7.17527E-07	6.76912E-07	0.002166118
Hexachloroethane	Wabash River	0.000213111	6.41666E-07	3.39252E-07	3.3881E-07	2.46315E-05
Hexachloroethane	Eel River	6.59944E-05	2.2941E-07	1.05056E-07	1.04919E-07	7.62763E-06
Hexachloroethane	France Park, Swimming lake	0.001633971	3.15984E-06	2.59808E-06	2.59773E-06	0.000188855
n-Nitroso-di-n-propylamine	Eel River	3.46625E-08	5.28465E-09	5.26051E-09	5.25987E-09	3.57671E-09
n-Nitroso-di-n-propylamine	Wabash River	1.40092E-07	2.13343E-08	2.12608E-08	2.12582E-08	1.44556E-08
n-Nitroso-di-n-propylamine	France Park, Swimming lake	7.50518E-07	1.13984E-07	1.13889E-07	1.13887E-07	7.74434E-08
Pentachlorophenol	Eel River	0.000116857	3.89984E-07	2.95424E-07	2.9435E-07	5.887E-06
Pentachlorophenol	Wabash River	0.000531351	1.6671E-06	1.3433E-06	1.33842E-06	2.67683E-05
Pentachlorophenol	France Park, Swimming lake	0.002024973	5.40164E-06	5.10262E-06	5.10069E-06	0.000102014
2,3,7,8 TCDD	Wabash River	6.25912E-10	2.49018E-11	3.75179E-13	1.83984E-14	1.98702E-09
2,3,7,8 TCDD	Eel River	1.28251E-10	6.74911E-12	7.6863E-14	3.76927E-15	4.07082E-10
2,3,7,8 TCDD	France Park, Swimming lake	1.05139E-08	1.00764E-10	9.33334E-13	3.09051E-13	3.33775E-08
2,3,7,8-PeCDD	Eel River	1.44431E-10	7.60179E-12	8.65739E-14	4.24548E-15	4.58512E-10
2,3,7,8-PeCDD	Wabash River	6.94444E-10	2.76283E-11	4.16258E-13	2.04128E-14	2.20458E-09
2,3,7,8-PeCDD	France Park, Swimming lake	1.85127E-08	1.77423E-10	1.64339E-12	5.4417E-13	5.87703E-08



Tab. 5-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
2,3,7,8-HxCDD	Eel River	2.31521E-10	2.7404E-11	2.98757E-13	1.08797E-15	1.65372E-09
2,3,7,8-HxCDD	Wabash River	1.07665E-09	9.63151E-11	1.38933E-12	5.05946E-15	7.69038E-09
2,3,7,8-HxCDD	France Park, Swimming lake	5.01248E-08	1.07782E-09	6.94869E-12	2.35549E-13	3.58034E-07
2,3,7,8-HpCDD	Eel River	6.60409E-11	6.2534E-11	6.80127E-13	9.65157E-16	3.77576E-09
2,3,7,8-HpCDD	Wabash River	3.01926E-10	2.1607E-10	3.1094E-12	4.4125E-15	1.72529E-08
2,3,7,8-HpCDD	France Park, Swimming lake	1.68644E-08	2.90064E-09	1.83123E-11	2.46465E-13	9.63678E-07
OCDD	Eel River	6.09009E-13	2.88349E-11	3.15017E-13	1.81253E-15	1.740003E-09
OCDD	Wabash River	2.75724E-12	9.86658E-11	1.42622E-12	8.20607E-15	7.87783E-09
OCDD	France Park, Swimming lake	1.62205E-10	1.39532E-09	9.1723E-12	4.82753E-13	4.63443E-07
2,3,7,8-TCDF	Eel River	3.38929E-09	1.78423E-10	2.06853E-12	1.28704E-13	1.07596E-08
2,3,7,8-TCDF	Wabash River	1.65525E-08	6.58719E-10	1.01022E-11	6.28561E-13	5.25477E-08
2,3,7,8-TCDF	France Park, Swimming lake	2.79712E-07	2.6832E-09	2.72978E-11	1.06217E-11	8.87976E-07
1,2,3,7,8-PeCDF	Wabash River	4.75601E-09	1.89184E-10	2.81705E-12	9.93319E-14	1.50985E-08
1,2,3,7,8-PeCDF	Eel River	9.83733E-10	5.17694E-10	5.82679E-13	2.05458E-14	3.12296E-09
1,2,3,7,8-PeCDF	France Park, Swimming lake	1.13195E-07	1.0839E-09	9.10194E-12	2.36414E-12	3.59349E-07
2,3,4,7,8-PeCDF	Eel River	1.12108E-09	5.89923E-11	6.59019E-13	1.73609E-14	3.53898E-09
2,3,4,7,8-PeCDF	Wabash River	5.35874E-09	2.13135E-10	3.1501E-12	8.29847E-14	1.70119E-08
2,3,4,7,8-PeCDF	France Park, Swimming lake	1.51565E-07	1.45051E-09	1.13835E-11	2.34711E-12	4.81158E-07
2,3,7,8-HxCDF	Eel River	4.33191E-10	5.12791E-11	5.63247E-13	7.04835E-15	3.09422E-09
2,3,7,8-HxCDF	Wabash River	2.00703E-09	1.79564E-10	2.60959E-12	3.26558E-14	1.43359E-08
2,3,7,8-HxCDF	France Park, Swimming lake	9.1861E-08	1.9763E-09	1.37806E-11	1.49465E-12	6.5615E-07
2,3,7,8-HpCDF	Eel River	1.7348E-11	1.64259E-11	1.77756E-13	4.85938E-16	9.91314E-10
2,3,7,8-HpCDF	Wabash River	7.96598E-11	5.70035E-11	8.16234E-13	2.23137E-15	4.55199E-09
2,3,7,8-HpCDF	France Park, Swimming lake	4.07576E-09	7.01051E-10	4.45251E-12	1.14167E-13	2.329E-07

