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Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	kse Soil Loss Due to Erosion (yr^{-1})	ksr Soil Loss Due to Surface Runoff (yr^{-1})	ks Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
Organics				
Acetaldehyde	1.20E+02	4.02E-02	1.20E+02	2.40E+02
Acetone	1.33E+02	7.75E-03	1.33E+02	2.66E+02
Acetonitrile	1.34E+02	5.73E-03	1.34E+02	2.67E+02
Acrolein	1.31E+02	1.17E-02	1.31E+02	2.63E+02
Acrylonitrile	1.25E+02	2.70E-02	1.25E+02	2.50E+02
Aldrin	2.47E+00	3.31E-01	2.47E+00	5.27E+00
Aniline	9.63E+01	9.84E-02	9.63E+01	1.93E+02
Benzaldehyde	5.26E+01	2.07E-01	5.26E+01	1.05E+02
Benzene	1.68E+01	2.95E-01	1.68E+01	3.38E+01
Benzoic acid	2.77E+01	2.68E-01	2.77E+01	5.57E+01
Benzotrichloride	3.03E+00	3.30E-01	3.03E+00	6.39E+00
Benzoyl chloride	1.18E+01	3.08E-01	1.18E+01	2.39E+01
Benzyl chloride	1.18E+01	3.08E-01	1.18E+01	2.39E+01
Biphenyl	1.76E+00	3.33E-01	1.76E+00	3.85E+00
Bis(2-chloroethoxy)methane	6.96E+01	1.65E-01	6.96E+01	1.39E+02
Bis(2-ethylhexyl)phthalate	3.32E-02	3.37E-01	3.32E-02	4.03E-01
Bromochloromethane	5.79E+01	1.94E-01	5.79E+01	1.16E+02
Bromodichloromethane	2.72E+01	2.70E-01	2.72E+01	5.47E+01
Bromoform	9.96E+00	3.12E-01	9.96E+00	2.02E+01
Bromomethane	7.51E+01	1.51E-01	7.51E+01	1.50E+02
2-Butanone (MEK)	1.25E+02	2.76E-02	1.25E+02	2.50E+02
Butyl benzyl phthalate	4.37E-02	3.37E-01	4.37E-02	4.24E-01
Carbazole	4.89E-01	3.36E-01	4.89E-01	1.31E+00
Carbon disulfide	2.17E+01	2.83E-01	2.17E+01	4.36E+01
Carbon tetrachloride	5.91E+00	3.22E-01	5.91E+00	1.21E+01
alpha-Chlordane	8.73E-03	3.37E-01	8.73E-03	3.54E-01
gamma-Chlordane	8.73E-03	3.37E-01	8.73E-03	3.54E-01
4-Chloroaniline	2.98E+01	2.63E-01	2.98E+01	5.99E+01
Chlorobenzene	1.51E+01	3.00E-01	1.51E+01	3.06E+01
Chloroethane	5.63E+01	1.97E-01	5.63E+01	1.13E+02

Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	kse Soil Loss Due to Erosion (yr^{-1})	ksr Soil Loss Due to Surface Runoff (yr^{-1}	ks Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
2-Chloroethyl vinyl ether	9.01E+01	1.14E-01	9.01E+01	1.80E+02
Chloroform	2.30E+01	2.80E-01	2.30E+01	4.62E+01
Chloromethane	9.56E+01	1.00E-01	9.56E+01	1.91E+02
4-Chloro-3-methylphenol	2.02E+00	3.32E-01	2.02E+00	4.36E+00
beta-Chloronaphthalene	1.95E-01	3.37E-01	1.95E-01	7.27E-01
2-Chlorophenol	1.61E+01	2.97E-01	1.61E+01	3.25E+01
2-Chloropropane	2.62E+01	2.72E-01	2.62E+01	5.27E+01
Dalapon	1.04E+02	7.97E-02	1.04E+02	2.08E+02
4,4'-DDD	2.46E-03	3.37E-01	2.46E-03	3.42E-01
4,4'-DDE	7.96E-04	3.37E-01	7.96E-04	3.39E-01
4,4'-DDT	1.12E-03	3.37E-01	1.12E-03	3.39E-01
Decanol	6.93E-02	3.37E-01	6.93E-02	4.75E-01
Dibenzofuran	1.95E-01	3.37E-01	1.95E-01	7.27E-01
Dibromochloromethane	1.82E+01	2.92E-01	1.82E+01	3.66E+01
Dicamba	1.42E+01	3.02E-01	1.42E+01	2.88E+01
1,2-Dichlorobenzene	1.07E+00	3.34E-01	1.07E+00	2.47E+00
1,3-Dichlorobenzene	6.44E-01	3.35E-01	6.44E-01	1.62E+00
1,4-Dichlorobenzene	1.09E+00	3.34E-01	1.09E+00	2.51E+00
3,3'-Dichlorobenzidine	2.42E+00	3.31E-01	2.42E+00	5.16E+00
1,1-Dichloroethane	3.20E+01	2.58E-01	3.20E+01	6.43E+01
1,2-Dichloroethane	5.26E+01	2.07E-01	5.26E+01	1.05E+02
1,1-Dichloroethene	1.68E+01	2.95E-01	1.68E+01	3.38E+01
cis-1,2-Dichloroethene	1.45E+01	3.01E-01	1.45E+01	2.94E+01
trans-1,2-Dichloroethene	5.26E+01	2.07E-01	5.26E+01	1.05E+02
2,4-Dichlorophenol	2.21E+00	3.32E-01	2.21E+00	4.75E+00
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	7.56E-01	3.35E-01	7.56E-01	1.85E+00
Dichloroprop	2.53E+00	3.31E-01	2.53E+00	5.39E+00
Diethyl phthalate	8.20E+00	3.17E-01	8.20E+00	1.67E+01
2,4-Dimethylphenol	1.18E+01	3.08E-01	1.18E+01	2.39E+01
Dimethyl phthalate	1.71E+01	2.95E-01	1.71E+01	3.45E+01
Di-n-butyl phthalate	3.24E-02	3.37E-01	3.24E-02	4.02E-01

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Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	kse Soil Loss Due to Erosion (yr^{-1})	ksr Soil Loss Due to Surface Runoff (yr^{-1})	ks Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
2,4-Dinitrophenol	5.11E+01	2.10E-01	5.11E+01	1.02E+02
Di-n-octyl phthalate	1.55E-02	3.37E-01	1.55E-02	3.68E-01
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA
Dioxins/Furans				
2,3,7,8-Tetrachlorodibenzo(p)dioxin	8.40E-04	3.37E-01	8.40E-04	3.39E-01
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	8.40E-04	3.37E-01	8.40E-04	3.39E-01
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	5.96E-05	3.37E-01	5.96E-05	3.37E-01
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.89E-04	3.37E-01	1.89E-04	3.37E-01
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.89E-04	3.37E-01	1.89E-04	3.37E-01
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	2.31E-05	3.37E-01	2.31E-05	3.37E-01
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	9.44E-05	3.37E-01	9.44E-05	3.37E-01
2,3,7,8-Tetrachlorodibenzofuran	1.08E-03	3.37E-01	1.08E-03	3.39E-01
2,3,4,7,8-Pentachlorodibenzofuran	4.44E-04	3.37E-01	4.44E-04	3.38E-01
1,2,3,7,8-Pentachlorodibenzofuran	5.96E-04	3.37E-01	5.96E-04	3.38E-01
1,2,3,4,7,8-Hexachlorodibenzofuran	1.89E-04	3.37E-01	1.89E-04	3.37E-01
1,2,3,6,7,8-Hexachlorodibenzofuran	1.89E-04	3.37E-01	1.89E-04	3.37E-01
1,2,3,7,8,9-Hexachlorodibenzofuran	1.89E-04	3.37E-01	1.89E-04	3.37E-01
2,3,4,6,7,8-Hexachlorodibenzofuran	1.89E-04	3.37E-01	1.89E-04	3.37E-01
1,2,3,4,6,7,8-Heptachlorodibenzofuran	4.63E-05	3.37E-01	4.63E-05	3.37E-01
1,2,3,4,7,8,9-Heptachlorodibenzofuran	4.63E-05	3.37E-01	4.63E-05	3.37E-01
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	5.81E-06	3.37E-01	5.81E-06	3.37E-01
Endosulfan I	6.15E-01	3.35E-01	6.15E-01	1.57E+00
Endosulfan sulfate	5.61E-01	3.36E-01	5.61E-01	1.46E+00
Endrin	6.47E-03	3.37E-01	6.47E-03	3.50E-01
Endrin aldehyde	6.47E-03	3.37E-01	6.47E-03	3.50E-01
Ethylbenzene	1.80E+00	3.33E-01	1.80E+00	3.93E+00
2-Ethyl hexanoic acid	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1.61E+00	3.33E-01	1.61E+00	3.55E+00
2-Fluoro-4-nitrophenol	NA	NA	NA	NA
Heptachlor	3.47E-01	3.36E-01	3.47E-01	1.03E+00
Hexachlorobenzene	1.26E-02	3.37E-01	1.26E-02	3.62E-01

Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	**kse** Soil Loss Due to Erosion (yr^{-1})	**ksr** Soil Loss Due to Surface Runoff (yr^{-1}	**ks** Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
Hexachlorobutadiene	3.24E-02	3.37E-01	3.24E-02	4.02E-01
beta-Hexachlorocyclohexane	4.07E-01	3.36E-01	4.07E-01	1.15E+00
Hexachlorocyclopentadiene	2.63E-01	3.36E-01	2.63E-01	8.62E-01
Hexachloroethane	1.17E+00	3.34E-01	1.17E+00	2.67E+00
Hexadecanoic acid	NA	NA	NA	NA
2-Hexanone	6.02E+01	1.88E-01	6.02E+01	1.21E+02
MCPP	1.88E+00	3.32E-01	1.88E+00	4.10E+00
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.89E+01	2.90E-01	1.89E+01	3.81E+01
Methylene chloride	7.04E+01	1.63E-01	7.04E+01	1.41E+02
Methyl ester acetic acid	1.27E+02	2.30E-02	1.27E+02	2.53E+02
Methyl-3-heptanol	NA	NA	NA	NA
2-Methylnaphthalene	3.55E-01	3.36E-01	3.55E-01	1.05E+00
4-Methyl-2-pentanone	7.51E+01	1.51E-01	7.51E+01	1.50E+02
2-Methylphenol	2.39E+01	2.78E-01	2.39E+01	4.80E+01
3-Methylphenol	2.34E+01	2.79E-01	2.34E+01	4.71E+01
4-Methylphenol	2.43E+01	2.77E-01	2.43E+01	4.89E+01
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA
Naphthalene	2.47E+00	3.31E-01	2.47E+00	5.27E+00
Naphthalene carbonitrile	NA	NA	NA	NA
beta-Naphthylamine	1.89E+01	2.90E-01	1.89E+01	3.81E+01
2-Nitroaniline	2.87E+01	2.66E-01	2.87E+01	5.78E+01
4-Nitroaniline	5.94E+01	1.90E-01	5.94E+01	1.19E+02
Nitrobenzene	2.87E+01	2.66E-01	2.87E+01	5.78E+01
2-Nitrophenol	3.20E+01	2.58E-01	3.20E+01	6.43E+01
4-Nitrophenol	2.57E+01	2.73E-01	2.57E+01	5.17E+01
n-Nitrosodiphenylamine	1.88E+00	3.32E-01	1.88E+00	4.10E+00
Octadecanoic acid	1.52E-05	3.37E-01	1.52E-05	3.37E-01
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA
PAHs				
Acenaphthene	3.09E-01	3.36E-01	3.09E-01	9.54E-01

Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	**kse** Soil Loss Due to Erosion (yr^{-1})	**ksr** Soil Loss Due to Surface Runoff (yr^{-1}	**ks** Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
Acenaphthylene	2.19E-01	3.36E-01	2.19E-01	7.74E-01
Anthracene	9.13E-02	3.37E-01	9.13E-02	5.19E-01
Benzo(a)anthracene	6.32E-03	3.37E-01	6.32E-03	3.50E-01
Benzo(a)pyrene	2.00E-03	3.37E-01	2.00E-03	3.41E-01
Benzo(b)fluoranthene	1.94E-03	3.37E-01	1.94E-03	3.41E-01
Benzo(e)pyrene	2.35E-03	3.37E-01	2.35E-03	3.42E-01
Benzo(g,h,i)perylene	5.14E-04	3.37E-01	5.14E-04	3.38E-01
Benzo(j)fluoranthene	1.95E-03	3.37E-01	1.95E-03	3.41E-01
Benzo(k)fluoranthene	3.72E-04	3.37E-01	3.72E-04	3.38E-01
Chrysene	6.32E-03	3.37E-01	6.32E-03	3.50E-01
Dibenzo(a,h)anthracene	8.15E-04	3.37E-01	8.15E-04	3.39E-01
Fluoranthene	3.24E-02	3.37E-01	3.24E-02	4.02E-01
Fluorene	1.59E-01	3.37E-01	1.59E-01	6.54E-01
Indeno(1,2,3-cd)pyrene	6.71E-04	3.37E-01	6.71E-04	3.38E-01
Phenanthrene	6.93E-02	3.37E-01	6.93E-02	4.75E-01
Pyrene	3.39E-02	3.37E-01	3.39E-02	4.05E-01
PCBs				
Monochlorobiphenyls	8.72E-02	3.37E-01	8.72E-02	5.11E-01
Dichlorobiphenyls	2.19E-02	3.37E-01	2.19E-02	3.81E-01
Trichlorobiphenyls	5.14E-03	3.37E-01	5.14E-03	3.47E-01
Tetrachlorobiphenyls	2.89E-03	3.37E-01	2.89E-03	3.43E-01
Pentachlorobiphenyls	1.26E-03	3.37E-01	1.26E-03	3.40E-01
Hexachlorobiphenyls	2.40E-04	3.37E-01	2.40E-04	3.37E-01
Heptachlorobiphenyls	3.64E-04	3.37E-01	3.64E-04	3.38E-01
Octachlorobiphenyls	1.45E-04	3.37E-01	1.45E-04	3.37E-01
Nonachlorobiphenyls	6.04E-05	3.37E-01	6.04E-05	3.37E-01
Decachlorobiphenyls	1.42E-05	3.37E-01	1.42E-05	3.37E-01
Pentachlorobenzene	1.74E-02	3.37E-01	1.74E-02	3.72E-01
Pentachlorophenol	1.95E-02	3.37E-01	1.95E-02	3.76E-01
3-Pentanol	6.10E+01	1.86E-01	6.10E+01	1.22E+02
4-Penten-2-ol	NA	NA	NA	NA

Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	kse Soil Loss Due to Erosion (yr^{-1})	ksr Soil Loss Due to Surface Runoff (yr^{-1}	ks Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
Phenol	5.41E+01	2.03E-01	5.41E+01	1.08E+02
Phthalic anhydride	1.35E+02	1.95E-03	1.35E+02	2.70E+02
Quinoline	2.04E+01	2.86E-01	2.04E+01	4.12E+01
Quinone	1.26E+02	2.40E-02	1.26E+02	2.53E+02
Styrene	2.83E+00	3.30E-01	2.83E+00	5.99E+00
1,2,4,5-Tetrachlorobenzene	5.14E-02	3.37E-01	5.14E-02	4.40E-01
Tetrachloroethene	1.02E+00	3.34E-01	1.02E+00	2.37E+00
2,3,4,6-Tetrachlorophenol	2.04E-01	3.37E-01	2.04E-01	7.45E-01
Toluene	5.06E+00	3.24E-01	5.06E+00	1.05E+01
1,2,4-Trichlorobenzene	2.46E-01	3.36E-01	2.46E-01	8.27E-01
1,2,5-Trichlorobenzene	2.46E-01	3.36E-01	2.46E-01	8.27E-01
1,1,1-Trichloroethane	7.86E+00	3.18E-01	7.86E+00	1.60E+01
Trichloroethene	1.20E+01	3.07E-01	1.20E+01	2.44E+01
Trichlorofluoromethane	7.20E+00	3.19E-01	7.20E+00	1.47E+01
2,3,6-Trichlorophenol	3.80E-01	3.36E-01	3.80E-01	1.10E+00
2,4,5-Trichlorophenol	2.82E-01	3.36E-01	2.82E-01	9.00E-01
2,4,6-Trichlorophenol	5.24E-01	3.36E-01	5.24E-01	1.38E+00
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1.88E+00	3.32E-01	1.88E+00	4.10E+00
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	8.75E+00	3.15E-01	8.75E+00	1.78E+01
Undecane	2.96E-04	3.37E-01	2.96E-04	3.38E-01
Vinyl acetate	1.07E+02	7.30E-02	1.07E+02	2.13E+02
Vinyl chloride	1.13E+02	5.70E-02	1.13E+02	2.26E+02
o-Xylene	1.93E+00	3.32E-01	1.93E+00	4.19E+00
m,p-Xylene	1.61E+00	3.33E-01	1.61E+00	3.55E+00
Metals / Inorganics				
Aluminum	1.51E-02	3.37E-01	1.51E-02	3.67E-01
Antimony	5.02E-01	3.36E-01	5.02E-01	1.34E+00
Arsenic	1.13E-01	3.37E-01	1.13E-01	5.63E-01
Barium	3.77E-01	3.36E-01	3.77E-01	1.09E+00
Beryllium	3.49E-02	3.37E-01	3.49E-02	4.07E-01
Cadmium	3.40E+00	3.29E-01	3.40E+00	7.13E+00

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Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	**kse** Soil Loss Due to Erosion (yr^{-1})	**ksr** Soil Loss Due to Surface Runoff (yr^{-1}	**ks** Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
Calcium	5.44E+00	3.24E-01	5.44E+00	1.12E+01
Chromium VI	2.67E-02	3.37E-01	2.67E-02	3.90E-01
Cobalt	5.02E-01	3.36E-01	5.02E-01	1.34E+00
Copper	6.45E-01	3.35E-01	6.45E-01	1.62E+00
Iron	9.01E-01	3.35E-01	9.01E-01	2.14E+00
Lead	2.52E-02	3.37E-01	2.52E-02	3.87E-01
Magnesium	4.86E+00	3.25E-01	4.86E+00	1.00E+01
Manganese	3.48E-01	3.36E-01	3.48E-01	1.03E+00
Mercury (inorganic)	1.74E-01	3.37E-01	1.74E-01	6.85E-01
Nickel	1.51E-01	3.37E-01	1.51E-01	6.39E-01
Potassium	4.00E+00	3.27E-01	4.00E+00	8.33E+00
Selenium	7.55E-02	3.37E-01	7.55E-02	4.88E-01
Silver	5.02E-01	3.36E-01	5.02E-01	1.34E+00
Sodium	2.26E-01	3.36E-01	2.26E-01	7.89E-01
Vanadium	2.26E-01	3.36E-01	2.26E-01	7.89E-01
Zinc	5.64E-01	3.36E-01	5.64E-01	1.46E+00
TICs				
Acetophenone	4.53E+01	2.25E-01	4.53E+01	9.09E+01
Benzonitrile	4.67E+01	2.21E-01	4.67E+01	9.37E+01
Bromobenzene	2.59E+00	3.31E-01	2.59E+00	5.50E+00
2-Butenal / 2-Methyl-2-propenal	8.28E+01	1.32E-01	8.28E+01	1.66E+02
2-(2-Butoxyethoxy)ethanol	9.56E+01	1.00E-01	9.56E+01	1.91E+02
Chlorocyclohexanol	NA	NA	NA	NA
Decane	2.70E-03	3.37E-01	2.70E-03	3.42E-01
Dichlorocyclohexane	NA	NA	NA	NA
Difluoroethane	1.05E+02	7.58E-02	1.05E+02	2.11E+02
Dimethylcyclohexane	2.21E+00	3.32E-01	2.21E+00	4.75E+00
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA
Dioctyl adipate	2.00E-03	3.37E-01	2.00E-03	3.41E-01
Dodecane	4.08E-03	3.37E-01	4.08E-03	3.45E-01
2-(2-Ethoxyethoxy)ethanol	1.35E+02	2.80E-03	1.35E+02	2.70E+02

Table 5B-15 (RB2)

Estimated Soil Loss Constant (ks) Due to Leaching (ksl), Soil Erosion (kse), and Surface Runoff (ksr)
Drake Chemical Site
Lock Haven, PA

Chemicals	ECOLOGICAL LOCATION			
	ksl Soil Loss Due to Leaching (yr^{-1})	kse Soil Loss Due to Erosion (yr^{-1})	ksr Soil Loss Due to Surface Runoff (yr^{-1})	ks Soil Loss Constant (yr^{-1})
	1 cm	1 cm	1 cm	1 cm
Ethyl benzaldehyde	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	1.31E+02	1.15E-02	1.31E+02	2.63E+02
Iodobenzene	1.43E+00	3.33E-01	1.43E+00	3.20E+00
Methyl benzoate	1.71E+01	2.95E-01	1.71E+01	3.45E+01
Methyl hexenone	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA
Silane	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

APPENDIX 5C

ESTIMATION OF CHEMICAL CONCENTRATIONS IN PLANTS

5C.1 INTRODUCTION

Chemical concentrations in plants were calculated for the chemicals of potential concern (i.e., all chemicals with the exception of acid gases). The types of plants that were evaluated included aboveground vegetables, root vegetables, and cattle feed (forage, corn silage, and grain). The chemical concentrations in vegetables were used to estimate exposures from human consumption of home-grown garden vegetables, and the chemical concentrations in cattle feed were used to estimate uptake into the beef and milk of cattle consuming the feed, and subsequent consumption by humans.

The equations used to estimate plant chemical concentrations are presented in Tables 5C-1 through 5C-10. Chemicals from the facility stack may accumulate in plants through three processes: (1) root uptake of chemicals deposited on the soil; (2) direct deposition of chemicals on exposed plant parts; and (3) air-to-plant transfer of vapor-phase chemicals. Thus, the total chemical concentrations in plants are based on these three processes, as illustrated in Table 5C-1. Not all chemical accumulation processes apply to all plant types, however. For example, those plants that grow beneath the soil would not be expected to receive any direct deposition or vapor-phase transfer of chemicals. Due to differences in exposures for different plant types, home-grown vegetables were evaluated in two categories: aboveground vegetables and belowground (i.e., root) vegetables. The aboveground vegetables were assumed to accumulate chemicals through root uptake, direct deposition, and vapor-phase transfer. Root vegetables were assumed to accumulate chemicals only through root uptake. Chemical concentrations in cattle feed were evaluated in three categories: forage, silage, and grain. Forage and silage were assumed to accumulate chemicals through root uptake, direct deposition, and vapor-phase transfer. Grain is protected from direct deposition and vapor-phase transfer, but is assumed to accumulate chemicals through root uptake.

Deposition onto plants and air-to-plant transfer can occur only during the 2 years the facility is in operation and, thus, will affect only two growing seasons for those plants that grow aboveground and are unprotected (i.e., aboveground vegetables, forage, and silage). Thus, as shown in Table 5C-1, the chemical concentrations in plants contributed by deposition and vapor-phase transfer are averaged over the exposure duration when calculating the average plant concentrations. The average plant concentrations are used in estimating exposures when calculating cancer risks. The maximum plant concentration is used for estimating exposures when calculating the potential for noncancer health effects, and is calculated by adding chemical inputs from deposition, vapor-phase transfer, and root uptake, with no exposure duration adjustment.

The following subsections describe the calculation of chemical concentrations in plants by each of the uptake processes.

5C.2 ROOT UPTAKE

Root uptake was calculated for all plant types. The equation used to calculate chemical concentrations due to root uptake (Pr) for aboveground plants (i.e., aboveground vegetables, forage, silage, and grain) is presented in Table 5C-2. The soil concentration is multiplied by a plant uptake factor (PUF) to calculate the concentration in the plant due to root uptake. The derivations of soil concentrations are presented in Volume II, Appendix 5B. The plant uptake factor for each organic chemical was calculated based on the octanol-water partition coefficient (K_{ow}) of the chemical, as shown in Table 5C-3. The plant uptake factor for each inorganic was based on uptake factors presented in Baes et al. (1984). Baes presents uptake factors for vegetative (Bv) and reproductive (Br) portions of plants. The uptake factors for vegetative portions of plants were used for forage, and the uptake factors for reproductive portions of plants were used for grain. Weighted uptake factors were calculated for silage and aboveground vegetables because they consist of both vegetative and reproductive portions. For aboveground vegetables, it was assumed that 8% consists of leafy vegetables (vegetative portions), and the remainder (92%) consists of fruits and fruiting vegetables (reproductive portions) (EPA, 1994a). For silage, it was assumed that 50% consists of stalks and leaves (vegetative portions), and the remainder (50%) consists of reproductive portions (Roth, 1996).

The equation used to calculate chemical concentrations in root vegetables due to root uptake (Pr_{bg}) is presented in Table 5C-4. The root uptake factors that are used to estimate the root vegetable concentrations for organics are based on the work of Briggs et al. (1982) who studied the uptake of organic chemicals from solution by barley shoots. The root concentration factor (RCF) is calculated based on the octanol-water partition coefficient (K_{ow}) as shown in Table 5C-5. This equation is used for all organics, with the exception of dioxins and furans. The root concentration factors for dioxins and furans are based on congener-specific values as recommended by EPA (EPA, 1994b). The root concentration factors for inorganics are based on recommendations from EPA (EPA, 1994a). Where data were unavailable for inorganics, the maximum value for this parameter for any inorganic (0.1 for silver) was applied. Since the root concentration factor is based on uptake from water, it is divided by a soil/water partition coefficient (Kd_s) to estimate the amount of chemical in soil that would partition to water. A correction factor (VG_{bg}) of 0.01 is applied to account for reduced translocation of chemicals in bulky, belowground vegetables such as carrots and potatoes as compared to the barley shoots, on which the root concentration factor is based (EPA, 1994b). The chemical concentrations in barley roots measured in the Briggs et al. (1982) study are most representative of the concentrations that would be expected in the outer millimeters of the root vegetable, and thus, are much higher than that expected in the whole root vegetable. The resulting concentrations in root vegetables are in wet weight, and are converted to dry weight concentrations using the equation presented in Table 5C-4, and assuming 85% moisture in root vegetables (EPA, 1994a).

5C.3 DIRECT DEPOSITION ON ABOVEGROUND PLANTS

Direct deposition only was considered for unprotected aboveground plants (i.e., aboveground vegetables, forage, and silage), and was not considered for root vegetables or protected aboveground plants (i.e., grain). The aboveground plant concentration due to deposition was calculated using the equation in Table 5C-6. The deposition rates used are based on the deposition modeling, and were calculated as described in Volume II, Appendix 5A. It was assumed that initially, all of the dry deposition remains on plants, while only a fraction (0.6 for organics and 0.46 for inorganics) of the wet deposition remains on plants (EPA, 1995). Subsequent to

deposition, a number of degradation processes can affect the final concentrations of chemicals on plant surfaces. These include weathering (mainly washoff by precipitation), volatilization, and photolysis. Of these processes, only weathering was considered as a potential mechanism for loss of surface-deposited chemicals in this analysis. A weathering loss constant (kp) of 1.5 per month was used, and corresponds to a half-life of 14 days (EPA, 1994a). For this assessment, it was assumed that no attenuation of surface chemicals deposited on the plants (e.g., by washing) takes place between the time the vegetables are harvested and the time they are eaten. The amount of chemical that can be removed by washing is highly variable, depending partially on the extent the chemical is sorbed to or can penetrate the leaf or fruit.

The interception fraction (Rp) in the equation accounts for that fraction of the airborne material falling on a given growing area that is deposited on (intercepted by) edible portions of the plant. The interception fractions used were either those recommended by EPA's Resource Conservation and Recovery Act (RCRA) screening guidance (EPA, 1994a) or calculated based on crop yield, as shown in Table 5C-7.

The yields and growing times that were used were based on recommendations from EPA (EPA, 1994a, 1994b), as well as data from the Pennsylvania Agricultural Statistics Service (PASS, 1995). The growing times for aboveground vegetables and silage were assumed to extend throughout the 2-year deposition period (EPA, 1994a; PASS, 1995). The growing time for forage was assumed to be 45 days (1.5 months), based on the average of the average period between successive hay harvests (60 days) and the average period between successive grazing periods (30 days) (EPA, 1994a).

5C.4 AIR-TO-PLANT TRANSFER

As with deposition, air-to-plant transfer was only considered for unprotected aboveground plants (i.e., aboveground vegetables, forage, and silage), and was not considered for root vegetables or protected aboveground plants (i.e., grain). This pathway was only considered for those chemicals that would be in the vapor phase (organics and mercury). The aboveground plant concentration due to air-to-plant transfer was calculated using the equation in Table 5C-8. The vapor-phase air

concentration is based on the air dispersion modeling, calculated as discussed in Volume II, Appendix 5A. The air-to-plant biotransfer factor (Bv) was calculated for organics (with the exception of dioxins and furans) as presented in Tables 5C-9 and 5C-10. The air-to-plant biotransfer factors used for dioxins and furans were based on experiments in which grass was exposed to dioxins and furans in air (Lorber, 1995). These values were adjusted to account for an air density of 1.247 kg/m^3. The air-to-plant biotransfer factor for mercury was based on recommendations by EPA in the RCRA screening guidance (EPA, 1994a).

Similar to the belowground correction factor (VG_{bg}), an aboveground plant correction factor (VG_{ag}) was applied to account for the difference between the chemical concentration in the outer few millimeters of the plant, and the average concentration in the whole plant. These corrections are applied to account for the differences between the plants considered in the risk assessment and the experimental plant (azalea leaves) on which the air-to-plant biotransfer factor is based (EPA, 1994b). The correction factors used are those recommended by EPA (EPA, 1994b). A factor of 1.0 is used for forage because there appears to be a direct analogy between azalea leaves and pasture grasses. A factor of 0.5 was used for silage to account for the fact that silage is part protected and part leafy. A factor of 0.01 was used for vegetables to account for the bulkiness of vegetables, as well as the reduction of residues from peeling, cooking, and cleaning (EPA, 1994b).

5C.5 RESULTS

The predicted chemical concentrations in aboveground vegetables are presented in Tables 5C-11 through 5C-13, and 5C-15 for both risk burn 1 (RB1) and risk burn 2 (RB2) operating conditions. Tables 5C-11, 5C-12, and 5C-13 present the aboveground vegetable chemical concentrations due to root uptake, direct deposition, and air-to-plant transfer, respectively. The total chemical concentrations in aboveground vegetables are presented in Table 5C-15. The chemical concentrations in root vegetables are presented in Table 5C-16. The chemical concentrations in forage are presented in Tables 5C-17 through 5C-20. Tables 5C-17, 5C-18, and 5C-19 present the forage chemical concentrations due to root uptake, direct deposition, and air-to-plant transfer, respectively. The total chemical concentrations in forage are presented in

Table 5C-20. The chemical concentrations in corn silage are presented in Tables 5C-21 through 5C-24. Tables 5C-21, 5C-22, and 5C-23 present the silage chemical concentrations due to root uptake, direct deposition, and air-to-plant transfer, respectively. The total chemical concentrations in corn silage are presented in Table 5C-24. The chemical concentrations in grain are presented in Table 5C-25.

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Table 5C-1

Estimation of Plant Concentration (CV_i)[a, b]
Drake Chemical Site
Lock Haven, PA

Maximum plant concentration[c,d]

$CV_i = Pr_i + Pd_i + Pv_i$ (aboveground vegetables, forage, and silage)

or

$CV_i = Pr_{bg}$ (root vegetables and grain)

Average plant concentration[d,e]

$CV_i = Pr_i + ((Pd_i + Pv_i) * 2)/ED$ (aboveground vegetables, forage, and silage)

or

$CV_i = Pr_{bg}$ (root vegetables and grain)

Parameter	Definition	Value
CV_i[b]	Total chemical concentration in the i^{th} plant group, mg/kg.	Calculated (see Tables 5C-15, 5C-16, 5C-20, 5C-24, and 5C-25 (RB1 and RB2))
Pr_i or Pr_{bg}[d]	Chemical concentration in i^{th} plant group due to root uptake, mg/kg. Pr_i refers to aboveground plants and Pr_{bg} refers to belowground plants.	See Tables 5C-2 (Pr_i) and 5C-4 (Pr_{bg})
Pd_i	Chemical concentration in i^{th} plant group due to direct deposition, mg/kg.	See Table 5C-6
Pv_i	Chemical concentration in i^{th} plant group due to air-to-plant transfer, mg/kg.	See Table 5C-8
2	Number of years during which the plants are exposed to incinerator emissions via deposition and transfer of vapors.	2 years
ED	Exposure duration, years.	6 years—child resident/farmer 30 years—adult resident 40 years—adult farmer

[a]EPA, 1990.

[b]Uptake via deposition and air-to-plant transfer is assumed to be insignificant for root vegetables and grain because they are protected produce. All three uptake processes are assumed to be potentially significant for aboveground vegetables, forage, and silage.

[c]Used in estimating exposures when calculating the potential for noncancer health effects.

[d]The Pr_i (Pr_{bg}) values used in estimating maximum plant concentrations are based on soil concentrations at the end of the 2-year deposition period. The Pr_i (Pr_{bg}) values used in estimating average plant concentrations are based on average soil concentrations over the applicable exposure duration.

[e]Used in estimating exposures when calculating cancer risk. Accounts for the fact that deposition and air-to-plant transfer occur only during two growing seasons.

Table 5C-2

Plant Chemical Concentration Due to Root Uptake in Aboveground Plants (Pr_i)[a]
Drake Chemical Site
Lock Haven, PA

$Pr_i = (CS)\ (PUF_i)$		
Parameter	**Definition**	**Value**
Pr_i	Chemical concentration in i^{th} aboveground plant group due to root uptake, mg chemical/kg plant tissue, dry weight (DW).	Calculated (see Tables 5C-11, 5C-17, 5C-21, and 5C-25 (RB1 and RB2))
CS[b]	Soil chemical concentration, mg chemical/kg soil.	See Tables 5B-1 and 5B-10
PUF_i	Plant uptake factor for the i^{th} plant group, [mg chemical/kg plant tissue DW]/[mg chemical/kg soil].	Chemical-specific (see Tables 5C-11, 5C-17, 5C-21, and 5C-25 (RB1 and RB2) for metals[c], and Table 5C-3 for organics)

[a]EPA, 1990. Aboveground plants include aboveground vegetables, forage, silage, and grain.

[b]CS is based on the soil concentration after the 2-year deposition period when estimating maximum plant concentrations used in estimating noncancer health effects. CS is based on the average soil concentration over the applicable exposure duration when estimating average plant concentrations used in calculating doses for estimating cancer risks (see Volume II, Appendix 5B).

[c]In calculating PUF_i for metals, $0.92(B_r) + 0.08\ (B_v)$ is used for aboveground vegetables, B_v is used for forage, $0.5\ (B_r) + 0.5\ (B_v)$ is used for silage, and B_r is used for grain, where B_r is the plant uptake factor into reproductive portions of plants and B_v is the plant uptake factor into vegetative portions of plants (see text).

Table 5C-3

Plant/Soil Uptake Factor for Organic Chemicals for Aboveground Plants (PUF_i)*
Drake Chemical Site
Lock Haven, PA

$\text{Log } PUF_i = 1.588 - 0.578 \text{ Log } K_{ow}$		
Parameter	**Definition**	**Value**
PUF_i	Plant/soil uptake factor for organic chemicals for aboveground plants, [mg chemical/kg plant tissue DW]/[mg chemical/kg soil].	Calculated (see Table 5C-11(RB1 and RB2))
K_{ow}	Octanol-water partition coefficient, unitless.	Chemical-specific (see Appendix 5H)

*EPA, 1990.

Table 5C-4

Plant Chemical Concentration Due to Root Uptake in Root Vegetables (Pr_{bg})[a]
Drake Chemical Site
Lock Haven, PA

$$Pr_{bg} = \frac{(CS)\ (RCF)\ (VG_{bg})}{Kd_s}$$

Wet-to-dry weight conversion:

$$Pr_{bg}\ (\text{dry weight}) = Pr_{bg}\ (\text{wet weight})/(1\text{-}F_{water})$$

Parameter	Definition	Value
Pr_{bg}	Chemical concentration in belowground plant group (i.e., root vegetables) due to root uptake, mg chemical/kg plant tissue, wet weight (WW).	Calculated (see Table 5C-16 (RB1 and RB2))
CS[b]	Soil chemical concentration, mg chemical/kg soil.	Calculated (see Tables 5B-1 and 5B-10)
RCF	Root concentration factor, L water/kg plant tissue, wet weight.	Chemical-specific (see Table 5C-16 (RB1 and RB2) and Table 5C-5)
VG_{bg}	Empirical correction factor, unitless.	0.01[a]
Kd_s	Soil/water partition coefficient, L water/kg soil.	Chemical-specific (see Table 5H-1)
F_{water}	Water fraction in root vegetables.	0.85[a]

[a]EPA, 1994a.