Tab. 5-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
OCDF	Eel River	7.11519E-14	3.3686E-12	3.65569E-14	1.36437E-17	2.03291E-10
OCDF	Wabash River	3.17525E-13	1.13613E-11	1.6314E-13	6.08868E-17	9.07214E-10
OCDF	France Park, Swimming lake	1.86467E-11	1.60349E-10	1.00116E-12	3.57558E-15	5.32762E-08
3,3'-Tetra CB	Eel River	2.09995E-08	2.08468E-12	5.38394E-14	3.15308E-14	1.23916E-10
3,3'-Tetra CB	Wabash River	7.76389E-08	5.8335E-12	1.99054E-13	1.16575E-13	4.58139E-10
3,3'-Tetra CB	France Park, Swimming lake	1.05228E-06	2.02667E-11	1.69645E-12	1.58E-12	6.20941E-09
2,3,4,4',5-Penta CB	Wabash River	2.34907E-07	1.77106E-11	6.02266E-13	3.52714E-13	1.38617E-09
2,3,4,4',5-Penta CB	Eel River	6.35369E-08	6.30748E-12	1.62899E-13	9.54008E-14	3.74925E-10
2,3,4,4',5-Penta CB	France Park, Swimming lake	3.18383E-06	6.13198E-11	5.13285E-12	4.78052E-12	1.87875E-08
2,3,4,4',5-Penta CB	Eel River	6.78445E-08	6.73511E-12	1.73943E-13	1.01869E-13	4.00344E-10
2,3,4,4',5-Penta CB	Wabash River	2.50833E-07	1.89113E-11	6.43098E-13	3.76627E-13	1.48014E-09
2,3,4,4',5-Penta CB	France Park, Swimming lake	3.39968E-06	6.54771E-11	5.48084E-12	5.10463E-12	2.00612E-08
2,3,3',4,4'-Penta CB	Wabash River	9.69491E-09	7.30937E-13	2.48562E-14	1.45569E-14	5.72087E-11
2,3,3',4,4'-Penta CB	Eel River	2.62224E-09	2.60317E-13	6.72303E-15	3.9373E-15	1.54736E-11
2,3,3',4,4'-Penta CB	France Park, Swimming lake	1.314E-07	2.53074E-12	2.11839E-13	1.97298E-13	7.7538E-10
2,3,3',4,4'-Penta CB	Wabash River	4.20046E-08	3.16689E-12	1.07693E-13	6.307E-14	2.47865E-10
2,3,3',4,4'-Penta CB	Eel River	1.13613E-08	1.12786E-12	2.91285E-14	1.7059E-14	6.70417E-11
2,3,3',4,4'-Penta CB	France Park, Swimming lake	5.69312E-07	1.09648E-11	9.17823E-13	8.54822E-13	3.35945E-09
3,3',4,4',5-Penta CB	Eel River	2.8807E-09	2.85975E-13	7.38566E-15	4.32537E-15	1.69987E-11
3,3',4,4',5-Penta CB	Wabash River	1.06505E-08	8.0298E-13	2.73061E-14	1.59917E-14	6.28473E-11
3,3',4,4',5-Penta CB	France Park, Swimming lake	1.44352E-07	2.78018E-12	2.32718E-13	2.16744E-13	8.51804E-10
2,3',4,4',5,5'-Hexa CB	Eel River	3.71529E-08	3.68827E-12	9.52544E-14	5.57852E-14	2.19236E-10
2,3',4,4',5,5'-Hexa CB	Wabash River	1.37361E-07	1.03562E-11	3.52172E-13	2.06248E-13	8.10554E-10
2,3',4,4',5,5'-Hexa CB	France Park, Swimming lake	1.86173E-06	3.58365E-11	3.00141E-12	2.79539E-12	1.09859E-08
2,3,3',4,4',5-Hexa CB	Eel River	7.43059E-08	7.37654E-12	1.90509E-13	1.1157E-13	4.38472E-10
2,3,3',4,4',5-Hexa CB	Wabash River	2.74722E-07	2.07124E-11	7.04345E-13	4.12496E-13	1.62111E-09
2,3,3',4,4',5-Hexa CB	France Park, Swimming lake	3.72346E-06	7.1713E-11	6.00282E-12	5.59078E-12	2.19718E-08



Tab. J-6  
 Estimated Surface Water Concentrations  
 ESSROC  
 Logansport, Indiana

Chemical	Water Body	Fish Concentration mg/kg	Total Water Body Concentration mg/L	Total Concentration in Water Column mg/L	Dissolved Phase Water Concentration mg/L	Concentration Sorbed to Bed Sediment mg/kg
2,3,3,4,4',5'_Hexa CB	Wabash River	8.40093E-08	6.53379E-12	2.15387E-13	1.2614E-13	4.9573E-10
2,3,3,4,4',5'_Hexa CB	Eel River	2.27225E-08	2.25573E-12	5.8257E-14	3.41179E-14	1.34083E-10
2,3,3,4,4',5'_Hexa CB	France Park, Swimming lake	1.13862E-06	2.19296E-11	1.83565E-12	1.70964E-12	6.7189E-09
3,3',4,4',5,5'-Hexa CB	Eel River	5.92293E-09	5.87985E-13	1.51855E-14	8.89329E-15	3.49506E-11
3,3',4,4',5,5'-Hexa CB	Wabash River	2.18982E-08	1.65099E-12	5.61434E-14	3.28801E-14	1.29219E-10
3,3',4,4',5,5'-Hexa CB	France Park, Swimming lake	2.96797E-07	5.71626E-12	4.78486E-13	4.45642E-13	1.75137E-09
2,2',3,4,4',5,5'-Hepta CB	Eel River	1.93303E-06	1.91897E-10	4.95599E-12	2.90245E-12	1.14066E-08
2,2',3,4,4',5,5'-Hepta CB	Wabash River	7.14676E-06	5.38822E-10	1.83232E-11	1.07309E-11	4.21723E-08
2,2',3,4,4',5,5'-Hepta CB	France Park, Swimming lake	9.68639E-05	1.86558E-09	1.5616E-10	1.45441E-10	5.71584E-07
2,2',3,3',4,4',5-Hepta CB	Eel River	1.92765E-06	1.91363E-10	4.94218E-12	2.89436E-12	1.13748E-08
2,2',3,3',4,4',5-Hepta CB	Wabash River	7.12685E-06	5.37322E-10	1.82721E-11	1.0701E-11	4.20549E-08
2,2',3,3',4,4',5-Hepta CB	France Park, Swimming lake	9.65941E-05	1.86038E-09	1.55725E-10	1.45036E-10	5.69992E-07
2,3,3',4,4',5,5'-Hepta CB	Eel River	8.18442E-09	8.12489E-13	2.09836E-14	1.22889E-14	4.82954E-11
2,3,3',4,4',5,5'-Hepta CB	Wabash River	3.02593E-08	2.28137E-12	7.758E-14	4.54343E-14	1.78557E-10
2,3,3',4,4',5,5'-Hepta CB	France Park, Swimming lake	4.1012E-07	7.89883E-12	6.6118E-13	6.15796E-13	2.42008E-09