[b]CS is based on the soil concentration after the 2-year deposition period when estimating maximum plant concentrations used in calculating noncancer doses. CS is based on the average soil concentration over the applicable exposure duration when estimating average plant concentrations used in calculating cancer doses (see Volume II, Appendix 5B).

Table 5C-5

Root Concentration Factor for Organic Chemicals for Root Vegetables (RCF)*
Drake Chemical Site
Lock Haven, PA

$\text{Log (RCF - 0.82)} = 0.77 \text{ Log } K_{ow} - 1.52$		
Parameter	**Definition**	**Value**
RCF	Root concentration factor for organic chemicals for belowground plants, L soil water/kg plant tissue, wet weight.	Calculated (see Table 5C-16 (RB1 and RB2))
K_{ow}	Octanol-water partition coefficient, unitless.	Chemical-specific (see Table 5H-1)

*EPA, 1994a.

Table 5C-6

Aboveground Plant Chemical Concentration Due to Direct Deposition (Pd_i)[a]
Drake Chemical Site
Lock Haven, PA

$$Pd_i = \frac{(1{,}000)\ [(Dyd)+(Fw)(Dyw)]\ (Rp_i)\ \left[1-e^{-(kp)\ (Tp_i)}\right]}{(Yp_i)\ (kp)}$$

Parameter	Definition	Value
Pd_i[b]	Chemical concentration due to direct deposition in the i^{th} plant group, mg chemical/kg plant tissue, dry weight.	Calculated (see Tables 5C-12, 5C-18, and 5C-22 (RB1 and RB2))
1,000	Conversion factor, $(10^{-3}$ kg/g$)(10^6$ mg/kg).	1,000
Dyd	Yearly dry deposition rate, g chemical/m^2-year.	Based on dry deposition model (see Appendix 5A)
Fw	Fraction of wet deposition that adheres to plant surfaces, unitless.	0.6 for organics[c] 0.46 for inorganics[c]
Dyw	Yearly wet deposition rate, g chemical/m^2-year.	Based on wet deposition model (see Appendix 5A)
Rp_i	Interception fraction of the edible portion of plant tissue for the i^{th} plant group, unitless.	See Table 5C-7
kp	Plant surface loss coefficient, $year^{-1}$.	18[a]
Tp_i	Length of plant's exposure to deposition per harvest of the edible portion of the i^{th} plant group, year.	0.17 aboveground vegetables[a] 0.13 forage[a] 0.17 silage[d]
Yp_i	Yield or standing crop biomass of the edible portion of the i^{th} plant group, kg DW/m^2.	1.6 aboveground vegetables[a] 0.24 forage[a] 1.35 silage[e]

[a]EPA, 1994a.
[b]Calculated for aboveground vegetables, forage, and silage.
[c]EPA, 1995.
[d]PASS, 1995.
[e]EPA, 1994b.

Table 5C-7

Interception Fraction for Aboveground Plants (Rp_i)
Drake Chemical Site
Lock Haven, PA

Aboveground vegetables: $Rp_a = 0.05$ Forage[a]: $Rp_f = 0.5$ Silage[b]: $Rp_s = 1 - e^{-0.768\ Yps}$		
Parameter	**Definition**	**Value**
Rp_a	Interception fraction for aboveground vegetables, unitless.	0.05[a]
Rp_f	Interception fraction for forage, unitless.	0.5[a]
Yp_s	Yield or standing crop biomass for silage, kg DW/m^2.	1.35[b]
Rp_s	Interception fraction for silage, unitless.	Calculated (0.65)

[a]EPA, 1994a.
[b]EPA, 1994b.

Table 5C-8

Aboveground Plant Chemical Concentration Due to Air-to-Plant Transfer (Pv_i)[a]
Drake Chemical Site
Lock Haven, PA

$$Pv_i = \frac{(Cy)\ (Bv_i)\ (VG_{ag})}{(\rho_a)(10^3)}$$

Parameter	Definition	Value
Pv_i[b]	Chemical concentration due to air-to-plant transfer in the i^{th} plant group, mg chemical/kg plant tissue, dry weight.	Calculated (see Tables 5C-13, 5C-19, and 5C-23 (RB1 and RB2))
Cy	Vapor-phase chemical concentration in air due to direct emissions, µg chemical/m^3 air.	Based on air dispersion model (see Appendix 5A)
Bv_i	Air-to-plant biotransfer factor for the i^{th} plant group, [mg chemical/kg plant tissue DW]/[mg chemical/kg air].	Congener-specific for dioxins/furans[c]; 1,000 for mercury[d]; calculated for other chemicals (see Table 5C-9)
VG_{ag}	Aboveground plant correction factor, unitless.	0.01 aboveground vegetables[a] 1.0 forage[a] 0.5 silage[a]
ρ_a	Density of air, kg/m^3.	1.247 at 10°C (283°K)
10^3	Units conversion, 10^3 µg/mg.	10^3

[a]EPA, 1994b.
[b]Calculated for aboveground vegetables, forage, and silage.
[c]Lorber, 1995.
[d]EPA, 1994a.

Table 5C-9

Air-to-Plant Biotransfer Factors (Bv)*
Drake Chemical Site
Lock Haven, PA

$$Bv_i = \frac{(\rho_a)\ (B_{vol})}{(0.15)\ (770)\ (40)}$$

Parameter	Definition	Value
Bv_i	Air-to-leaf biotransfer, [mg/kg DW]/[mg/kg air].	Calculated (see Table 5C-13 (RB1 and RB2))
ρ_a	Density of air, kg/m^3.	1.247 at 10°C
B_{vol}	Bacci volumetric air-to-leaf biotransfer factor, [mg/kg WW]/[mg/kg air].	See Table 5C-10
0.15	Fraction of grass that is dry weight.	0.15*
770	Grass leaf density, g/L.	770*
40	Empirical correction factor.	40*

*EPA, 1994b.

Table 5C-10

Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})[a]
Drake Chemical Site
Lock Haven, PA

$$\log B_{vol} = (1.065)\ (\log K_{ow}) - \log\left(\frac{H}{RT}\right) - 1.654$$

Parameter	Definition	Value
B_{vol}	Bacci volumetric air-to-leaf biotransfer factor, [mg/kg WW]/[mg/kg air].	Calculated (see Table 5C-14)
K_{ow}	Octanol-water partition coefficient, unitless.	Chemical-specific (see Table 5H-1)
H	Henry's Law constant, atm-m^3/mole.	Chemical-specific (see Table 5H-1)
R	Universal gas constant, atm-m^3/mole-K.	8.206×10^{-5}
T	Temperature, °K (annual average).	283[b]

[a]EPA, 1993.
[b]Based on 31 years of data from Williamsport, PA.

RISK BURN 1

Table 5C-11 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag}) Drake Chemical Site Lock Haven, PA

Table 5C-11 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Organics							
Acetaldehyde	2.19E+01	1.25E-05	3.71E-06	4.17E-06	8.33E-07	1.24E-06	1.85E-07
Acetone	5.33E+01	7.68E-05	2.28E-05	2.56E-05	5.12E-06	7.59E-06	1.14E-06
Acetonitrile	6.09E+01	2.70E-04	8.00E-05	8.99E-05	1.80E-05	2.67E-05	4.00E-06
Acrolein	4.37E+01	2.04E-05	6.04E-06	6.80E-06	1.36E-06	2.01E-06	3.02E-07
Acrylonitrile	2.78E+01	9.85E-06	2.92E-06	3.28E-06	6.57E-07	9.73E-07	1.46E-07
Aldrin	7.05E-01	9.42E-08	2.74E-08	5.68E-08	1.60E-08	1.65E-08	3.48E-09
Aniline	1.17E+01	1.48E-05	4.38E-06	4.93E-06	9.86E-07	1.46E-06	2.19E-07
Benzaldehyde	5.40E+00	3.01E-05	8.91E-06	1.00E-05	2.00E-06	2.97E-06	4.46E-07
Benzene	2.27E+00	1.33E-03	3.94E-04	4.59E-04	9.19E-05	1.36E-04	2.04E-05
Benzoic acid	3.21E+00	2.77E-05	8.22E-06	9.29E-06	1.86E-06	2.75E-06	4.13E-07
Benzotrichloride	7.95E-01	1.93E-07	5.71E-08	1.10E-07	2.82E-08	3.24E-08	6.25E-09
Benzoyl chloride	1.81E+00	3.94E-05	1.17E-05	1.44E-05	2.90E-06	4.28E-06	6.44E-07
Benzyl chloride	1.81E+00	2.61E-06	7.72E-07	9.56E-07	1.92E-07	2.83E-07	4.26E-08
Biphenyl	5.77E-01	2.38E-06	7.05E-07	1.56E-06	5.30E-07	4.61E-07	1.17E-07
Bis(2-chloroethoxy)methane	7.24E+00	1.04E-07	3.08E-08	3.47E-08	6.93E-09	1.03E-08	1.54E-09
Bis(2-ethylhexyl)phthalate	5.78E-02	8.97E-06	7.71E-07	7.43E-06	8.19E-06	6.37E-07	6.79E-07
Bromochloromethane	5.93E+00	5.38E-06	1.60E-06	1.79E-06	3.59E-07	5.32E-07	7.98E-08
Bromodichloromethane	3.17E+00	4.13E-06	1.22E-06	1.38E-06	2.76E-07	4.09E-07	6.14E-08
Bromoform	1.63E+00	1.21E-06	3.57E-07	4.62E-07	9.31E-08	1.37E-07	2.07E-08
Bromomethane	7.95E+00	1.77E-05	5.25E-06	5.90E-06	1.18E-06	1.75E-06	2.63E-07
2-Butanone (MEK)	2.74E+01	2.63E-05	7.80E-06	8.77E-06	1.75E-06	2.60E-06	3.90E-07
Butyl benzyl phthalate	6.78E-02	7.73E-08	1.97E-08	6.39E-08	6.95E-08	1.63E-08	1.71E-08
Carbazole	2.74E-01	5.05E-08	1.50E-08	3.91E-08	2.71E-08	1.16E-08	6.64E-09
Carbon disulfide	2.70E+00	3.50E-06	1.04E-06	1.18E-06	2.36E-07	3.50E-07	5.25E-08
Carbon tetrachloride	1.18E+00	2.44E-06	7.24E-07	1.11E-06	2.35E-07	3.28E-07	5.21E-08
alpha-Chlordane	2.67E-02	2.93E-09	7.58E-10	2.43E-09	2.76E-09	6.29E-10	6.97E-10
gamma-Chlordane	2.67E-02	1.15E-09	3.06E-10	9.53E-10	1.08E-09	2.54E-10	2.81E-10
4-Chloroaniline	3.39E+00	9.37E-08	2.78E-08	3.13E-08	6.26E-09	9.28E-09	1.39E-09
Chlorobenzene	2.13E+00	8.00E-06	2.37E-06	2.80E-06	5.60E-07	8.29E-07	1.24E-07
Chloroethane	5.77E+00	1.88E-06	5.59E-07	6.28E-07	1.26E-07	1.86E-07	2.79E-08

Table 5C-11 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
2-Chloroethyl vinyl ether	1 04E+01	2 10E-07	6 21E-08	6 99E-08	1.40E-08	2 07E-08	3 11E-09
Chloroform	2 81E+00	4 59E-05	1 36E-05	1 55E-05	3 09E-06	4 58E-06	6 87E-07
Chloromethane	1 15E+01	3 39E-06	1.01E-06	1.13E-06	2 26E-07	3 35E-07	5 03E-08
4-Chloro-3-methylphenol	6 25E-01	1 07E-07	3 17E-08	6 79E-08	2 13E-08	2 01E-08	4 72E-09
beta-Chloronaphthalene	1.61E-01	2.09E-08	6 18E-09	1 69E-08	1 55E-08	4 98E-09	4 15E-09
2-Chlorophenol	2 21E+00	1 12E-07	3 31E-08	3 88E-08	7 76E-09	1 15E-08	1.73E-09
2-Chloropropane	3 09E+00	1 41E-06	4 17E-07	4 72E-07	9 43E-08	1 40E-07	2 10E-08
Dalapon	1 38E+01	1 55E-07	4 59E-08	5 16E-08	1 03E-08	1 53E-08	2 30E-09
4,4'-DDD	1 28E-02	7 46E-09	1 91E-09	6 20E-09	7 09E-09	1 59E-09	1 78E-09
4,4'-DDE	6 69E-03	2 44E-09	6.65E-10	2 03E-09	2 32E-09	5 52E-10	6 20E-10
4,4'-DDT	8 16E-03	6.32E-09	7 77E-10	5 26E-09	6 02E-09	6 45E-10	7 25E-10
Decanol	8 84E-02	1 26E-10	8 92E-12	1 04E-10	1 09E-10	7 33E-12	7 37E-12
Dibenzofuran	1 61E-01	1.75E-08	5.19E-09	1 42E-08	1 30E-08	4.18E-09	3 48E-09
Dibromochloromethane	2.40E+00	1.08E-06	3.19E-07	3 68E-07	7.37E-08	1 09E-07	1 64E-08
Dicamba	2 04E+00	4 86E-08	1 44E-08	1 72E-08	3 44E-09	5 07E-09	7 62E-10
1,2-Dichlorobenzene	4 31E-01	2 43E-07	7 19E-08	1 74E-07	8 00E-08	5 13E-08	1 81E-08
1,3-Dichlorobenzene	3 22E-01	6 47E-08	1.92E-08	4 90E-08	2 99E-08	1.45E-08	7 10E-09
1,4-Dichlorobenzene	4 37E-01	1 33E-07	3 93E-08	9 45E-08	4.30E-08	2 79E-08	9 72E-09
3,3'-Dichlorobenzidine	6 96E-01	7 06E-08	1 53E-08	4.28E-08	1.22E-08	9 29E-09	1 99E-09
1,1-Dichloroethane	3 58E+00	7 91E-06	2 34E-06	2 64E-06	5 28E-07	7 82E-07	1.17E-07
1,2-Dichloroethane	5 40E+00	9 20E-07	2.73E-07	3 07E-07	6 14E-08	9 09E-08	1 36E-08
1,1-Dichloroethene	2 27E+00	6 45E-07	1 91E-07	2 23E-07	4 46E-08	6 60E-08	9 90E-09
cis-1,2-Dichloroethene	2 07E+00	2 75E-06	8 14E-07	9 68E-07	1 94E-07	2 87E-07	4 30E-08
trans-1,2-Dichloroethene	5 40E+00	5 24E-07	1 55E-07	1 75E-07	3 49E-08	5 18E-08	7 77E-09
2,4-Dichlorophenol	6 60E-01	2 13E-07	6 29E-08	1 32E-07	3 95E-08	3 90E-08	8 75E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3 53E-01	8 86E-08	2 62E-08	6 60E-08	3 71E-08	1 95E-08	8 65E-09
Dichloroprop	7 14E-01	2 10E-10	1 49E-11	1 26E-10	3 51E-11	8 90E-12	1 86E-12
Diethyl phthalate	1 45E+00	4 47E-06	1 32E-06	1 81E-06	3 69E-07	5 36E-07	8 20E-08
2,4-Dimethylphenol	1 81E+00	1 31E-07	3 87E-08	4 79E-08	9 61E-09	1 42E-08	2 13E-09
Dimethyl phthalate	2 30E+00	4 61E-06	1 36E-06	1 59E-06	3 18E-07	4 70E-07	7 05E-08
Di-n-butyl phthalate	5 70E-02	4 30E-07	1 16E-07	3 56E-07	3 92E-07	9 58E-08	1 02E-07

Table 5C-11 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg): RESIDENTIAL LOCATION Maximum 2 Year	FARMER LOCATION Maximum 2 Year	RESIDENTIAL LOCATION 6 Year Average	RESIDENTIAL LOCATION 30 Year Average	FARMER LOCATION 6 Year Average	FARMER LOCATION 40 Year Average
2,4-Dinitrophenol	5.26E+00	5.81E-08	1.72E-08	1.94E-08	3.87E-09	5.74E-09	8.60E-10
Di-n-octyl phthalate	3.72E-02	1.80E-08	5.21E-09	1.49E-08	1.68E-08	4.32E-09	4.74E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA	NA
Dioxins/Furans							
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.62E-03	3.62E-13	4.63E-14	3.01E-13	3.44E-13	3.84E-14	4.32E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5.62E-03	5.95E-13	5.37E-14	4.95E-13	5.67E-13	4.46E-14	5.01E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	1.59E-13	1.20E-14	1.32E-13	1.51E-13	9.98E-15	1.12E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	4.12E-13	2.97E-14	3.43E-13	3.93E-13	2.47E-14	2.78E-14
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	5.34E-13	3.91E-14	4.44E-13	5.09E-13	3.24E-14	3.65E-14
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	8.08E-13	5.83E-14	6.73E-13	7.71E-13	4.84E-14	5.45E-14
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	4.07E-12	2.89E-13	3.38E-12	3.88E-12	2.40E-13	2.70E-13
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	1.06E-12	1.71E-13	8.80E-13	1.01E-12	1.42E-13	1.59E-13
2,3,4,7,8-Pentachlorodibenzofuran	3.87E-03	1.38E-12	1.30E-13	1.15E-12	1.31E-12	1.08E-13	1.22E-13
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	9.77E-13	1.05E-13	8.13E-13	9.30E-13	8.73E-14	9.82E-14
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	1.89E-12	1.41E-13	1.57E-12	1.80E-12	1.17E-13	1.32E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	1.25E-12	9.39E-14	1.04E-12	1.19E-12	7.79E-14	8.77E-14
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	1.78E-13	1.39E-14	1.48E-13	1.69E-13	1.15E-14	1.30E-14
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	1.23E-12	9.22E-14	1.02E-12	1.17E-12	7.66E-14	8.62E-14
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	2.57E-12	1.89E-13	2.13E-12	2.45E-12	1.57E-13	1.76E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	5.35E-13	3.88E-14	4.45E-13	5.10E-13	3.22E-14	3.62E-14
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.17E-04	6.68E-13	4.75E-14	5.56E-13	6.37E-13	3.94E-14	4.43E-14
Endosulfan I	3.13E-01	2.87E-08	8.16E-09	2.18E-08	1.36E-08	6.19E-09	3.12E-09
Endosulfan sulfate	2.97E-01	1.33E-08	3.93E-09	1.02E-08	6.64E-09	3.00E-09	1.60E-09
Endrin	2.24E-02	9.46E-10	2.28E-10	7.87E-10	8.94E-10	1.89E-10	2.11E-10
Endrin aldehyde	2.24E-02	7.68E-10	1.75E-10	6.39E-10	7.26E-10	1.45E-10	1.62E-10
Ethylbenzene	5.85E-01	1.59E-06	4.71E-07	1.04E-06	3.47E-07	3.06E-07	7.71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.48E-01	5.05E-06	1.49E-06	3.37E-06	1.21E-06	9.93E-07	2.68E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	3.26E-09	9.64E-10	2.58E-09	2.03E-09	7.60E-10	5.16E-10
Hexachlorobenzene	3.30E-02	5.88E-09	1.74E-09	4.89E-09	5.52E-09	1.44E-09	1.59E-09

Table 5C-11 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Hexachlorobutadiene	5.70E-02	1.04E-08	3.07E-09	8.58E-09	9.47E-09	2.54E-09	2.71E-09
beta-Hexachlorocyclohexane	2.46E-01	7.10E-09	2.10E-09	5.56E-09	4.15E-09	1.64E-09	1.04E-09
Hexachlorocyclopentadiene	1.91E-01	1.47E-08	4.36E-09	1.18E-08	1.01E-08	3.48E-09	2.64E-09
Hexachloroethane	4.54E-01	9.20E-09	2.72E-09	6.49E-09	2.83E-09	1.92E-09	6.37E-10
Hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	1.20E-05	3.56E-06	4.01E-06	8.01E-07	1.19E-06	1.78E-07
MCPP	6.01E-01	6.09E-07	1.66E-07	3.92E-07	1.28E-07	1.07E-07	2.62E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	1.62E-06	4.50E-07	5.54E-07	1.11E-07	1.54E-07	2.30E-08
Methylene chloride	7.34E+00	1.61E-05	4.77E-06	5.36E-06	1.07E-06	1.59E-06	2.38E-07
Methyl ester acetic acid	3.05E+01	4.96E-14	3.52E-15	1.65E-14	3.31E-15	1.17E-15	1.76E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	1.45E-07	4.30E-08	1.15E-07	8.99E-08	3.39E-08	2.28E-08
4-Methyl-2-pentanone	7.95E+00	1.88E-06	5.56E-07	6.25E-07	1.25E-07	1.85E-07	2.78E-08
2-Methylphenol	2.89E+00	5.06E-07	1.50E-07	1.70E-07	3.40E-08	5.04E-08	7.56E-09
3-Methylphenol	2.85E+00	2.05E-06	6.07E-07	6.89E-07	1.38E-07	2.04E-07	3.06E-08
4-Methylphenol	2.93E+00	5.16E-07	1.53E-07	1.73E-07	3.47E-08	5.14E-08	7.71E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	8.29E-07	2.46E-07	5.00E-07	1.41E-07	1.48E-07	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	1.01E-07	2.98E-08	3.43E-08	6.86E-09	1.02E-08	1.52E-09
2-Nitroaniline	3.30E+00	1.19E-07	3.53E-08	3.99E-08	7.98E-09	1.18E-08	1.77E-09
4-Nitroaniline	6.09E+00	1.57E-07	4.66E-08	5.24E-08	1.05E-08	1.55E-08	2.33E-09
Nitrobenzene	3.30E+00	9.94E-06	2.94E-06	3.32E-06	6.64E-07	9.85E-07	1.48E-07
2-Nitrophenol	3.58E+00	4.18E-06	1.24E-06	1.39E-06	2.79E-07	4.13E-07	6.20E-08
4-Nitrophenol	3.05E+00	9.76E-07	2.89E-07	3.27E-07	6.54E-08	9.69E-08	1.45E-08
n-Nitrosodiphenylamine	6.01E-01	2.15E-07	6.37E-08	1.39E-07	4.53E-08	4.10E-08	1.00E-08
Octadecanoic acid	6.78E-04	1.67E-08	1.19E-09	1.39E-08	1.59E-08	9.85E-10	1.11E-09
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA	NA
PAHs							
Acenaphthene	2.10E-01	3.07E-08	9.08E-09	2.44E-08	2.00E-08	7.20E-09	5.13E-09

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Table 5C-11 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Acenaphthylene	1.72E-01	2.61E-08	7.71E-09	2.10E-08	1.88E-08	6.20E-09	4.98E-09
Anthracene	1.04E-01	1.30E-08	3.84E-09	1.07E-08	1.10E-08	3.15E-09	3.06E-09
Benzo(a)anthracene	2.22E-02	1.14E-08	1.00E-09	9.48E-09	1.08E-08	8.33E-10	9.28E-10
Benzo(a)pyrene	1.14E-02	5.41E-09	5.04E-10	4.50E-09	5.15E-09	4.18E-10	4.69E-10
Benzo(b)fluoranthene	1.12E-02	1.27E-09	3.33E-10	1.06E-09	1.21E-09	2.76E-10	3.10E-10
Benzo(e)pyrene	1.25E-02	5.81E-09	5.63E-10	4.83E-09	5.52E-09	4.68E-10	5.24E-10
Benzo(g,h,i)perylene	5.19E-03	3.15E-09	2.28E-10	2.62E-09	3.00E-09	1.89E-10	2.12E-10
Benzo(j)fluoranthene	1.12E-02	8.54E-09	9.85E-10	7.10E-09	8.12E-09	8.18E-10	9.17E-10
Benzo(k)fluoranthene	4.31E-03	2.62E-09	1.88E-10	2.18E-09	2.49E-09	1.56E-10	1.75E-10
Chrysene	2.22E-02	4.97E-09	7.57E-10	4.13E-09	4.69E-09	6.28E-10	6.99E-10
Dibenzo(a,h)anthracene	6.78E-03	3.99E-09	3.02E-10	3.32E-09	3.80E-09	2.51E-10	2.82E-10
Fluoranthene	5.70E-02	7.18E-09	2.03E-09	5.95E-09	6.56E-09	1.68E-09	1.79E-09
Fluorene	1.43E-01	2.60E-08	7.68E-09	2.11E-08	2.02E-08	6.23E-09	5.46E-09
Indeno(1,2,3-cd)pyrene	6.06E-03	3.72E-09	2.65E-10	3.10E-09	3.55E-09	2.20E-10	2.47E-10
Phenanthrene	8.84E-02	7.49E-08	2.21E-08	6.16E-08	6.51E-08	1.82E-08	1.83E-08
Pyrene	5.85E-02	1.93E-08	5.32E-09	1.60E-08	1.76E-08	4.40E-09	4.68E-09
PCBs							
Monochlorobiphenyls	1.01E-01	3.44E-09	1.02E-09	2.83E-09	2.93E-09	8.36E-10	8.17E-10
Dichlorobiphenyls	4.55E-02	7.95E-10	2.35E-10	6.59E-10	7.36E-10	1.95E-10	2.11E-10
Trichlorobiphenyls	1.97E-02	5.26E-10	1.56E-10	4.37E-10	4.98E-10	1.29E-10	1.44E-10
Tetrachlorobiphenyls	1.41E-02	7.67E-10	2.24E-10	6.38E-10	7.29E-10	1.86E-10	2.09E-10
Pentachlorobiphenyls	8.73E-03	4.52E-10	1.32E-10	3.76E-10	4.30E-10	1.10E-10	1.23E-10
Hexachlorobiphenyls	3.35E-03	1.31E-10	3.34E-11	1.09E-10	1.25E-10	2.77E-11	3.12E-11
Heptachlorobiphenyls	4.25E-03	7.94E-11	1.32E-11	6.61E-11	7.57E-11	1.10E-11	1.23E-11
Octachlorobiphenyls	2.50E-03	1.13E-11	2.35E-12	9.38E-12	1.08E-11	1.95E-12	2.19E-12
Nonachlorobiphenyls	1.51E-03	8.38E-12	6.40E-13	6.97E-12	7.99E-12	5.32E-13	5.98E-13
Decachlorobiphenyls	6.51E-04	3.17E-13	2.80E-14	2.63E-13	3.02E-13	2.33E-14	2.62E-14
Pentachlorobenzene	3.98E-02	7.33E-09	2.17E-09	6.08E-09	6.82E-09	1.80E-09	1.96E-09
Pentachlorophenol	4.25E-02	1.78E-08	5.26E-09	1.47E-08	1.65E-08	4.35E-09	4.74E-09
3-Pentanol	6.25E+00	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA	NA

Table 5C-11 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Phenol	5 55E+00	2 64E-05	7.84E-06	8 81E-06	1 76E-06	2 61E-06	3 92E-07
Phthalic anhydride	8 84E+01	8 63E-05	2 56E-05	2 88E-05	5 75E-06	8 52E-06	1 28E-06
Quinoline	2.60E+00	1 65E-06	4 90E-07	5 60E-07	1 12E-07	1 66E-07	2 49E-08
Quinone	2.97E+01	2 84E-05	8 42E-06	9.47E-06	1 89E-06	2 81E-06	4 21E-07
Styrene	7 64E-01	6 04E-07	1.79E-07	3 51E-07	9.29E-08	1 04E-07	2 06E-08
1,2,4,5-Tetrachlorobenzene	7 44E-02	1 25E-08	3 69E-09	1 03E-08	1 11E-08	3 04E-09	3 15E-09
Tetrachloroethene	4 20E-01	7 29E-07	2 16E-07	5 24E-07	2 48E-07	1 55E-07	5 65E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	1 56E-08	4 63E-09	1 26E-08	1 15E-08	3 73E-09	3 06E-09
Toluene	1.08E+00	4 96E-06	1.47E-06	2 38E-06	5 19E-07	7 05E-07	1 15E-07
1,2,4-Trichlorobenzene	1.84E-01	2.15E-08	6.37E-09	1 73E-08	1 51E-08	5 10E-09	3 95E-09
1,2,5-Trichlorobenzene	1 84E-01	9 71E-06	2 88E-06	7 79E-06	6 80E-06	2 30E-06	1 78E-06
1,1,1-Trichloroethane	1 41E+00	1 58E-06	4 67E-07	6.49E-07	1 33E-07	1 92E-07	2 95E-08
Trichloroethene	1.84E+00	6.06E-07	1 79E-07	2 21E-07	4 44E-08	6 55E-08	9 85E-09
Trichlorofluoromethane	1.34E+00	1.27E-03	3 77E-04	5 39E-04	1 11E-04	1 60E-04	2 47E-05
2,3,6-Trichlorophenol	2 37E-01	4.42E-06	1.31E-06	3 47E-06	2 66E-06	1 03E-06	6 69E-07
2,4,5-Trichlorophenol	1 99E-01	2 28E-08	6.74E-09	1 82E-08	1 53E-08	5 36E-09	3 96E-09
2,4,6-Trichlorophenol	2 85E-01	1 16E-07	3 43E-08	8 92E-08	6 00E-08	2 64E-08	1 46E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6 01E-01	1 45E-08	3 77E-09	9 36E-09	3 06E-09	2 43E-09	5 95E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1 51E+00	1 01E-08	2 96E-09	4 02E-09	8 15E-10	1 18E-09	1 79E-10
Undecane	3.77E-03	1 21E-12	8.58E-14	1.01E-12	1 15E-12	7 12E-14	8 01E-14
Vinyl acetate	1.47E+01	2 56E-06	7 60E-07	8 55E-07	1 71E-07	2 53E-07	3 80E-08
Vinyl chloride	1 74E+01	2 57E-06	7 62E-07	8 57E-07	1 71E-07	2 54E-07	3 81E-08
o-Xylene	6 09E-01	9.40E-07	2 78E-07	6 03E-07	1 94E-07	1 78E-07	4 31E-08
m,p-Xylene	5 48E-01	2 05E-06	6 06E-07	1 36E-06	4 89E-07	4 03E-07	1 09E-07
Metals / Inorganics							
Aluminum	9 18E-04	2 20E-05	1 99E-06	1 83E-05	2 06E-05	1 65E-06	1 81E-06
Antimony	4 36E-02	3 52E-07	3 19E-08	2 72E-07	1 87E-07	2 46E-08	1 39E-08
Arsenic	8 72E-03	7 32E-09	6 62E-10	5 99E-09	6 02E-09	5 41E-10	5 08E-10
Barium	2 58E-02	4 53E-05	4 10E-06	3 56E-05	2 73E-05	3 22E-06	2 11E-06
Beryllium	2 18E-03	2.83E-09	2 56E-10	2 35E-09	2 58E-09	2 12E-10	2 25E-10
Cadmium	1 82E-01	2 52E-06	2 28E-07	1 39E-06	3 40E-07	1 25E-07	2 30E-08

Table 5C-11 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Calcium	6.02E-01	1.26E-02	1.14E-03	5.89E-03	1.27E-03	5.33E-04	8.58E-05
Chromium III	4.74E-03	1.35E-07	1.22E-08	1.12E-07	1.24E-07	1.01E-08	1.09E-08
Cobalt	8.04E-03	1.37E-08	1.24E-09	1.06E-08	7.28E-09	9.59E-10	5.43E-10
Copper	2.62E-01	4.87E-05	4.41E-06	3.69E-05	2.25E-05	3.33E-06	1.63E-06
Iron	1.24E-03	2.48E-06	2.25E-07	1.81E-06	9.22E-07	1.64E-07	6.47E-08
Lead	1.19E-02	9.84E-07	8.91E-08	8.16E-07	9.07E-07	7.37E-08	7.95E-08
Magnesium	5.86E-01	4.43E-03	4.01E-04	2.16E-03	4.75E-04	1.95E-04	3.22E-05
Manganese	6.60E-02	2.07E-06	1.88E-07	1.64E-06	1.29E-06	1.48E-07	1.00E-07
Mercury (inorganic)	2.56E-01	9.20E-05	2.72E-05	7.45E-05	7.01E-05	2.20E-05	1.89E-05
Nickel	6.00E-02	7.29E-06	6.59E-07	5.93E-06	5.72E-06	5.35E-07	4.75E-07
Potassium	5.86E-01	2.52E-03	2.28E-04	1.31E-03	3.04E-04	1.18E-04	2.06E-05
Selenium	2.50E-02	7.22E-07	6.54E-08	5.94E-07	6.24E-07	5.37E-08	5.34E-08
Silver	1.24E-01	7.55E-06	6.83E-07	5.83E-06	4.00E-06	5.27E-07	2.98E-07
Sodium	5.66E-02	6.08E-03	5.50E-04	4.89E-03	4.35E-03	4.42E-04	3.52E-04
Vanadium	3.20E-03	5.07E-08	4.58E-09	4.07E-08	3.63E-08	3.68E-09	2.93E-09
Zinc	9.48E-01	4.69E-04	4.24E-05	3.59E-04	2.34E-04	3.24E-05	1.72E-05
TICs							
Acetophenone	4.69E+00	4.36E-06	1.29E-06	1.45E-06	2.91E-07	4.31E-07	6.47E-08
Benzonitrile	4.82E+00	1.48E-06	4.38E-07	4.93E-07	9.86E-08	1.46E-07	2.19E-08
Bromobenzene	7.14E-01	4.21E-06	1.25E-06	2.51E-06	6.92E-07	7.41E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	6.41E-05	1.90E-05	2.14E-05	4.27E-06	6.34E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	1.15E+01	7.18E-05	2.13E-05	2.39E-05	4.78E-06	7.09E-06	1.06E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA	NA
Decane	1.32E-02	1.01E-13	7.17E-15	8.41E-14	9.60E-14	5.95E-15	6.66E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA	NA
Dioctyl adipate	1.11E-02	1.94E-07	2.68E-08	1.61E-07	1.84E-07	2.23E-08	2.50E-08
2-(2-Ethoxyethoxy)ethanol	7.97E+01	2.77E-05	8.20E-06	9.23E-06	1.85E-06	2.73E-06	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA	NA

Table 5C-11 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
4-Hydroxy-4-methyl-2-pentanone	4 41E+01	6 61E-11	4 70E-12	2 20E-11	4 41E-12	1 57E-12	2 35E-13
Iodine	1 39E+00	3 02E-12	2 14E-13	1 24E-12	2 54E-13	8 81E-14	1 35E-14
Iodobenzene	5 05E-01	7 84E-12	5 56E-13	5 34E-12	2 05E-12	3 78E-13	1 10E-13
Iodomethane	5 15E+00	1 51E-14	1 07E-15	5 04E-15	1 01E-15	3 58E-16	5 37E-17
Methyl benzoate	2 28E+00	2 22E-11	1 58E-12	7 66E-12	1 53E-12	5 44E-13	8 16E-14
Methyl hexenone	NA	NA	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-12 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-12 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Organics						
Acetaldehyde	7.42E-16	1.26E-15	1.26E-16	1.58E-17	2.48E-15	2.24E-16
Acetone	5.77E-15	9.79E-15	9.81E-16	1.23E-16	1.93E-14	1.75E-15
Acetonitrile	5.34E-14	9.06E-14	9.08E-15	1.14E-15	1.78E-13	1.62E-14
Acrolein	2.61E-15	4.43E-15	4.45E-16	5.56E-17	8.73E-15	7.91E-16
Acrylonitrile	2.62E-15	4.45E-15	4.46E-16	5.58E-17	8.76E-15	7.94E-16
Aldrin	1.84E-10	3.12E-10	3.12E-11	3.91E-12	6.13E-10	5.56E-11
Aniline	2.14E-12	3.62E-12	3.63E-13	4.55E-14	7.13E-12	6.46E-13
Benzaldehyde	2.63E-11	4.46E-11	4.48E-12	5.60E-13	8.79E-11	7.96E-12
Benzene	1.08E-12	1.83E-12	1.83E-13	2.29E-14	3.60E-12	3.26E-13
Benzoic acid	4.45E-11	7.54E-11	7.56E-12	9.46E-13	1.48E-10	1.35E-11
Benzotrichloride	8.59E-14	1.46E-13	1.46E-14	1.83E-15	2.87E-13	2.60E-14
Benzoyl chloride	3.83E-12	6.50E-12	6.52E-13	8.15E-14	1.28E-11	1.16E-12
Benzyl chloride	1.71E-13	2.90E-13	2.91E-14	3.64E-15	5.71E-13	5.17E-14
Biphenyl	1.46E-11	2.47E-11	2.48E-12	3.10E-13	4.86E-11	4.41E-12
Bis(2-chloroethoxy)methane	1.24E-13	2.11E-13	2.12E-14	2.65E-15	4.16E-13	3.77E-14
Bis(2-ethylhexyl)phthalate	6.48E-06	1.10E-05	1.10E-06	1.38E-07	2.16E-05	1.96E-06
Bromochloromethane	6.91E-15	1.17E-14	1.17E-15	1.47E-16	2.31E-14	2.09E-15
Bromodichloromethane	1.48E-14	2.51E-14	2.52E-15	3.15E-16	4.94E-14	4.48E-15
Bromoform	5.05E-14	8.57E-14	8.59E-15	1.08E-15	1.69E-13	1.53E-14
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA
2-Butanone (MEK)	1.28E-14	2.17E-14	2.18E-15	2.72E-16	4.27E-14	3.87E-15
Butyl benzyl phthalate	9.18E-09	1.56E-08	1.56E-09	1.95E-10	3.06E-08	2.78E-09
Carbazole	9.02E-14	1.53E-13	1.53E-14	1.92E-15	3.01E-13	2.73E-14
Carbon disulfide	8.59E-16	1.46E-15	1.46E-16	1.83E-17	2.87E-15	2.60E-16
Carbon tetrachloride	1.70E-15	2.89E-15	2.90E-16	3.62E-17	5.68E-15	5.15E-16
alpha-Chlordane	8.08E-10	1.37E-09	1.37E-10	1.72E-11	2.70E-09	2.44E-10
gamma-Chlordane	2.50E-10	4.24E-10	4.25E-11	5.32E-12	8.35E-10	7.57E-11
4-Chloroaniline	1.36E-13	2.31E-13	2.31E-14	2.90E-15	4.54E-13	4.12E-14
Chlorobenzene	5.79E-14	9.82E-14	9.85E-15	1.23E-15	1.93E-13	1.75E-14
Chloroethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA

Table 5C-12 (RBI)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
2-Chloroethyl vinyl ether	6 33E-16	1 07E-15	1.08E-16	1 35E-17	2 11E-15	1 92E-16
Chloroform	2 13E-14	3 62E-14	3.63E-15	4 54E-16	7 12E-14	6 46E-15
Chloromethane	0 00E+00	0 00E+00	0 00E+00	0 00E+00	NA	NA
4-Chloro-3-methylphenol	8 16E-14	1 38E-13	1 39E-14	1 74E-15	2 72E-13	2 47E-14
beta-Chloronaphthalene	2 82E-13	4 79E-13	4 80E-14	6.01E-15	9 42E-13	8 54E-14
2-Chlorophenol	5 66E-15	9 60E-15	9 62E-16	1 20E-16	1 89E-14	1 71E-15
2-Chloropropane	1 95E-16	3 30E-16	3.31E-17	4 15E-18	6 51E-16	5 90E-17
Dalapon	1.09E-13	1.85E-13	1 85E-14	2 32E-15	3 63E-13	3 29E-14
4,4'-DDD	4 53E-09	7 69E-09	7 71E-10	9 64E-11	1 51E-08	1.37E-09
4,4'-DDE	1.68E-09	2 85E-09	2 86E-10	3 57E-11	5 60E-09	5 08E-10
4,4'-DDT	2 65E-08	4 50E-08	4 51E-09	5 65E-10	8 86E-08	8 03E-09
Decanol	6 38E-11	1.08E-10	1 09E-11	1 36E-12	2.13E-10	1 93E-11
Dibenzofuran	5 97E-13	1 01E-12	1 02E-13	1 27E-14	1 99E-12	1 81E-13
Dibromochloromethane	3 04E-15	5.15E-15	5.16E-16	6 46E-17	1 01E-14	9 19E-16
Dicamba	1 44E-11	2 44E-11	2 45E-12	3 06E-13	4 80E-11	4 35E-12
1,2-Dichlorobenzene	2 48E-14	4.20E-14	4 22E-15	5 27E-16	8 27E-14	7 50E-15
1,3-Dichlorobenzene	5 41E-15	9 18E-15	9 21E-16	1 15E-16	1 81E-14	1 64E-15
1,4-Dichlorobenzene	5 16E-15	8 76E-15	8 78E-16	1 10E-16	1 72E-14	1 56E-15
3,3'-Dichlorobenzidine	2 00E-09	3 39E-09	3 40E-10	4 25E-11	6 67E-09	6 04E-10
1,1-Dichloroethane	3 42E-15	5 81E-15	5 82E-16	7 29E-17	1 14E-14	1 04E-15
1,2-Dichloroethane	1 02E-15	1 73E-15	1 74E-16	2 17E-17	3 41E-15	3 09E-16
1,1-Dichloroethene	8 28E-17	1.40E-16	1 41E-17	1 76E-18	2 76E-16	2 50E-17
cis-1,2-Dichloroethene	1 15E-15	1 94E-15	1 95E-16	2 44E-17	3 83E-15	3 47E-16
trans-1,2-Dichloroethene	1 80E-16	3 05E-16	3 06E-17	3 83E-18	6 00E-16	5 44E-17
2,4-Dichlorophenol	2 80E-13	4 75E-13	4 76E-14	5 95E-15	9 34E-13	8 47E-14
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	1 73E-13	2 93E-13	2 93E-14	3 67E-15	5 76E-13	5 22E-14
Dichloroprop	1 67E-11	2 83E-11	2 83E-12	3 55E-13	5 56E-11	5 04E-12
Diethyl phthalate	2 76E-10	4 68E-10	4 70E-11	5 88E-12	9 22E-10	8 35E-11
2,4-Dimethylphenol	3 96E-13	6 72E-13	6 74E-14	8 44E-15	1 32E-12	1 20E-13
Dimethyl phthalate	4 78E-11	8 10E-11	8 13E-12	1 02E-12	1 59E-10	1 45E-11
Di-n-butyl phthalate	3 93E-08	6 66E-08	6 68E-09	8 36E-10	1 31E-07	1 19E-08

Table 5C-12 (RBI)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
2,4-Dinitrophenol	3.44E-12	5.83E-12	5.85E-13	7.32E-14	1.15E-11	1.04E-12
Di-n-octyl phthalate	5.53E-10	9.37E-10	9.40E-11	1.18E-11	1.84E-09	1.67E-10
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA
Dioxins/Furans						
2,3,7,8-Tetrachlorodibenzo(p)dioxin	2.14E-12	3.63E-12	3.64E-13	4.55E-14	7.14E-12	6.47E-13
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	4.31E-12	7.31E-12	7.33E-13	9.17E-14	1.44E-11	1.30E-12
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	5.68E-12	9.64E-12	9.66E-13	1.21E-13	1.90E-11	1.72E-12
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.50E-11	2.55E-11	2.55E-12	3.19E-13	5.01E-11	4.54E-12
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.01E-11	1.71E-11	1.71E-12	2.14E-13	3.36E-11	3.05E-12
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	5.08E-11	8.61E-11	8.64E-12	1.08E-12	1.70E-10	1.54E-11
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.14E-10	1.93E-10	1.94E-11	2.43E-12	3.81E-10	3.45E-11
2,3,7,8-Tetrachlorodibenzofuran	4.32E-12	7.33E-12	7.35E-13	9.20E-14	1.44E-11	1.31E-12
2,3,4,7,8-Pentachlorodibenzofuran	1.42E-11	2.40E-11	2.41E-12	3.02E-13	4.73E-11	4.29E-12
1,2,3,7,8-Pentachlorodibenzofuran	7.90E-12	1.34E-11	1.34E-12	1.68E-13	2.64E-11	2.39E-12
1,2,3,4,7,8-Hexachlorodibenzofuran	3.54E-11	6.00E-11	6.02E-12	7.53E-13	1.18E-10	1.07E-11
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-11	3.97E-11	3.98E-12	4.99E-13	7.82E-11	7.09E-12
1,2,3,7,8,9-Hexachlorodibenzofuran	3.28E-12	5.56E-12	5.58E-13	6.98E-14	1.10E-11	9.92E-13
2,3,4,6,7,8-Hexachlorodibenzofuran	2.29E-11	3.89E-11	3.90E-12	4.88E-13	7.65E-11	6.93E-12
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.07E-10	1.82E-10	1.83E-11	2.29E-12	3.59E-10	3.25E-11
1,2,3,4,7,8,9-Heptachlorodibenzofuran	2.25E-11	3.82E-11	3.83E-12	4.79E-13	7.52E-11	6.82E-12
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	9.38E-11	1.59E-10	1.59E-11	2.00E-12	3.13E-10	2.84E-11
Endosulfan I	2.26E-10	3.83E-10	3.84E-11	4.80E-12	7.53E-10	6.82E-11
Endosulfan sulfate	5.51E-12	9.34E-12	9.37E-13	1.17E-13	1.84E-11	1.67E-12
Endrin	4.58E-10	7.76E-10	7.78E-11	9.74E-12	1.53E-09	1.38E-10
Endrin aldehyde	4.63E-10	7.85E-10	7.87E-11	9.85E-12	1.55E-09	1.40E-10
Ethylbenzene	1.82E-14	3.08E-14	3.09E-15	3.87E-16	6.07E-14	5.50E-15
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1.57E-09	2.66E-09	2.67E-10	3.34E-11	5.24E-09	4.75E-10
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA
Heptachlor	1.72E-12	2.92E-12	2.92E-13	3.66E-14	5.74E-12	5.20E-13
Hexachlorobenzene	5.03E-12	8.53E-12	8.55E-13	1.07E-13	1.68E-11	1.52E-12

Table 5C-12 (RBI)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Hexachlorobutadiene	8 30E-14	1 41E-13	1 41E-14	1.77E-15	2 77E-13	2 51E-14
beta-Hexachlorocyclohexane	4 40E-16	7.46E-16	7.48E-17	9 37E-18	1 47E-15	1 33E-16
Hexachlorocyclopentadiene	1 56E-13	2 64E-13	2 65E-14	3 31E-15	5 20E-13	4 71E-14
Hexachloroethane	6 47E-16	1 10E-15	1 10E-16	1 38E-17	2 16E-15	1 96E-16
Hexadecanoic acid	NA	NA	NA	NA	NA	NA
2-Hexanone	6.39E-13	1 08E-12	1.09E-13	1 36E-14	2 13E-12	1 93E-13
MCPP	5 41E-09	9 18E-09	9 20E-10	1 15E-10	1 81E-08	1 64E-09
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	9 69E-09	1 64E-08	1 65E-09	2 06E-10	3 23E-08	2 93E-09
Methylene chloride	3 31E-15	5 61E-15	5.62E-16	7 04E-17	1 10E-14	1 00E-15
Methyl ester acetic acid	1 84E-15	3 12E-15	3 13E-16	3 91E-17	6.14E-15	5 56E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	5.23E-13	8 87E-13	8 90E-14	1 11E-14	1 75E-12	1 58E-13
4-Methyl-2-pentanone	1.93E-14	3 27E-14	3.28E-15	4 10E-16	6 43E-14	5 83E-15
2-Methylphenol	1 54E-13	2 61E-13	2.62E-14	3 27E-15	5 14E-13	4 66E-14
3-Methylphenol	1.75E-12	2 97E-12	2 97E-13	3 72E-14	5 84E-12	5 29E-13
4-Methylphenol	3.14E-13	5.33E-13	5 35E-14	6 69E-15	1 05E-12	9 51E-14
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA
Naphthalene	2.94E-13	4 99E-13	5 00E-14	6 26E-15	9 82E-13	8 90E-14
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	5 61E-12	9.52E-12	9.55E-13	1 19E-13	1 87E-11	1 70E-12
2-Nitroaniline	1.36E-12	2.30E-12	2 31E-13	2 89E-14	4 53E-12	4 11E-13
4-Nitroaniline	7 83E-13	1 33E-12	1 33E-13	1 67E-14	2.61E-12	2 37E-13
Nitrobenzene	3 94E-12	6 68E-12	6.70E-13	8 38E-14	1 32E-11	1 19E-12
2-Nitrophenol	2 85E-12	4 84E-12	4 85E-13	6 07E-14	9 53E-12	8 64E-13
4-Nitrophenol	4.84E-11	8 22E-11	8 24E-12	1 03E-12	1 62E-10	1 47E-11
n-Nitrosodiphenylamine	8 82E-14	1 50E-13	1 50E-14	1 88E-15	2 95E-13	2 67E-14
Octadecanoic acid	1.10E-06	1 87E-06	1 87E-07	2 34E-08	3 67E-06	3.33E-07
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA
PAHs						
Acenaphthene	9 87E-13	1 67E-12	1 68E-13	2 10E-14	3 29E-12	2 99E-13

AR317496

Table 5C-12 (RBT)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Acenaphthylene	2.56E-12	4.35E-12	4.36E-13	5.46E-14	8.56E-12	7.76E-13
Anthracene	6.47E-13	1.10E-12	1.10E-13	1.38E-14	2.16E-12	1.96E-13
Benzo(a)anthracene	2.12E-08	3.60E-08	3.61E-09	4.51E-10	7.08E-08	6.42E-09
Benzo(a)pyrene	1.91E-08	3.24E-08	3.25E-09	4.06E-10	6.37E-08	5.78E-09
Benzo(b)fluoranthene	7.81E-10	1.32E-09	1.33E-10	1.66E-11	2.61E-09	2.36E-10
Benzo(e)pyrene	1.83E-08	3.11E-08	3.11E-09	3.90E-10	6.11E-08	5.54E-09
Benzo(g,h,i)perylene	2.69E-08	4.56E-08	4.57E-09	5.72E-10	8.98E-08	8.13E-09
Benzo(j)fluoranthene	2.72E-08	4.61E-08	4.62E-09	5.79E-10	9.08E-08	8.23E-09
Benzo(k)fluoranthene	2.70E-08	4.58E-08	4.59E-09	5.74E-10	9.01E-08	8.16E-09
Chrysene	6.38E-09	1.08E-08	1.08E-09	1.36E-10	2.13E-08	1.93E-09
Dibenzo(a,h)anthracene	2.57E-08	4.35E-08	4.36E-09	5.46E-10	8.57E-08	7.76E-09
Fluoranthene	3.26E-10	5.54E-10	5.55E-11	6.95E-12	1.09E-09	9.88E-11
Fluorene	4.09E-12	6.94E-12	6.96E-13	8.71E-14	1.37E-11	1.24E-12
Indeno(1,2,3-cd)pyrene	2.74E-08	4.64E-08	4.65E-09	5.82E-10	9.14E-08	8.28E-09
Phenanthrene	7.54E-11	1.28E-10	1.28E-11	1.60E-12	2.52E-10	2.28E-11
Pyrene	1.37E-09	2.33E-09	2.33E-10	2.92E-11	4.58E-09	4.15E-10
PCBs						
Monochlorobiphenyls	3.41E-13	5.78E-13	5.80E-14	7.25E-15	1.14E-12	1.03E-13
Dichlorobiphenyls	1.25E-12	2.13E-12	2.13E-13	2.67E-14	4.19E-12	3.79E-13
Trichlorobiphenyls	2.29E-12	3.88E-12	3.89E-13	4.87E-14	7.64E-12	6.92E-13
Tetrachlorobiphenyls	3.86E-11	6.54E-11	6.56E-12	8.20E-13	1.29E-10	1.17E-11
Pentachlorobiphenyls	4.12E-11	6.98E-11	7.00E-12	8.76E-13	1.37E-10	1.25E-11
Hexachlorobiphenyls	3.15E-10	5.34E-10	5.35E-11	6.69E-12	1.05E-09	9.52E-11
Heptachlorobiphenyls	4.79E-10	8.13E-10	8.15E-11	1.02E-11	1.60E-09	1.45E-10
Octachlorobiphenyls	7.88E-11	1.34E-10	1.34E-11	1.68E-12	2.63E-10	2.38E-11
Nonachlorobiphenyls	2.42E-10	4.10E-10	4.11E-11	5.15E-12	8.07E-10	7.32E-11
Decachlorobiphenyls	2.00E-11	3.39E-11	3.39E-12	4.25E-13	6.66E-11	6.04E-12
Pentachlorobenzene	4.48E-13	7.60E-13	7.62E-14	9.53E-15	1.50E-12	1.36E-13
Pentachlorophenol	4.92E-12	8.35E-12	8.37E-13	1.05E-13	1.64E-11	1.49E-12
3-Pentanol	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA

Table 5C-12 (RBI)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Phenol	4 55E-12	7 72E-12	7 74E-13	9 68E-14	1 52E-11	1 38E-12
Phthalic anhydride	5 84E-10	9.91E-10	9.94E-11	1 24E-11	1 95E-09	1 77E-10
Quinoline	1 93E-12	3 28E-12	3 29E-13	4 11E-14	6 45E-12	5 85E-13
Quinone	1 66E-12	2 82E-12	2 83E-13	3 54E-14	5 56E-12	5 04E-13
Styrene	1.21E-14	2 05E-14	2 05E-15	2 57E-16	4 03E-14	3.65E-15
1,2,4,5-Tetrachlorobenzene	1 80E-14	3 06E-14	3 07E-15	3 84E-16	6 02E-14	5 46E-15
Tetrachloroethene	5 84E-15	9 90E-15	9 93E-16	1 24E-16	1 95E-14	1 77E-15
2,3,4,6-Tetrachlorophenol	1.83E-12	3.10E-12	3 11E-13	3 89E-14	6 10E-12	5 53E-13
Toluene	1 33E-14	2 25E-14	2 26E-15	2 83E-16	4 43E-14	4 02E-15
1,2,4-Trichlorobenzene	4.29E-14	7.28E-14	7 30E-15	9 14E-16	1 43E-13	1 30E-14
1,2,5-Trichlorobenzene	1 94E-11	3 29E-11	3 29E-12	4 12E-13	6 47E-11	5 86E-12
1,1,1-Trichloroethane	1.21E-15	2.06E-15	2 07E-16	2 59E-17	4 06E-15	3 68E-16
Trichloroethene	6 14E-16	1 04E-15	1 04E-16	1 31E-17	2 05E-15	1 86E-16
Trichlorofluoromethane	1 33E-13	2 26E-13	2 26E-14	2 83E-15	4 44E-13	4 03E-14
2,3,6-Trichlorophenol	1.58E-10	2 67E-10	2 68E-11	3 35E-12	5 26E-10	4 77E-11
2,4,5-Trichlorophenol	1 77E-13	3 00E-13	3 01E-14	3 77E-15	5 91E-13	5 36E-14
2,4,6-Trichlorophenol	1.13E-12	1.91E-12	1 91E-13	2 40E-14	3 76E-12	3 41E-13
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2 07E-10	3.52E-10	3 53E-11	4 41E-12	6 93E-10	6 28E-11
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	8.82E-12	1.50E-11	1 50E-12	1 88E-13	2 95E-11	2 67E-12
Undecane	1 43E-11	2 42E-11	2 43E-12	3 04E-13	4 77E-11	4 32E-12
Vinyl acetate	1.92E-15	3 26E-15	3 27E-16	4 09E-17	6 42E-15	5 82E-16
Vinyl chloride	0 00E+00	0 00E+00	0 00E+00	0 00E+00	NA	NA
o-Xylene	1 41E-14	2 40E-14	2 40E-15	3 01E-16	4.72E-14	4 28E-15
m,p-Xylene	3 07E-14	5 21E-14	5 22E-15	6 54E-16	1 03E-13	9 29E-15
Metals / Inorganics						
Aluminum	1 56E-03	1 32E-03	2 51E-04	1 02E-05	3 59E-03	4 23E-04
Antimony	5 53E-07	4 67E-07	8 88E-08	3.62E-09	1 27E-06	1 50E-07
Arsenic	5 53E-08	4 67E-08	8 88E-09	3 62E-10	1 27E-07	1 50E-08
Barium	1 19E-04	1 00E-04	1 91E-05	7 77E-07	2 73E-04	3 21E-05
Beryllium	8.50E-08	7.17E-08	1 36E-08	5 56E-10	1 95E-07	2 30E-08
Cadmium	1 24E-06	1 05E-06	2 00E-07	8 15E-09	2 86E-06	3 37E-07

Table 5C-12 (RBI)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Calcium	2.24E-03	1.89E-03	3.59E-04	1.46E-05	5.14E-03	6.05E-04
Chromium III	1.86E-06	1.57E-06	2.99E-07	1.22E-08	4.28E-06	5.04E-07
Cobalt	1.17E-07	9.87E-08	1.88E-08	7.66E-10	2.69E-07	3.17E-08
Copper	1.29E-05	1.09E-05	2.07E-06	8.46E-08	2.97E-05	3.49E-06
Iron	1.43E-04	1.20E-04	2.29E-05	9.33E-07	3.27E-04	3.85E-05
Lead	5.41E-06	4.56E-06	8.69E-07	3.54E-08	1.24E-05	1.46E-06
Magnesium	7.71E-04	6.50E-04	1.24E-04	5.04E-06	1.77E-03	2.08E-04
Manganese	2.12E-06	1.79E-06	3.40E-07	1.39E-08	4.87E-06	5.73E-07
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA
Nickel	8.04E-06	6.78E-06	1.29E-06	5.26E-08	1.85E-05	2.17E-06
Potassium	4.07E-04	3.43E-04	6.52E-05	2.66E-06	9.34E-04	1.10E-04
Selenium	1.90E-06	1.60E-06	3.04E-07	1.24E-08	4.36E-06	5.13E-07
Silver	4.17E-06	3.52E-06	6.69E-07	2.73E-08	9.58E-06	1.13E-06
Sodium	7.16E-03	6.04E-03	1.15E-03	4.69E-05	1.64E-02	1.94E-03
Vanadium	1.06E-06	8.90E-07	1.69E-07	6.91E-09	2.42E-06	2.85E-07
Zinc	3.41E-05	2.87E-05	5.47E-06	2.23E-07	7.83E-05	9.22E-06
TICs						
Acetophenone	5.49E-13	9.31E-13	9.34E-14	1.17E-14	1.83E-12	1.66E-13
Benzonitrile	2.18E-13	3.70E-13	3.71E-14	4.64E-15	7.28E-13	6.60E-14
Bromobenzene	2.12E-13	3.60E-13	3.61E-14	4.51E-15	7.08E-13	6.41E-14
2-Butenal / 2-Methyl-2-propenal	1.94E-13	3.29E-13	3.30E-14	4.13E-15	6.48E-13	5.87E-14
2-(2-Butoxyethoxy)ethanol	3.91E-10	6.64E-10	6.66E-11	8.33E-12	1.31E-09	1.18E-10
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA
Decane	3.42E-13	5.80E-13	5.82E-14	7.28E-15	1.14E-12	1.03E-13
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA
Dioctyl adipate	5.45E-07	9.24E-07	9.26E-08	1.16E-08	1.82E-06	1.65E-07
2-(2-Ethoxyethoxy)ethanol	5.31E-12	9.00E-12	9.02E-13	1.13E-13	1.77E-11	1.61E-12
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA

Table 5C-12 (RBI)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
4-Hydroxy-4-methyl-2-pentanone	1.75E-12	2.97E-12	2.98E-13	3.73E-14	5.85E-12	5.30E-13
Iodine	1.92E-13	3.25E-13	3.26E-14	4.08E-15	6.40E-13	5.80E-14
Iodobenzene	7.96E-13	1.35E-12	1.35E-13	1.69E-14	2.66E-12	2.41E-13
Iodomethane	1.31E-15	2.23E-15	2.24E-16	2.80E-17	4.39E-15	3.98E-16
Methyl benzoate	1.53E-12	2.60E-12	2.61E-13	3.27E-14	5.12E-12	4.64E-13
Methyl hexenone	2.98E-13	5.05E-13	5.06E-14	6.34E-15	9.94E-13	9.01E-14
Nonanoic acid	NA	NA	NA	NA	NA	NA
Silane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-13 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-13 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	C_V Vapor Phase Air Concentration (µg/m³)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
Organics					
Acetaldehyde	8.15E-06	2.42E-06	5.98E-03	3.91E-13	1.16E-13
Acetone	2.28E-05	6.76E-06	1.81E-03	3.30E-13	9.78E-14
Acetonitrile	6.90E-05	2.05E-05	3.01E-03	1.67E-12	4.94E-13
Acrolein	8.15E-06	2.42E-06	2.53E-02	1.66E-12	4.91E-13
Acrylonitrile	5.34E-06	1.58E-06	1.86E-03	7.96E-14	2.36E-14
Aldrin	4.41E-07	1.31E-07	1.76E+01	6.22E-11	1.84E-11
Aniline	2.13E-05	6.30E-06	9.36E-06	1.60E-15	4.73E-16
Benzaldehyde	4.97E-05	1.47E-05	2.02E-01	8.02E-11	2.38E-11
Benzene	1.52E-03	4.51E-04	4.65E-03	5.67E-11	1.68E-11
Benzoic acid	5.01E-05	1.49E-05	1.95E+02	7.83E-08	2.32E-08
Benzotrichloride	5.28E-07	1.57E-07	1.83E-01	7.73E-13	2.29E-13
Benzoyl chloride	5.69E-05	1.69E-05	NA	NA	NA
Benzyl chloride	3.12E-06	9.26E-07	1.23E-01	3.09E-12	9.17E-13
Biphenyl	6.18E-06	1.83E-06	7.90E-01	3.91E-11	1.16E-11
Bis(2-chloroethoxy)methane	1.85E-07	5.48E-08	8.08E+00	1.20E-11	3.55E-12
Bis(2-ethylhexyl)phthalate	1.44E-05	4.28E-06	7.48E+04	8.66E-06	2.57E-06
Bromochloromethane	1.19E-05	3.53E-06	3.06E-03	2.93E-13	8.67E-14
Bromodichloromethane	1.10E-05	3.26E-06	6.59E-03	5.81E-13	1.72E-13
Bromoform	4.20E-06	1.25E-06	8.95E-02	3.02E-12	8.94E-13
Bromomethane	2.85E-05	8.44E-06	4.12E-04	9.41E-14	2.79E-14
2-Butanone (MEK)	1.90E-05	5.64E-06	5.64E-03	8.61E-13	2.55E-13
Butyl benzyl phthalate	1.17E-06	3.48E-07	3.84E+03	3.61E-08	1.07E-08
Carbazole	1.85E-07	5.48E-08	8.06E+00	1.20E-11	3.54E-12
Carbon disulfide	3.80E-06	1.13E-06	1.30E-03	3.97E-14	1.18E-14
Carbon tetrachloride	2.86E-06	8.47E-07	2.82E-03	6.47E-14	1.92E-14
alpha-Chlordane	2.64E-07	7.83E-08	1.08E+02	2.29E-10	6.79E-11
gamma-Chlordane	1.08E-07	3.19E-08	7.16E+01	6.18E-11	1.83E-11
4-Chloroaniline	1.85E-07	5.48E-08	1.16E+00	1.71E-12	5.08E-13
Chlorobenzene	1.01E-05	3.01E-06	7.42E-03	6.04E-13	1.79E-13
Chloroethane	1.30E-06	3.84E-07	5.47E-04	5.68E-15	1.68E-15
2-Chloroethyl vinyl ether	2.82E-07	8.37E-08	5.62E-02	1.27E-13	3.77E-14
Chloroform	5.07E-05	1.50E-05	5.14E-03	2.09E-12	6.20E-13
Chloromethane	3.09E-06	9.15E-07	1.47E-05	3.63E-16	1.08E-16
4-Chloro-3-methylphenol	1.85E-07	5.48E-08	1.11E+02	1.65E-10	4.90E-11
beta-Chloronaphthalene	1.85E-07	5.48E-08	5.55E+00	8.23E-12	2.44E-12
2-Chlorophenol	1.85E-07	5.48E-08	2.63E+00	3.90E-12	1.16E-12
2-Chloropropane	1.49E-06	4.42E-07	8.63E-04	1.03E-14	3.06E-15
Dalapon	1.94E-07	5.75E-08	1.49E+01	2.31E-11	6.86E-12
4,4'-DDD	5.44E-07	1.61E-07	1.66E+04	7.24E-08	2.15E-08
4,4'-DDE	8.24E-07	2.44E-07	5.09E+04	3.36E-07	9.97E-08
4,4'-DDT	4.67E-07	1.38E-07	2.17E+02	8.13E-10	2.41E-10
Decanol	8.07E-06	2.39E-06	2.14E+02	1.38E-08	4.10E-09
Dibenzofuran	1.85E-07	5.48E-08	4.56E+03	6.76E-09	2.00E-09
Dibromochloromethane	3.43E-06	1.02E-06	2.99E-02	8.21E-13	2.43E-13
Dicamba	6.74E-08	2.00E-08	1.57E+04	8.48E-09	2.52E-09
1,2-Dichlorobenzene	5.52E-07	1.64E-07	2.30E-01	1.02E-12	3.03E-13
1,3-Dichlorobenzene	1.85E-07	5.48E-08	2.93E-01	4.34E-13	1.29E-13

Table 5C-13 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Cy Vapor Phase Air Concentration (µg/m³) RESIDENTIAL LOCATION	Cy Vapor Phase Air Concentration (µg/m³) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg) RESIDENTIAL LOCATION	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg) FARMER LOCATION
1,4-Dichlorobenzene	2.98E-07	8.85E-08	1.25E-01	2.98E-13	
3,3'-Dichlorobenzidine	1.72E-07	5.08E-08	5.08E+03	6.99E-09	
1,1-Dichloroethane	1.19E-05	3.53E-06	1.91E-03	1.82E-13	5.40E-14
1,2-Dichloroethane	1.20E-06	3.55E-07	4.45E-03	4.28E-14	1.27E-14
1,1-Dichloroethene	7.27E-07	2.15E-07	9.88E-04	5.76E-15	1.71E-15
cis-1,2-Dichloroethene	3.44E-06	1.02E-06	7.51E-03	2.07E-13	6.14E-14
trans-1,2-Dichloroethene	8.84E-07	2.62E-07	7.85E-04	5.57E-15	1.65E-15
2,4-Dichlorophenol	5.58E-07	1.65E-07	9.01E+01	4.04E-10	1.20E-10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	2.74E-07	8.12E-08	3.49E+05	7.67E-07	2.27E-07
Dichloroprop	1.72E-07	5.11E-08	1.79E+04	2.47E-08	7.31E-09
Diethyl phthalate	6.77E-06	2.01E-06	7.02E+01	3.81E-09	1.13E-09
2,4-Dimethylphenol	1.85E-07	5.48E-08	5.98E+00	8.86E-12	2.63E-12
Dimethyl phthalate	7.10E-06	2.10E-06	5.99E+01	3.41E-09	1.01E-09
Di-n-butyl phthalate	8.00E-06	2.37E-06	8.21E+04	5.27E-06	1.56E-06
2,4-Dinitrophenol	1.85E-07	5.48E-08	8.53E+03	1.27E-08	3.75E-09
Di-n-octyl phthalate	1.15E-06	3.41E-07	9.16E+03	8.44E-08	2.50E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1.78E-11	5.29E-12	6.40E+04	9.15E-12	2.71E-12
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	9.97E-12	2.96E-12	1.20E+05	9.60E-12	2.84E-12
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	3.08E-12	9.13E-13	4.70E+05	1.16E-11	3.44E-12
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.97E-12	5.84E-13	4.70E+05	7.42E-12	2.20E-12
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.57E-12	7.62E-13	4.70E+05	9.69E-12	2.87E-12
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.10E-12	2.11E-12	3.60E+05	2.05E-11	6.08E-12
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.65E-12	4.88E-13	9.00E+06	1.19E-10	3.52E-11
2,3,7,8-Tetrachlorodibenzofuran	7.16E-11	2.12E-11	8.50E+04	4.88E-11	1.45E-11
2,3,4,7,8-Pentachlorodibenzofuran	4.10E-11	1.22E-11	4.90E+04	1.61E-11	4.78E-12
1,2,3,7,8-Pentachlorodibenzofuran	3.79E-11	1.12E-11	4.90E+04	1.49E-11	4.42E-12
1,2,3,4,7,8-Hexachlorodibenzofuran	1.50E-11	4.44E-12	1.60E+05	1.92E-11	5.70E-12
1,2,3,6,7,8-Hexachlorodibenzofuran	1.07E-11	3.17E-12	1.60E+05	1.37E-11	4.07E-12
1,2,3,7,8,9-Hexachlorodibenzofuran	2.70E-12	8.00E-13	1.60E+05	3.46E-12	1.03E-12
2,3,4,6,7,8-Hexachlorodibenzofuran	1.12E-11	3.32E-12	1.60E+05	1.44E-11	4.25E-12
1,2,3,4,6,7,8-Heptachlorodibenzofuran	3.18E-11	9.42E-12	4.70E+05	1.20E-10	3.55E-11
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.88E-12	1.15E-12	4.70E+05	1.46E-11	4.33E-12
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	1.33E-12	3.95E-13	1.30E+06	1.39E-11	4.12E-12
Endosulfan I	2.71E-07	8.02E-08	9.87E+00	2.14E-11	6.35E-12
Endosulfan sulfate	5.45E-08	1.61E-08	4.23E+01	1.85E-11	5.47E-12
Endrin	8.84E-08	2.62E-08	3.20E+05	2.27E-07	6.72E-08
Endrin aldehyde	2.74E-08	8.13E-09	4.41E+07	9.71E-06	2.88E-06
Ethylbenzene	2.70E-06	8.01E-07	3.91E-02	8.47E-13	2.51E-13
2-Ethylhexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1.04E-05	3.10E-06	1.98E+04	1.66E-06	4.91E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	4.47E-08	1.33E-08	7.02E-01	2.52E-13	7.47E-14
Hexachlorobenzene	1.85E-07	5.48E-08	3.70E+01	5.48E-11	1.62E-11
Hexachlorobutadiene	1.85E-07	5.48E-08	8.98E-01	1.33E-12	3.95E-13
beta-Hexachlorocyclohexane	3.05E-08	9.05E-09	6.74E+03	1.65E-09	4.89E-10
Hexachlorocyclopentadiene	1.85E-07	5.48E-08	1.54E-01	2.29E-13	6.78E-14

Table 5C-13 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	C_V Vapor Phase Air Concentration (µg/m³)		B_v Air-to-Plant Biotransfer Factor	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION	([mg/kg DW]/[mg/kg])	RESIDENTIAL LOCATION	FARMER LOCATION
Hexachloroethane	1.85E-07	5.48E-08	2.24E-02	3.32E-14	9.84E-15
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	1.90E-05	5.63E-06	2.34E-03	3.57E-13	1.06E-13
MCPP	1.05E-06	3.13E-07	5.93E+04	5.02E-07	1.49E-07
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.20E-06	6.52E-07	4.56E+03	8.03E-08	2.38E-08
Methylene chloride	2.11E-05	6.25E-06	9.35E-04	1.58E-13	4.68E-14
Methyl ester acetic acid	5.90E-06	1.75E-06	2.46E-03	1.17E-13	3.45E-14
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	7.45E-07	2.21E-07	3.60E+00	2.15E-11	6.37E-12
4-Methyl-2-pentanone	2.86E-06	8.48E-07	1.73E-01	3.96E-12	1.17E-12
2-Methylphenol	7.09E-07	2.10E-07	1.97E+01	1.12E-10	3.32E-11
3-Methylphenol	2.86E-06	8.47E-07	2.40E+01	5.49E-10	1.63E-10
4-Methylphenol	7.27E-07	2.15E-07	4.13E+01	2.41E-10	7.13E-11
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	1.46E-06	4.33E-07	4.62E-01	5.41E-12	1.60E-12
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	1.85E-07	5.48E-08	1.11E+04	1.64E-08	4.87E-09
2-Nitroaniline	1.85E-07	5.48E-08	1.34E-01	1.98E-13	5.87E-14
4-Nitroaniline	3.48E-07	1.03E-07	3.69E+02	1.03E-09	3.05E-10
Nitrobenzene	1.43E-05	4.25E-06	5.46E-01	6.27E-11	1.86E-11
2-Nitrophenol	8.55E-06	2.53E-06	3.20E+00	2.20E-10	6.51E-11
4-Nitrophenol	2.00E-06	5.94E-07	5.01E-01	8.06E-12	2.39E-12
n-Nitrosodiphenylamine	3.86E-07	1.15E-07	9.57E-05	2.97E-16	8.79E-17
Octadecanoic acid	6.81E-07	2.02E-07	1.76E+12	9.63E+00	2.86E+00
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	1.85E-07	5.48E-08	8.63E+00	1.28E-11	3.79E-12
Acenaphthylene	1.85E-07	5.48E-08	2.64E+01	3.91E-11	1.16E-11
Anthracene	1.85E-07	5.48E-08	8.87E+01	1.32E-10	3.90E-11
Benzo(a)anthracene	4.25E-08	1.26E-08	1.99E+05	6.77E-08	2.01E-08
Benzo(a)pyrene	5.67E-08	1.68E-08	9.12E+05	4.15E-07	1.23E-07
Benzo(b)fluoranthene	1.80E-07	5.33E-08	3.35E+03	4.83E-09	1.43E-09
Benzo(e)pyrene	6.20E-08	1.84E-08	3.52E+05	1.75E-07	5.18E-08
Benzo(g,h,i)perylene	4.32E-09	1.28E-09	1.36E+07	4.70E-07	1.39E-07
Benzo(j)fluoranthene	1.79E-07	5.31E-08	7.78E+03	1.12E-08	3.31E-09
Benzo(k)fluoranthene	3.71E-09	1.10E-09	2.57E+03	7.65E-11	2.27E-11
Chrysene	1.42E-07	4.21E-08	1.25E+05	1.42E-07	4.22E-08
Dibenzo(a,h)anthracene	1.26E-08	3.72E-09	1.59E+07	1.60E-06	4.75E-07
Fluoranthene	1.83E-07	5.42E-08	3.54E+03	5.18E-09	1.54E-09
Fluorene	1.85E-07	5.48E-08	4.23E+01	6.28E-11	1.86E-11
Indeno(1,2,3-cd)pyrene	1.12E-09	3.32E-10	2.43E+09	2.18E-05	6.47E-06
Phenanthrene	8.81E-07	2.61E-07	2.60E+02	1.84E-09	5.46E-10
Pyrene	3.28E-07	9.71E-08	4.29E+03	1.13E-08	3.34E-09
PCBs					
Monochlorobiphenyls	7.61E-08	2.25E-08	1.29E+01	7.89E-12	2.34E-12
Dichlorobiphenyls	3.87E-08	1.15E-08	1.11E+02	3.45E-11	1.02E-11
Trichlorobiphenyls	5.91E-08	1.75E-08	3.16E+02	1.50E-10	4.44E-11

Table 5C-13 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	C_V Vapor Phase Air Concentration (µg/m³) RESIDENTIAL LOCATION	C_V Vapor Phase Air Concentration (µg/m³) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg) RESIDENTIAL LOCATION	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg) FARMER LOCATION
Tetrachlorobiphenyls	1 19E-07	3 51E-08	1 38E-03	1.31E-09	3 89E-10
Pentachlorobiphenyls	1 13E-07	3.34E-08	1.31E+03	1.18E-09	3 51E-10
Hexachlorobiphenyls	7 07E-08	2 10E-08	9 17E-03	5.20E-09	1 54E-09
Heptachlorobiphenyls	1 75E-08	5 19E-09	5 15E+04	7.23E-09	2 14E-09
Octachlorobiphenyls	6 08E-09	1 80E-09	1 95E+04	9 49E-10	2 81E-10
Nonachlorobiphenyls	3 02E-10	8 94E-11	2.29E+04	5 54E-11	1 64E-11
Decachlorobiphenyls	8 45E-11	2.50E-11	4.23E+05	2 87E-10	8 50E-11
Pentachlorobenzene	1 85E-07	5 48E-08	6.28E+00	9.31E-12	2 76E-12
Pentachlorophenol	4.25E-07	1.26E-07	1.41E+04	4 80E-08	1 42E-08
3-Pentanol	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	4.04E-05	1.20E-05	3 84E+00	1.24E-09	3 69E-10
Phthalic anhydride	2.28E-05	6.76E-06	4 90E+00	8.97E-10	2 66E-10
Quinoline	2 73E-06	8 09E-07	8 11E+01	1 77E-09	5 26E-10
Quinone	2.28E-05	6 76E-06	2 19E-01	4 00E-11	1 18E-11
Styrene	8 96E-07	2 66E-07	7.01E-02	5 04E-13	1 49E-13
1,2,4,5-Tetrachlorobenzene	3.29E-07	9.75E-08	1 41E+00	3.71E-12	1 10E-12
Tetrachloroethene	1.65E-06	4.88E-07	2.16E-02	2 85E-13	8 46E-14
2,3,4,6-Tetrachlorophenol	1.85E-07	5 48E-08	9 11E+02	1.35E-09	4 00E-10
Toluene	5.52E-06	1.64E-06	1 72E-02	7.62E-13	2.26E-13
1,2,4-Trichlorobenzene	1.85E-07	5.48E-08	6.81E-01	1.01E-12	3.00E-13
1,2,5-Trichlorobenzene	8 34E-05	2 47E-05	6 81E-01	4.56E-10	1.35E-10
1,1,1-Trichloroethane	1.80E-06	5.35E-07	1.53E-02	2.21E-13	6.56E-14
Trichloroethene	7.02E-07	2.08E-07	3.82E-03	2.15E-14	6 38E-15
Trichlorofluoromethane	1.36E-03	4.02E-04	1.18E-03	1.28E-11	3 1E-12
2,3,6-Trichlorophenol	2 95E-05	8 76E-06	5.06E+02	1.20E-07	3.55E-08
2,4,5-Trichlorophenol	1 85E-07	5 48E-08	5.73E+02	8.50E-10	2.52E-10
2,4,6-Trichlorophenol	6.34E-07	1 88E-07	2.96E+02	1.50E-09	4 46E-10
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	5.06E-08	1.50E-08	3.45E+04	1.40E-08	4.15E-09
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	2 89E-08	8 58E-09	4.21E+03	9.77E-10	2 90E-10
Undecane	8.28E-05	2.45E-05	1.87E+00	1.24E-09	3.69E-10
Vinyl acetate	2.86E-06	8.47E-07	1.73E-03	3.97E-14	1 18E-14
Vinyl chloride	2.20E-06	6.53E-07	1.08E-05	1.91E-16	5 67E-17
o-Xylene	1 40E-06	4.16E-07	5.97E-02	6.72E-13	1.99E-13
m,p-Xylene	3 81E-06	1.13E-06	5 16E-02	1.58E-12	4 68E-13
Metals Inorganics					
Aluminum	NA	NA	not applicable	NA	NA
Antimony	NA	NA	not applicable	NA	NA
Arsenic	NA	NA	not applicable	NA	NA
Barium	NA	NA	not applicable	NA	NA
Beryllium	NA	NA	not applicable	NA	NA
Cadmium	NA	NA	not applicable	NA	NA
Calcium	NA	NA	not applicable	NA	NA
Chromium III	NA	NA	not applicable	NA	NA
Cobalt	NA	NA	not applicable	NA	NA
Copper	NA	NA	not applicable	NA	NA
Iron	NA	NA	not applicable	NA	NA
Lead	NA	NA	not applicable	NA	NA

Table 5C-13 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	C_V Vapor Phase Air Concentration ($\mu g/m^3$)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
Magnesium	NA	NA	not applicable	NA	NA
Manganese	NA	NA	not applicable	NA	NA
Mercury (inorganic)	1.98E-04	5.88E-05	1.00E+03	1.59E-06	4.72E-07
Nickel	NA	NA	not applicable	NA	NA
Potassium	NA	NA	not applicable	NA	NA
Selenium	NA	NA	not applicable	NA	NA
Silver	NA	NA	not applicable	NA	NA
Sodium	NA	NA	not applicable	NA	NA
Vanadium	NA	NA	not applicable	NA	NA
Zinc	NA	NA	not applicable	NA	NA
TICs					
Acetophenone	8.15E-06	2.42E-06	6.26E-01	4.09E-11	1.21E-11
Benzonitrile	2.49E-06	7.38E-07	1.22E-01	2.44E-12	7.24E-13
Bromobenzene	1.04E-05	3.08E-06	1.02E-01	8.49E-12	2.52E-12
2-Butenal / 2-Methyl-2-propenal	8.65E-05	2.56E-05	1.31E-01	9.07E-11	2.69E-11
2-(2-Butoxyethoxy)ethanol	1.16E-04	3.45E-05	3.56E+01	3.32E-08	9.84E-09
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	7.27E-06	2.15E-06	6.31E-02	3.68E-12	1.09E-12
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	6.88E-06	2.04E-06	1.03E+06	5.68E-05	1.68E-05
2-(2-Ethoxyethoxy)ethanol	9.93E-06	2.94E-06	7.61E-01	6.06E-11	1.80E-11
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	2.52E-05	7.49E-06	7.37E-01	1.49E-10	4.43E-11
Iodine	2.49E-05	7.39E-06	6.40E-03	1.28E-12	3.79E-13
Iodobenzene	1.15E-05	3.42E-06	5.22E-01	4.83E-11	1.43E-11
Iodomethane	7.81E-06	2.32E-06	1.07E-03	6.72E-14	1.99E-14
Methyl benzoate	2.28E-05	6.76E-06	7.77E-01	1.42E-10	4.21E-11
Methyl hexenone	1.67E-05	4.94E-06	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	8.16E-06	2.42E-06	NA	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-14 (RB1)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Table 5C-14 (RB1)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Organics			
Acetaldehyde	0 43	6.67E-05	2.22E+01
Acetone	-0.24	4.28E-05	6.69E+00
Acetonitrile	-0.34	2.01E-05	1.11E+01
Acrolein	-0.09	4.40E-06	9.39E+01
Acrylonitrile	0.25	1.38E-04	6.89E+00
Aldrin	3.01	1.27E-05	6.51E+04
Aniline	0.9	1.35E-01	3.47E-02
Benzaldehyde	1.48	2.60E-05	7 47E+02
Benzene	2 13	5.55E-03	1.72E+01
Benzoic acid	1.87	7.00E-08	7.22E+05
Benzotrichloride	2.92	9.81E-04	6.76E+02
Benzoyl chloride	2.3	not available	NA
Benzyl chloride	2.3	3.17E-04	4.57E+02
Biphenyl	3.16	4.08E-04	2.93E+03
Bis(2-chloroethoxy)methane	1.26	3.78E-07	2.99E+04
Bis(2-ethylhexyl)phthalate	4.89	3.00E-07	2 77E+08
Bromochloromethane	1.41	1.44E-03	1.14E+01
Bromodichloromethane	1.88	2.12E-03	2.44E+01
Bromoform	2.38	5.32E-04	3.32E+02
Bromomethane	1.19	6.24E-03	1.53E+00
2-Butanone (MEK)	0.26	4.66E-05	2.09E+01
Butyl benzyl phthalate	4.77	4.35E-06	1.42E+07
Carbazole	3.72	1.58E-04	2 99E+04
Carbon disulfide	2	1.44E-02	4.83E+00
Carbon tetrachloride	2.62	3.04E-02	1.05E+01
alpha-Chlordane	5.47	8.60E-04	4.01E+05
gamma-Chlordane	5 47	1.30E-03	2.65E+05
4-Chloroaniline	1.83	1.07E-05	4.28E+03
Chlorobenzene	2.18	3.93E-03	2.75E+01
Chloroethane	1.43	8.48E-03	2.03E+00
2-Chloroethyl vinyl ether	0.99	2.80E-05	2.08E+02
Chloroform	1.97	3.39E-03	1.90E+01
Chloromethane	0.91	8.82E-02	5.44E-02
4-Chloro-3-methylphenol	3.1	2.50E-06	4.13E+05
beta-Chloronaphthalene	4.12	6.12E-04	2.06E+04
2-Chlorophenol	2.15	1.03E-05	9.75E+03
2-Chloropropane	1.9	1 70E-02	3.20E+00
Dalapon	0.778	6.30E-08	5.51E+04
4,4'-DDD	6.02	2.16E-05	6.15E+07
4,4'-DDE	6.51	2.34E-05	1.89E+08
4,4'-DDT	6.36	3.80E-03	8.05E+05
Decanol	4.57	4.79E-05	7.92E+05
Dibenzofuran	4.12	7.45E-07	1.69E+07
Dibromochloromethane	2.09	7.83E-04	1.11E+02
Dicamba	2.21	2.00E-09	5.81E+07
1,2-Dichlorobenzene	3.38	2.40E-03	8.54E+02
1,3-Dichlorobenzene	3.6	3.24E-03	1.08E+03

Table 5C-14 (RB1)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
1,4-Dichlorobenzene	3.37	4.33E-03	4.62E+02
3,3'-Dichlorobenzidine	3.02	4.50E-08	1.88E+07
1,1-Dichloroethane	1.79	5.87E-03	7.07E+00
1,2-Dichloroethane	1.48	1.18E-03	1.65E-01
1,1-Dichloroethene	2.13	2.61E-02	3.66E+00
cis-1,2-Dichloroethene	2.2	4.08E-03	2.78E+01
trans-1,2-Dichloroethene	1.48	6.67E-03	2.91E+00
2,4-Dichlorophenol	3.06	2.80E-06	3.34E+05
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53	2.29E-09	1.29E+09
Dichloroprop	3	1.22E-08	6.62E+07
Diethyl phthalate	2.47	8.46E-07	2.60E+05
2,4-Dimethylphenol	2.3	6.55E-06	2.21E+04
Dimethyl phthalate	2.12	4.20E-07	2.22E+05
Di-n-butyl phthalate	4.9	2.80E-07	3.04E+08
2,4-Dinitrophenol	1.5	6.45E-10	3.16E+07
Di-n-octyl phthalate	5.22	5.50E-06	3.40E+07
Dioctadecyl ester phosphoric acid	not available	not available	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	6.64	1.60E-05	5.92E+06
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	6.64	2.60E-06	1.15E+07
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	7.79	1.20E-05	4.39E+07
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	7.79	1.20E-05	4.39E+07
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	7.3	1.20E-05	4.39E+07
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	8.2	7.50E-06	3.35E+07
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	7.59	7.00E-09	8.32E+08
2,3,7,8-Tetrachlorodibenzofuran	6.53	8.60E-06	7.87E+06
2,3,4,7,8-Pentachlorodibenzofuran	6.92	6.20E-06	4.50E+06
1,2,3,7,8-Pentachlorodibenzofuran	6.79	6.20E-06	4.50E+06
1,2,3,4,7,8-Hexachlorodibenzofuran	7.3	1.40E-05	1.44E+07
1,2,3,6,7,8-Hexachlorodibenzofuran	7.3	6.10E-06	1.44E+07
1,2,3,7,8,9-Hexachlorodibenzofuran	7.3	1.00E-05	1.44E+07
2,3,4,6,7,8-Hexachlorodibenzofuran	7.3	1.00E-05	1.44E+07
1,2,3,4,6,7,8-Heptachlorodibenzofuran	7.9	5.30E-05	4.31E+07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	7.9	5.30E-05	4.31E+07
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	8.8	1.90E-06	1.23E+08
Endosulfan I	3.62	1.01E-04	3.66E+04
Endosulfan sulfate	3.66	2.60E-05	1.57E+05
Endrin	5.6	4.00E-07	1.19E+09
Endrin aldehyde	5.6	2.90E-09	1.64E+11
Ethylbenzene	3.15	8.04E-03	1.45E+02
2-Ethyl hexanoic acid	not available	not available	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	3.2	1.80E-08	7.32E+07
2-Fluoro-4-nitrophenol	not available	not available	NA
Heptachlor	3.87	2.62E-03	2.60E+03
Hexachlorobenzene	5.31	1.70E-03	1.37E+05
Hexachlorobutadiene	4.9	2.56E-02	3.33E+03
beta-Hexachlorocyclohexane	3.8	2.30E-07	2.50E+07
Hexachlorocyclopentadiene	3.99	1.60E-02	5.72E+02

Table 5C-14 (RB1)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Hexachloroethane	3.34	2.24E-02	8.29E+01
Hexadecanoic acid	not available	not available	NA
2-Hexanone	1.38	1 75E-03	8.68E+00
MCPP	3.13	5 05E-09	2.20E+08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.07	4 89E-09	1.69E+07
Methylene chloride	1.25	3 19E-03	3 46E+00
Methyl ester acetic acid	0.18	8 78E-05	9 12E+00
Methyl-3-heptanol	not available	not available	NA
2-Methylnaphthalene	3.86	4 99E-04	1.33E+04
4-Methyl-2-pentanone	1.19	1 49E-05	6.40E-02
2-Methylphenol	1.95	8 41E-07	7.31E+04
3-Methylphenol	1.96	7.09E-07	8.89E+04
4-Methylphenol	1.94	3.92E-07	1.53E+05
Mono(2-ethylhexyl)ester hexadecanoic acid	not available	not available	NA
Naphthalene	3.01	4.83E-04	1.71E+03
Naphthalene carbonitrile	not available	not available	NA
beta-Naphthylamine	2.07	2.01E-09	4.10E+07
2-Nitroaniline	1.85	9.72E-05	4.95E+02
4-Nitroaniline	1.39	1.14E-08	1.37E+06
Nitrobenzene	1.85	2.38E-05	2.02E+03
2-Nitrophenol	1.79	3.50E-06	1.19E+04
4-Nitrophenol	1.91	3.00E-05	1.86E+03
n-Nitrosodiphenylamine	3 13	3.13E+00	3.55E-01
Octadecanoic acid	8.23	4.59E-11	6.53E+15
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	not available	not available	NA
PAHs			
Acenaphthene	3.92	2 41E-04	3.20E+04
Acenaphthylene	4.07	1.14E-04	9.76E+04
Anthracene	4.45	8.60E-05	3.29E+05
Benzo(a)anthracene	5.61	6.60E-07	7.36E+08
Benzo(a)pyrene	6.11	4.90E-07	3.38E+09
Benzo(b)fluoranthene	6.124	1.38E-04	1.24E+07
Benzo(e)pyrene	6.04	1.07E-06	1.30E+09
Benzo(g,h,i)perylene	6 7	1.40E-07	5.03E+10
Benzo(j)fluoranthene	6.12	5.89E-05	2.88E+07
Benzo(k)fluoranthene	6.84	1.04E-03	9.54E+06
Chrysene	5.61	1.05E-06	4.63E+08
Dibenzo(a,h)anthracene	6.5	7.30E-08	5.90E+10
Fluoranthene	4.9	6.50E-06	1.31E+07
Fluorene	4.21	1.00E-04	1.57E+05
Indeno(1,2,3-cd)pyrene	6.584	5.89E-10	8.99E+12
Phenanthrene	4.57	3.93E-05	9.65E+05
Pyrene	4.88	5.10E-06	1.59E+07
PCBs			
Monochlorobiphenyls	4.47	6.19E-04	4.79E+04
Dichlorobiphenyls	5.07	3.14E-04	4 12E+05
Trichlorobiphenyls	5 7	5.17E-04	1.17E+06

Table 5C-14 (RB1)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Tetrachlorobiphenyls	5.95	2.19E-04	5.11E+06
Pentachlorobiphenyls	6.31	5.57E-04	4.86E+06
Hexachlorobiphenyls	7.03	4.65E-04	3.40E+07
Heptachlorobiphenyls	6.85	5.33E-05	1.91E+08
Octachlorobiphenyls	7.25	3.76E-04	7.21E+07
Nonachlorobiphenyls	7.63	8.11E-04	8.48E+07
Decachlorobiphenyls	8.26	2.06E-04	1.57E+09
Pentachlorobenzene	5.17	7.10E-03	2.33E+04
Pentachlorophenol	5.12	2.80E-06	5.22E+07
3-Pentanol	1.37	not available	NA
4-Penten-2-ol	not available	not available	NA
Phenol	1.46	1.30E-06	1.42E+04
Phthalic anhydride	-0.62	6.20E-09	1.82E+04
Quinoline	2.03	2.49E-07	3.00E+05
Quinone	0.2	1.04E-06	8.10E+02
Styrene	2.95	2.75E-03	2.60E+02
1,2,4,5-Tetrachlorobenzene	4.7	1.00E-02	5.22E+03
Tetrachloroethene	3.4	2.69E-02	8.00E+01
2,3,4,6-Tetrachlorophenol	4.1	3.55E-06	3.37E+06
Toluene	2.69	5.92E-03	6.37E+01
1,2,4-Trichlorobenzene	4.02	3.90E-03	2.52E+03
1,2,5-Trichlorobenzene	4.02	3.90E-03	2.52E+03
1,1,1-Trichloroethane	2.49	4.08E-03	5.66E+01
Trichloroethene	2.29	1.00E-02	1.42E+01
Trichlorofluoromethane	2.53	5.83E-02	4.37E+00
2,3,6-Trichlorophenol	3.83	3.29E-06	1.88E+06
2,4,5-Trichlorophenol	3.96	4.00E-06	2.12E+06
2,4,6-Trichlorophenol	3.69	4.00E-06	1.10E+06
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3.13	8.68E-09	1.28E+08
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	2.44	1.31E-08	1.56E+07
Undecane	6.94	1.83E+00	6.94E+03
Vinyl acetate	0.73	4.81E-04	6.42E+00
Vinyl chloride	0.6	5.60E-02	4.01E-02
o-Xylene	3.12	4.90E-03	2.21E+02
m,p-Xylene	3.2	6.90E-03	1.91E+02
Metals - Inorganics			
Aluminum	not available	not available	not applicable
Antimony	not available	not available	not applicable
Arsenic	not available	not available	not applicable
Barium	not available	not available	not applicable
Beryllium	not available	not available	not applicable
Cadmium	not available	not available	not applicable
Calcium	not available	not available	not applicable
Chromium III	not available	not available	not applicable
Cobalt	not available	not available	not applicable
Copper	not available	not available	not applicable
Iron	not available	not available	not applicable
Lead	not available	not available	not applicable

Table 5C-14 (RB1)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Magnesium	not available	not available	not applicable
Manganese	not available	not available	not applicable
Mercury (inorganic)	not available	1.14E-02	NA
Nickel	not available	not available	not applicable
Potassium	not available	not available	not applicable
Selenium	not available	not available	not applicable
Silver	not available	not available	not applicable
Sodium	not available	not available	not applicable
Vanadium	not available	not available	not applicable
Zinc	not available	not available	not applicable
TICs			
Acetophenone	1.58	1.07E-05	2.32E+03
Benzonitrile	1.56	5.21E-05	4.53E+02
Bromobenzene	2.99	2.09E-03	3.78E+02
2-Butenal / 2-Methyl-2-propenal	1.09	1.54E-05	4.84E+02
2-(2-Butoxyethoxy)ethanol	0.91	3.64E-08	1.32E+05
Chlorocyclohexanol	not available	not available	NA
Decane	5.98	5.15E+00	2.34E+02
4,4-Dimethyl-2-oxetanone	not available	not available	NA
Dioctyl adipate	6.11	4.34E-07	3.82E+09
2-(2-Ethoxyethoxy)ethanol	-0.54	4.86E-08	2.82E+03
Ethyl benzaldehyde	not available	not available	NA
Ethyl methyl benzoate	not available	not available	NA
Hexenal	not available	not available	NA
Hexenedione	not available	not available	NA
4-Hydroxy-4-methyl-2-pentanone	-0.098	1.48E-07	2.73E+03
Iodine	2.49	9.75E-03	2.37E+01
Iodobenzene	3.25	7.70E-04	1.94E+03
Iodomethane	1.51	5.26E-03	3.97E+00
Methyl benzoate	2.12	3.24E-05	2.88E+03
Methyl hexenone	not available	not available	NA
Nonanoic acid	not available	not available	NA
Silane	not available	not available	NA

NA= Sufficient information not available to calculate parameters

Table 5C-15 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-15 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Organics						
Acetaldehyde	1.25E-05	3.71E-06	4.17E-06	8.33E-07	1.24E-06	1.85E-07
Acetone	7.68E-05	2.28E-05	2.56E-05	5.12E-06	7.59E-06	1.14E-06
Acetonitrile	2.70E-04	8.00E-05	8.99E-05	1.80E-05	2.67E-05	4.00E-06
Acrolein	2.04E-05	6.04E-06	6.80E-06	1.36E-06	2.01E-06	3.02E-07
Acrylonitrile	9.85E-06	2.92E-06	3.28E-06	6.57E-07	9.73E-07	1.46E-07
Aldrin	9.48E-08	2.74E-08	5.70E-08	1.61E-08	1.65E-08	3.49E-09
Aniline	1.48E-05	4.38E-06	4.93E-06	9.86E-07	1.46E-06	2.19E-07
Benzaldehyde	3.01E-05	8.91E-06	1.00E-05	2.00E-06	2.97E-06	4.46E-07
Benzene	1.33E-03	3.94E-04	4.59E-04	9.19E-05	1.36E-04	2.04E-05
Benzoic acid	2.78E-05	8.25E-06	9.31E-06	1.86E-06	2.76E-06	4.14E-07
Benzotrichloride	1.93E-07	5.71E-08	1.10E-07	2.82E-08	3.24E-08	6.25E-09
Benzoyl chloride	3.94E-05	1.17E-05	1.44E-05	2.90E-06	4.28E-06	6.44E-07
Benzyl chloride	2.61E-06	7.72E-07	9.56E-07	1.92E-07	2.83E-07	4.26E-08
Biphenyl	2.38E-06	7.05E-07	1.56E-06	5.30E-07	4.61E-07	1.17E-07
Bis(2-chloroethoxy)methane	1.04E-07	3.08E-08	3.47E-08	6.93E-09	1.03E-08	1.54E-09
Bis(2-ethylhexyl)phthalate	3.93E-05	5.30E-06	1.75E-05	1.02E-05	2.15E-06	9.05E-07
Bromochloromethane	5.38E-06	1.60E-06	1.79E-06	3.59E-07	5.32E-07	7.98E-08
Bromodichloromethane	4.13E-06	1.22E-06	1.38E-06	2.76E-07	4.09E-07	6.14E-08
Bromoform	1.21E-06	3.57E-07	4.62E-07	9.31E-08	1.37E-07	2.07E-08
Bromomethane	1.77E-05	5.25E-06	5.90E-06	1.18E-06	1.75E-06	2.63E-07
2-Butanone (MEK)	2.63E-05	7.80E-06	8.77E-06	1.75E-06	2.60E-06	3.90E-07
Butyl benzyl phthalate	1.44E-07	3.32E-08	8.61E-08	7.40E-08	2.08E-08	1.77E-08
Carbazole	5.06E-08	1.50E-08	3.91E-08	2.71E-08	1.16E-08	6.64E-09
Carbon disulfide	3.50E-06	1.04E-06	1.18E-06	2.36E-07	3.50E-07	5.25E-08
Carbon tetrachloride	2.44E-06	7.24E-07	1.11E-06	2.35E-07	3.28E-07	5.21E-08
alpha-Chlordane	5.86E-09	1.07E-09	3.41E-09	2.95E-09	7.33E-10	7.13E-10
gamma-Chlordane	2.04E-09	4.00E-10	1.25E-09	1.14E-09	2.85E-10	2.86E-10
4-Chloroaniline	9.37E-08	2.78E-08	3.13E-08	6.26E-09	9.28E-09	1.39E-09
Chlorobenzene	8.00E-06	2.37E-06	2.80E-06	5.60E-07	8.29E-07	1.24E-07
Chloroethane	1.88E-06	5.59E-07	6.28E-07	1.26E-07	1.86E-07	2.79E-08
2-Chloroethyl vinyl ether	2.10E-07	6.21E-08	6.99E-08	1.40E-08	2.07E-08	3.11E-09
Chloroform	4.59E-05	1.36E-05	1.55E-05	3.09E-06	4.58E-06	6.87E-07
Chloromethane	3.39E-06	1.01E-06	1.13E-06	2.26E-07	3.35E-07	5.03E-08
4-Chloro-3-methylphenol	1.07E-07	3.17E-08	6.79E-08	2.13E-08	2.01E-08	4.73E-09
beta-Chloronaphthalene	2.09E-08	6.18E-09	1.69E-08	1.55E-08	4.98E-09	4.15E-09
2-Chlorophenol	1.12E-07	3.31E-08	3.88E-08	7.77E-09	1.15E-08	1.73E-09
2-Chloropropane	1.41E-06	4.17E-07	4.72E-07	9.43E-08	1.40E-07	2.10E-08
Dalapon	1.55E-07	4.59E-08	5.17E-08	1.03E-08	1.53E-08	2.30E-09
4,4'-DDD	9.49E-08	2.47E-08	3.54E-08	1.29E-08	9.20E-09	2.92E-09
4,4'-DDE	3.45E-07	1.01E-07	1.16E-07	2.51E-08	3.40E-08	5.63E-09
4,4'-DDT	9.57E-08	9.05E-09	3.51E-08	1.20E-08	3.40E-09	1.14E-09
Decanol	1.42E-08	4.13E-09	4.78E-09	1.05E-09	1.38E-09	2.13E-10
Dibenzofuran	2.43E-08	7.19E-09	1.64E-08	1.35E-08	4.85E-09	3.58E-09
Dibromochloromethane	1.08E-06	3.19E-07	3.68E-07	7.37E-08	1.09E-07	1.64E-08
Dicamba	5.71E-08	1.69E-08	2.00E-08	4.01E-09	5.91E-09	8.88E-10
1,2-Dichlorobenzene	2.43E-07	7.19E-08	1.74E-07	8.00E-08	5.13E-08	1.81E-08
1,3-Dichlorobenzene	6.47E-08	1.92E-08	4.90E-08	2.99E-08	1.45E-08	7.10E-09

Table 5C-15 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
1,4-Dichlorobenzene	1.33E-07	3.93E-08	9.45E-08	4.30E-08	2.79E-08	9.72E-09
3,3'-Dichlorobenzidine	8.42E-08	1.80E-08	4.74E-08	1.31E-08	1.02E-08	2.12E-09
1,1-Dichloroethane	7.91E-06	2.34E-06	2.64E-06	5.28E-07	7.82E-07	1.17E-07
1,2-Dichloroethane	9.20E-07	2.73E-07	3.07E-07	6.14E-08	9.09E-08	1.36E-08
1,1-Dichloroethene	6.45E-07	1.91E-07	2.23E-07	4.46E-08	6.60E-08	9.90E-09
cis-1,2-Dichloroethene	2.75E-06	8.14E-07	9.68E-07	1.94E-07	2.87E-07	4.30E-08
trans-1,2-Dichloroethene	5.24E-07	1.55E-07	1.75E-07	3.49E-08	5.18E-08	7.77E-09
2,4-Dichlorophenol	2.13E-07	6.31E-08	1.32E-07	3.95E-08	3.91E-08	8.75E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	8.55E-07	2.54E-07	3.22E-07	8.82E-08	9.53E-08	2.00E-08
Dichloroprop	2.49E-08	7.33E-09	8.36E-09	1.68E-09	2.45E-09	3.68E-10
Diethyl phthalate	4.47E-06	1.32E-06	1.81E-06	3.70E-07	5.37E-07	8.20E-08
2,4-Dimethylphenol	1.31E-07	3.87E-08	4.79E-08	9.61E-09	1.42E-08	2.13E-09
Dimethyl phthalate	4.61E-06	1.37E-06	1.59E-06	3.18E-07	4.70E-07	7.06E-08
Di-n-butyl phthalate	5.83E-06	1.69E-06	2.15E-06	7.52E-07	6.20E-07	1.81E-07
2,4-Dinitrophenol	7.08E-08	2.10E-08	2.36E-08	4.72E-09	6.99E-09	1.05E-09
Di-n-octyl phthalate	1.04E-07	3.04E-08	4.37E-08	2.25E-08	1.27E-08	6.00E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA
Dioxins/Furans						
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1.67E-11	3.41E-12	5.73E-12	1.43E-12	1.16E-12	2.11E-13
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	2.46E-11	4.20E-12	8.49E-12	2.17E-12	1.43E-12	2.58E-13
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	3.07E-11	5.17E-12	1.03E-11	2.19E-12	1.73E-12	2.69E-13
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	5.79E-11	6.77E-12	1.95E-11	4.23E-12	2.27E-12	3.65E-13
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	4.38E-11	5.96E-12	1.49E-11	3.40E-12	2.01E-12	3.32E-13
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	1.91E-10	2.15E-11	6.40E-11	1.34E-11	7.20E-12	1.13E-12
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	5.03E-10	7.00E-11	1.70E-10	3.72E-11	2.35E-11	3.75E-12
2,3,7,8-Tetrachlorodibenzofuran	6.43E-11	1.59E-11	2.20E-11	5.22E-12	5.40E-12	9.48E-13
2,3,4,7,8-Pentachlorodibenzofuran	6.48E-11	9.20E-12	2.23E-11	5.54E-12	3.13E-12	5.75E-13
1,2,3,7,8-Pentachlorodibenzofuran	4.23E-11	6.92E-12	1.46E-11	3.68E-12	2.36E-12	4.39E-13
1,2,3,4,7,8-Hexachlorodibenzofuran	1.39E-10	1.65E-11	4.74E-11	1.10E-11	5.59E-12	9.52E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	9.32E-11	1.13E-11	3.17E-11	7.32E-12	3.80E-12	6.45E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	1.46E-11	2.03E-12	4.95E-12	1.13E-12	6.84E-13	1.14E-13
2,3,4,6,7,8-Hexachlorodibenzofuran	9.21E-11	1.13E-11	3.13E-11	7.22E-12	3.81E-12	6.46E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	4.81E-10	6.82E-11	1.62E-10	3.43E-11	2.28E-11	3.58E-12
1,2,3,4,7,8,9-Heptachlorodibenzofuran	9.03E-11	1.12E-11	3.04E-11	6.50E-12	3.75E-12	5.94E-13
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.28E-10	3.25E-11	1.10E-10	2.24E-11	1.09E-11	1.67E-12
Endosulfan I	2.95E-08	8.24E-09	2.21E-08	1.37E-08	6.22E-09	3.13E-09
Endosulfan sulfate	1.33E-08	3.94E-09	1.02E-08	6.65E-09	3.01E-09	1.60E-09
Endrin	2.29E-07	6.76E-08	7.69E-08	1.61E-08	2.26E-08	3.58E-09
Endrin aldehyde	9.71E-06	2.88E-06	3.24E-06	6.48E-07	9.59E-07	1.44E-07
Ethylbenzene	1.59E-06	4.71E-07	1.04E-06	3.47E-07	3.06E-07	7.71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	6.71E-06	1.98E-06	3.92E-06	1.32E-06	1.16E-06	2.92E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA
Heptachlor	3.27E-09	9.64E-10	2.58E-09	2.04E-09	7.60E-10	5.16E-10
Hexachlorobenzene	5.96E-09	1.76E-09	4.91E-09	5.52E-09	1.45E-09	1.59E-09
Hexachlorobutadiene	1.04E-08	3.07E-09	8.58E-09	9.47E-09	2.54E-09	2.71E-09
beta-Hexachlorocyclohexane	8.75E-09	2.59E-09	6.11E-09	4.26E-09	1.81E-09	1.06E-09
Hexachlorocyclopentadiene	1.47E-08	4.36E-09	1.18E-08	1.01E-08	3.48E-09	2.64E-09

Table 5C-15 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Hexachloroethane	9.20E-09	2.72E-09	6.49E-09	2.83E-09	1.92E-09	6.37E-10
Hexadecanoic acid	NA	NA	NA	NA	NA	NA
2-Hexanone	1.20E-05	3.56E-06	4.01E-06	8.01E-07	1.19E-06	1.78E-07
MCPP	1.13E-06	3.17E-07	5.66E-07	1.63E-07	1.57E-07	3.38E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.74E-06	4.77E-07	5.92E-07	1.18E-07	1.62E-07	2.44E-08
Methylene chloride	1.61E-05	4.77E-06	5.36E-06	1.07E-06	1.59E-06	2.38E-07
Methyl ester acetic acid	1.72E-13	3.86E-14	5.74E-14	1.15E-14	1.29E-14	1.93E-15
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	1.45E-07	4.31E-08	1.15E-07	8.99E-08	3.39E-08	2.28E-08
4-Methyl-2-pentanone	1.88E-06	5.56E-07	6.25E-07	1.25E-07	1.85E-07	2.78E-08
2-Methylphenol	5.06E-07	1.50E-07	1.70E-07	3.40E-08	5.04E-08	7.56E-09
3-Methylphenol	2.05E-06	6.07E-07	6.90E-07	1.38E-07	2.04E-07	3.07E-08
4-Methylphenol	5.16E-07	1.53E-07	1.73E-07	3.47E-08	5.14E-08	7.71E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA
Naphthalene	8.29E-07	2.46E-07	5.00E-07	1.41E-07	1.48E-07	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	1.17E-07	3.46E-08	3.98E-08	7.96E-09	1.18E-08	1.77E-09
2-Nitroaniline	1.19E-07	3.53E-08	3.99E-08	7.98E-09	1.18E-08	1.77E-09
4-Nitroaniline	1.58E-07	4.69E-08	5.27E-08	1.05E-08	1.56E-08	2.34E-09
Nitrobenzene	9.94E-06	2.94E-06	3.32E-06	6.64E-07	9.85E-07	1.48E-07
2-Nitrophenol	4.18E-06	1.24E-06	1.39E-06	2.79E-07	4.13E-07	6.20E-08
4-Nitrophenol	9.76E-07	2.89E-07	3.27E-07	6.54E-08	9.69E-08	1.45E-08
n-Nitrosodiphenylamine	2.15E-07	6.37E-08	1.39E-07	4.53E-08	4.10E-08	1.00E-08
Octadecanoic acid	9.63E+00	2.86E+00	3.21E+00	6.42E-01	9.52E-01	1.43E-01
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA
PAHs						
Acenaphthene	3.07E-08	9.08E-09	2.44E-08	2.00E-08	7.20E-09	5.13E-09
Acenaphthylene	2.61E-08	7.72E-09	2.10E-08	1.88E-08	6.20E-09	4.99E-09
Anthracene	1.31E-08	3.88E-09	1.07E-08	1.10E-08	3.16E-09	3.06E-09
Benzo(a)anthracene	1.50E-07	2.75E-08	5.56E-08	2.00E-08	9.66E-09	2.25E-09
Benzo(a)pyrene	4.84E-07	1.29E-07	1.64E-07	3.70E-08	4.33E-08	6.90E-09
Benzo(b)fluoranthene	8.71E-09	2.00E-09	3.54E-09	1.71E-09	8.32E-10	3.93E-10
Benzo(e)pyrene	2.42E-07	5.79E-08	8.35E-08	2.12E-08	1.96E-08	3.39E-09
Benzo(g,h,i)perylene	5.63E-07	1.48E-07	1.89E-07	4.04E-08	4.94E-08	7.59E-09
Benzo(j)fluoranthene	1.10E-07	1.25E-08	4.11E-08	1.49E-08	4.66E-09	1.49E-09
Benzo(k)fluoranthene	9.28E-08	8.37E-09	3.22E-08	8.50E-09	2.88E-09	5.84E-10
Chrysene	1.69E-07	4.49E-08	5.87E-08	1.56E-08	1.53E-08	2.90E-09
Dibenzo(a,h)anthracene	1.69E-06	4.84E-07	5.67E-07	1.16E-07	1.61E-07	2.44E-08
Fluoranthene	1.35E-08	3.67E-09	8.04E-09	6.98E-09	2.22E-09	1.87E-09
Fluorene	2.60E-08	7.70E-09	2.11E-08	2.02E-08	6.24E-09	5.46E-09
Indeno(1,2,3-cd)pyrene	2.19E-05	6.48E-06	7.31E-06	1.46E-06	2.16E-06	3.24E-07
Phenanthrene	7.70E-08	2.27E-08	6.23E-08	6.53E-08	1.84E-08	1.83E-08
Pyrene	3.52E-08	9.08E-09	2.13E-08	1.87E-08	5.65E-09	4.87E-09
PCBs						
Monochlorobiphenyls	3.45E-09	1.02E-09	2.83E-09	2.93E-09	8.36E-10	8.17E-10
Dichlorobiphenyls	8.34E-10	2.46E-10	6.72E-10	7.39E-10	1.98E-10	2.12E-10
Trichlorobiphenyls	6.84E-10	2.01E-10	4.90E-10	5.09E-10	1.44E-10	1.46E-10