Table 5-7  
Plant Uptake Factors  
ESSROC  
Logansport, Indiana

Chemical	Below Ground Root Conc. Factor B <sub>rootveg</sub>	Source	Above Ground Root Conc. Factor B <sub>veg</sub>	Source	Plant-Soil BioConc. Factor, Forage B <sub>forage</sub>	Source	Plant-Soil BioConc. Factor, Grain B <sub>grain</sub>	Source	Air-Plant BioTran. Fac. Above Ground B <sub>veg</sub>	Source
<b>Inorganics</b>										
Antimony	3.00E-02	(a)	3.19E-02	(a)	2.00E-01	(a)	2.00E-01	(a)	NA	(a)
Arsenic	8.00E-03	(a)	6.33E-03	(a)	3.60E-02	(a)	4.00E-03	(a)	NA	(a)
Barium	1.50E-02	(a)	3.22E-02	(a)	1.50E-01	(a)	1.50E-02	(a)	NA	(a)
Beryllium	1.50E-03	(a)	2.58E-03	(a)	1.00E-02	(a)	1.50E-03	(a)	NA	(a)
Cadmium	6.40E-02	(a)	1.25E-01	(a)	3.64E-01	(a)	6.20E-02	(a)	NA	(a)
Chromium (VI)	4.50E-03	(a)	4.88E-03	(a)	7.50E-03	(a)	4.50E-03	(a)	NA	(a)
Chromium, total	4.50E-03	(a)	4.88E-03	(a)	7.50E-03	(a)	4.50E-03	(a)	NA	(a)
Lead	9.00E-03	(a)	1.36E-02	(a)	4.50E-02	(a)	9.00E-03	(a)	NA	(a)
Mercury (Divalent)	3.60E-02	(a)	1.45E-02	(a)	0	(a)	3.60E-02	(a)	1.80E+03	(a)
Methyl Mercury	9.90E-02	(a)	2.94E-02	(a)	0.00E+00	(a)	0.00E+00	(a)	NA	(a)
Nickel	8.00E-03	(a)	9.31E-03	(a)	3.20E-02	(a)	6.00E-03	(a)	NA	(a)
Thallium	4.00E-04	(a)	8.58E-04	(a)	4.00E-03	(a)	4.00E-04	(a)	NA	(a)
<b>Semi-Volatiles</b>										
Acenaphthene	5.48	(a)	1.98E-01	(a)	1.98E-01	(a)	NA	(a)	4.66	(a)
Benzo(a)pyrene	1.26	(a)	1.11E-02	(a)	1.11E-02	(a)	NA	(a)	2.25E+05	(a)
Benzo(a)anthracene	2.11	(a)	2.02E-02	(a)	2.02E-02	(a)	NA	(a)	1.72E+04	(a)
Benzo(b)fluoranthene	1.66	(a)	1.00E-02	(a)	1.00E-02	(a)	NA	(a)	3.65E+04	(a)
Bis(2-ethyl hexyl)phthalate	2.13	(a)	3.80E-02	(a)	3.80E-02	(a)	NA	(a)	1.77E+06	(a)
2-Chlorophenol	4.4	(a)	2.18	(a)	2.18	(a)	NA	(a)	6.76E-01	(a)
Dibenz(a,h)anthracene	1.43E+00	(a)	6.56E-03	(a)	6.36E-03	(a)	NA	(a)	4.68E+07	(a)
1,4-dichlorobenzene	1.70E+01	(a)	4.13E-01	(a)	4.13E-01	(a)	NA	(a)	8.60E-02	(a)
2,4-Dinitrophenol	9.74E+04	(a)	5.13	(a)	5.13	(a)	NA	(a)	4.80E+02	(a)



Table 5-7  
 Plant Uptake Factors  
 ESSROC  
 Logansport, Indiana

Chemical	Below Ground Root Conc. Factor $B_{proove}$	Source	Above Ground Root Conc. Factor $B_{ag}$	Source	Plant-Soil BioConc. Factor, Forage $B_{fense}$	Source	Plant-Soil BioConc. Factor, Grain $B_{grain}$	Source	Air-Plant BioTran. Fac. Above Ground $B_{y,ag}$	Source
2,4-Dinitrotoluene	2.80E+01	(a)	2.72	(a)	2.72	(a)	NA	(a)	5.10E+01	(a)
2,6-Dinitrotoluene	3.08E+01	(a)	3.15	(a)	3.15	(a)	NA	(a)	4.41E+01	(a)
Fluoranthene	3.9	(a)	4.46E-02	(a)	4.46E-02	(a)	NA	(a)	1.56E+03	(a)
Hexachlorobutadiene	1.15E-02	(a)	6.68E-02	(a)	6.68E-02	(a)	NA	(a)	1.19E+00	(a)
Hexachlorobenzene	5.02	(a)	2.56E-02	(a)	2.56E-02	(a)	NA	(a)	7.57E+01	(a)
Hexachlorocyclopentadiene	1.47E+01	(a)	5.65E-02	(a)	5.65E-02	(a)	NA	(a)	5.47E-01	(a)
Naphthalene	8.23	(a)	4.35E-01	(a)	4.35E-01	(a)	NA	(a)	4.52E-01	(a)
2-Nitroaniline	3.18E+01	(a)	3.3	(a)	3.3	(a)	NA	(a)	4.47	(a)
Nitrobenzene	1.05E+01	(a)	3.38	(a)	3.38	(a)	NA	(a)	2.43E-01	(a)
n-Nitroso-di-n-propylamine	5.29E+01	(a)	6.17	(a)	6.17	(a)	NA	(a)	4.00E-02	(a)
Pentachlorophenol	3.77E+02	(a)	4.48E-02	(a)	4.48E-02	(a)	NA	(a)	1.02E+03	(a)
Phenol	4.32E+01	(a)	5.42	(a)	5.42	(a)	NA	(a)	3.52	(a)
Pyrene	2.44	(a)	4.98E-02	(a)	4.98E-02	(a)	NA	(a)	1.04E+06	(a)
1,2,4-Trichlorobenzene	1.69E+01	(a)	1.92E-01	(a)	1.92E-01	(a)	NA	(a)	3.78E-01	(a)
2,4,5-Trichlorophenol	2.02E+01	(a)	2.24E-01	(a)	2.24E-01	(a)	NA	(a)	1.31E+02	(a)