Table 5C-15 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Tetrachlorobiphenyls	2.21E-09	6.25E-10	1.12E-09	8.25E-10	3.20E-10	2.29E-10
Pentachlorobiphenyls	1.77E-09	4.95E-10	8.17E-10	5.19E-10	2.31E-10	1.41E-10
Hexachlorobiphenyls	6.38E-09	1.67E-09	2.19E-09	5.41E-10	5.73E-10	1.13E-10
Heptachlorobiphenyls	8.90E-09	2.30E-09	3.01E-09	6.64E-10	7.73E-10	1.27E-10
Octachlorobiphenyls	1.22E-09	3.07E-10	4.13E-10	9.15E-11	1.04E-10	1.74E-11
Nonachlorobiphenyls	8.71E-10	9.02E-11	2.95E-10	6.55E-11	3.04E-11	5.08E-12
Decachlorobiphenyls	3.54E-10	9.11E-11	1.18E-10	2.39E-11	3.04E-11	4.58E-12
Pentachlorobenzene	7.34E-09	2.17E-09	6.08E-09	6.82E-09	1.80E-09	1.96E-09
Pentachlorophenol	6.57E-08	1.95E-08	3.07E-08	1.97E-08	9.09E-09	5.45E-09
3-Pentanol	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA
Phenol	2.64E-05	7.84E-06	8.81E-06	1.76E-06	2.61E-06	3.92E-07
Phthalic anhydride	8.63E-05	2.56E-05	2.88E-05	5.75E-06	8.52E-06	1.28E-06
Quinoline	1.65E-06	4.90E-07	5.61E-07	1.12E-07	1.66E-07	2.49E-08
Quinone	2.84E-05	8.42E-06	9.47E-06	1.89E-06	2.81E-06	4.21E-07
Styrene	6.04E-07	1.79E-07	3.51E-07	9.29E-08	1.04E-07	2.06E-08
1,2,4,5-Tetrachlorobenzene	1.25E-08	3.69E-09	1.03E-08	1.11E-08	3.04E-09	3.15E-09
Tetrachloroethene	7.29E-07	2.16E-07	5.24E-07	2.48E-07	1.55E-07	5.65E-08
2,3,4,6-Tetrachlorophenol	1.70E-08	5.03E-09	1.31E-08	1.16E-08	3.86E-09	3.08E-09
Toluene	4.96E-06	1.47E-06	2.38E-06	5.19E-07	7.05E-07	1.15E-07
1,2,4-Trichlorobenzene	2.15E-08	6.37E-09	1.73E-08	1.51E-08	5.10E-09	3.95E-09
1,2,5-Trichlorobenzene	9.71E-06	2.88E-06	7.79E-06	6.80E-06	2.30E-06	1.78E-06
1,1,1-Trichloroethane	1.58E-06	4.67E-07	6.49E-07	1.33E-07	1.92E-07	2.95E-08
Trichloroethene	6.06E-07	1.79E-07	2.21E-07	4.44E-08	6.55E-08	9.85E-09
Trichlorofluoromethane	1.27E-03	3.77E-04	5.39E-04	1.11E-04	1.60E-04	2.47E-05
2,3,6-Trichlorophenol	4.54E-06	1.34E-06	3.51E-06	2.67E-06	1.04E-06	6.71E-07
2,4,5-Trichlorophenol	2.36E-08	6.99E-09	1.84E-08	1.53E-08	5.45E-09	3.97E-09
2,4,6-Trichlorophenol	1.17E-07	3.47E-08	8.97E-08	6.01E-08	2.65E-08	1.46E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2.92E-08	7.99E-09	1.43E-08	4.04E-09	3.83E-09	8.06E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.11E-08	3.25E-09	4.35E-09	8.82E-10	1.27E-09	1.94E-10
Undecane	1.29E-09	3.73E-10	4.32E-10	8.73E-11	1.24E-10	1.87E-11
Vinyl acetate	2.56E-06	7.60E-07	8.55E-07	1.71E-07	2.53E-07	3.80E-08
Vinyl chloride	2.57E-06	7.62E-07	8.57E-07	1.71E-07	2.54E-07	3.81E-08
o-Xylene	9.40E-07	2.78E-07	6.03E-07	1.94E-07	1.78E-07	4.31E-08
m,p-Xylene	2.05E-06	6.06E-07	1.36E-06	4.89E-07	4.03E-07	1.09E-07
Metals Inorganics						
Aluminum	3.61E-03	4.25E-04	1.22E-03	2.60E-04	1.43E-04	2.30E-05
Antimony	1.62E-06	1.82E-07	6.96E-07	2.71E-07	7.45E-08	2.14E-08
Arsenic	1.34E-07	1.56E-08	4.84E-08	1.45E-08	5.53E-09	1.26E-09
Barium	3.18E-04	3.62E-05	1.27E-04	4.55E-05	1.39E-05	3.71E-06
Beryllium	1.98E-07	2.32E-08	6.74E-08	1.56E-08	7.88E-09	1.37E-09
Cadmium	5.38E-06	5.65E-07	2.34E-06	5.31E-07	2.37E-07	3.99E-08
Calcium	1.77E-02	1.74E-03	7.60E-03	1.61E-03	7.34E-04	1.16E-04
Chromium III	4.42E-06	5.17E-07	1.54E-06	4.10E-07	1.78E-07	3.61E-08
Cobalt	2.83E-07	3.29E-08	1.00E-07	2.52E-08	1.15E-08	2.13E-09
Copper	7.84E-05	7.90E-06	4.68E-05	2.45E-05	4.50E-06	1.81E-06
Iron	3.30E-04	3.88E-05	1.11E-04	2.27E-05	1.30E-05	1.99E-06
Lead	1.34E-05	1.55E-06	4.96E-06	1.74E-06	5.62E-07	1.53E-07

Table 5C-15 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Magnesium	6.20E-03	6.10E-04	2.75E-03	5.93E-04	2.65E-04	4.26E-05
Manganese	6.94E-06	7.61E-07	3.26E-06	1.62E-06	3.39E-07	1.29E-07
Mercury (inorganic)	9.35E-05	2.77E-05	7.50E-05	7.02E-05	2.22E-05	1.89E-05
Nickel	2.57E-05	2.83E-06	1.21E-05	6.95E-06	1.26E-06	5.83E-07
Potassium	3.45E-03	3.38E-04	1.62E-03	3.66E-04	1.55E-04	2.61E-05
Selenium	5.08E-06	5.79E-07	2.05E-06	9.14E-07	2.25E-07	7.91E-08
Silver	1.71E-05	1.81E-06	9.02E-06	4.64E-06	9.03E-07	3.55E-07
Sodium	2.25E-02	2.49E-03	1.04E-02	5.45E-03	1.09E-03	4.48E-04
Vanadium	2.47E-06	2.90E-07	8.49E-07	1.98E-07	9.88E-08	1.72E-08
Zinc	5.47E-04	5.16E-05	3.85E-04	2.39E-04	3.55E-05	1.77E-05
TICs						
Acetophenone	4.36E-06	1.29E-06	1.45E-06	2.91E-07	4.31E-07	6.47E-08
Benzonitrile	1.48E-06	4.38E-07	4.93E-07	9.86E-08	1.46E-07	2.19E-08
Bromobenzene	4.21E-06	1.25E-06	2.51E-06	6.92E-07	7.41E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	6.41E-05	1.90E-05	2.14E-05	4.27E-06	6.34E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	7.18E-05	2.13E-05	2.39E-05	4.79E-06	7.09E-06	1.06E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA
Decane	4.92E-12	1.20E-12	1.69E-12	4.17E-13	4.04E-13	6.64E-14
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA
Dioctyl adipate	5.88E-05	1.70E-05	1.97E-05	4.09E-06	5.69E-06	8.75E-07
2-(2-Ethoxyethoxy)ethanol	2.77E-05	8.20E-06	9.23E-06	1.85E-06	2.73E-06	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	2.21E-10	4.95E-11	7.38E-11	1.48E-11	1.65E-11	2.47E-12
Iodine	4.94E-12	6.51E-13	1.88E-12	3.82E-13	2.34E-13	3.54E-14
Iodobenzene	5.88E-11	1.51E-11	2.23E-11	5.45E-12	5.23E-12	8.37E-13
Iodomethane	8.67E-14	2.14E-14	2.89E-14	5.78E-15	7.13E-15	1.07E-15
Methyl benzoate	1.69E-10	4.41E-11	5.67E-11	1.13E-11	1.47E-11	2.21E-12
Methyl hexenone	9.94E-13	9.01E-14	3.31E-13	6.63E-14	3.00E-14	4.50E-15
Nonanoic acid	NA	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-16 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Table 5C-16 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Organics								
Acetaldehyde	2.25E-02	8.85E-01	1.50E-06	4.44E-07	4.99E-07	9.98E-08	1.48E-07	2.22E-08
Acetone	3.92E-03	8.40E-01	2.06E-05	6.10E-06	6.86E-06	1.37E-06	2.03E-06	3.05E-07
Acetonitrile	2.88E-03	8.37E-01	8.57E-05	2.54E-05	2.86E-05	5.72E-06	8.47E-06	1.27E-06
Acrolein	6.01E-03	8.46E-01	4.38E-06	1.30E-06	1.46E-06	2.92E-07	4.33E-07	6.49E-08
Acrylonitrile	1.45E-02	8.67E-01	1.41E-06	4.19E-07	4.71E-07	9.42E-08	1.40E-07	2.09E-08
Aldrin	9.00E+00	7.10E+00	7.02E-09	2.04E-09	4.23E-09	1.19E-09	1.23E-09	2.60E-10
Aniline	6.88E-02	9.69E-01	1.19E-06	3.52E-07	3.96E-07	7.92E-08	1.17E-07	1.76E-08
Benzaldehyde	2.65E-01	1.24E+00	1.73E-06	5.14E-07	5.78E-07	1.16E-07	1.71E-07	2.57E-08
Benzene	1.19E+00	2.14E+00	7.03E-05	2.08E-05	2.43E-05	4.86E-06	7.19E-06	1.08E-06
Benzoic acid	6.51E-01	1.65E+00	1.46E-06	4.32E-07	4.88E-07	9.77E-08	1.45E-07	2.17E-08
Benzotrichloride	7.32E+00	6.17E+00	1.36E-08	4.04E-09	7.76E-09	1.99E-09	2.29E-09	4.42E-10
Benzoyl chloride	1.75E+00	2.60E+00	2.15E-06	6.36E-07	7.88E-07	1.58E-07	2.33E-07	3.51E-08
Benzyl chloride	1.75E+00	2.60E+00	1.42E-07	4.21E-08	5.21E-08	1.05E-08	1.54E-08	2.32E-09
Biphenyl	1.27E+01	9.01E+00	1.95E-07	5.77E-08	1.27E-07	4.33E-08	3.77E-08	9.61E-09
Bis(2-chloroethoxy)methane	1.59E-01	1.10E+00	6.64E-09	1.97E-09	2.21E-09	4.42E-10	6.56E-10	9.84E-11
Bis(2-ethylhexyl)phthalate	6.83E+02	1.77E+02	2.68E-06	2.30E-07	2.22E-06	2.44E-06	1.90E-07	2.03E-07
Bromochloromethane	2.25E-01	1.19E+00	3.19E-07	9.47E-08	1.06E-07	2.13E-08	3.16E-08	4.73E-09
Bromodichloromethane	6.66E-01	1.67E+00	2.17E-07	6.43E-08	7.26E-08	1.45E-08	2.15E-08	3.23E-09
Bromoform	2.11E+00	2.87E+00	6.72E-08	1.99E-08	2.57E-08	5.19E-09	7.62E-09	1.15E-09
Bromomethane	1.35E-01	1.07E+00	1.18E-06	3.48E-07	3.92E-07	7.84E-08	1.16E-07	1.74E-08
2-Butanone (MEK)	1.49E-02	8.68E-01	3.74E-06	1.11E-06	1.25E-06	2.49E-07	3.69E-07	5.54E-08
Butyl benzyl phthalate	5.18E+02	1.43E+02	2.10E-08	5.36E-09	1.73E-08	1.89E-08	4.42E-09	4.63E-09
Carbazole	4.62E+01	2.29E+01	6.10E-09	1.81E-09	4.72E-09	3.27E-09	1.40E-09	8.02E-10
Carbon disulfide	8.79E-01	1.87E+00	1.83E-07	5.42E-08	6.18E-08	1.24E-08	1.83E-08	2.75E-09
Carbon tetrachloride	3.67E+00	3.96E+00	1.49E-07	4.40E-08	6.75E-08	1.43E-08	2.00E-08	3.17E-09
alpha-Chlordane	2.60E+03	4.93E+02	1.39E-09	3.59E-10	1.15E-09	1.31E-09	2.98E-10	3.30E-10
gamma-Chlordane	2.60E+03	4.93E+02	5.44E-10	1.45E-10	4.52E-10	5.12E-10	1.20E-10	1.33E-10
4-Chloroaniline	5.94E-01	1.59E+00	4.95E-09	1.47E-09	1.65E-09	3.31E-10	4.90E-10	7.35E-11
Chlorobenzene	1.33E+00	2.26E+00	4.26E-07	1.26E-07	1.49E-07	2.98E-08	4.41E-08	6.62E-09
Chloroethane	2.36E-01	1.20E+00	1.11E-07	3.29E-08	3.70E-08	7.39E-09	1.10E-08	1.64E-09

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Table 5C-16 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{hg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{hg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
2-Chloroethyl vinyl ether	8.49E-02	9.95E-01	1.58E-08	4.68E-09	5.26E-09	1.05E-09	1.56E-09	2.34E-10
Chloroform	8.20E-01	1.81E+00	2.41E-06	7.13E-07	8.10E-07	1.62E-07	2.40E-07	3.60E-08
Chloromethane	7.04E-02	9.72E-01	2.71E-07	8.02E-08	9.02E-08	1.80E-08	2.67E-08	4.01E-09
4-Chloro-3-methylphenol	1.11E+01	8.18E+00	8.42E-09	2.49E-09	5.34E-09	1.68E-09	1.58E-09	3.72E-10
beta-Chloronaphthalene	1.16E+02	4.57E+01	3.41E-09	1.01E-09	2.75E-09	2.53E-09	8.14E-10	6.77E-10
2-Chlorophenol	1.24E+00	2.19E+00	5.93E-09	1.76E-09	2.06E-09	4.11E-10	6.09E-10	9.14E-11
2-Chloropropane	6.98E-01	1.70E+00	7.39E-08	2.19E-08	2.48E-08	4.95E-09	7.34E-09	1.10E-09
Dalapon	5.16E-02	9.40E-01	1.37E-08	4.05E-09	4.56E-09	9.11E-10	1.35E-09	2.03E-10
4,4'-DDD	9.21E+03	1.31E+03	5.49E-09	1.41E-09	4.56E-09	5.21E-09	1.17E-09	1.31E-09
4,4'-DDE	2.85E+04	3.11E+03	2.65E-09	7.24E-10	2.21E-09	2.53E-09	6.01E-10	6.75E-10
4,4'-DDT	2.02E+04	2.38E+03	6.11E-09	7.51E-10	5.08E-09	5.81E-09	6.23E-10	7.00E-10
Decanol	3.27E+02	1.01E+02	2.92E-11	2.07E-12	2.40E-11	2.54E-11	1.70E-12	1.71E-12
Dibenzofuran	1.16E+02	4.57E+01	2.86E-09	8.47E-10	2.31E-09	2.13E-09	6.83E-10	5.68E-10
Dibromochloromethane	1.08E+00	2.05E+00	5.66E-08	1.68E-08	1.94E-08	3.88E-09	5.74E-09	8.61E-10
Dicamba	1.43E+00	2.34E+00	2.60E-09	7.68E-10	9.19E-10	1.84E-10	2.71E-10	4.07E-11
1,2-Dichlorobenzene	2.11E+01	1.29E+01	2.30E-08	6.81E-09	1.64E-08	7.57E-09	4.86E-09	1.72E-09
1,3-Dichlorobenzene	3.50E+01	1.87E+01	7.16E-09	2.12E-09	5.42E-09	3.31E-09	1.60E-09	7.85E-10
1,4-Dichlorobenzene	2.06E+01	1.27E+01	1.25E-08	3.69E-09	8.89E-09	4.04E-09	2.63E-09	9.14E-10
3,3'-Dichlorobenzidine	9.21E+00	7.21E+00	5.29E-09	1.15E-09	3.21E-09	9.17E-10	6.96E-10	1.49E-10
1,1-Dichloroethane	5.41E-01	1.54E+00	4.20E-07	1.24E-07	1.40E-07	2.80E-08	4.15E-08	6.23E-09
1,2-Dichloroethane	2.65E-01	1.24E+00	5.31E-08	1.57E-08	1.77E-08	3.54E-09	5.24E-09	7.87E-10
1,1-Dichloroethene	1.19E+00	2.14E+00	3.41E-08	1.01E-08	1.18E-08	2.35E-09	3.49E-09	5.23E-10
cis-1,2-Dichloroethene	1.39E+00	2.31E+00	1.47E-07	4.35E-08	5.17E-08	1.03E-08	1.53E-08	2.30E-09
trans-1,2-Dichloroethene	2.65E-01	1.24E+00	3.02E-08	8.96E-09	1.01E-08	2.01E-09	2.99E-09	4.48E-10
2,4-Dichlorophenol	1.01E+01	7.68E+00	1.63E-08	4.83E-09	1.01E-08	3.03E-09	3.00E-09	6.72E-10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	2.98E+01	1.66E+01	9.32E-09	2.76E-09	6.94E-09	3.90E-09	2.05E-09	9.10E-10
Dichloroprop	8.80E+00	6.99E+00	1.55E-11	1.10E-12	9.31E-12	2.60E-12	6.59E-13	1.38E-13
Diethyl phthalate	2.60E+00	3.23E+00	2.56E-07	7.58E-08	1.04E-07	2.12E-08	3.08E-08	4.70E-09
2,4-Dimethylphenol	1.75E+00	2.60E+00	7.12E-09	2.11E-09	2.61E-09	5.24E-10	7.73E-10	1.16E-10
Dimethyl phthalate	1.16E+00	2.12E+00	2.43E-07	7.21E-08	8.38E-08	1.68E-08	2.48E-08	3.72E-09
Di-n-butyl phthalate	6.99E+02	1.80E+02	1.29E-07	3.49E-08	1.07E-07	1.18E-07	2.88E-08	3.08E-08

Table 5C-16 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{hg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{hg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
2,4-Dinitrophenol	2.77E-01	1.25E+00	3.32E-09	9.85E-10	1.11E-09	2.22E-10	3.28E-10	4.92E-11
Di-n-octyl phthalate	1.46E+03	3.17E+02	6.97E-09	2.02E-09	5.79E-09	6.51E-09	1.68E-09	1.84E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA	NA	NA
Dioxins/Furans								
2,3,7,8-Tetrachlorodibenzo(p)dioxin	2.70E+04	3.92E+03	6.22E-13	7.95E-14	5.17E-13	5.92E-13	6.60E-14	7.42E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	2.70E+04	3.92E+03	1.02E-12	9.24E-14	8.51E-13	9.74E-13	7.67E-14	8.62E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	3.80E+05	3.01E+04	6.88E-13	5.21E-14	5.72E-13	6.56E-13	4.33E-14	4.87E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.20E+05	3.01E+04	5.66E-12	4.08E-13	4.71E-12	5.39E-12	3.39E-13	3.81E-13
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.20E+05	1.26E+04	1.60E-12	1.17E-13	1.33E-12	1.53E-12	9.73E-14	1.09E-13
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	9.80E+05	6.22E+04	4.85E-12	3.50E-13	4.04E-12	4.63E-12	2.91E-13	3.27E-13
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	2.40E+05	2.11E+04	1.50E-11	1.07E-12	1.25E-11	1.43E-11	8.85E-13	9.95E-13
2,3,7,8-Tetrachlorodibenzofuran	2.10E+04	3.22E+03	1.66E-12	2.68E-13	1.38E-12	1.58E-12	2.23E-13	2.50E-13
2,3,4,7,8-Pentachlorodibenzofuran	5.10E+04	6.43E+03	2.99E-12	2.83E-13	2.49E-12	2.85E-12	2.35E-13	2.64E-13
1,2,3,7,8-Pentachlorodibenzofuran	3.80E+04	5.11E+03	1.90E-12	2.05E-13	1.58E-12	1.81E-12	1.70E-13	1.91E-13
1,2,3,4,7,8-Hexachlorodibenzofuran	1.20E+05	1.26E+04	5.66E-12	4.23E-13	4.71E-12	5.40E-12	3.51E-13	3.95E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	1.20E+05	1.26E+04	3.75E-12	2.82E-13	3.12E-12	3.58E-12	2.34E-13	2.63E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	1.20E+05	1.26E+04	5.33E-13	4.17E-14	4.44E-13	5.08E-13	3.46E-14	3.89E-14
2,3,4,6,7,8-Hexachlorodibenzofuran	1.20E+05	1.26E+04	3.68E-12	2.77E-13	3.06E-12	3.50E-12	2.30E-13	2.58E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	4.90E+05	3.66E+04	1.21E-11	8.93E-13	1.01E-11	1.16E-11	7.41E-13	8.34E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	4.90E+05	3.66E+04	2.53E-12	1.83E-13	2.11E-12	2.41E-12	1.52E-13	1.71E-13
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.90E+06	1.80E+05	6.49E-12	4.61E-13	5.40E-12	6.19E-12	3.83E-13	4.31E-13
Endosulfan I	3.67E+01	1.93E+01	3.22E-09	9.16E-10	2.45E-09	1.53E-09	6.95E-10	3.50E-10
Endosulfan sulfate	4.02E+01	2.07E+01	1.54E-09	4.54E-10	1.18E-09	7.67E-10	3.47E-10	1.85E-10
Endrin	3.50E+03	6.20E+02	4.98E-10	1.20E-10	4.14E-10	4.70E-10	9.96E-11	1.11E-10
Endrin aldehyde	3.50E+03	6.20E+02	4.04E-10	9.20E-11	3.36E-10	3.82E-10	7.63E-11	8.49E-11
Ethylbenzene	1.24E+01	8.86E+00	1.29E-07	3.83E-08	8.42E-08	2.82E-08	2.49E-08	6.26E-09
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1.39E+01	9.61E+00	4.24E-07	1.25E-07	2.83E-07	1.01E-07	8.33E-08	2.25E-08
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	6.52E+01	2.97E+01	4.40E-10	1.30E-10	3.48E-10	2.75E-10	1.03E-10	6.97E-11
Hexachlorobenzene	1.80E+03	3.71E+02	2.45E-09	7.26E-10	2.04E-09	2.30E-09	6.02E-10	6.63E-10

Table 5C-16 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Hexachlorobutadiene	6.99E+02	1.80E+02	3.12E-09	9.24E-10	2.58E-09	2.85E-09	7.63E-10	8.14E-10
beta-Hexachlorocyclohexane	5.55E+01	2.63E+01	9.10E-10	2.69E-10	7.13E-10	5.32E-10	2.11E-10	1.33E-10
Hexachlorocyclopentadiene	8.60E+01	3.65E+01	2.18E-09	6.45E-10	1.74E-09	1.49E-09	5.15E-10	3.90E-10
Hexachloroethane	1.93E+01	1.21E+01	8.48E-10	2.51E-10	5.97E-10	2.60E-10	1.77E-10	5.87E-11
Hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	2.10E-01	1.17E+00	7.23E-07	2.14E-07	2.41E-07	4.82E-08	7.14E-08	1.07E-08
MCPP	1.19E+01	8.58E+00	4.88E-08	1.34E-08	3.15E-08	1.03E-08	8.60E-09	2.11E-09
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.03E+00	2.01E+00	8.54E-08	2.37E-08	2.91E-08	5.83E-09	8.07E-09	1.21E-09
Methylene chloride	1.55E-01	1.10E+00	1.03E-06	3.06E-07	3.44E-07	6.88E-08	1.02E-07	1.53E-08
Methyl ester acetic acid	1.22E-02	8.62E-01	7.68E-15	5.45E-16	2.56E-15	5.12E-16	1.82E-16	2.73E-17
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	6.37E+01	2.91E+01	1.95E-08	5.77E-09	1.54E-08	1.20E-08	4.54E-09	3.05E-09
4-Methyl-2-pentanone	1.35E-01	1.07E+00	1.24E-07	3.69E-08	4.15E-08	8.30E-09	1.23E-08	1.84E-09
2-Methylphenol	7.83E-01	1.78E+00	2.65E-08	7.85E-09	8.91E-09	1.78E-09	2.64E-09	3.96E-10
3-Methylphenol	8.01E-01	1.80E+00	1.07E-07	3.18E-08	3.61E-08	7.22E-09	1.07E-08	1.60E-09
4-Methylphenol	7.65E-01	1.76E+00	2.70E-08	8.01E-09	9.08E-09	1.82E-09	2.69E-09	4.04E-10
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	9.00E+00	7.10E+00	6.18E-08	1.83E-08	3.73E-08	1.05E-08	1.10E-08	2.33E-09
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	1.03E+00	2.01E+00	5.28E-09	1.56E-09	1.80E-09	3.60E-10	5.34E-10	8.01E-11
2-Nitroaniline	6.22E-01	1.62E+00	6.28E-09	1.86E-09	2.10E-09	4.20E-10	6.23E-10	9.34E-11
4-Nitroaniline	2.15E-01	1.18E+00	9.41E-09	2.79E-09	3.14E-09	6.27E-10	9.29E-10	1.39E-10
Nitrobenzene	6.22E-01	1.62E+00	5.23E-07	1.55E-07	1.75E-07	3.50E-08	5.19E-08	7.78E-09
2-Nitrophenol	5.41E-01	1.54E+00	2.22E-07	6.57E-08	7.40E-08	1.48E-08	2.19E-08	3.29E-09
4-Nitrophenol	7.14E-01	1.71E+00	5.12E-08	1.52E-08	1.72E-08	3.43E-09	5.08E-09	7.62E-10
n-Nitrosodiphenylamine	1.19E+01	8.58E+00	1.73E-08	5.11E-09	1.11E-08	3.64E-09	3.29E-09	8.06E-10
Octadecanoic acid	1.49E+06	6.56E+04	7.23E-08	5.12E-09	6.01E-08	6.89E-08	4.25E-09	4.79E-09
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA	NA	NA
PAHs								
Acenaphthene	7.32E+01	3.23E+01	4.30E-09	1.27E-09	3.42E-09	2.80E-09	1.01E-09	7.19E-10

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Table 5C-16 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Acenaphthylene	1.03E+02	4.19E+01	4.10E-09	1.21E-09	3.30E-09	2.96E-09	9.74E-10	7.83E-10
Anthracene	2.48E+02	8.15E+01	2.74E-09	8.12E-10	2.25E-09	2.32E-09	6.65E-10	6.45E-10
Benzo(a)anthracene	3.58E+03	6.31E+02	6.05E-09	5.32E-10	5.03E-09	5.72E-09	4.42E-10	4.92E-10
Benzo(a)pyrene	1.13E+04	1.53E+03	4.28E-09	3.98E-10	3.56E-09	4.07E-09	3.30E-10	3.71E-10
Benzo(b)fluoranthene	1.17E+04	1.57E+03	1.02E-09	2.66E-10	8.47E-10	9.68E-10	2.21E-10	2.48E-10
Benzo(c)pyrene	9.65E+03	1.35E+03	4.34E-09	4.21E-10	3.61E-09	4.13E-09	3.50E-10	3.92E-10
Benzo(g,h,i)perylene	4.41E+04	4.36E+03	4.00E-09	2.88E-10	3.32E-09	3.81E-09	2.40E-10	2.69E-10
Benzo(j)fluoranthene	1.16E+04	1.56E+03	6.81E-09	7.85E-10	5.66E-09	6.47E-09	6.52E-10	7.31E-10
Benzo(k)fluoranthene	6.09E+04	5.58E+03	3.71E-09	2.66E-10	3.09E-09	3.54E-09	2.21E-10	2.48E-10
Chrysene	3.58E+03	6.31E+02	2.63E-09	4.01E-10	2.19E-09	2.49E-09	3.33E-10	3.70E-10
Dibenzo(a,h)anthracene	2.78E+04	3.06E+03	4.31E-09	3.26E-10	3.58E-09	4.10E-09	2.71E-10	3.04E-10
Fluoranthene	6.99E+02	1.80E+02	2.16E-09	6.12E-10	1.79E-09	1.97E-09	5.06E-10	5.39E-10
Fluorene	1.43E+02	5.35E+01	4.55E-09	1.35E-09	3.69E-09	3.53E-09	1.09E-09	9.57E-10
Indeno(1,2,3-cd)pyrene	3.38E+04	3.55E+03	4.30E-09	3.06E-10	3.58E-09	4.10E-09	2.54E-10	2.85E-10
Phenanthrene	3.27E+02	1.01E+02	1.74E-08	5.13E-09	1.43E-08	1.51E-08	4.22E-09	4.24E-09
Pyrene	6.68E+02	1.74E+02	5.73E-09	1.58E-09	4.74E-09	5.22E-09	1.30E-09	1.39E-09
PCBs								
Monochlorobiphenyls	2.60E+02	8.44E+01	7.39E-10	2.19E-10	6.06E-10	6.28E-10	1.79E-10	1.75E-10
Dichlorobiphenyls	1.03E+03	2.43E+02	2.74E-10	8.10E-11	2.27E-10	2.54E-10	6.70E-11	7.27E-11
Trichlorobiphenyls	4.41E+03	7.40E+02	3.00E-10	8.86E-11	2.49E-10	2.84E-10	7.35E-11	8.20E-11
Tetrachlorobiphenyls	7.84E+03	1.15E+03	5.34E-10	1.56E-10	4.44E-10	5.07E-10	1.30E-10	1.45E-10
Pentachlorobiphenyls	1.80E+04	2.18E+03	4.20E-10	1.23E-10	3.49E-10	3.99E-10	1.02E-10	1.14E-10
Hexachlorobiphenyls	9.43E+04	7.82E+03	2.16E-10	5.51E-11	1.80E-10	2.06E-10	4.58E-11	5.15E-11
Heptachlorobiphenyls	6.23E+04	5.68E+03	1.14E-10	1.89E-11	9.45E-11	1.08E-10	1.57E-11	1.76E-11
Octachlorobiphenyls	1.56E+05	1.15E+04	2.22E-11	4.62E-12	1.85E-11	2.12E-11	3.84E-12	4.32E-12
Nonachlorobiphenyls	3.75E+05	2.27E+04	2.24E-11	1.71E-12	1.86E-11	2.13E-11	1.42E-12	1.60E-12
Decachlorobiphenyls	1.60E+06	6.92E+04	1.40E-12	1.24E-13	1.17E-12	1.34E-12	1.03E-13	1.16E-13
Pentachlorobenzene	1.30E+03	2.90E+02	2.73E-09	8.09E-10	2.27E-09	2.55E-09	6.70E-10	7.33E-10
Pentachlorophenol	1.16E+03	2.65E+02	6.37E-09	1.89E-09	5.28E-09	5.92E-09	1.56E-09	1.70E-09
3-Pentanol	2.05E-01	1.16E+00	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA	NA	NA

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Table 5C-16 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Phenol	2.53E-01	1.22E+00	1.54E-06	4.56E-07	5.12E-07	1.02E-07	1.52E-07	2.28E-08
Phthalic anhydride	9.71E-04	8.30E-01	5.56E-05	1.65E-05	1.85E-05	3.71E-06	5.50E-06	8.24E-07
Quinoline	9.42E-01	1.92E+00	8.66E-08	2.57E-08	2.94E-08	5.87E-09	8.70E-09	1.31E-09
Quinone	1.28E-02	8.63E-01	4.30E-06	1.28E-06	1.43E-06	2.87E-07	4.25E-07	6.38E-08
Styrene	7.84E+00	[illegible]	4.35E-08	1.29E-08	2.52E-08	6.68E-09	7.46E-09	1.48E-09
1,2,4,5-Tetrachlorobenzene	4.41E+02	1.20E-02	3.20E-09	9.49E-10	2.65E-09	2.85E-09	7.82E-10	8.09E-10
Tetrachloroethene	2.21E+01	1.34E+01	7.00E-08	2.07E-08	5.03E-08	2.38E-08	1.49E-08	5.42E-09
2,3,4,6-Tetrachlorophenol	1.11E+02	4.42E+01	2.52E-09	7.45E-10	2.03E-09	1.85E-09	6.00E-10	4.92E-10
Toluene	4.31E+00	4.38E+00	3.12E-07	9.23E-08	1.49E-07	3.26E-08	4.42E-08	7.23E-09
1,2,4-Trichlorobenzene	9.21E+01	3.84E+01	3.26E-09	9.64E-10	2.61E-09	2.28E-09	7.72E-10	5.98E-10
1,2,5-Trichlorobenzene	9.21E+01	3.84E+01	1.47E-06	4.35E-07	1.18E-06	1.03E-06	3.48E-07	2.70E-07
1,1,1-Trichloroethane	2.72E+00	3.32E+00	9.11E-08	2.70E-08	3.75E-08	7.66E-09	1.11E-08	1.70E-09
Trichloroethene	1.71E+00	2.57E+00	3.29E-08	9.76E-09	1.20E-08	2.41E-09	3.56E-09	5.36E-10
Trichlorofluoromethane	2.98E+00	3.50E+00	7.46E-05	2.21E-05	3.16E-05	6.51E-06	9.35E-06	1.45E-06
2,3,6-Trichlorophenol	5.95E+01	2.77E+01	5.79E-07	1.71E-07	4.55E-07	3.48E-07	1.34E-07	8.77E-08
2,4,5-Trichlorophenol	8.03E+01	3.46E+01	3.29E-09	9.74E-10	2.62E-09	2.21E-09	7.75E-10	5.72E-10
2,4,6-Trichlorophenol	4.31E+01	2.18E+01	1.37E-08	4.05E-09	1.05E-08	7.09E-09	3.11E-09	1.72E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1.19E+01	8.58E+00	1.16E-09	3.03E-10	7.51E-10	2.45E-10	1.95E-10	4.77E-11
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	2.42E+00	3.10E+00	5.74E-10	1.68E-10	2.28E-10	4.63E-11	6.68E-11	1.02E-11
Undecane	7.66E+04	6.67E+03	1.86E-12	1.32E-13	1.55E-12	1.77E-12	1.09E-13	1.23E-13
Vinyl acetate	4.61E-02	9.30E-01	2.35E-07	6.97E-08	7.84E-08	1.57E-08	2.32E-08	3.49E-09
Vinyl chloride	3.39E-02	9.07E-01	2.63E-07	7.81E-08	8.78E-08	1.76E-08	2.60E-08	3.90E-09
o-Xylene	1.16E+01	8.45E+00	7.50E-08	2.22E-08	4.81E-08	1.55E-08	1.42E-08	3.44E-09
m,p-Xylene	1.39E+01	9.61E+00	1.72E-07	5.08E-08	1.14E-07	4.10E-08	3.38E-08	9.12E-09
Metals / Inorganics								
Aluminum	1.50E+03	1.00E-01	1.06E-07	9.63E-09	8.84E-08	9.95E-08	7.98E-09	8.76E-09
Antimony	4.50E+01	3.00E-02	3.59E-10	3.25E-11	2.77E-10	1.90E-10	2.50E-11	1.42E-11
Arsenic	2.00E+02	8.00E-03	2.24E-12	2.03E-13	1.83E-12	1.84E-12	1.65E-13	1.55E-13
Barium	6.00E+01	1.50E-02	2.93E-08	2.65E-09	2.30E-08	1.77E-08	2.08E-09	1.36E-09
Beryllium	6.50E+02	1.50E-03	2.00E-13	1.81E-14	1.66E-13	1.82E-13	1.49E-14	1.59E-14
Cadmium	6.50E+00	3.20E-02	4.55E-09	4.12E-10	2.50E-09	6.13E-10	2.26E-10	4.15E-11

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Table 5C-16 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Calcium	4.00E+00	1.00E-01	3.49E-05	3.16E-06	1.63E-05	3.50E-06	1.47E-06	2.37E-07
Chromium III	8.50E+02	1.00E-01	2.24E-10	2.02E-11	1.85E-10	2.06E-10	1.67E-11	1.80E-11
Cobalt	4.50E+01	1.00E-01	2.53E-10	2.29E-11	1.96E-10	1.34E-10	1.77E-11	1.00E-11
Copper	3.50E+01	1.00E-01	3.54E-08	3.21E-09	2.68E-08	1.64E-08	2.42E-09	1.19E-09
Iron	2.50E+01	1.00E-01	5.34E-07	4.83E-08	3.90E-07	1.98E-07	3.52E-08	1.39E-08
Lead	9.00E+02	1.00E-01	6.14E-10	5.55E-11	5.09E-10	5.66E-10	4.59E-11	4.96E-11
Magnesium	4.50E+00	1.00E-01	1.12E-05	1.01E-06	5.46E-06	1.20E-06	4.93E-07	8.14E-08
Manganese	6.50E+01	1.00E-01	3.22E-09	2.92E-10	2.55E-09	2.01E-09	2.30E-10	1.56E-10
Mercury (inorganic)	1.30E+02	7.00E-03	1.29E-09	3.82E-10	1.04E-09	9.83E-10	3.09E-10	2.65E-10
Nickel	1.50E+02	4.00E-03	2.16E-10	1.95E-11	1.76E-10	1.69E-10	1.59E-11	1.41E-11
Potassium	5.50E+00	1.00E-01	5.21E-06	4.71E-07	2.71E-06	6.29E-07	2.45E-07	4.26E-08
Selenium	3.00E+02	2.00E-02	1.28E-10	1.16E-11	1.06E-10	1.11E-10	9.54E-12	9.50E-12
Silver	4.50E+01	1.00E-01	9.02E-09	8.16E-10	6.97E-09	4.78E-09	6.29E-10	3.57E-10
Sodium	1.00E+02	1.00E-01	7.16E-06	6.48E-07	5.76E-06	5.13E-06	5.20E-07	4.14E-07
Vanadium	1.00E+02	1.00E-01	1.06E-09	9.55E-11	8.49E-10	7.56E-10	7.66E-11	6.10E-11
Zinc	4.00E+01	1.00E-01	8.24E-08	7.46E-09	6.31E-08	4.11E-08	5.70E-09	3.02E-09
TICs								
Acetophenone	3.33E-01	1.32E+00	2.45E-07	7.26E-08	8.16E-08	1.63E-08	2.42E-08	3.63E-09
Benzonitrile	3.18E-01	1.30E+00	8.35E-08	2.48E-08	2.78E-08	5.57E-09	8.25E-09	1.24E-09
Bromobenzene	8.60E+00	6.88E+00	3.14E-07	9.31E-08	1.87E-07	5.17E-08	5.54E-08	1.14E-08
2-Butenal / 2-Methyl-2-propenal	1.07E-01	1.03E+00	4.54E-06	1.35E-06	1.51E-06	3.03E-07	4.49E-07	6.73E-08
2-(2-Butoxyethoxy)ethanol	7.04E-02	9.72E-01	5.75E-06	1.70E-06	1.92E-06	3.83E-07	5.68E-07	8.52E-08
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA	NA	NA
Decane	8.40E+03	1.22E+03	7.40E-14	5.25E-15	6.16E-14	7.03E-14	4.36E-15	4.88E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA	NA	NA
Dioctyl adipate	1.13E+04	1.53E+03	1.57E-07	2.18E-08	1.31E-07	1.50E-07	1.81E-08	2.03E-08
2-(2-Ethoxyethoxy)ethanol	1.40E-03	8.32E-01	1.38E-05	4.09E-06	4.59E-06	9.19E-07	1.36E-06	2.04E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA	NA	NA

Table 5C-16 (RBI)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
4-Hydroxy-4-methyl-2-pentanone	5 88E-03	8.45E-01	1 44E-11	1.02E-12	4 79E-12	9 57E-13	3 40E-13	5 10E-14
Iodine	2 72E+00	3 32E+00	1.76E-13	1 25E-14	7 26E-14	1 48E-14	5 15E-15	7 89E-16
Iodobenzene	1.56E+01	1.04E+01	6 90E-13	4.89E-14	4 70E-13	1 81E-13	3 33E-14	9 65E-15
Iodomethane	2 84E-01	1 26E+00	8 68E-16	6.16E-17	2 89E-16	5 79E-17	2 05E-17	3 08E-18
Methyl benzoate	1.16E+00	2 12E+00	1 19E-12	8.41E-14	4 09E-13	8 17E-14	2 90E-14	4 35E-15
Methyl hexenone	NA	NA	NA	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-17 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f) Drake Chemical Site Lock Haven, PA

Table 5C-17 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics					
Acetaldehyde	2.19E+01	3.71E-06	1.24E-06	2.47E-07	1.85E-07
Acetone	5.33E+01	2.28E-05	7.59E-06	1.52E-06	1.14E-06
Acetonitrile	6.09E+01	8.00E-05	2.67E-05	5.33E-06	4.00E-06
Acrolein	4.37E+01	6.04E-06	2.01E-06	4.03E-07	3.02E-07
Acrylonitrile	2.78E-01	2.92E-06	9.73E-07	1.95E-07	1.46E-07
Aldrin	7.05E-01	6.97E-08	2.32E-08	4.64E-09	3.48E-09
Aniline	1.17E+01	4.38E-06	1.46E-06	2.92E-07	2.19E-07
Benzaldehyde	5.40E+00	8.91E-06	2.97E-06	5.94E-07	4.46E-07
Benzene	2.27E+00	4.08E-04	1.36E-04	2.72E-05	2.04E-05
Benzoic acid	3.21E+00	8.25E-06	2.75E-06	5.50E-07	4.13E-07
Benzotrichloride	7.95E-01	1.25E-07	4.16E-08	8.33E-09	6.25E-09
Benzoyl chloride	1.81E+00	1.29E-05	4.29E-06	8.59E-07	6.44E-07
Benzyl chloride	1.81E+00	8.53E-07	2.84E-07	5.68E-08	4.26E-08
Biphenyl	5.77E-01	2.35E-06	7.84E-07	1.57E-07	1.18E-07
Bis(2-chloroethoxy)methane	7.24E+00	3.08E-08	1.03E-08	2.06E-09	1.54E-09
Bis(2-ethylhexyl)phthalate	5.78E-02	1.39E-05	9.85E-06	4.41E-06	3.39E-06
Bromochloromethane	5.93E+00	1.60E-06	5.32E-07	1.06E-07	7.98E-08
Bromodichloromethane	3.17E+00	1.23E-06	4.09E-07	8.19E-08	6.14E-08
Bromoform	1.63E+00	4.14E-07	1.38E-07	2.76E-08	2.07E-08
Bromomethane	7.95E+00	5.25E-06	1.75E-06	3.50E-07	2.63E-07
2-Butanone (MEK)	2.74E+01	7.80E-06	2.60E-06	5.20E-07	3.90E-07
Butyl benzyl phthalate	6.78E-02	3.49E-07	2.41E-07	9.69E-08	7.38E-08
Carbazole	2.74E-01	1.34E-07	5.09E-08	1.02E-08	7.68E-09
Carbon disulfide	2.70E+00	1.05E-06	3.50E-07	7.00E-08	5.25E-08
Carbon tetrachloride	1.18E+00	1.04E-06	3.47E-07	6.95E-08	5.21E-08
alpha-Chlordane	2.67E-02	1.43E-08	1.08E-08	6.69E-09	5.46E-09
gamma-Chlordane	2.67E-02	5.76E-09	4.37E-09	2.70E-09	2.20E-09
4-Chloroaniline	3.39E+00	2.78E-08	9.28E-09	1.86E-09	1.39E-09
Chlorobenzene	2.13E+00	2.49E-06	8.30E-07	1.66E-07	1.24E-07
Chloroethane	5.77E+00	5.59E-07	1.86E-07	3.72E-08	2.79E-08
2-Chloroethyl vinyl ether	1.04E+01	6.21E-08	2.07E-08	4.14E-09	3.11E-09
Chloroform	2.81E+00	1.37E-05	4.58E-06	9.17E-07	6.87E-07
Chloromethane	1.15E+01	1.01E-06	3.35E-07	6.70E-08	5.03E-08
4-Chloro-3-methylphenol	6.25E-01	9.45E-08	3.15E-08	6.30E-09	4.73E-09
beta-Chloronaphthalene	1.61E-01	8.43E-08	4.26E-08	9.65E-09	7.23E-09
2-Chlorophenol	2.21E+00	3.45E-08	1.15E-08	2.30E-09	1.73E-09
2-Chloropropane	3.09E+00	4.19E-07	1.40E-07	2.80E-08	2.10E-08
Dalapon	1.38E+01	4.59E-08	1.53E-08	3.06E-09	2.30E-09
4,4'-DDD	1.28E-02	3.65E-08	2.82E-08	1.93E-08	1.62E-08
4,4'-DDE	6.69E-03	1.27E-08	9.86E-09	6.95E-09	5.87E-09
4,4'-DDT	8.16E-03	1.49E-08	1.15E-08	8.07E-09	6.80E-09
Decanol	8.84E-02	1.50E-10	9.75E-11	3.23E-11	2.43E-11
Dibenzofuran	1.61E-01	7.07E-08	3.58E-08	8.09E-09	6.07E-09
Dibromochloromethane	2.40E+00	3.27E-07	1.09E-07	2.18E-08	1.64E-08
Dicamba	2.04E+00	1.52E-08	5.08E-09	1.02E-09	7.62E-10
1,2-Dichlorobenzene	4.31E-01	3.63E-07	1.23E-07	2.45E-08	1.84E-08
1,3-Dichlorobenzene	3.22E-01	1.43E-07	5.10E-08	1.02E-08	7.67E-09

Table 5C-17 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,4-Dichlorobenzene	4 37E-01	1 95E-07	6.56E-08	1 31E-08	9 85E-09
3,3 -Dichlorobenzidine	6 96E-01	3.97E-08	1.32E-08	2 65E-09	1 99E-09
1,1-Dichloroethane	3.58E+00	2.35E-06	7 82E-07	1.56E-07	1 17E-07
1,2-Dichloroethane	5 40E+00	2 73E-07	9.09E-08	1 82E-08	1.36E-08
1,1-Dichloroethene	2.27E+00	1 98E-07	6 60E-08	1.32E-08	9.90E-09
cis-1,2-Dichloroethene	2 07E+00	8 61E-07	2 87E-07	5 74E-08	4 30E-08
trans-1,2-Dichloroethene	5.40E+00	1 55E-07	5 18E-08	1.04E-08	7 77E-09
2,4-Dichlorophenol	6.60E-01	1.75E-07	5 83E-08	1.17E-08	8 75E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53E-01	1.74E-07	6.06E-08	1.21E-08	9 09E-09
Dichloroprop	7 14E-01	3 72E-11	1.24E-11	2 48E-12	1.86E-12
Diethyl phthalate	1.45E+00	1.64E-06	5 46E-07	1.09E-07	8.20E-08
2,4-Dimethylphenol	1.81E+00	4.27E-08	1 42E-08	2.85E-09	2.13E-09
Dimethyl phthalate	2.30E+00	1.41E-06	4.70E-07	9 41E-08	7 05E-08
Di-n-butyl phthalate	5 70E-02	2.09E-06	1 49E-06	6.71E-07	5 17E-07
2,4-Dinitrophenol	5.26E+00	1.72E-08	5.74E-09	1.15E-09	8 60E-10
Di-n-octyl phthalate	3 72E-02	9 70E-08	7.22E-08	4 03E-08	3.21E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5 62E-03	8.84E-13	6 86E-13	4.83E-13	4 08E-13
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5 62E-03	1.03E-12	7.97E-13	5.61E-13	4.74E-13
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	2.30E-13	1.79E-13	1.28E-13	1.08E-13
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	5 69E-13	4.42E-13	3 15E-13	2 67E-13
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	7.48E-13	5.81E-13	4 14E-13	3.51E-13
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	1.12E-12	8.68E-13	6.21E-13	5.26E-13
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	5.53E-12	4.30E-12	3.07E-12	2.60E-12
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	3.26E-12	2.53E-12	1.78E-12	1.50E-12
2,3,4,7,8-Pentachlorodibenzofuran	3 87E-03	2.49E-12	1 94E-12	1.37E-12	1.16E-12
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	2.01E-12	1.56E-12	1 10E-12	9.34E-13
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	2.70E-12	2.10E-12	1 49E-12	1.27E-12
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	1.80E-12	1.40E-12	9.95E-13	8.43E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	2.66E-13	2.07E-13	1.47E-13	1.25E-13
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	1.77E-12	1.37E-12	9 78E-13	8.28E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	3.61E-12	2.81E-12	2.01E-12	1.70E-12
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	7 42E-13	5.77E-13	4.12E-13	3.50E-13
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3 17E-04	9.09E-13	7.06E-13	5.05E-13	4.28E-13
Endosulfan I	3.13E-01	6.28E-08	2.27E-08	4.54E-09	3 41E-09
Endosulfan sulfate	2 97E-01	3.22E-08	1.18E-08	2.38E-09	1.78E-09
Endrin	2.24E-02	4.32E-09	3.30E-09	2 11E-09	1 74E-09
Endrin aldehyde	2.24E-02	3.31E-09	2.53E-09	1.62E-09	1.33E-09
Ethylbenzene	5 85E-01	1.54E-06	5.14E-07	1.03E-07	7 71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5 48E-01	5.36E-06	1 79E-06	3.58E-07	2.68E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	1.04E-08	4.38E-09	9 01E-10	6 76E-10
Hexachlorobenzene	3.30E-02	3.26E-08	2.44E-08	1 42E-08	1 14E-08
Hexachlorobutadiene	5 70E-02	5.53E-08	3 93E-08	1 78E-08	1 37E-08
beta-Hexachlorocyclohexane	2.46E-01	2.09E-08	8.38E-09	1.70E-09	1.28E-09
Hexachlorocyclopentadiene	1 91E-01	5.35E-08	2 46E-08	5.23E-09	3 92E-09

Table 5C-17 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachloroethane	4.54E-01	1.28E-08	4.29E-09	8.57E-10	6.43E-10
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	3.56E-06	1.19E-06	2.37E-07	1.78E-07
MCPP	6.01E-01	5.25E-07	1.75E-07	3.50E-08	2.63E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	4.61E-07	1.54E-07	3.07E-08	2.30E-08
Methylene chloride	7.34E+00	4.77E-06	1.59E-06	3.18E-07	2.38E-07
Methyl ester acetic acid	3.05E+01	3.52E-15	1.17E-15	2.35E-16	1.76E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	4.61E-07	1.92E-07	3.94E-08	2.96E-08
4-Methyl-2-pentanone	7.95E+00	5.56E-07	1.85E-07	3.71E-08	2.78E-08
2-Methylphenol	2.89E+00	1.51E-07	5.04E-08	1.01E-08	7.56E-09
3-Methylphenol	2.85E+00	6.13E-07	2.04E-07	4.09E-08	3.06E-08
4-Methylphenol	2.93E+00	1.54E-07	5.14E-08	1.03E-08	7.71E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	6.25E-07	2.08E-07	4.17E-08	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	3.05E-08	1.02E-08	2.03E-09	1.52E-09
2-Nitroaniline	3.30E+00	3.55E-08	1.18E-08	2.36E-09	1.77E-09
4-Nitroaniline	6.09E+00	4.66E-08	1.55E-08	3.10E-09	2.33E-09
Nitrobenzene	3.30E+00	2.95E-06	9.85E-07	1.97E-07	1.48E-07
2-Nitrophenol	3.58E+00	1.24E-06	4.13E-07	8.27E-08	6.20E-08
4-Nitrophenol	3.05E+00	2.91E-07	9.69E-08	1.94E-08	1.45E-08
n-Nitrosodiphenylamine	6.01E-01	2.01E-07	6.70E-08	1.34E-08	1.01E-08
Octadecanoic acid	6.78E-04	2.27E-08	1.77E-08	1.26E-08	1.07E-08
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	2.10E-01	1.04E-07	4.53E-08	9.42E-09	7.06E-09
Acenaphthylene	1.72E-01	1.01E-07	4.94E-08	1.09E-08	8.16E-09
Anthracene	1.04E-01	6.24E-08	3.84E-08	1.13E-08	8.49E-09
Benzo(a)anthracene	2.22E-02	1.90E-08	1.45E-08	9.32E-09	7.67E-09
Benzo(a)pyrene	1.14E-02	9.60E-09	7.43E-09	5.13E-09	4.30E-09
Benzo(b)fluoranthene	1.12E-02	6.35E-09	4.91E-09	3.39E-09	2.85E-09
Benzo(e)pyrene	1.25E-02	1.07E-08	8.29E-09	5.69E-09	4.77E-09
Benzo(g,h,i)perylene	5.19E-03	4.35E-09	3.38E-09	2.39E-09	2.02E-09
Benzo(j)fluoranthene	1.12E-02	1.88E-08	1.45E-08	1.00E-08	8.43E-09
Benzo(k)fluoranthene	4.31E-03	3.59E-09	2.79E-09	1.98E-09	1.68E-09
Chrysene	2.22E-02	1.43E-08	1.09E-08	7.02E-09	5.78E-09
Dibenzo(a,h)anthracene	6.78E-03	5.77E-09	4.48E-09	3.15E-09	2.66E-09
Fluoranthene	5.70E-02	3.66E-08	2.61E-08	1.18E-08	9.06E-09
Fluorene	1.43E-01	1.11E-07	5.98E-08	1.43E-08	1.08E-08
Indeno(1,2,3-cd)pyrene	6.06E-03	5.06E-09	3.93E-09	2.78E-09	2.35E-09
Phenanthrene	8.84E-02	3.73E-07	2.42E-07	8.01E-08	6.03E-08
Pyrene	5.85E-02	9.57E-08	6.78E-08	3.01E-08	2.31E-08
PCBs					
Monochlorobiphenyls	1.01E-01	1.67E-08	1.04E-08	3.11E-09	2.33E-09
Dichlorobiphenyls	4.55E-02	4.32E-09	3.16E-09	1.62E-09	1.27E-09
Trichlorobiphenyls	1.97E-02	2.95E-09	2.26E-09	1.48E-09	1.22E-09

Table 5C-17 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Tetrachlorobiphenyls	1.41E-02	4.27E-09	3.30E-09	2.24E-09	1.87E-09
Pentachlorobiphenyls	8.73E-03	2.52E-09	1.95E-09	1.37E-09	1.15E-09
Hexachlorobiphenyls	3.35E-03	6.38E-10	4.96E-10	3.53E-10	2.99E-10
Heptachlorobiphenyls	4.25E-03	2.53E-10	1.96E-10	1.39E-10	1.18E-10
Octachlorobiphenyls	2.50E-03	4.49E-11	3.49E-11	2.49E-11	2.11E-11
Nonachlorobiphenyls	1.51E-03	1.23E-11	9.53E-12	6.81E-12	5.77E-12
Decachlorobiphenyls	6.51E-04	5.37E-13	4.17E-13	2.98E-13	2.53E-13
Pentachlorobenzene	3.98E-02	4.02E-08	2.98E-08	1.62E-08	1.28E-08
Pentachlorophenol	4.25E-02	9.71E-08	7.15E-08	3.77E-08	2.98E-08
3-Pentanol	6.25E+00	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	5.55E+00	7.84E-06	2.61E-06	5.23E-07	3.92E-07
Phthalic anhydride	8.84E+01	2.56E-05	8.52E-06	1.70E-06	1.28E-06
Quinoline	2.60E+00	4.98E-07	1.66E-07	3.32E-08	2.49E-08
Quinone	2.97E+01	8.42E-06	2.81E-06	5.62E-07	4.21E-07
Styrene	7.64E-01	4.11E-07	1.37E-07	2.74E-08	2.06E-08
1,2,4,5-Tetrachlorobenzene	7.44E-02	6.43E-08	4.35E-08	1.64E-08	1.24E-08
Tetrachloroethene	4.20E-01	1.13E-06	3.83E-07	7.66E-08	5.75E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	6.22E-08	3.10E-08	6.94E-09	5.21E-09
Toluene	1.08E+00	2.30E-06	7.67E-07	1.53E-07	1.15E-07
1,2,4-Trichlorobenzene	1.84E-01	8.02E-08	3.77E-08	8.12E-09	6.09E-09
1,2,5-Trichlorobenzene	1.84E-01	3.62E-05	1.70E-05	3.66E-06	2.75E-06
1,1,1-Trichloroethane	1.41E+00	5.89E-07	1.96E-07	3.93E-08	2.95E-08
Trichloroethene	1.84E+00	1.97E-07	6.57E-08	1.31E-08	9.85E-09
Trichlorofluoromethane	1.34E+00	4.93E-04	1.64E-04	3.29E-05	2.47E-05
2,3,6-Trichlorophenol	2.37E-01	1.35E-05	5.52E-06	1.13E-06	8.44E-07
2,4,5-Trichlorophenol	1.99E-01	8.03E-08	3.60E-08	7.59E-09	5.69E-09
2,4,6-Trichlorophenol	2.85E-01	2.94E-07	1.10E-07	2.21E-08	1.65E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6.01E-01	1.19E-08	3.97E-09	7.94E-10	5.95E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.51E+00	3.58E-09	1.19E-09	2.39E-10	1.79E-10
Undecane	3.77E-03	1.64E-12	1.28E-12	9.07E-13	7.68E-13
Vinyl acetate	1.47E+01	7.60E-07	2.53E-07	5.07E-08	3.80E-08
Vinyl chloride	1.74E+01	7.62E-07	2.54E-07	5.08E-08	3.81E-08
o-Xylene	6.09E-01	8.62E-07	2.87E-07	5.75E-08	4.31E-08
m,p-Xylene	5.48E-01	2.17E-06	7.26E-07	1.45E-07	1.09E-07
Metals - Inorganics					
Aluminum	4.00E-03	1.61E-04	1.20E-04	6.75E-05	5.39E-05
Antimony	2.00E-01	1.29E-06	4.86E-07	9.78E-08	7.33E-08
Arsenic	4.00E-02	4.75E-08	2.79E-08	7.52E-09	5.64E-09
Barium	1.50E-01	2.47E-04	1.01E-04	2.07E-05	1.55E-05
Beryllium	1.00E-02	2.11E-08	1.49E-08	6.55E-09	5.04E-09
Cadmium	5.50E-01	1.39E-06	4.64E-07	9.28E-08	6.96E-08
Calcium	3.50E+00	9.97E-03	3.32E-03	6.65E-04	4.99E-04
Chromium III	7.50E-03	3.53E-07	2.55E-07	1.23E-07	9.55E-08
Cobalt	2.00E-02	2.72E-08	1.03E-08	2.07E-09	1.55E-09
Copper	4.00E-01	5.01E-05	1.79E-05	3.59E-06	2.69E-06
Iron	4.00E-03	4.19E-06	1.43E-06	2.86E-07	2.15E-07
Lead	4.50E-02	6.16E-06	4.47E-06	2.19E-06	1.71E-06

Table 5C-17 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Magnesium	1.00E+00	1.10E-03	3.66E-04	7.33E-05	5.49E-05
Manganese	2.50E-01	7.68E-06	3.22E-06	6.63E-07	4.97E-07
Mercury (inorganic)	9.00E-01	1.35E-03	7.07E-04	1.65E-04	1.24E-04
Nickel	6.00E-02	9.66E-06	5.27E-06	1.28E-06	9.63E-07
Potassium	1.00E+00	7.03E-04	2.34E-04	4.69E-05	3.52E-05
Selenium	2.50E-02	1.09E-06	6.96E-07	2.22E-07	1.67E-07
Silver	4.00E-01	1.94E-05	7.32E-06	1.47E-06	1.11E-06
Sodium	7.50E-02	9.46E-03	4.56E-03	9.99E-04	7.49E-04
Vanadium	5.50E-03	1.02E-07	4.93E-08	1.08E-08	8.09E-09
Zinc	1.50E+00	5.48E-04	2.01E-04	4.04E-05	3.03E-05
TICs					
Acetophenone	4.69E+00	1.29E-06	4.31E-07	8.62E-08	6.47E-08
Benzonitrile	4.82E+00	4.38E-07	1.46E-07	2.92E-08	2.19E-08
Bromobenzene	7.14E-01	3.07E-06	1.02E-06	2.04E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	1.90E-05	6.34E-06	1.27E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	1.15E+01	2.13E-05	7.09E-06	1.42E-06	1.06E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	1.32E-02	1.36E-13	1.05E-13	7.18E-14	6.01E-14
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	1.11E-02	5.12E-07	3.96E-07	2.73E-07	2.29E-07
2-(2-Ethoxyethoxy)ethanol	7.97E+01	8.20E-06	2.73E-06	5.47E-07	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4.41E+01	4.70E-12	1.57E-12	3.13E-13	2.35E-13
Iodine	1.39E+00	2.70E-13	9.00E-14	1.80E-14	1.35E-14
Iodobenzene	5.05E-01	2.19E-12	7.33E-13	1.47E-13	1.10E-13
Iodomethane	5.15E+00	1.07E-15	3.58E-16	7.15E-17	5.37E-17
Methyl benzoate	2.28E+00	1.63E-12	5.44E-13	1.09E-13	8.16E-14
Methyl hexenone	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-18 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f) Drake Chemical Site Lock Haven, PA

Table 5C-18 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Organics			
Acetaldehyde	1.26E-16	1.58E-17	1.42E-14
Acetone	9.81E-16	1.23E-16	1.10E-13
Acetonitrile	9.08E-15	1.14E-15	1.02E-12
Acrolein	4.45E-16	5.56E-17	5.00E-14
Acrylonitrile	4.46E-16	5.58E-17	5.02E-14
Aldrin	3.12E-11	3.91E-12	3.51E-09
Aniline	3.63E-13	4.55E-14	4.09E-11
Benzaldehyde	4.48E-12	5.60E-13	5.03E-10
Benzene	1.83E-13	2.29E-14	2.06E-11
Benzoic acid	7.56E-12	9.46E-13	8.50E-10
Benzotrichloride	1.46E-14	1.83E-15	1.64E-12
Benzoyl chloride	6.52E-13	8.15E-14	7.33E-11
Benzyl chloride	2.91E-14	3.64E-15	3.27E-12
Biphenyl	2.48E-12	3.10E-13	2.79E-10
Bis(2-chloroethoxy)methane	2.12E-14	2.65E-15	2.38E-12
Bis(2-ethylhexyl)phthalate	1.10E-06	1.38E-07	1.24E-04
Bromochloromethane	1.17E-15	1.47E-16	1.32E-13
Bromodichloromethane	2.52E-15	3.15E-16	2.83E-13
Bromoform	8.59E-15	1.08E-15	9.66E-13
Bromomethane	0.00E+00	0.00E+00	NA
2-Butanone (MEK)	2.18E-15	2.72E-16	2.45E-13
Butyl benzyl phthalate	1.56E-09	1.95E-10	1.76E-07
Carbazole	1.53E-14	1.92E-15	1.72E-12
Carbon disulfide	1.46E-16	1.83E-17	1.64E-14
Carbon tetrachloride	2.90E-16	3.62E-17	3.26E-14
alpha-Chlordane	1.37E-10	1.72E-11	1.55E-08
gamma-Chlordane	4.25E-11	5.32E-12	4.78E-09
4-Chloroaniline	2.31E-14	2.90E-15	2.60E-12
Chlorobenzene	9.85E-15	1.23E-15	1.11E-12
Chloroethane	0.00E+00	0.00E+00	NA
2-Chloroethyl vinyl ether	1.08E-16	1.35E-17	1.21E-14
Chloroform	3.63E-15	4.54E-16	4.08E-13
Chloromethane	0.00E+00	0.00E+00	NA
4-Chloro-3-methylphenol	1.39E-14	1.74E-15	1.56E-12
beta-Chloronaphthalene	4.80E-14	6.01E-15	5.40E-12
2-Chlorophenol	9.62E-16	1.20E-16	1.08E-13
2-Chloropropane	3.31E-17	4.15E-18	3.73E-15
Dalapon	1.85E-14	2.32E-15	2.08E-12
4,4'-DDD	7.71E-10	9.64E-11	8.67E-08
4,4'-DDE	2.86E-10	3.57E-11	3.21E-08
4,4'-DDT	4.51E-09	5.65E-10	5.07E-07
Decanol	1.09E-11	1.36E-12	1.22E-09
Dibenzofuran	1.02E-13	1.27E-14	1.14E-11
Dibromochloromethane	5.16E-16	6.46E-17	5.81E-14
Dicamba	2.45E-12	3.06E-13	2.75E-10
1,2-Dichlorobenzene	4.22E-15	5.27E-16	4.74E-13
1,3-Dichlorobenzene	9.21E-16	1.15E-16	1.04E-13

Table 5C-18 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
1,4-Dichlorobenzene	8 78E-16	1.10E-16	9 88E-14
3,3'-Dichlorobenzidine	3 40E-10	4.25E-11	3 82E-08
1,1-Dichloroethane	5 82E-16	7.29E-17	6 55E-14
1,2-Dichloroethane	1 74E-16	2 17E-17	1 95E-14
1,1-Dichloroethene	1.41E-17	1 76E-18	1.58E-15
cis-1,2-Dichloroethene	1 95E-16	2 44E-17	2 19E-14
trans-1,2-Dichloroethene	3 06E-17	3 83E-18	3 44E-15
2,4-Dichlorophenol	4 76E-14	5 95E-15	5 35E-12
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	2.93E-14	3.67E-15	3 30E-12
Dichloroprop	2.83E-12	3.55E-13	3 19E-10
Diethyl phthalate	4 70E-11	5.88E-12	5.28E-09
2,4-Dimethylphenol	6 74E-14	8 44E-15	7.58E-12
Dimethyl phthalate	8 13E-12	1 02E-12	9 14E-10
Di-n-butyl phthalate	6 68E-09	8.36E-10	7.51E-07
2,4-Dinitrophenol	5 85E-13	7.32E-14	6.58E-11
Di-n-octyl phthalate	9 40E-11	1 18E-11	1 06E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	3 64E-13	4.55E-14	4 09E-11
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	7.33E-13	9.17E-14	8 24E-11
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	9.66E-13	1.21E-13	1 09E-10
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	2.55E-12	3 19E-13	2 87E-10
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.71E-12	2.14E-13	1.93E-10
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	8.64E-12	1.08E-12	9 71E-10
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.94E-11	2.43E-12	2.18E-09
2,3,7,8-Tetrachlorodibenzofuran	7.35E-13	9.20E-14	8.27E-11
2,3,4,7,8-Pentachlorodibenzofuran	2 41E-12	3.02E-13	2 71E-10
1,2,3,7,8-Pentachlorodibenzofuran	1.34E-12	1.68E-13	1.51E-10
1,2,3,4,7,8-Hexachlorodibenzofuran	6.02E-12	7.53E-13	6 77E-10
1,2,3,6,7,8-Hexachlorodibenzofuran	3 98E-12	4.99E-13	4 48E-10
1,2,3,7,8,9-Hexachlorodibenzofuran	5.58E-13	6 98E-14	6.27E-11
2,3,4,6,7,8-Hexachlorodibenzofuran	3.90E-12	4.88E-13	4.38E-10
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.83E-11	2.29E-12	2.05E-09
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.83E-12	4 79E-13	4.31E-10
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	1.59E-11	2.00E-12	1.79E-09
Endosulfan I	3.84E-11	4 80E-12	4 31E-09
Endosulfan sulfate	9.37E-13	1.17E-13	1.05E-10
Endrin	7.78E-11	9 74E-12	8 75E-09
Endrin aldehyde	7 87E-11	9.85E-12	8 85E-09
Ethylbenzene	3.09E-15	3.87E-16	3 48E-13
2-Ethyl hexanoic acid	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	2.67E-10	3.34E-11	3.00E-08
2-Fluoro-4-nitrophenol	NA	NA	NA
Heptachlor	2.92E-13	3.66E-14	3.29E-11
Hexachlorobenzene	8.55E-13	1.07E-13	9.61E-11
Hexachlorobutadiene	1.41E-14	1.77E-15	1.59E-12
beta-Hexachlorocyclohexane	7 48E-17	9.37E-18	8.42E-15
Hexachlorocyclopentadiene	2.65E-14	3.31E-15	2.98E-12

Table 5C-18 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Hexachloroethane	1.10E-16	1.38E-17	1.24E-14
Hexadecanoic acid	NA	NA	NA
2-Hexanone	1.09E-13	1.36E-14	1.22E-11
MCPP	9.20E-10	1.15E-10	1.03E-07
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.65E-09	2.06E-10	1.85E-07
Methylene chloride	5.62E-16	7.04E-17	6.32E-14
Methyl ester acetic acid	3.13E-16	3.91E-17	3.52E-14
Methyl-3-heptanol	NA	NA	NA
2-Methylnaphthalene	8.90E-14	1.11E-14	1.00E-11
4-Methyl-2-pentanone	3.28E-15	4.10E-16	3.68E-13
2-Methylphenol	2.62E-14	3.27E-15	2.94E-12
3-Methylphenol	2.97E-13	3.72E-14	3.34E-11
4-Methylphenol	5.35E-14	6.69E-15	6.01E-12
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA
Naphthalene	5.00E-14	6.26E-15	5.62E-12
Naphthalene carbonitrile	NA	NA	NA
beta-Naphthylamine	9.55E-13	1.19E-13	1.07E-10
2-Nitroaniline	2.31E-13	2.89E-14	2.60E-11
4-Nitroaniline	1.33E-13	1.67E-14	1.50E-11
Nitrobenzene	6.70E-13	8.38E-14	7.53E-11
2-Nitrophenol	4.85E-13	6.07E-14	5.46E-11
4-Nitrophenol	8.24E-12	1.03E-12	9.26E-10
n-Nitrosodiphenylamine	1.50E-14	1.88E-15	1.69E-12
Octadecanoic acid	1.87E-07	2.34E-08	2.10E-05
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA
PAHs			
Acenaphthene	1.68E-13	2.10E-14	1.89E-11
Acenaphthylene	4.36E-13	5.46E-14	4.90E-11
Anthracene	1.10E-13	1.38E-14	1.24E-11
Benzo(a)anthracene	3.61E-09	4.51E-10	4.06E-07
Benzo(a)pyrene	3.25E-09	4.06E-10	3.65E-07
Benzo(b)fluoranthene	1.33E-10	1.66E-11	1.49E-08
Benzo(e)pyrene	3.11E-09	3.90E-10	3.50E-07
Benzo(g,h,i)perylene	4.57E-09	5.72E-10	5.14E-07
Benzo(j)fluoranthene	4.62E-09	5.79E-10	5.20E-07
Benzo(k)fluoranthene	4.59E-09	5.74E-10	5.16E-07
Chrysene	1.08E-09	1.36E-10	1.22E-07
Dibenzo(a,h)anthracene	4.36E-09	5.46E-10	4.91E-07
Fluoranthene	5.55E-11	6.95E-12	6.24E-09
Fluorene	6.96E-13	8.71E-14	7.83E-11
Indeno(1,2,3-cd)pyrene	4.65E-09	5.82E-10	5.23E-07
Phenanthrene	1.28E-11	1.60E-12	1.44E-09
Pyrene	2.33E-10	2.92E-11	2.62E-08
PCBs			
Monochlorobiphenyls	5.80E-14	7.25E-15	6.52E-12
Dichlorobiphenyls	2.13E-13	2.67E-14	2.40E-11
Trichlorobiphenyls	3.89E-13	4.87E-14	4.38E-11