Table 5-7  
Plant Uptake Factors  
ESSROC  
Logansport, Indiana

Chemical	Below Ground Root Conc. Factor Br <sub>rootveg</sub>	Source	Above Ground Root Conc. Factor Br <sub>ag</sub>	Source	Plant-Soil BioConc. Factor, Forage Br <sub>forage</sub>	Source	Plant-Soil BioConc. Factor, Grain Br <sub>grain</sub>	Source	Air-Plant Bio Tran. Fac. Above Ground Br <sub>ag</sub>	Source
<b>Dioxins/Furans</b>										
2,3,7,8-TCDD	1.12	(a)	5.62E-03	(a)	5.62E-03	(a)	NA	(a)	6.55E+04	(a)
2,3,7,8-PeCDD	1.12	(a)	5.62E-03	(a)	5.62E-03	(a)	NA	(a)	2.39E+05	(a)
2,3,7,8-HxCDD	0.81	(a)	2.56E-03	(b)	2.56E-03	(b)	NA	(b)	5.20E+05	(a)
2,3,7,8-EpCDD	0.49	(a)	7.28E-04	(b)	7.28E-04	(b)	NA	(b)	9.10E+05	(a)
OCDD	6.77E-01	(a)	1.59E-03	(a)	1.59E-03	(a)	NA	(a)	2.36E+06	(a)
2,3,7,8-TCDF	1.19	(a)	6.51E-03	(a)	6.51E-03	(a)	NA	(a)	4.57E+04	(a)
1,2,3,7,8-PeCDF	1.03	(a)	4.61E-03	(a)	4.61E-03	(a)	NA	(a)	9.75E+04	(a)
2,3,4,7,8-PeCDF	9.65E-01	(a)	3.87E-03	(a)	3.87E-03	(a)	NA	(a)	9.75E+04	(a)
2,3,7,8-HxCDF	8.80E-01	(a)	2.05E-03	(b)	2.05E-03	(b)	NA	(b)	1.62E+05	(a)
2,3,7,8-EpCDF	0.568	(a)	1.02E-03	(b)	1.02E-03	(b)	NA	(b)	8.30E+06	(a)
OCDF	3.60E-01	(a)	3.26E-04	(a)	3.26E-04	(a)	NA	(a)	2.28E+06	(a)
<b>Polychlorinated Biphenyls</b>										
3,3'-Tetra CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3,4,4',5'-Penta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3',4,4',5'-Penta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2',3,3',4,4'-Penta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3,3',4,4'-Penta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
3,3',4,4',5'-Penta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3',4,4',5',5'-Hexa CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3,3',4,4',5'-Hexa CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3,3',4,4',5',5'-Hexa CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3,3',4,4',5',5'-Hexa CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)



Table 5-7  
 Plant Uptake Factors  
 ESSROC  
 Logansport, Indiana

Chemical	Below Ground Root Conc. Factor $B_{r\_rootveg}$	Source	Above Ground Root Conc. Factor $B_{r\_sg}$	Source	Plant-Soil BioConc. Factor, Forage $B_{r\_forage}$	Source	Plant-Soil BioConc. Factor, Grain $B_{r\_grain}$	Source	Air-Plant Bio Tran. Fac. Above Ground $B_{v\_ac}$	Source
2,2',3,4,4',5,5'-Hepta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,2',3,3',4,4',5'-Hepta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
2,3,3',4,4',5,5'-Hepta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Mono CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Di CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Tri CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Tetra CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Penta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Hex CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Hepta CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Octa CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Nona CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)
Total Deca CB	1.42E+01	(b)	1.00E-02	(b)	1.00E-02	(b)	NA	(b)	3.09E+02	(b)

(a) Appendix A-3 of 1998 HHRAP.

(b) Chemical-specific inputs

for Aroclor 1254 used for PCBs.

Table 5-7  
 Plant Uptake Factors  
 ESSROC  
 Logansport, Indiana

Chemical	Air-Plant BioTran. Fac. Forage BY <sub>soil</sub>	Source
<b>Inorganics</b>		
Antimony	NA	
Arsenic	NA	
Barium	NA	
Beryllium	NA	
Cadmium	NA	
Chromium (VI)	NA	
Chromium, total	NA	
Lead	NA	
Mercury (Divalent)	1.80E+03	(a)
Methyl Mercury	NA	
Nickel	NA	
Thallium	NA	
<b>Semi-Volatiles</b>		
Accenaphthene	4.56	(a)
Benzo(a)pyrene	2.25E+05	(a)
Benzo(a)anthracene	1.72E+04	(a)
Benzo(b)fluoranthene	3.65E+04	(a)
Bis(2-ethyl hexyl)phthalate	1.77E+06	(a)
2-Chlorophenol	6.76E-01	(a)
Dibenz(a,h)anthracene	4.68E-07	(a)
1,4-dichlorobenzene	8.60E-02	(a)
2,4-Dinitrophenol	4.80E+02	(a)



Table S-7  
 Plant Uptake Factors  
 ESSROC  
 Logansport, Indiana

Chemical	Air-Plant BioTran. Fac. Forage By <sub>forage</sub>	Source
2,4-Dinitrotoluene	5.10E+01	(a)
2,6-Dinitrotoluene	4.41E+01	(a)
Fluoranthene	1.56E+03	(a)
Hexachlorobutadiene	1.19E+00	(a)
Hexachlorobenzene	7.57E+01	(a)
Hexachlorocyclopentadiene	5.47E-01	(a)
Naphthalene	4.52E-01	(a)
2-Nitroaniline	4.47	(a)
Nitrobenzene	2.43E-01	(a)
n-Nitroso-di-n-propylamine	4.00E-02	(a)
Pentachlorophenol	1.02E+03	(a)
Phenol	3.52	(a)
Pyrene	1.04E+06	(a)
1,2,4-Trichlorobenzene	3.78E-01	(a)
2,4,5-Trichlorophenol	1.31E+02	(a)