Table 5C-18 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Tetrachlorobiphenyls	6.56E-12	8.20E-13	7 37E-10
Pentachlorobiphenyls	7.00E-12	8.76E-13	7 87E-10
Hexachlorobiphenyls	5.35E-11	6.69E-12	6 02E-09
Heptachlorobiphenyls	8 15E-11	1.02E-11	9 16E-09
Octachlorobiphenyls	1.34E-11	1 68E-12	1.51E-09
Nonachlorobiphenyls	4 11E-11	5 15E-12	4 63E-09
Decachlorobiphenyls	3.39E-12	4 25E-13	3 82E-10
Pentachlorobenzene	7.62E-14	9 53E-15	8 57E-12
Pentachlorophenol	8.37E-13	1 05E-13	9 41E-11
3-Pentanol	NA	NA	NA
4-Penten-2-ol	NA	NA	NA
Phenol	7 74E-13	9 68E-14	8 70E-11
Phthalic anhydride	9.94E-11	1.24E-11	1 12E-08
Quinoline	3.29E-13	4 11E-14	3 70E-11
Quinone	2.83E-13	3.54E-14	3 18E-11
Styrene	2.05E-15	2.57E-16	2.31E-13
1,2,4,5-Tetrachlorobenzene	3.07E-15	3.84E-16	3 45E-13
Tetrachloroethene	9.93E-16	1.24E-16	1 12E-13
2,3,4,6-Tetrachlorophenol	3.11E-13	3.89E-14	3 50E-11
Toluene	2.26E-15	2.83E-16	2.54E-13
1,2,4-Trichlorobenzene	7.30E-15	9.14E-16	8.21E-13
1,2,5-Trichlorobenzene	3.29E-12	4.12E-13	3 70E-10
1,1,1-Trichloroethane	2.07E-16	2.59E-17	2.32E-14
Trichloroethene	1 04E-16	1 31E-17	1 17E-14
Trichlorofluoromethane	2.26E-14	2.83E-15	2 54E-12
2,3,6-Trichlorophenol	2.68E-11	3.35E-12	3 01E-09
2,4,5-Trichlorophenol	3.01E-14	3.77E-15	3.39E-12
2,4,6-Trichlorophenol	1.91E-13	2.40E-14	2.15E-11
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3.53E-11	4 41E-12	3 97E-09
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.50E-12	1.88E-13	1.69E-10
Undecane	2 43E-12	3.04E-13	2.73E-10
Vinyl acetate	3.27E-16	4.09E-17	3.68E-14
Vinyl chloride	0.00E+00	0.00E+00	NA
o-Xylene	2 40E-15	3.01E-16	2.70E-13
m,p-Xylene	5.22E-15	6.54E-16	5.87E-13
Metals / Inorganics			
Aluminum	2.51E-04	1.02E-05	2.67E-02
Antimony	8 88E-08	3.62E-09	9.46E-06
Arsenic	8.88E-09	3 62E-10	9 46E-07
Barium	1.91E-05	7.77E-07	2.03E-03
Beryllium	1.36E-08	5.56E-10	1.45E-06
Cadmium	2.00E-07	8.15E-09	2.13E-05
Calcium	3.59E-04	1.46E-05	3.82E-02
Chromium III	2.99E-07	1.22E-08	3.19E-05
Cobalt	1.88E-08	7.66E-10	2.00E-06
Copper	2.07E-06	8.46E-08	2.21E-04
Iron	2.29E-05	9.33E-07	2 44E-03
Lead	8.69E-07	3.54E-08	9.25E-05

Table 5C-18 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Magnesium	1.24E-04	5.04E-06	1.32E-02
Manganese	3.40E-07	1.39E-08	3.62E-05
Mercury (inorganic)	0.00E+00	0.00E+00	NA
Nickel	1.29E-06	5.26E-08	1.37E-04
Potassium	6.52E-05	2.66E-06	6.95E-03
Selenium	3.04E-07	1.24E-08	3.24E-05
Silver	6.69E-07	2.73E-08	7.13E-05
Sodium	1.15E-03	4.69E-05	1.22E-01
Vanadium	1.69E-07	6.91E-09	1.80E-05
Zinc	5.47E-06	2.23E-07	5.83E-04
TICs			
Acetophenone	9.34E-14	1.17E-14	1.05E-11
Benzonitrile	3.71E-14	4.64E-15	4.17E-12
Bromobenzene	3.61E-14	4.51E-15	4.05E-12
2-Butenal / 2-Methyl-2-propenal	3.30E-14	4.13E-15	3.71E-12
2-(2-Butoxyethoxy)ethanol	6.66E-11	8.33E-12	7.48E-09
Chlorocyclohexanol	NA	NA	NA
Decane	5.82E-14	7.28E-15	6.54E-12
4,4-Dimethyl-2-oxetanone	NA	NA	NA
Dioctyl adipate	9.26E-08	1.16E-08	1.04E-05
2-(2-Ethoxyethoxy)ethanol	9.02E-13	1.13E-13	1.01E-10
Ethyl benzaldehyde	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA
Hexenal	NA	NA	NA
Hexenedione	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	2.98E-13	3.73E-14	3.35E-11
Iodine	3.26E-14	4.08E-15	3.67E-12
Iodobenzene	1.35E-13	1.69E-14	1.52E-11
Iodomethane	2.24E-16	2.80E-17	2.51E-14
Methyl benzoate	2.61E-13	3.27E-14	2.93E-11
Methyl hexenone	5.06E-14	6.34E-15	5.69E-12
Nonanoic acid	NA	NA	NA
Silane	0.00E+00	0.00E+00	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-19 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Table 5C-19 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration (µg/m³) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Organics			
Acetaldehyde	2.42E-06	5.98E-03	1.16E-11
Acetone	6.76E-06	1.81E-03	9.78E-12
Acetonitrile	2.05E-05	3.01E-03	4.94E-11
Acrolein	2.42E-06	2.53E-02	4.91E-11
Acrylonitrile	1.58E-06	1.86E-03	2.36E-12
Aldrin	1.31E-07	1.76E+01	1.84E-09
Aniline	6.30E-06	9.36E-06	4.73E-14
Benzaldehyde	1.47E-05	2.02E-01	2.38E-09
Benzene	4.51E-04	4.65E-03	1.68E-09
Benzoic acid	1.49E-05	1.95E+02	2.32E-06
Benzotrichloride	1.57E-07	1.83E-01	2.29E-11
Benzoyl chloride	1.69E-05	NA	NA
Benzyl chloride	9.26E-07	1.23E-01	9.17E-11
Biphenyl	1.83E-06	7.90E-01	1.16E-09
Bis(2-chloroethoxy)methane	5.48E-08	8.08E+00	3.55E-10
Bis(2-ethylhexyl)phthalate	4.28E-06	7.48E+04	2.57E-04
Bromochloromethane	3.53E-06	3.06E-03	8.67E-12
Bromodichloromethane	3.26E-06	6.59E-03	1.72E-11
Bromoform	1.25E-06	8.95E-02	8.94E-11
Bromomethane	8.44E-06	4.12E-04	2.79E-12
2-Butanone (MEK)	5.64E-06	5.64E-03	2.55E-11
Butyl benzyl phthalate	3.48E-07	3.84E+03	1.07E-06
Carbazole	5.48E-08	8.06E+00	3.54E-10
Carbon disulfide	1.13E-06	1.30E-03	1.18E-12
Carbon tetrachloride	8.47E-07	2.82E-03	1.92E-12
alpha-Chlordane	7.83E-08	1.08E+02	6.79E-09
gamma-Chlordane	3.19E-08	7.16E+01	1.83E-09
4-Chloroaniline	5.48E-08	1.16E+00	5.08E-11
Chlorobenzene	3.01E-06	7.42E-03	1.79E-11
Chloroethane	3.84E-07	5.47E-04	1.68E-13
2-Chloroethyl vinyl ether	8.37E-08	5.62E-02	3.77E-12
Chloroform	1.50E-05	5.14E-03	6.20E-11
Chloromethane	9.15E-07	1.47E-05	1.08E-14
4-Chloro-3-methylphenol	5.48E-08	1.11E+02	4.90E-09
beta-Chloronaphthalene	5.48E-08	5.55E+00	2.44E-10
2-Chlorophenol	5.48E-08	2.63E+00	1.16E-10
2-Chloropropane	4.42E-07	8.63E-04	3.06E-13
Dalapon	5.75E-08	1.49E+01	6.86E-10
4,4'-DDD	1.61E-07	1.66E+04	2.15E-06
4,4'-DDE	2.44E-07	5.09E+04	9.97E-06
4,4'-DDT	1.38E-07	2.17E+02	2.41E-08
Decanol	2.39E-06	2.14E+02	4.10E-07
Dibenzofuran	5.48E-08	4.56E+03	2.00E-07
Dibromochloromethane	1.02E-06	2.99E-02	2.43E-11
Dicamba	2.00E-08	1.57E+04	2.52E-07
1,2-Dichlorobenzene	1.64E-07	2.30E-01	3.03E-11
1,3-Dichlorobenzene	5.48E-08	2.93E-01	1.29E-11

Table 5C-19 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
1,4-Dichlorobenzene	8 85E-08	1.25E-01	8 85E-12
3,3'-Dichlorobenzidine	5 08E-08	5 08E+03	2.07E-07
1,1-Dichloroethane	3.53E-06	1.91E-03	5 40E-12
1,2-Dichloroethane	3.55E-07	4 45E-03	1.27E-12
1,1-Dichloroethene	2 15E-07	9 88E-04	1 71E-13
cis-1,2-Dichloroethene	1 02E-06	7.51E-03	6 14E-12
trans-1,2-Dichloroethene	2 62E-07	7.85E-04	1 65E-13
2,4-Dichlorophenol	1 65E-07	9.01E+01	1 20E-08
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	8 12E-08	3 49E+05	2.27E-05
Dichloroprop	5.11E-08	1 79E+04	7.31E-07
Diethyl phthalate	2 01E-06	7.02E+01	1.13E-07
2,4-Dimethylphenol	5.48E-08	5.98E+00	2.63E-10
Dimethyl phthalate	2.10E-06	5.99E+01	1.01E-07
Di-n-butyl phthalate	2.37E-06	8 21E+04	1.56E-04
2,4-Dinitrophenol	5 48E-08	8.53E+03	3.75E-07
Di-n-octyl phthalate	3.41E-07	9.16E+03	2.50E-06
Dioctadecyl ester phosphoric acid	NA	NA	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.29E-12	6 40E+04	2 71E-10
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	2 96E-12	1.20E+05	2 84E-10
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	9 13E-13	4.70E+05	3 44E-10
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	5.84E-13	4.70E+05	2.20E-10
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	7.62E-13	4 70E+05	2 87E-10
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	2.11E-12	3.60E+05	6 08E-10
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	4 88E-13	9.00E+06	3.52E-09
2,3,7,8-Tetrachlorodibenzofuran	2.12E-11	8.50E+04	1.45E-09
2,3,4,7,8-Pentachlorodibenzofuran	1.22E-11	4.90E+04	4 78E-10
1,2,3,7,8-Pentachlorodibenzofuran	1.12E-11	4 90E+04	4 42E-10
1,2,3,4,7,8-Hexachlorodibenzofuran	4.44E-12	1.60E+05	5 70E-10
1,2,3,6,7,8-Hexachlorodibenzofuran	3.17E-12	1.60E+05	4 07E-10
1,2,3,7,8,9-Hexachlorodibenzofuran	8.00E-13	1.60E+05	1.03E-10
2,3,4,6,7,8-Hexachlorodibenzofuran	3.32E-12	1.60E+05	4.25E-10
1,2,3,4,6,7,8-Heptachlorodibenzofuran	9.42E-12	4.70E+05	3.55E-09
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.15E-12	4.70E+05	4 33E-10
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.95E-13	1.30E+06	4 12E-10
Endosulfan I	8.02E-08	9.87E+00	6.35E-10
Endosulfan sulfate	1.61E-08	4.23E+01	5 47E-10
Endrin	2 62E-08	3.20E+05	6.72E-06
Endrin aldehyde	8.13E-09	4.41E+07	2 88E-04
Ethylbenzene	8.01E-07	3.91E-02	2.51E-11
2-Ethyl hexanoic acid	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	3.10E-06	1.98E+04	4.91E-05
2-Fluoro-4-nitrophenol	NA	NA	NA
Heptachlor	1.33E-08	7.02E-01	7 47E-12
Hexachlorobenzene	5 48E-08	3.70E+01	1.62E-09
Hexachlorobutadiene	5.48E-08	8.98E-01	3 95E-11
beta-Hexachlorocyclohexane	9.05E-09	6.74E+03	4.89E-08
Hexachlorocyclopentadiene	5 48E-08	1.54E-01	6.78E-12

Table 5C-19 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Hexachloroethane	5 48E-08	2.24E-02	9 84E-13
Hexadecanoic acid	NA	NA	NA
2-Hexanone	5.63E-06	2.34E-03	1 06E-11
MCPP	3.13E-07	5.93E+04	1 49E-05
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	6.52E-07	4.56E+03	2.38E-06
Methylene chloride	6.25E-06	9.35E-04	4 68E-12
Methyl ester acetic acid	1.75E-06	2.46E-03	3 45E-12
Methyl-3-heptanol	NA	NA	NA
2-Methylnaphthalene	2.21E-07	3.60E+00	6.37E-10
4-Methyl-2-pentanone	8.48E-07	1 73E-01	1 17E-10
2-Methylphenol	2 10E-07	1 97E+01	3 32E-09
3-Methylphenol	8 47E-07	2 40E+01	1.63E-08
4-Methylphenol	2 15E-07	4.13E+01	7.13E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA
Naphthalene	4.33E-07	4.62E-01	1 60E-10
Naphthalene carbonitrile	NA	NA	NA
beta-Naphthylamine	5.48E-08	1.11E+04	4.87E-07
2-Nitroaniline	5 48E-08	1.34E-01	5.87E-12
4-Nitroaniline	1.03E-07	3.69E+02	3.05E-08
Nitrobenzene	4.25E-06	5 46E-01	1.86E-09
2-Nitrophenol	2.53E-06	3.20E+00	6.51E-09
4-Nitrophenol	5.94E-07	5.01E-01	2.39E-10
n-Nitrosodiphenylamine	1.15E-07	9.57E-05	8 79E-15
Octadecanoic acid	2.02E-07	1.76E+12	2.86E+02
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA
PAHs			
Acenaphthene	5.48E-08	8.63E+00	3.79E-10
Acenaphthylene	5.48E-08	2.64E+01	1.16E-09
Anthracene	5 48E-08	8.87E+01	3 90E-09
Benzo(a)anthracene	1.26E-08	1.99E+05	2.01E-06
Benzo(a)pyrene	1.68E-08	9.12E+05	1.23E-05
Benzo(b)fluoranthene	5.33E-08	3.35E+03	1 43E-07
Benzo(e)pyrene	1.84E-08	3.52E+05	5.18E-06
Benzo(g,h,i)perylene	1.28E-09	1.36E+07	1.39E-05
Benzo(j)fluoranthene	5.31E-08	7.78E+03	3.31E-07
Benzo(k)fluoranthene	1.10E-09	2.57E+03	2.27E-09
Chrysene	4.21E-08	1.25E+05	4.22E-06
Dibenzo(a,h)anthracene	3.72E-09	1.59E+07	4.75E-05
Fluoranthene	5.42E-08	3.54E+03	1.54E-07
Fluorene	5.48E-08	4.23E+01	1.86E-09
Indeno(1,2,3-cd)pyrene	3.32E-10	2.43E+09	6.47E-04
Phenanthrene	2.61E-07	2.60E+02	5.46E-08
Pyrene	9 71E-08	4.29E+03	3.34E-07
PCBs			
Monochlorobiphenyls	2.25E-08	1.29E+01	2.34E-10
Dichlorobiphenyls	1.15E-08	1.11E+02	1.02E-09
Trichlorobiphenyls	1.75E-08	3.16E+02	4.44E-09

Table 5C-19 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Tetrachlorobiphenyls	3.51E-08	1.38E+03	3.89E-08
Pentachlorobiphenyls	3.34E-08	1.31E+03	3.51E-08
Hexachlorobiphenyls	2.10E-08	9.17E+03	1.54E-07
Heptachlorobiphenyls	5.19E-09	5.15E+04	2.14E-07
Octachlorobiphenyls	1.80E-09	1.95E+04	2.81E-08
Nonachlorobiphenyls	8.94E-11	2.29E+04	1.64E-09
Decachlorobiphenyls	2.50E-11	4.23E+05	8.50E-09
Pentachlorobenzene	5.48E-08	6.28E+00	2.76E-10
Pentachlorophenol	1.26E-07	1.41E+04	1.42E-06
3-Pentanol	NA	NA	NA
4-Penten-2-ol	NA	NA	NA
Phenol	1.20E-05	3.84E+00	3.69E-08
Phthalic anhydride	6.76E-06	4.90E+00	2.66E-08
Quinoline	8.09E-07	8.11E+01	5.26E-08
Quinone	6.76E-06	2.19E-01	1.18E-09
Styrene	2.66E-07	7.01E-02	1.49E-11
1,2,4,5-Tetrachlorobenzene	9.75E-08	1.41E+00	1.10E-10
Tetrachloroethene	4.88E-07	2.16E-02	8.46E-12
2,3,4,6-Tetrachlorophenol	5.48E-08	9.11E+02	4.00E-08
Toluene	1.64E-06	1.72E-02	2.26E-11
1,2,4-Trichlorobenzene	5.48E-08	6.81E-01	3.00E-11
1,2,5-Trichlorobenzene	2.47E-05	6.81E-01	1.35E-08
1,1,1-Trichloroethane	5.35E-07	1.53E-02	6.56E-12
Trichloroethene	2.08E-07	3.82E-03	6.38E-13
Trichlorofluoromethane	4.02E-04	1.18E-03	3.81E-10
2,3,6-Trichlorophenol	8.76E-06	5.06E+02	3.55E-06
2,4,5-Trichlorophenol	5.48E-08	5.73E+02	2.52E-08
2,4,6-Trichlorophenol	1.88E-07	2.96E+02	4.46E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1.50E-08	3.45E+04	4.15E-07
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	8.58E-09	4.21E+03	2.90E-08
Undecane	2.45E-05	1.87E+00	3.69E-08
Vinyl acetate	8.47E-07	1.73E-03	1.18E-12
Vinyl chloride	6.53E-07	1.08E-05	5.67E-15
o-Xylene	4.16E-07	5.97E-02	1.99E-11
m,p-Xylene	1.13E-06	5.16E-02	4.68E-11
Metals - Inorganics			
Aluminum	NA	not applicable	NA
Antimony	NA	not applicable	NA
Arsenic	NA	not applicable	NA
Barium	NA	not applicable	NA
Beryllium	NA	not applicable	NA
Cadmium	NA	not applicable	NA
Calcium	NA	not applicable	NA
Chromium III	NA	not applicable	NA
Cobalt	NA	not applicable	NA
Copper	NA	not applicable	NA
Iron	NA	not applicable	NA
Lead	NA	not applicable	NA

Table 5C-19 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration (µg/m³) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Magnesium	NA	not applicable	NA
Manganese	NA	not applicable	NA
Mercury (inorganic)	5.88E-05	1.00E+03	4.72E-05
Nickel	NA	not applicable	NA
Potassium	NA	not applicable	NA
Selenium	NA	not applicable	NA
Silver	NA	not applicable	NA
Sodium	NA	not applicable	NA
Vanadium	NA	not applicable	NA
Zinc	NA	not applicable	NA
TICs			
Acetophenone	2.42E-06	6.26E-01	1.21E-09
Benzonitrile	7.38E-07	1.22E-01	7.24E-11
Bromobenzene	3.08E-06	1.02E-01	2.52E-10
2-Butenal / 2-Methyl-2-propenal	2.56E-05	1.31E-01	2.69E-09
2-(2-Butoxyethoxy)ethanol	3.45E-05	3.56E+01	9.84E-07
Chlorocyclohexanol	NA	NA	NA
Decane	2.15E-06	6.31E-02	1.09E-10
4,4-Dimethyl-2-oxetanone	NA	NA	NA
Dioctyl adipate	2.04E-06	1.03E+06	1.68E-03
2-(2-Ethoxyethoxy)ethanol	2.94E-06	7.61E-01	1.80E-09
Ethyl benzaldehyde	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA
Hexenal	NA	NA	NA
Hexenedione	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	7.49E-06	7.37E-01	4.43E-09
Iodine	7.39E-06	6.40E-03	3.79E-11
Iodobenzene	3.42E-06	5.22E-01	1.43E-09
Iodomethane	2.32E-06	1.07E-03	1.99E-12
Methyl benzoate	6.76E-06	7.77E-01	4.21E-09
Methyl hexenone	4.94E-06	NA	NA
Nonanoic acid	NA	NA	NA
Silane	2.42E-06	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-20 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Table 5C-20 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics				
Acetaldehyde	3.71E-06	1.24E-06	2.47E-07	1.85E-07
Acetone	2.28E-05	7.59E-06	1.52E-06	1.14E-06
Acetonitrile	8.00E-05	2.67E-05	5.33E-06	4.00E-06
Acrolein	6.04E-06	2.01E-06	4.03E-07	3.02E-07
Acrylonitrile	2.92E-06	9.73E-07	1.95E-07	1.46E-07
Aldrin	7.50E-08	2.50E-08	5.00E-09	3.75E-09
Aniline	4.38E-06	1.46E-06	2.92E-07	2.19E-07
Benzaldehyde	8.92E-06	2.97E-06	5.94E-07	4.46E-07
Benzene	4.08E-04	1.36E-04	2.72E-05	2.04E-05
Benzoic acid	1.06E-05	3.53E-06	7.05E-07	5.29E-07
Benzotrichloride	1.25E-07	4.16E-08	8.33E-09	6.25E-09
Benzoyl chloride	1.29E-05	4.29E-06	8.59E-07	6.44E-07
Benzyl chloride	8.53E-07	2.84E-07	5.68E-08	4.26E-08
Biphenyl	2.35E-06	7.85E-07	1.57E-07	1.18E-07
Bis(2-chloroethoxy)methane	3.12E-08	1.04E-08	2.08E-09	1.56E-09
Bis(2-ethylhexyl)phthalate	3.95E-04	1.37E-04	2.98E-05	2.24E-05
Bromochloromethane	1.60E-06	5.32E-07	1.06E-07	7.98E-08
Bromodichloromethane	1.23E-06	4.09E-07	8.19E-08	6.14E-08
Bromoform	4.14E-07	1.38E-07	2.76E-08	2.07E-08
Bromomethane	5.25E-06	1.75E-06	3.50E-07	2.63E-07
2-Butanone (MEK)	7.80E-06	2.60E-06	5.20E-07	3.90E-07
Butyl benzyl phthalate	1.60E-06	6.56E-07	1.80E-07	1.36E-07
Carbazole	1.34E-07	5.10E-08	1.03E-08	7.70E-09
Carbon disulfide	1.05E-06	3.50E-07	7.00E-08	5.25E-08
Carbon tetrachloride	1.04E-06	3.47E-07	6.95E-08	5.21E-08
alpha-Chlordane	3.65E-08	1.82E-08	8.17E-09	6.57E-09
gamma-Chlordane	1.24E-08	6.58E-09	3.14E-09	2.53E-09
4-Chloroaniline	2.79E-08	9.30E-09	1.86E-09	1.40E-09
Chlorobenzene	2.49E-06	8.30E-07	1.66E-07	1.24E-07
Chloroethane	5.59E-07	1.86E-07	3.72E-08	2.79E-08
2-Chloroethyl vinyl ether	6.21E-08	2.07E-08	4.14E-09	3.11E-09
Chloroform	1.37E-05	4.58E-06	9.17E-07	6.87E-07
Chloromethane	1.01E-06	3.35E-07	6.70E-08	5.03E-08
4-Chloro-3-methylphenol	9.94E-08	3.31E-08	6.63E-09	4.97E-09
beta-Chloronaphthalene	8.45E-08	4.27E-08	9.66E-09	7.25E-09
2-Chlorophenol	3.46E-08	1.15E-08	2.31E-09	1.73E-09
2-Chloropropane	4.19E-07	1.40E-07	2.80E-08	2.10E-08
Dalapon	4.66E-08	1.55E-08	3.11E-09	2.33E-09
4,4'-DDD	2.27E-06	7.72E-07	1.68E-07	1.28E-07
4,4'-DDE	1.00E-05	3.35E-06	6.74E-07	5.06E-07
4,4'-DDT	5.46E-07	1.89E-07	4.35E-08	3.34E-08
Decanol	4.11E-07	1.37E-07	2.74E-08	2.06E-08
Dibenzofuran	2.71E-07	1.03E-07	2.15E-08	1.61E-08
Dibromochloromethane	3.27E-07	1.09E-07	2.18E-08	1.64E-08
Dicamba	2.67E-07	8.90E-08	1.78E-08	1.34E-08
1,2-Dichlorobenzene	3.63E-07	1.23E-07	2.45E-08	1.84E-08
1,3-Dichlorobenzene	1.43E-07	5.10E-08	1.02E-08	7.67E-09

Table 5C-20 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,4-Dichlorobenzene	1.95E-07	6.56E-08	1.31E-08	9.85E-09
3,3'-Dichlorobenzidine	2.85E-07	9.51E-08	1.90E-08	1.43E-08
1,1-Dichloroethane	2.35E-06	7.82E-07	1.56E-07	1.17E-07
1,2-Dichloroethane	2.73E-07	9.09E-08	1.82E-08	1.36E-08
1,1-Dichloroethene	1.98E-07	6.60E-08	1.32E-08	9.90E-09
cis-1,2-Dichloroethene	8.61E-07	2.87E-07	5.74E-08	4.30E-08
trans-1,2-Dichloroethene	1.55E-07	5.18E-08	1.04E-08	7.77E-09
2,4-Dichlorophenol	1.87E-07	6.23E-08	1.25E-08	9.35E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	2.29E-05	7.64E-06	1.53E-06	1.15E-06
Dichloroprop	7.31E-07	2.44E-07	4.88E-08	3.66E-08
Diethyl phthalate	1.76E-06	5.86E-07	1.17E-07	8.79E-08
2,4-Dimethylphenol	4.30E-08	1.43E-08	2.86E-09	2.15E-09
Dimethyl phthalate	1.51E-06	5.04E-07	1.01E-07	7.56E-08
Di-n-butyl phthalate	1.59E-04	5.38E-05	1.11E-05	8.36E-06
2,4-Dinitrophenol	3.92E-07	1.31E-07	2.62E-08	1.96E-08
Di-n-octyl phthalate	2.61E-06	9.10E-07	2.08E-07	1.58E-07
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA
Dioxins/Furans				
2,3,7,8-Tetrachlorodibenzo(p)dioxin	3.13E-10	1.05E-10	2.13E-11	1.60E-11
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	3.68E-10	1.23E-10	2.50E-11	1.88E-11
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	4.53E-10	1.51E-10	3.03E-11	2.27E-11
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	5.08E-10	1.69E-10	3.41E-11	2.56E-11
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	4.81E-10	1.61E-10	3.24E-11	2.43E-11
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	1.58E-09	5.27E-10	1.06E-10	7.95E-11
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	5.71E-09	1.90E-09	3.83E-10	2.88E-10
2,3,7,8-Tetrachlorodibenzofuran	1.53E-09	5.12E-10	1.04E-10	7.80E-11
2,3,4,7,8-Pentachlorodibenzofuran	7.51E-10	2.52E-10	5.13E-11	3.86E-11
1,2,3,7,8-Pentachlorodibenzofuran	5.95E-10	1.99E-10	4.06E-11	3.06E-11
1,2,3,4,7,8-Hexachlorodibenzofuran	1.25E-09	4.18E-10	8.46E-11	6.36E-11
1,2,3,6,7,8-Hexachlorodibenzofuran	8.57E-10	2.86E-10	5.80E-11	4.36E-11
1,2,3,7,8,9-Hexachlorodibenzofuran	1.66E-10	5.53E-11	1.12E-11	8.39E-12
2,3,4,6,7,8-Hexachlorodibenzofuran	8.65E-10	2.89E-10	5.86E-11	4.40E-11
1,2,3,4,6,7,8-Heptachlorodibenzofuran	5.61E-09	1.87E-09	3.76E-10	2.82E-10
1,2,3,4,7,8,9-Heptachlorodibenzofuran	8.65E-10	2.89E-10	5.80E-11	4.35E-11
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	2.21E-09	7.36E-10	1.48E-10	1.11E-10
Endosulfan I	6.78E-08	2.43E-08	4.87E-09	3.65E-09
Endosulfan sulfate	3.28E-08	1.21E-08	2.42E-09	1.81E-09
Endrin	6.74E-06	2.25E-06	4.51E-07	3.38E-07
Endrin aldehyde	2.88E-04	9.59E-05	1.92E-05	1.44E-05
Ethylbenzene	1.54E-06	5.14E-07	1.03E-07	7.71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.45E-05	1.82E-05	3.63E-06	2.72E-06
2-Fluoro-4-nitrophenol	NA	NA	NA	NA
Heptachlor	1.05E-08	4.40E-09	9.04E-10	6.78E-10
Hexachlorobenzene	3.43E-08	2.50E-08	1.43E-08	1.15E-08
Hexachlorobutadiene	5.54E-08	3.94E-08	1.78E-08	1.37E-08
beta-Hexachlorocyclohexane	6.99E-08	2.47E-08	4.96E-09	3.72E-09
Hexachlorocyclopentadiene	5.35E-08	2.46E-08	5.23E-09	3.92E-09

Table 5C-20 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachloroethane	1.28E-08	4.29E-09	8.57E-10	6.43E-10
Hexadecanoic acid	NA	NA	NA	NA
2-Hexanone	3.56E-06	1.19E-06	2.37E-07	1.78E-07
MCPP	1.55E-05	5.17E-06	1.03E-06	7.76E-07
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	3.03E-06	1.01E-06	2.02E-07	1.51E-07
Methylene chloride	4.77E-06	1.59E-06	3.18E-07	2.38E-07
Methyl ester acetic acid	3.49E-12	1.16E-12	2.33E-13	1.75E-13
Methyl-3-heptanol	NA	NA	NA	NA
2-Methylnaphthalene	4.62E-07	1.92E-07	3.95E-08	2.96E-08
4-Methyl-2-pentanone	5.56E-07	1.85E-07	3.71E-08	2.78E-08
2-Methylphenol	1.54E-07	5.15E-08	1.03E-08	7.72E-09
3-Methylphenol	6.29E-07	2.10E-07	4.19E-08	3.15E-08
4-Methylphenol	1.61E-07	5.38E-08	1.08E-08	8.06E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA
Naphthalene	6.25E-07	2.08E-07	4.17E-08	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA
beta-Naphthylamine	5.18E-07	1.73E-07	3.45E-08	2.59E-08
2-Nitroaniline	3.55E-08	1.18E-08	2.37E-09	1.77E-09
4-Nitroaniline	7.71E-08	2.57E-08	5.14E-09	3.85E-09
Nitrobenzene	2.96E-06	9.85E-07	1.97E-07	1.48E-07
2-Nitrophenol	1.25E-06	4.15E-07	8.31E-08	6.23E-08
4-Nitrophenol	2.92E-07	9.73E-08	1.95E-08	1.46E-08
n-Nitrosodiphenylamine	2.01E-07	6.70E-08	1.34E-08	1.01E-08
Octadecanoic acid	2.86E+02	9.52E+01	1.90E+01	1.43E+01
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA
PAHs				
Acenaphthene	1.04E-07	4.54E-08	9.44E-09	7.08E-09
Acenaphthylene	1.02E-07	4.98E-08	1.10E-08	8.22E-09
Anthracene	6.63E-08	3.97E-08	1.16E-08	8.68E-09
Benzo(a)anthracene	2.43E-06	8.18E-07	1.70E-07	1.28E-07
Benzo(a)pyrene	1.27E-05	4.23E-06	8.49E-07	6.37E-07
Benzo(b)fluoranthene	1.64E-07	5.76E-08	1.39E-08	1.08E-08
Benzo(e)pyrene	5.54E-06	1.85E-06	3.75E-07	2.81E-07
Benzo(g,h,i)perylene	1.45E-05	4.82E-06	9.66E-07	7.25E-07
Benzo(j)fluoranthene	8.70E-07	2.98E-07	6.68E-08	5.10E-08
Benzo(k)fluoranthene	5.22E-07	1.76E-07	3.65E-08	2.76E-08
Chrysene	4.36E-06	1.46E-06	2.96E-07	2.23E-07
Dibenzo(a,h)anthracene	4.80E-05	1.60E-05	3.21E-06	2.40E-06
Fluoranthene	1.97E-07	7.94E-08	2.24E-08	1.71E-08
Fluorene	1.13E-07	6.05E-08	1.45E-08	1.09E-08
Indeno(1,2,3-cd)pyrene	6.47E-04	2.16E-04	4.32E-05	3.24E-05
Phenanthrene	4.29E-07	2.61E-07	8.38E-08	6.31E-08
Pyrene	4.56E-07	1.88E-07	5.41E-08	4.12E-08
PCBs				
Monochlorobiphenyls	1.69E-08	1.04E-08	3.12E-09	2.35E-09
Dichlorobiphenyls	5.37E-09	3.51E-09	1.69E-09	1.32E-09
Trichlorobiphenyls	7.44E-09	3.76E-09	1.78E-09	1.45E-09

Table 5C-20 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Tetrachlorobiphenyls	4.39E-08	1.65E-08	4 88E-09	3 85E-09
Pentachlorobiphenyls	3 84E-08	1.39E-08	3 76E-09	2.95E-09
Hexachlorobiphenyls	1.61E-07	5.39E-08	1 10E-08	8.31E-09
Heptachlorobiphenyls	2.24E-07	7.46E-08	1 50E-08	1 13E-08
Octachlorobiphenyls	2.97E-08	9 91E-09	2 00E-09	1 50E-09
Nonachlorobiphenyls	6.28E-09	2 10E-09	4.25E-10	3.19E-10
Decachlorobiphenyls	8.89E-09	2 96E-09	5 93E-10	4 45E-10
Pentachlorobenzene	4 05E-08	2.99E-08	1.62E-08	1.28E-08
Pentachlorophenol	1.52E-06	5.45E-07	1.33E-07	1.01E-07
3-Pentano	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA
Phenol	7.87E-06	2.62E-06	5.25E-07	3.94E-07
Phthalic anhydride	2.56E-05	8.54E-06	1 71E-06	1.28E-06
Quinoline	5.51E-07	1.84E-07	3.67E-08	2.75E-08
Quinone	8 42E-06	2 81E-06	5 62E-07	4 21E-07
Styrene	4.11E-07	1.37E-07	2 74E-08	2 06E-08
1,2,4,5-Tetrachlorobenzene	6 44E-08	4 36E-08	1.64E-08	1.24E-08
Tetrachloroethene	1 13E-06	3.83E-07	7.66E-08	5.75E-08
2,3,4,6-Tetrachlorophenol	1.02E-07	4.44E-08	9 61E-09	7.21E-09
Toluene	2.30E-06	7.67E-07	1.53E-07	1 15E-07
1,2,4-Trichlorobenzene	8 03E-08	3 77E-08	8 12E-09	6.09E-09
1,2,5-Trichlorobenzene	3.62E-05	1.70E-05	3.66E-06	2.75E-06
1,1,1-Trichloroethane	5.89E-07	1.96E-07	3.93E-08	2 95E-08
Trichloroethene	1.97E-07	6.57E-08	1.31E-08	9.85E-09
Trichlorofluoromethane	4.93E-04	1.64E-04	3.29E-05	2.47E-05
2,3,6-Trichlorophenol	1.71E-05	6.70E-06	1.36E-06	1.02E-06
2,4,5-Trichlorophenol	1 05E-07	4.45E-08	9.27E-09	6.95E-09
2,4,6-Trichlorophenol	3.38E-07	1.25E-07	2.50E-08	1.88E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	4.31E-07	1.44E-07	2.87E-08	2.15E-08
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	3.27E-08	1.09E-08	2.18E-09	1.64E-09
Undecane	3.72E-08	1.24E-08	2.48E-09	1.86E-09
Vinyl acetate	7.60E-07	2.53E-07	5.07E-08	3.80E-08
Vinyl chloride	7.62E-07	2.54E-07	5 08E-08	3 81E-08
o-Xylene	8.62E-07	2.87E-07	5 75E-08	4.31E-08
m,p-Xylene	2.17E-06	7.26E-07	1 45E-07	1.09E-07
Metals - Inorganics				
Aluminum	2.69E-02	9.03E-03	1.85E-03	1.39E-03
Antimony	1.07E-05	3.64E-06	7.28E-07	5 46E-07
Arsenic	9.93E-07	3 43E-07	7.06E-08	5.29E-08
Barium	2.28E-03	7.78E-04	1.56E-04	1.17E-04
Beryllium	1.47E-06	4.99E-07	1.03E-07	7 77E-08
Cadmium	2.27E-05	7.56E-06	1.51E-06	1.13E-06
Calcium	4.82E-02	1 61E-02	3.21E-03	2 41E-03
Chromium III	3.22E-05	1.09E-05	2.25E-06	1.69E-06
Cobalt	2.03E-06	6.78E-07	1.36E-07	1.02E-07
Copper	2.71E-04	9.15E-05	1.83E-05	1.37E-05
Iron	2 44E-03	8.14E-04	1.63E-04	1.22E-04
Lead	9.87E-05	3.53E-05	8.36E-06	6.34E-06