Table 5-7  
 Plant Uptake Factors  
 ESSROC  
 Logansport, Indiana

Chemical	Air-Plant BioTrans. Fac. Forage Bv <sub>forage</sub>	Source
<b>Dioxins/Furans</b>		
2,3,7,8-TCDD	6.55E+04	(a)
2,3,7,8-PeCDD	2.39E+05	(a)
2,3,7,8-HxCDD	5.20E+05	(a)
2,3,7,8-HpCDD	9.10E+05	(a)
OCDD	2.36E+06	(a)
2,3,7,8-TCDF	4.57E+04	(a)
1,2,3,7,8-PeCDF	9.75E+04	(a)
2,3,4,7,8-PeCDF	9.75E+04	(a)
2,3,7,8-HxCDF	1.62E+05	(a)
2,3,7,8-HpCDF	8.30E+06	(a)
OCDF	2.28E+06	(a)
<b>Polychlorinated Biphenyls</b>		
3,3'-Tetra CB	3.09E+02	(b)
2,3,4,4',5'-Penta CB	3.09E+02	(b)
2,3',4,4',5'-Penta CB	3.09E+02	(b)
2,3,3',4,4'-Penta CB	3.09E+02	(b)
2,3,3',4,4',5'-Penta CB	3.09E+02	(b)
2,3,4,4',5,5'-Hexa CB	3.09E+02	(b)
2,3,3',4,4',5'-Hexa CB	3.09E+02	(b)
2,3,3',4,4',5',5'-Hexa CB	3.09E+02	(b)
3,3',4,4',5,5'-Hexa CB	3.09E+02	(b)



Table 5-7  
 Plant Uptake Factors  
 ESSROC  
 Logansport, Indiana

Chemical	Air-Plant BioTran. Fac. Forage Bv <sub>forage</sub>	Source
2,2',3,4,4',5,5'-Hepta CB	3.09E+02	(b)
2,2',3,3',4,4',5-Hepta CB	3.09E+02	(b)
2,3,3',4,4',5,5'-Hepta CB	3.09E+02	(b)
Total Mono CB	3.09E+02	(b)
Total Di CB	3.09E+02	(b)
Total Tri CB	3.09E+02	(b)
Total Tetra CB	3.09E+02	(b)
Total Penta CB	3.09E+02	(b)
Total Hex CB	3.09E+02	(b)
Total Hepta CB	3.09E+02	(b)
Total Octa CB	3.09E+02	(b)
Total Nona CB	3.09E+02	(b)
Total Deca CB	3.09E+02	(b)

(a) Appendix A-3 of 1998  
 EHRAP.

(b) Chemical-specific inputs  
 for Aroclor 1254 used for PCBs.

Table 5-8  
 Estimated Plant Concentrations  
 ESSROC  
 Logansport, Indiana  
 Units mg/kg

Chemical	Maximum Exposure Area Corn	Maximum Exposure Area Forage	Maximum Exposure Area Grain	Maximum Exposure Area Potato	Maximum Exposure Area Silage	Maximum Exposure Area Spinach
Carcinogens						
2,3,7,8-TCDD	3.7193E-12	8.4614E-10	6.9223E-11	7.4121E-12	4.5551E-10	1.2116E-11
2,3,7,8-PeCDD	5.5276E-12	3.4573E-09	1.0288E-10	1.1016E-11	1.5078E-09	1.1776E-10
2,3,7,8-HxCDD	1.2958E-11	2.0128E-08	2.4226E-10	4.1983E-11	7.7546E-09	9.1437E-10
2,3,7,8-HpCDD	9.7115E-12	4.4325E-08	1.8162E-10	6.5366E-11	1.4893E-08	2.5787E-09
OCDD	1.0533E-11	1.8244E-08	1.9712E-10	4.4848E-11	5.35E-09	1.5097E-09
2,3,7,8-TCDF	1.1101E-10	1.7906E-08	2.0625E-09	2.0292E-10	9.2821E-09	4.7242E-10
1,2,3,7,8-PeCDF	2.9621E-11	1.3114E-08	5.523E-10	6.6181E-11	5.6869E-09	4.8659E-10
2,3,4,7,8-PeCDF	3.5701E-11	1.9417E-08	6.6802E-10	8.9023E-11	7.8116E-09	8.6797E-10
2,3,7,8-HxCDF	2.5255E-11	2.6104E-08	4.7243E-10	8.8898E-11	8.4661E-09	1.6713E-09
2,3,7,8-HpCDF	3.5176E-12	7.1753E-08	6.5853E-11	1.9588E-11	3.4137E-08	1.2528E-09
OCDF	2.2085E-13	2.3867E-09	4.1834E-12	2.4388E-12	6.8192E-10	1.7248E-10
Arsenic	3.4516E-07	0.00012627	6.9033E-06	4.3623E-07	3.8003E-05	9.801E-06
Beryllium	7.4763E-09	4.4702E-06	1.4953E-07	4.3467E-09	1.2752E-06	3.4974E-07
Benzo(a)pyrene	6.2879E-08	8.2893E-05	1.2287E-06	7.1376E-08	3.6226E-05	2.5659E-06
Benzo(a)anthracene	3.4897E-07	2.886E-05	6.6715E-06	3.6452E-07	1.6633E-05	8.9821E-07
Benzo(b)fluoranthene	2.1579E-07	6.4517E-05	4.2004E-06	3.5822E-07	3.1905E-05	1.5282E-06
Bis(2-ethylhexyl)phthalate	4.9586E-08	0.18838799	9.9167E-07	2.7794E-08	0.09419449	0.00188392
Dibenz(a,b)anthracene	1.1204E-08	0.00017095	2.1653E-07	2.5193E-08	8.3041E-05	2.4529E-06
1,4-dichlorobenzene	7.7641E-06	4.5874E-05	4.5873E-05	3.1959E-06	4.5874E-05	7.7641E-06
2,4-Dinitrotoluene	7.2384E-06	1.2152E-05	1.2036E-05	7.4513E-07	1.2083E-05	7.3114E-06
2,6-Dinitrotoluene	9.7385E-06	1.5397E-05	1.5321E-05	9.5221E-07	1.5359E-05	9.8146E-06
Hexachlorobenzene	1.157E-06	1.8957E-05	1.8873E-05	2.2687E-06	1.9663E-05	1.1578E-06
Hexachlorobutadiene	3.6897E-06	6.9358E-05	6.9356E-05	6.3521E-09	8.0851E-10	1.617E-11
Hexachloroethane	1.2289E-06	1.2995E-05	1.2995E-05	9.7424E-07	1.2995E-05	3.8928E-12
n-Nitroso-di-n-propylamine	3.3894E-07	2.6769E-07	2.3125E-07	8.4119E-08	2.4947E-07	3.4053E-07
Pentachlorophenol	2.9927E-07	3.2977E-06	1.5744E-06	2.5184E-05	2.4361E-06	3.165E-07



Table 5-8  
 Estimated Plant Concentrations  
 ESSROC  
 Logansport, Indiana  
 Units mg/kg

Chemical	Corn		Forage		Grain		Potato		Silage		Spinach	
	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area
3,3'-Tetra CB	5.3056E-13	3.2598E-11	1.0539E-11	7.5339E-12	1.9247E-11	1.425E-12						
2,3,4,4',5'-Penta CB	1.6053E-12	9.8629E-11	3.1888E-11	2.2795E-11	5.8235E-11	4.3117E-12						
2,3',4,4',5'-Penta CB	1.8365E-12	1.0532E-10	3.405E-11	2.6079E-11	6.2184E-11	4.9328E-12						
2',3,3',4,4'-Penta CB	6.6252E-14	4.0705E-12	1.316E-12	9.4077E-13	2.4034E-12	1.7795E-13						
2,3,3',4,4'-Penta CB	2.8705E-13	1.7636E-11	5.702E-12	4.076E-12	1.0413E-11	7.7098E-13						
3,3',4,4',5'-Penta CB	7.2782E-14	4.4717E-12	1.4458E-12	1.0935E-12	2.6403E-12	1.7852E-13						
2,3',4,4',5,5'-Hexa CB	9.3868E-13	5.7673E-11	1.8646E-11	1.3329E-11	3.4053E-11	2.5212E-12						
2,3',4,4',5,5'-Hexa CB	1.8774E-12	1.1535E-10	3.7293E-11	2.6658E-11	6.8106E-11	5.0425E-12						
2,3,3',4,4',5'-Hexa CB	5.7137E-13	3.5272E-11	1.1404E-11	8.1134E-12	2.0827E-11	1.5347E-12						
3,3',4,4',5,5'-Hexa CB	1.4964E-13	9.1942E-12	2.9726E-12	2.1249E-12	5.4287E-12	4.0193E-13						
2,2',3,4,4',5,5'-Hepta CB	4.8838E-11	3.0006E-09	9.7015E-10	6.9351E-10	1.7717E-09	1.3118E-10						
2,2',3,3',4,4',5-Hepta CB	1.7821E-11	2.9923E-09	9.6744E-10	2.5306E-10	1.7668E-09	4.7867E-11						
2,3,3',4,4',5,5'-Hepta CB	2.0406E-13	1.2705E-11	4.1076E-12	2.8977E-12	7.5015E-12	5.4809E-13						
Noncarcinogens												
Antimony	2.9832E-06	0.00016219	5.9664E-05	2.8055E-06	8.6375E-05	1.1105E-05						
Arsenic	5.6714E-07	0.00013071	1.1343E-05	7.1676E-07	4.2443E-05	1.0023E-05						
Barium	3.1543E-05	0.00174398	0.00063086	1.4694E-05	0.00092087	0.00011972						
Beryllium	1.483E-08	4.6173E-06	2.966E-07	8.6222E-09	1.4223E-06	3.571E-07						
Cadmium	0.00021214	0.00583927	0.00424282	0.00010862	0.00465876	0.00033861						
Chromium (VI)	1.4844E-08	5.5329E-06	2.9688E-07	1.9467E-07	1.6611E-06	4.2962E-07						
Chromium, total	1.9687E-06	0.00033523	3.9374E-05	1.8154E-06	0.00011646	2.5405E-05						
Lead	0.000408	0.03064206	0.00815993	0.000135	0.0140174	0.00218894						
Divalent Mercury	4.307E-05	0.00088285	0.0008614	0.00010693	0.00087212	6.4519E-05						
Methyl Mercury	8.6564E-07	0.0002555	1.7313E-05	2.9149E-06	7.9369E-05	1.9734E-05						
Nickel	2.8938E-06	0.00036106	5.7876E-05	3.0772E-05	0.00013687	2.691E-05						
Selenium	1.3693E-06	0.00041918	2.7386E-05	5.6177E-07	0.00012946	3.2405E-05						
Thallium	1.2655E-07	0.00014314	2.531E-06	1.4749E-05	3.9164E-05	1.1265E-05						

Table 5-8  
 Estimated Plant Concentrations  
 ESSROC  
 Logansport, Indiana  
 Units mg/kg

Chemical	Maximum Exposure Area Corn	Maximum Exposure Area Forage	Maximum Exposure Area Grain	Maximum Exposure Area Potato	Maximum Exposure Area Silage	Maximum Exposure Area Spinach
Acenaphthene	2.5201E-10	7.194E-09	5.0391E-09	6.9748E-11	6.1166E-09	2.4069E-09
Bis(2-ethyl hexyl)phthalate	4.9589E-08	0.18838799	9.9173E-07	2.7796E-08	0.09419449	0.00188392
2-Chlorophenol	0.00010412	0.00010413	0.00010413	2.1015E-06	0.00010413	0.00010412
1,4-dichlorobenzene	7.9275E-06	4.6151E-05	4.615E-05	3.2631E-06	4.615E-05	7.9275E-06
2,4-Dimethylphenol	2.4289E-07	6.7583E-06	3.2889E-06	2.4722E-08	5.004E-06	3.3933E-06
2,4-Dinitrophenol	9.9573E-06	1.2443E-05	1.095E-05	0.18905257	1.1672E-05	1.1338E-05
2,4-Dinitrotoluene	7.5099E-06	1.2162E-05	1.2046E-05	7.5249E-07	1.2092E-05	7.3829E-06
2,6-Dinitrotoluene	9.8263E-06	1.5407E-05	1.5331E-05	9.608E-07	1.5369E-05	9.9024E-06
Hexachlorobenzene	1.5328E-06	2.3566E-05	2.3481E-05	3.0058E-06	2.3523E-05	1.5337E-06
Hexachlorobutadiene	4.9025E-06	9.0263E-05	9.0261E-05	8.4399E-09	8.0851E-10	1.617E-11
Hexachlorocyclopentadiene	5.3544E-08	1.0406E-06	1.0399E-06	1.3931E-07	1.0402E-06	5.3551E-08
Hexachloroethane	1.2572E-06	1.3112E-05	1.3111E-05	9.9667E-07	1.3112E-05	3.8928E-12
Naphthalene	0.00010754	0.00213832	0.00213823	2.0345E-05	0.00213827	0.00010754
2-Nitroamine	1.3689E-05	1.3664E-05	1.3657E-05	1.3162E-06	1.366E-05	1.3659E-05
Nitrobenzene	8.1357E-06	1.7623E-05	1.7623E-05	2.4792E-07	1.7623E-05	8.1357E-06
Phenol	6.3399E-05	0.00037725	0.00037708	0.00050532	0.00037716	6.3401E-05
Pyrene	1.5159E-10	0.02138185	3.0318E-09	7.4274E-11	0.01069001	0.00021408
1,2,4-Trichlorobenzene	7.3712E-07	7.3703E-06	7.3701E-06	6.4882E-07	7.3703E-06	7.3712E-07
2,4,5-Trichlorophenol	3.6507E-06	1.3379E-05	1.3226E-05	3.2922E-06	1.3303E-05	3.6522E-06
Total Mono CB	6.7102E-11	4.0792E-09	1.3247E-09	9.5284E-10	2.4121E-09	1.7949E-10
Total Di CB	4.7519E-11	2.9063E-09	9.4389E-10	6.7477E-10	1.7187E-09	1.161E-10



Table 5-8  
 Estimated Plant Concentrations  
 ESSROC  
 Logansport, Indiana  
 Units mg/kg

Chemical	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area	Maximum Exposure Area
	Corn	Forage	Grain	Potato	Silage	Spinach
Total Tri CB	6.1213E-11	3.7441E-09	1.2159E-09	8.6923E-10	2.214E-09	1.6373E-10
Total Tetra CB	4.5191E-11	2.7641E-09	8.9765E-10	6.4171E-10	1.6345E-09	1.2088E-10
Total Penta CB	4.2452E-11	2.5966E-09	8.4325E-10	6.0282E-10	1.5354E-09	1.0372E-10
Total Hex CB	1.5338E-10	9.3813E-09	3.0466E-09	2.1779E-09	5.5474E-09	3.7474E-10
Total Hepta CB	2.3554E-10	1.4407E-08	4.6787E-09	3.3447E-09	8.5192E-09	6.3003E-10
Total Octa CB	5.3407E-11	3.2751E-09	1.0636E-09	7.5839E-10	1.9366E-09	1.4286E-10
Total Nona CB	2.6115E-10	1.7723E-10	5.3207E-11	3.7083E-09	8.6618E-11	3.1479E-10
Total Deca CB	4.4506E-10	2.7557E-11	8.9493E-12	6.3199E-09	1.6295E-11	1.1905E-09

Table 5-9  
Beef Uptake Factors  
ESSROC  
Logansport, Indiana

Chemical	Bio Transfer Factor Milk B <sub>milk</sub>	Source	Bio Transfer Factor Beef B <sub>beef</sub>	Source	Bio Transfer Factor Pork B <sub>pork</sub>	Source	Bio Transfer Factor Egg B <sub>egg</sub>	Source	Bio Transfer Factor Chicken B <sub>chicken</sub>	Source
<b>Inorganics</b>										
Antimony	1.00E-04	(a)	1.00E-03	(a)	NA	(a)	NA	(a)	NA	(a)
Arsenic	6.00E-05	(a)	2.00E-03	(a)	NA	(a)	NA	(a)	NA	(a)
Barium	3.50E-04	(a)	1.50E-04	(a)	NA	(a)	NA	(a)	NA	(a)
Beryllium	9.00E-07	(a)	1.00E-03	(a)	NA	(a)	NA	(a)	NA	(a)
Cadmium	6.50E-06	(a)	1.20E-04	(a)	1.91E-04	(a)	2.50E-03	(a)	1.06E-01	(a)
Chromium (VI)	1.50E-03	(a)	5.50E-03	(a)	NA	(a)	NA	(a)	NA	(a)
Chromium, total	1.50E-03	(a)	5.50E-03	(a)	NA	(a)	NA	(a)	NA	(a)
Lead	2.50E-04	(a)	3.00E-04	(a)	3.60E-04	(a)	3.60E-04	(a)	NA	(a)
Mercury (Divalent)	2.26E-03	(a)	5.22E-03	(a)	3.39E-05	(a)	2.39E-02	(a)	2.39E-02	(a)
Methyl Mercury	3.38E-04	(a)	7.80E-04	(a)	5.07E-06	(a)	3.58E-03	(a)	3.58E-03	(a)
Nickel	1.00E-03	(a)	6.00E-03	(a)	NA	(a)	NA	(a)	NA	(a)
Thallium	2.00E-03	(a)	4.00E-02	(a)	NA	(a)	NA	(a)	NA	(a)
<b>Semi-Volatiles</b>										
Acenaphthene	7.32E-05	(a)	2.31E-04	(a)	2.80E-04	(a)	7.32E-02	(a)	1.83E-04	(a)
Benzo(a)pyrene	1.07E-02	(a)	3.38E-02	(a)	4.10E-02	(a)	1.07E+01	(a)	2.67E-02	(a)
Benzo(a)anthracene	3.79E-03	(a)	1.20E-02	(a)	1.45E-02	(a)	3.79	(a)	9.46E-03	(a)
Benzo(b)fluoranthene	1.27E-02	(a)	4.00E-02	(a)	4.84E-02	(a)	1.27E+01	(a)	3.16E-02	(a)
Bis(2-ethyl hexyl)phthalate	1.27E-03	(a)	4.03E-03	(a)	4.88E-03	(a)	1.27	(a)	3.18E-03	(a)
2-Chlorophenol	1.15E-06	(a)	3.64E-06	(a)	4.41E-06	(a)	1.15E-03	(a)	2.88E-06	(a)
Dibenz(a,h)anthracene	2.80E-02	(a)	8.86E-02	(a)	1.07E-01	(a)	2.80E+01	(a)	7.00E-02	(a)
1,4-dichlorobenzene	2.05E-05	(a)	6.49E-05	(a)	7.86E-05	(a)	2.05E-02	(a)	5.12E-02	(a)
Di-n-octyl phthalate	1.70E+01	(a)	5.37E+01	(a)	6.50E+01	(a)	1.70E+04	(a)	4.24E+01	(a)
2,4-Dinitrophenol	2.62E-07	(a)	8.29E-07	(a)	1.00E-06	(a)	2.62E-04	(a)	6.54E-07	(a)
2,4-Dinitrotoluene	7.86E-07	(a)	2.49E-06	(a)	3.01E-06	(a)	7.86E-04	(a)	1.96E-06	(a)
2,6-Dinitrotoluene	6.12E-07	(a)	1.93E-06	(a)	2.34E-06	(a)	6.12E-04	(a)	1.33E-06	(a)
Fluoranthene	9.65E-04	(a)	3.05E-03	(a)	3.69E-03	(a)	9.65E-01	(a)	2.41E-03	(a)



Table 5-9  
Beef Uptake Factors  
ESSROC  
Logansport, Indiana

Chemical	Bio Transfer Factor Milk B <sub>milk</sub>	Source	Bio Transfer Factor Beef B <sub>beef</sub>	Source	Bio Transfer Factor Pork B <sub>pork</sub>	Source	Bio Transfer Factor Egg B <sub>egg</sub>	Source	Bio Transfer Factor Chicken B <sub>chicken</sub>	Source
Hexachlorobutadiene	4.78E-04	(a)	1.50E-03	(a)	1.81E-03	(a)	4.78E-01	(a)	1.20E-03	(a)
Hexachlorobenzene	2.53E-03	(a)	7.99E-03	(a)	9.68E-03	(a)	2.53	(a)	6.51E-03	(a)
Hexachlorocyclopentadiene	6.41E-04	(a)	2.03E-03	(a)	2.45E-03	(a)	6.41E-01	(a)	1.60E-03	(a)
Naphthalene	1.87E-05	(a)	5.92E-05	(a)	7.16E-05	(a)	1.87E-02	(a)	4.67E-05	(a)
2-Nitroaniline	5.62E-07	(a)	1.78E-06	(a)	2.15E-06	(a)	5.62E-04	(a)	1.40E-06	(a)
Nitrobenzene	5.40E-07	(a)	1.71E-06	(a)	2.07E-06	(a)	5.40E-04	(a)	1.35E-06	(a)
n-Nitroso-di-n-propylamine	1.91E-07	(a)	6.03E-07	(a)	7.30E-07	(a)	1.91E-04	(a)	4.76E-07	(a)
Penachlorophenol	9.55E-04	(a)	3.02E-03	(a)	3.66E-03	(a)	9.55E-01	(a)	2.39E-03	(a)
Phenol	2.38E-07	(a)	7.54E-07	(a)	9.12E-07	(a)	2.38E-04	(a)	5.95E-07	(a)
Pyrene	7.98E-04	(a)	2.52E-03	(a)	3.06E-03	(a)	7.98E-01	(a)	1.99E-03	(a)
1,2,4-Trichlorobenzene	7.73E-05	(a)	2.45E-04	(a)	2.96E-04	(a)	7.73E-02	(a)	1.93E-04	(a)
2,4,5-Trichlorophenol	5.89E-05	(a)	1.86E-04	(a)	2.25E-04	(a)	5.89E-02	(a)	1.47E-04	(a)
Dioxins/Furans										
2,3,7,8-TCDD	1.00E-02	(a)	5.43E-02	(a)	6.57E-02	(a)	5.43E-02	(a)	7.30E-02	(a)
2,3,7,8-PeCDD	1.00E-02	(a)	5.43E-02	(a)	6.57E-02	(a)	4.71E-02	(a)	5.50E-02	(a)
2,3,7,8-HxCDD	0.006	(a)	0.0326	(a)	3.49E-02	(a)	4.53E-02	(a)	4.90E-02	(a)
2,3,7,8-HeCDD	0.001	(a)	0.0054	(a)	6.57E-03	(a)	2.55E-02	(a)	8.58E-03	(a)
OCDD	1.00E-03	(a)	5.43E-03	(a)	6.57E-03	(a)	9.90E-03	(a)	1.10E-03	(a)
2,3,7,8-TCDF	3.00E-03	(a)	1.63E-02	(a)	1.97E-02	(a)	3.61E-02	(a)	5.63E-02	(a)
1,2,3,7,8-PeCDF	2.00E-03	(a)	1.09E-02	(a)	1.31E-02	(a)	4.71E-02	(a)	4.40E-04	(a)
2,3,4,7,8-PeCDF	9.00E-03	(a)	4.89E-02	(a)	5.91E-02	(a)	5.61E-02	(a)	7.32E-02	(a)
2,3,7,8-HxCDF	0.005	(a)	0.0271	(a)	3.29E-02	(a)	2.11E-02	(a)	1.74E-02	(a)
2,3,7,8-HeCDF	1.00E-03	(a)	5.45E-03	(a)	6.50E-03	(a)	2.10E-02	(a)	7.00E-03	(a)
OCDF	1.00E-03	(a)	5.43E-03	(a)	6.57E-03	(a)	7.92E-03	(a)	4.40E-04	(a)
Polychlorinated Biphenyls										
3,3'-Tetra CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)



Table 5-9  
Beef Uptake Factors  
ESSROC  
Logansport, Indiana

Chemical	Bio Transfer Factor Milk B <sub>a,milk</sub>	Source	Bio Transfer Factor Beef B <sub>a,beef</sub>	Source	Bio Transfer Factor Pork B <sub>a,pork</sub>	Source	Bio Transfer Factor Egg B <sub>a,egg</sub>	Source	Bio Transfer Factor Chicken B <sub>a,chicken</sub>	Source
2,3,4,4',5'-Penta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,3',4,4',5'-Penta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2',3,3',4,4'-Penta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,3,3',4,4'-Penta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
3,3',4,4',5'-Penta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,3',4,4',5',5'-Hexa CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,3,3',4,4',5'-Hexa CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,3,3',4,4',5',5'-Hexa CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
3,3',4,4',5',5'-Hexa CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,2',3,4,4',5',5'-Hepta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,2',3,3',4,4',5'-Hepta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
2,3,3',4,4',5',5'-Hepta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Mono CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Di CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Tri CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Tetra CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Penta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Hex CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Hepta CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Octa CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Nona CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)
Total Deca CB	1.28E-02	(b)	4.05E-02	(b)	4.90E-02	(b)	1.28E+01	(b)	3.19E-02	(b)