Table 5C-20 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Magnesium	1.43E-02	4.76E-03	9.52E-04	7.14E-04
Manganese	4.39E-05	1.53E-05	3.08E-06	2.31E-06
Mercury (inorganic)	1.40E-03	7.23E-04	1.68E-04	1.26E-04
Nickel	1.47E-04	5.11E-05	1.04E-05	7.83E-06
Potassium	7.65E-03	2.55E-03	5.10E-04	3.83E-04
Selenium	3.35E-05	1.15E-05	2.38E-06	1.79E-06
Silver	9.07E-05	3.11E-05	6.23E-06	4.67E-06
Sodium	1.32E-01	4.54E-02	9.16E-03	6.87E-03
Vanadium	1.81E-05	6.06E-06	1.21E-06	9.10E-07
Zinc	1.13E-03	3.95E-04	7.92E-05	5.94E-05
TICs				
Acetophenone	1.29E-06	4.32E-07	8.63E-08	6.47E-08
Benzonitrile	4.39E-07	1.46E-07	2.92E-08	2.19E-08
Bromobenzene	3.07E-06	1.02E-06	2.04E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	1.90E-05	6.34E-06	1.27E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	2.23E-05	7.42E-06	1.48E-06	1.11E-06
Chlorocyclohexanol	NA	NA	NA	NA
Decane	1.16E-10	3.86E-11	7.78E-12	5.84E-12
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA
Dioctyl adipate	1.69E-03	5.65E-04	1.13E-04	8.49E-05
2-(2-Ethoxyethoxy)ethanol	8.21E-06	2.74E-06	5.47E-07	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4.47E-09	1.49E-09	2.98E-10	2.23E-10
Iodine	4.19E-11	1.40E-11	2.79E-12	2.09E-12
Iodobenzene	1.45E-09	4.83E-10	9.66E-11	7.25E-11
Iodomethane	2.02E-12	6.72E-13	1.34E-13	1.01E-13
Methyl benzoate	4.24E-09	1.41E-09	2.83E-10	2.12E-10
Methyl hexenone	5.69E-12	1.90E-12	3.80E-13	2.85E-13
Nonanoic acid	NA	NA	NA	NA
Silane	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-21 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Table 5C-21 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics					
Acetaldehyde	2.19E+01	3.71E-06	1.24E-06	2.47E-07	1.85E-07
Acetone	5.33E+01	2.28E-05	7.59E-06	1.52E-06	1.14E-06
Acetonitrile	6.09E+01	8.00E-05	2.67E-05	5.33E-06	4.00E-06
Acrolein	4.37E+01	6.04E-06	2.01E-06	4.03E-07	3.02E-07
Acrylonitrile	2.78E+01	2.92E-06	9.73E-07	1.95E-07	1.46E-07
Aldrin	7.05E-01	2.74E-08	1.65E-08	4.64E-09	3.48E-09
Aniline	1.17E+01	4.38E-06	1.46E-06	2.92E-07	2.19E-07
Benzaldehyde	5.40E+00	8.91E-06	2.97E-06	5.94E-07	4.46E-07
Benzene	2.27E+00	3.94E-04	1.36E-04	2.72E-05	2.04E-05
Benzoic acid	3.21E+00	8.22E-06	2.75E-06	5.50E-07	4.13E-07
Benzotrichloride	7.95E-01	5.71E-08	3.24E-08	8.33E-09	6.25E-09
Benzoyl chloride	1.81E+00	1.17E-05	4.28E-06	8.59E-07	6.44E-07
Benzyl chloride	1.81E+00	7.72E-07	2.83E-07	5.68E-08	4.26E-08
Biphenyl	5.77E-01	7.05E-07	4.61E-07	1.56E-07	1.17E-07
Bis(2-chloroethoxy)methane	7.24E+00	3.08E-08	1.03E-08	2.06E-09	1.54E-09
Bis(2-ethylhexyl)phthalate	5.78E-02	7.71E-07	6.37E-07	6.91E-07	6.79E-07
Bromochloromethane	5.93E+00	1.60E-06	5.32E-07	1.06E-07	7.98E-08
Bromodichloromethane	3.17E+00	1.22E-06	4.09E-07	8.19E-08	6.14E-08
Bromoform	1.63E+00	3.57E-07	1.37E-07	2.76E-08	2.07E-08
Bromomethane	7.95E+00	5.25E-06	1.75E-06	3.50E-07	2.63E-07
2-Butanone (MEK)	2.74E+01	7.80E-06	2.60E-06	5.20E-07	3.90E-07
Butyl benzyl phthalate	6.78E-02	1.97E-08	1.63E-08	1.75E-08	1.71E-08
Carbazole	2.74E-01	1.50E-08	1.16E-08	7.93E-09	6.64E-09
Carbon disulfide	2.70E+00	1.04E-06	3.50E-07	7.00E-08	5.25E-08
Carbon tetrachloride	1.18E+00	7.24E-07	3.28E-07	6.95E-08	5.21E-08
alpha-Chlordane	2.67E-02	7.58E-10	6.29E-10	7.02E-10	6.97E-10
gamma-Chlordane	2.67E-02	3.06E-10	2.54E-10	2.83E-10	2.81E-10
4-Chloroaniline	3.39E+00	2.78E-08	9.28E-09	1.86E-09	1.39E-09
Chlorobenzene	2.13E+00	2.37E-06	8.29E-07	1.66E-07	1.24E-07
Chloroethane	5.77E+00	5.59E-07	1.86E-07	3.72E-08	2.79E-08
2-Chloroethyl vinyl ether	1.04E+01	6.21E-08	2.07E-08	4.14E-09	3.11E-09
Chloroform	2.81E+00	1.36E-05	4.58E-06	9.17E-07	6.87E-07
Chloromethane	1.15E+01	1.01E-06	3.35E-07	6.70E-08	5.03E-08
4-Chloro-3-methylphenol	6.25E-01	3.17E-08	2.01E-08	6.28E-09	4.72E-09
beta-Chloronaphthalene	2.21E+00	6.18E-09	4.98E-09	4.52E-09	4.15E-09
2-Chlorophenol	2.21E+00	3.31E-08	1.15E-08	2.30E-09	1.73E-09
2-Chloropropane	3.09E+00	4.17E-07	1.40E-07	2.80E-08	2.10E-08
Dalapon	1.38E+01	4.59E-08	1.53E-08	3.06E-09	2.30E-09
4,4'-DDD	1.28E-02	1.91E-09	1.59E-09	1.79E-09	1.78E-09
4,4'-DDE	6.69E-03	6.65E-10	5.52E-10	6.22E-10	6.20E-10
4,4'-DDT	8.16E-03	7.77E-10	6.45E-10	7.27E-10	7.25E-10
Decanol	8.84E-02	8.92E-12	7.33E-12	7.63E-12	7.37E-12
Dibenzofuran	1.61E-01	5.19E-09	4.18E-09	3.80E-09	3.48E-09
Dibromochloromethane	2.40E+00	3.19E-07	1.09E-07	2.18E-08	1.64E-08
Dicamba	2.04E+00	1.44E-08	5.07E-09	1.02E-09	7.62E-10
1,2-Dichlorobenzene	4.31E-01	7.19E-08	5.13E-08	2.35E-08	1.81E-08
1,3-Dichlorobenzene	3.22E-01	1.92E-08	1.45E-08	8.75E-09	7.10E-09

Table 5C-21 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,4-Dichlorobenzene	4.37E-01	3 93E-08	2 79E-08	1.26E-08	9 72E-09
3,3'-Dichlorobenzidine	6.96E-01	1.53E-08	9.29E-09	2 65E-09	1 99E-09
1,1-Dichloroethane	3.58E+00	2.34E-06	7 82E-07	1.56E-07	1 17E-07
1,2-Dichloroethane	5 40E+00	2 73E-07	9 09E-08	1 82E-08	1 36E-08
1,1-Dichloroethene	2.27E+00	1.91E-07	6 60E-08	1 32E-08	9 90E-09
cis-1,2-Dichlorocthene	2.07E+00	8.14E-07	2 87E-07	5 74E-08	4 30E-08
trans-1,2-Dichloroethene	5 40E+00	1.55E-07	5 18E-08	1 04E-08	7 77E-09
2,4-Dichlorophenol	6.60E-01	6.29E-08	3 90E-08	1 16E-08	8 75E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53E-01	2.62E-08	1.95E-08	1.09E-08	8.65E-09
Dichloroprop	7 14E-01	1.49E-11	8 90E-12	2 48E-12	1 86E-12
Diethyl phthalate	1.45E+00	1.32E-06	5.36E-07	1 09E-07	8.20E-08
2,4-Dimethylphenol	1.81E+00	3.87E-08	1 42E-08	2 85E-09	2 13E-09
Dimethyl phthalate	2.30E+00	1.36E-06	4 70E-07	9 41E-08	7 05E-08
Di-n-butyl phthalate	5.70E-02	1 16E-07	9.58E-08	1 04E-07	1 02E-07
2,4-Dinitrophenol	5.26E+00	1 72E-08	5.74E-09	1.15E-09	8 60E-10
Di-n-octyl phthalate	3.72E-02	5.21E-09	4.32E-09	4.78E-09	4 74E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.62E-03	4.63E-14	3.84E-14	4 33E-14	4.32E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5.62E-03	5.37E-14	4 46E-14	5 03E-14	5 01E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	1.20E-14	9 98E-15	1.13E-14	1 12E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	2.97E-14	2 47E-14	2 78E-14	2 78E-14
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	3.91E-14	3.24E-14	3.66E-14	3 65E-14
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	5.83E-14	4 84E-14	5 47E-14	5 45E-14
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	2.89E-13	2 40E-13	2 71E-13	2 70E-13
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	1 71E-13	1.42E-13	1.60E-13	1 59E-13
2,3,4,7,8-Pentachlorodibenzofuran	3.87E-03	1.30E-13	1.08E-13	1.22E-13	1.22E-13
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	1.05E-13	8.73E-14	9.85E-14	9 82E-14
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	1.41E-13	1.17E-13	1.32E-13	1.32E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	9.39E-14	7.79E-14	8.79E-14	8 77E-14
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	1.39E-14	1.15E-14	1.30E-14	1.30E-14
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	9.22E-14	7.66E-14	8.64E-14	8 62E-14
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	1.89E-13	1.57E-13	1.77E-13	1 76E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	3.88E-14	3.22E-14	3.63E-14	3 62E-14
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.17E-04	4.75E-14	3 94E-14	4.45E-14	4 43E-14
Endosulfan I	3.13E-01	8.16E-09	6.19E-09	3.83E-09	3 12E-09
Endosulfan sulfate	2.97E-01	3 93E-09	3.00E-09	1 94E-09	1.60E-09
Endrin	2.24E-02	2.28E-10	1.89E-10	2 12E-10	2 11E-10
Endrin aldehyde	2.24E-02	1.75E-10	1 45E-10	1 63E-10	1.62E-10
Ethylbenzene	5.85E-01	4.71E-07	3.06E-07	1 02E-07	7 71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.48E-01	1.49E-06	9 93E-07	3.55E-07	2.68E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	9.64E-10	7.60E-10	5.93E-10	5 16E-10
Hexachlorobenzene	3.30E-02	1.74E-09	1.44E-09	1.60E-09	1.59E-09
Hexachlorobutadiene	5.70E-02	3.07E-09	2.54E-09	2 76E-09	2.71E-09
beta-Hexachlorocyclohexane	2.46E-01	2.10E-09	1.64E-09	1.21E-09	1 04E-09
Hexachlorocyclopentadiene	1.91E-01	4.36E-09	3 48E-09	2.95E-09	2.64E-09

Table 5C-21 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachloroethane	4.54E-01	2.72E-09	1.92E-09	8.30E-10	6.37E-10
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	3.56E-06	1.19E-06	2.37E-07	1.78E-07
MCPP	6.01E-01	1.66E-07	1.07E-07	3.49E-08	2.62E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	4.50E-07	1.54E-07	3.07E-08	2.30E-08
Methylene chloride	7.34E+00	4.77E-06	1.59E-06	3.18E-07	2.38E-07
Methyl ester acetic acid	3.05E+01	3.52E-15	1.17E-15	2.35E-16	1.76E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	4.30E-08	3.39E-08	2.62E-08	2.28E-08
4-Methyl-2-pentanone	7.95E+00	5.56E-07	1.85E-07	3.71E-08	2.78E-08
2-Methylphenol	2.89E+00	1.50E-07	5.04E-08	1.01E-08	7.56E-09
3-Methylphenol	2.85E+00	6.07E-07	2.04E-07	4.09E-08	3.06E-08
4-Methylphenol	2.93E+00	1.53E-07	5.14E-08	1.03E-08	7.71E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	2.46E-07	1.48E-07	4.17E-08	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	2.98E-08	1.02E-08	2.03E-09	1.52E-09
2-Nitroaniline	3.30E+00	3.53E-08	1.18E-08	2.36E-09	1.77E-09
4-Nitroaniline	6.09E+00	4.66E-08	1.55E-08	3.10E-09	2.33E-09
Nitrobenzene	3.30E+00	2.94E-06	9.85E-07	1.97E-07	1.48E-07
2-Nitrophenol	3.58E+00	1.24E-06	4.13E-07	8.27E-08	6.20E-08
4-Nitrophenol	3.05E+00	2.89E-07	9.69E-08	1.94E-08	1.45E-08
n-Nitrosodiphenylamine	6.01E-01	6.37E-08	4.10E-08	1.34E-08	1.00E-08
Octadecanoic acid	6.78E-04	1.19E-09	9.85E-10	1.11E-09	1.11E-09
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	2.10E-01	9.08E-09	7.20E-09	5.82E-09	5.13E-09
Acenaphthylene	1.72E-01	7.71E-09	6.20E-09	5.49E-09	4.98E-09
Anthracene	1.04E-01	3.84E-09	3.15E-09	3.20E-09	3.06E-09
Benzo(a)anthracene	2.22E-02	1.00E-09	8.33E-10	9.33E-10	9.28E-10
Benzo(a)pyrene	1.12E-02	5.04E-10	4.18E-10	4.71E-10	4.69E-10
Benzo(b)fluoranthene	1.12E-02	3.33E-10	2.76E-10	3.11E-10	3.10E-10
Benzo(e)pyrene	1.25E-02	5.63E-10	4.68E-10	5.26E-10	5.24E-10
Benzo(g,h,i)perylene	5.19E-03	2.28E-10	1.89E-10	2.13E-10	2.12E-10
Benzo(j)fluoranthene	1.12E-02	9.85E-10	8.18E-10	9.21E-10	9.17E-10
Benzo(k)fluoranthene	4.31E-03	1.88E-10	1.56E-10	1.76E-10	1.75E-10
Chrysene	2.22E-02	7.57E-10	6.28E-10	7.03E-10	6.99E-10
Dibenzo(a,h)anthracene	6.78E-03	3.02E-10	2.51E-10	2.82E-10	2.82E-10
Fluoranthene	5.70E-02	2.03E-09	1.68E-09	1.82E-09	1.79E-09
Fluorene	1.43E-01	7.68E-09	6.23E-09	5.88E-09	5.46E-09
Indeno(1,2,3-cd)pyrene	6.06E-03	2.65E-10	2.20E-10	2.48E-10	2.47E-10
Phenanthrene	8.84E-02	2.21E-08	1.82E-08	1.89E-08	1.83E-08
Pyrene	5.85E-02	5.32E-09	4.40E-09	4.77E-09	4.68E-09
PCBs					
Monochlorobiphenyls	1.01E-01	1.02E-09	8.36E-10	8.53E-10	8.17E-10
Dichlorobiphenyls	4.55E-02	2.35E-10	1.95E-10	2.14E-10	2.11E-10
Trichlorobiphenyls	1.97E-02	1.56E-10	1.29E-10	1.45E-10	1.44E-10

Table 5C-21 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Tetrachlorobiphenyls	1.41E-02	2.24E-10	1.86E-10	2.09E-10	2.09E-10
Pentachlorobiphenyls	8.73E-03	1.32E-10	1.10E-10	1.24E-10	1.23E-10
Hexachlorobiphenyls	3.35E-03	3.34E-11	2.77E-11	3.12E-11	3.12E-11
Heptachlorobiphenyls	4.25E-03	1.32E-11	1.10E-11	1.24E-11	1.23E-11
Octachlorobiphenyls	2.50E-03	2.35E-12	1.95E-12	2.20E-12	2.19E-12
Nonachlorobiphenyls	1.51E-03	6.40E-13	5.32E-13	6.00E-13	5.98E-13
Decachlorobiphenyls	6.51E-04	2.80E-14	2.33E-14	2.63E-14	2.62E-14
Pentachlorobenzene	3.98E-02	2.17E-09	1.80E-09	1.99E-09	1.96E-09
Pentachlorophenol	4.25E-02	5.26E-09	4.35E-09	4.80E-09	4.74E-09
3-Pentanol	6.25E+00	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	5.55E+00	7.84E-06	2.61E-06	5.23E-07	3.92E-07
Phthalic anhydride	8.84E+01	2.56E-05	8.52E-06	1.70E-06	1.28E-06
Quinoline	2.60E+00	4.90E-07	1.66E-07	3.32E-08	2.49E-08
Quinone	2.97E+01	8.42E-06	2.81E-06	5.62E-07	4.21E-07
Styrene	7.64E-01	1.79E-07	1.04E-07	2.74E-08	2.06E-08
1,2,4,5-Tetrachlorobenzene	7.44E-02	3.69E-09	3.04E-09	3.23E-09	3.15E-09
Tetrachloroethene	4.20E-01	2.16E-07	1.55E-07	7.29E-08	5.65E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	4.63E-09	3.73E-09	3.35E-09	3.06E-09
Toluene	1.08E+00	1.47E-06	7.05E-07	1.53E-07	1.15E-07
1,2,4-Trichlorobenzene	1.84E-01	6.37E-09	5.10E-09	4.39E-09	3.95E-09
1,2,5-Trichlorobenzene	1.84E-01	2.88E-06	2.30E-06	1.98E-06	1.78E-06
1,1,1-Trichloroethane	1.41E+00	4.67E-07	1.92E-07	3.93E-08	2.95E-08
Trichloroethene	1.84E+00	1.79E-07	6.55E-08	1.31E-08	9.85E-09
Trichlorofluoromethane	1.34E+00	3.77E-04	1.60E-04	3.29E-05	2.[illegible]E-05
2,3,6-Trichlorophenol	2.37E-01	1.31E-06	1.03E-06	7.76E-07	6.[illegible]E-07
2,4,5-Trichlorophenol	1.99E-01	6.74E-09	5.36E-09	4.46E-09	3.[illegible]E-09
2,4,6-Trichlorophenol	2.85E-01	3.43E-08	2.64E-08	1.75E-08	1.4[illegible]E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6.01E-01	3.77E-09	2.43E-09	7.91E-10	5.95E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.51E+00	2.96E-09	1.18E-09	2.39E-10	1.79E-10
Undecane	3.77E-03	8.58E-14	7.12E-14	8.03E-14	8.01E-14
Vinyl acetate	1.47E+01	7.60E-07	2.53E-07	5.07E-08	3.80E-08
Vinyl chloride	1.74E+01	7.62E-07	2.54E-07	5.08E-08	3.81E-08
o-Xylene	6.09E-01	2.78E-07	1.78E-07	5.73E-08	4.31E-08
m,p-Xylene	5.48E-01	6.06E-07	4.03E-07	1.44E-07	1.09E-07
Metals Inorganics					
Aluminum	2.33E-03	5.04E-06	4.18E-06	4.63E-06	4.58E-06
Antimony	1.15E-01	8.41E-08	6.48E-08	4.40E-08	3.67E-08
Arsenic	2.30E-02	1.75E-09	1.43E-09	1.41E-09	1.34E-09
Barium	8.25E-02	1.31E-05	1.03E-05	7.80E-06	6.73E-06
Beryllium	5.75E-03	6.76E-10	5.59E-10	6.05E-10	5.93E-10
Cadmium	3.50E-01	4.39E-07	2.41E-07	5.90E-08	4.43E-08
Calcium	1.93E+00	3.64E-03	1.70E-03	3.66E-04	2.74E-04
Chromium III	6.00E-03	1.55E-08	1.28E-08	1.40E-08	1.38E-08
Cobalt	1.35E-02	2.09E-09	1.61E-09	1.09E-09	9.12E-10
Copper	3.25E-01	5.47E-06	4.13E-06	2.50E-06	2.03E-06
Iron	2.50E-03	4.53E-07	3.30E-07	1.67E-07	1.31E-07
Lead	2.70E-02	2.02E-07	1.67E-07	1.83E-07	1.81E-07

Table 5C-21 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Magnesium	7.75E-01	5.31E-04	2.58E-04	5.68E-05	4.26E-05
Manganese	1.50E-01	4.26E-07	3.36E-07	2.62E-07	2.28E-07
Mercury (inorganic)	5.50E-01	5.85E-05	4.73E-05	4.39E-05	4.06E-05
Nickel	6.00E-02	6.59E-07	5.35E-07	5.09E-07	4.75E-07
Potassium	7.75E-01	3.01E-04	1.57E-04	3.63E-05	2.73E-05
Selenium	2.50E-02	6.54E-08	5.37E-08	5.55E-08	5.34E-08
Silver	2.50E-01	1.38E-06	1.06E-06	7.20E-07	6.02E-07
Sodium	6.50E-02	6.32E-04	5.07E-04	4.46E-04	4.04E-04
Vanadium	4.25E-03	6.09E-09	4.89E-09	4.29E-09	3.89E-09
Zinc	1.20E+00	5.37E-05	4.10E-05	2.64E-05	2.18E-05
TICs					
Acetophenone	4.69E+00	1.29E-06	4.31E-07	8.62E-08	6.47E-08
Benzonitrile	4.82E+00	4.38E-07	1.46E-07	2.92E-08	2.19E-08
Bromobenzene	7.14E-01	1.25E-06	7.41E-07	2.04E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	1.90E-05	6.34E-06	1.27E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	1.15E+01	2.13E-05	7.09E-06	1.42E-06	1.06E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	1.32E-02	7.17E-15	5.95E-15	6.69E-15	6.66E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	1.11E-02	2.68E-08	2.23E-08	2.51E-08	2.50E-08
2-(2-Ethoxyethoxy)ethanol	7.97E+01	8.20E-06	2.73E-06	5.47E-07	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4.41E+01	4.70E-12	1.57E-12	3.13E-13	2.35E-13
Iodine	1.39E+00	2.14E-13	8.81E-14	1.80E-14	1.35E-14
Iodobenzene	5.05E-01	5.56E-13	3.78E-13	1.44E-13	1.10E-13
Iodomethane	5.15E+00	1.07E-15	3.58E-16	7.15E-17	5.37E-17
Methyl benzoate	2.28E+00	1.58E-12	5.44E-13	1.09E-13	8.16E-14
Methyl hexenone	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-22 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Silage (Pd_s) Drake Chemical Site Lock Haven, PA

Table 5C-22 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Silage (Pd_s)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_s** Silage Concentration Due to Direct Deposition (mg/kg)
Organics			
Acetaldehyde	1.26E-16	1.58E-17	3.46E-15
Acetone	9.81E-16	1.23E-16	2.69E-14
Acetonitrile	9.08E-15	1.14E-15	2.49E-13
Acrolein	4.45E-16	5.56E-17	1.22E-14
Acrylonitrile	4.46E-16	5.58E-17	1.22E-14
Aldrin	3.12E-11	3.91E-12	8.56E-10
Aniline	3.63E-13	4.55E-14	9.96E-12
Benzaldehyde	4.48E-12	5.60E-13	1.23E-10
Benzene	1.83E-13	2.29E-14	5.02E-12
Benzoic acid	7.56E-12	9.46E-13	2.07E-10
Benzotrichloride	1.46E-14	1.83E-15	4.01E-13
Benzoyl chloride	6.52E-13	8.15E-14	1.79E-11
Benzyl chloride	2.91E-14	3.64E-15	7.97E-13
Biphenyl	2.48E-12	3.10E-13	6.79E-11
Bis(2-chloroethoxy)methane	2.12E-14	2.65E-15	5.80E-13
Bis(2-ethylhexyl)phthalate	1.10E-06	1.38E-07	3.02E-05
Bromochloromethane	1.17E-15	1.47E-16	3.22E-14
Bromodichloromethane	2.52E-15	3.15E-16	6.90E-14
Bromoform	8.59E-15	1.08E-15	2.35E-13
Bromomethane	0.00E+00	0.00E+00	NA
2-Butanone (MEK)	2.18E-15	2.72E-16	5.97E-14
Butyl benzyl phthalate	1.56E-09	1.95E-10	4.28E-08
Carbazole	1.53E-14	1.92E-15	4.20E-13
Carbon disulfide	1.46E-16	1.83E-17	4.00E-15
Carbon tetrachloride	2.90E-16	3.62E-17	7.94E-15
alpha-Chlordane	1.37E-10	1.72E-11	3.77E-09
gamma-Chlordane	4.25E-11	5.32E-12	1.17E-09
4-Chloroaniline	2.31E-14	2.90E-15	6.34E-13
Chlorobenzene	9.85E-15	1.23E-15	2.70E-13
Chloroethane	0.00E+00	0.00E+00	NA
2-Chloroethyl vinyl ether	1.08E-16	1.35E-17	2.95E-15
Chloroform	3.63E-15	4.54E-16	9.95E-14
Chloromethane	0.00E+00	0.00E+00	NA
4-Chloro-3-methylphenol	1.39E-14	1.74E-15	3.80E-13
beta-Chloronaphthalene	4.80E-14	6.01E-15	1.32E-12
2-Chlorophenol	9.62E-16	1.20E-16	2.64E-14
2-Chloropropane	3.31E-17	4.15E-18	9.08E-16
Dalapon	1.85E-14	2.32E-15	5.07E-13
4,4'-DDD	7.71E-10	9.64E-11	2.11E-08
4,4'-DDE	2.86E-10	3.57E-11	7.83E-09
4,4'-DDT	4.51E-09	5.65E-10	1.24E-07
Decanol	1.09E-11	1.36E-12	2.98E-10
Dibenzofuran	1.02E-13	1.27E-14	2.78E-12
Dibromochloromethane	5.16E-16	6.46E-17	1.42E-14
Dicamba	2.45E-12	3.06E-13	6.70E-11
1,2-Dichlorobenzene	4.22E-15	5.27E-16	1.16E-13
1,3-Dichlorobenzene	9.21E-16	1.15E-16	2.52E-14

Table 5C-22 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Silage (Pd_s)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_s** Silage Concentration Due to Direct Deposition (mg/kg)
1,4-Dichlorobenzene	8 78E-16	1.10E-16	2 41E-14
3,3'-Dichlorobenzidine	3 40E-10	4.25E-11	9.31E-09
1,1-Dichloroethane	5.82E-16	7.29E-17	1 60E-14
1,2-Dichloroethane	1 74E-16	2 17E-17	4 76E-15
1,1-Dichloroethene	1 41E-17	1 76E-18	3 86E-16
cis-1,2-Dichloroethene	1.95E-16	2 44E-17	5.34E-15
trans-1,2-Dichloroethene	3.06E-17	3.83E-18	8.38E-16
2,4-Dichlorophenol	4 76E-14	5 95E-15	1 30E-12
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	2 93E-14	3 67E-15	8 04E-13
Dichloroprop	2.83E-12	3.55E-13	7.77E-11
Diethyl phthalate	4 70E-11	5 88E-12	1.29E-09
2,4-Dimethylphenol	6 74E-14	8.44E-15	1.85E-12
Dimethyl phthalate	8 13E-12	1.02E-12	2.23E-10
Di-n-butyl phthalate	6 68E-09	8.36E-10	1 83E-07
2,4-Dinitrophenol	5 85E-13	7.32E-14	1 60E-11
Di-n-octyl phthalate	9 40E-11	1.18E-11	2.58E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	3.64E-13	4.55E-14	9 97E-12
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	7.33E-13	9 17E-14	2.01E-11
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	9.66E-13	1.21E-13	2.65E-11
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	2.55E-12	3.19E-13	7 00E-11
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.71E-12	2.14E-13	4 70E-11
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	8.64E-12	1.08E-12	2 37E-10
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.94E-11	2.43E-12	5.31E-10
2,3,7,8-Tetrachlorodibenzofuran	7.35E-13	9.20E-14	2.02E-11
2,3,4,7,8-Pentachlorodibenzofuran	2.41E-12	3.02E-13	6.60E-11
1,2,3,7,8-Pentachlorodibenzofuran	1.34E-12	1.68E-13	3.68E-11
1,2,3,4,7,8-Hexachlorodibenzofuran	6.02E-12	7.53E-13	1.65E-10
1,2,3,6,7,8-Hexachlorodibenzofuran	3.98E-12	4.99E-13	1.09E-10
1,2,3,7,8,9-Hexachlorodibenzofuran	5.58E-13	6.98E-14	1.53E-11
2,3,4,6,7,8-Hexachlorodibenzofuran	3.90E-12	4.88E-13	1.07E-10
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.83E-11	2.29E-12	5.01E-10
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.83E-12	4.79E-13	1.05E-10
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	1.59E-11	2.00E-12	4.37E-10
Endosulfan I	3 84E-11	4.80E-12	1.05E-09
Endosulfan sulfate	9.37E-13	1.17E-13	2.57E-11
Endrin	7 78E-11	9.74E-12	2.13E-09
Endrin aldehyde	7.87E-11	9.85E-12	2.16E-09
Ethylbenzene	3.09E-15	3 87E-16	8.48E-14
2-Ethyl hexanoic acid	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	2.67E-10	3.34E-11	7.32E-09
2-Fluoro-4-nitrophenol	NA	NA	NA
Heptachlor	2.92E-13	3.66E-14	8.01E-12
Hexachlorobenzene	8.55E-13	1.07E-13	2.34E-11
Hexachlorobutadiene	1.41E-14	1.77E-15	3.87E-13
beta-Hexachlorocyclohexane	7 48E-17	9.37E-18	2.05E-15
Hexachlorocyclopentadiene	2.65E-14	3.31E-15	7.25E-13

Table 5C-22 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Silage (Pd_s)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_s** Silage Concentration Due to Direct Deposition (mg/kg)
Hexachloroethane	1.10E-16	1.38E-17	3.02E-15
Hexadecanoic acid	NA	NA	NA
2-Hexanone	1.09E-13	1.36E-14	2.98E-12
MCPP	9.20E-10	1.15E-10	2.52E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.65E-09	2.06E-10	4.52E-08
Methylene chloride	5.62E-16	7.04E-17	1.54E-14
Methyl ester acetic acid	3.13E-16	3.91E-17	8.57E-15
Methyl-3-heptanol	NA	NA	NA
2-Methylnaphthalene	8.90E-14	1.11E-14	2.44E-12
4-Methyl-2-pentanone	3.28E-15	4.10E-16	8.98E-14
2-Methylphenol	2.62E-14	3.27E-15	7.17E-13
3-Methylphenol	2.97E-13	3.72E-14	8.15E-12
4-Methylphenol	5.35E-14	6.69E-15	1.47E-12
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA
Naphthalene	5.00E-14	6.26E-15	1.37E-12
Naphthalene carbonitrile	NA	NA	NA
beta-Naphthylamine	9.55E-13	1.19E-13	2.62E-11
2-Nitroaniline	2.31E-13	2.89E-14	6.33E-12
4-Nitroaniline	1.33E-13	1.67E-14	3.65E-12
Nitrobenzene	6.70E-13	8.38E-14	1.84E-11
2-Nitrophenol	4.85E-13	6.07E-14	1.33E-11
4-Nitrophenol	8.24E-12	1.03E-12	2.26E-10
n-Nitrosodiphenylamine	1.50E-14	1.88E-15	4.11E-13
Octadecanoic acid	1.87E-07	2.34E-08	5.13E-06
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA
PAHs			
Acenaphthene	1.68E-13	2.10E-14	4.60E-12
Acenaphthylene	4.36E-13	5.46E-14	1.20E-11
Anthracene	1.10E-13	1.38E-14	3.02E-12
Benzo(a)anthracene	3.61E-09	4.51E-10	9.89E-08
Benzo(a)pyrene	3.25E-09	4.06E-10	8.90E-08
Benzo(b)fluoranthene	1.33E-10	1.66E-11	3.64E-09
Benzo(e)pyrene	3.11E-09	3.90E-10	8.53E-08
Benzo(g,h,i)perylene	4.57E-09	5.72E-10	1.25E-07
Benzo(j)fluoranthene	4.62E-09	5.79E-10	1.27E-07
Benzo(k)fluoranthene	4.59E-09	5.74E-10	1.26E-07
Chrysene	1.08E-09	1.36E-10	2.97E-08
Dibenzo(a,h)anthracene	4.36E-09	5.46E-10	1.20E-07
Fluoranthene	5.55E-11	6.95E-12	1.52E-09
Fluorene	6.96E-13	8.71E-14	1.91E-11
Indeno(1,2,3-cd)pyrene	4.65E-09	5.82E-10	1.28E-07
Phenanthrene	1.28E-11	1.60E-12	3.51E-10
Pyrene	2.33E-10	2.92E-11	6.40E-09
PCBs			
Monochlorobiphenyls	5.80E-14	7.25E-15	1.59E-12
Dichlorobiphenyls	2.13E-13	2.67E-14	5.84E-12
Trichlorobiphenyls	3.89E-13	4.87E-14	1.07E-11

Table 5C-22 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Silage (Pd_s)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_s** Silage Concentration Due to Direct Deposition (mg/kg)
Tetrachlorobiphenyls	6.56E-12	8.20E-13	1 80E-10
Pentachlorobiphenyls	7.00E-12	8 76E-13	1.92E-10
Hexachlorobiphenyls	5 35E-11	6 69E-12	1 47E-09
Heptachlorobiphenyls	8 15E-11	1 02E-11	2.23E-09
Octachlorobiphenyls	1.34E-11	1.68E-12	3.67E-10
Nonachlorobiphenyls	4 11E-11	5.15E-12	1 13E-09
Decachlorobiphenyls	3.39E-12	4.25E-13	9.30E-11
Pentachlorobenzene	7 62E-14	9.53E-15	2 09E-12
Pentachlorophenol	8 37E-13	1 05E-13	2.29E-11
3-Pentanol	NA	NA	NA
4-Penten-2-ol	NA	NA	NA
Phenol	7 74E-13	9 68E-14	2.12E-11
Phthalic anhydride	9 94E-11	1.24E-11	2 72E-09
Quinoline	3.29E-13	4 11E-14	9 01E-12
Quinone	2.83E-13	3.54E-14	7 76E-12
Styrene	2.05E-15	2 57E-16	5.62E-14
1,2,4,5-Tetrachlorobenzene	3.07E-15	3.84E-16	8 41E-14
Tetrachloroethene	9.93E-16	1.24E-16	2.72E-14
2,3,4,6-Tetrachlorophenol	3 11E-13	3 89E-14	8.52E-12
Toluene	2.26E-15	2.83E-16	6 19E-14
1,2,4-Trichlorobenzene	7.30E-15	9.14E-16	2.00E-13
1,2,5-Trichlorobenzene	3.29E-12	4 12E-13	9 03E-11
1,1,1-Trichloroethane	2.07E-16	2 59E-17	5.66E-15
Trichloroethene	1.04E-16	1 31E-17	2.86E-15
Trichlorofluoromethane	2.26E-14	2 83E-15	6.20E-13
2,3,6-Trichlorophenol	2.68E-11	3.35E-12	7.35E-10
2,4,5-Trichlorophenol	3.01E-14	3 77E-15	8.25E-13
2,4,6-Trichlorophenol	1.91E-13	2.40E-14	5.25E-12
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3.53E-11	4 41E-12	9.67E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.50E-12	1.88E-13	4.11E-11
Undecane	2.43E-12	3.04E-13	6.66E-11
Vinyl acetate	3.27E-16	4.09E-17	8.96E-15
Vinyl chloride	0.00E+00	0.00E+00	NA
o-Xylene	2 40E-15	3.01E-16	6 59E-14
m,p-Xylene	5.22E-15	6.54E-16	1.43E-13
Metals - Inorganics			
Aluminum	2.51E-04	1.02E-05	6.52E-03
Antimony	8 88E-08	3.62E-09	2.31E-06
Arsenic	8.88E-09	3 62E-10	2 31E-07
Barium	1.91E-05	7 77E-07	4 95E-04
Beryllium	1.36E-08	5.56E-10	3.54E-07
Cadmium	2.00E-07	8.15E-09	5.19E-06
Calcium	3.59E-04	1 46E-05	9.32E-03
Chromium III	2.99E-07	1.22E-08	7 77E-06
Cobalt	1.88E-08	7.66E-10	4.88E-07
Copper	2.07E-06	8.46E-08	5.38E-05
Iron	2.29E-05	9.33E-07	5.94E-04
Lead	8.69E-07	3.54E-08	2.26E-05

Table 5C-22 (RB1)

Estimated Chemical Concentrations Due to Direct Deposition on Silage (Pd_s)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_s** Silage Concentration Due to Direct Deposition (mg/kg)
Magnesium	1.24E-04	5.04E-06	3.21E-03
Manganese	3.40E-07	1.39E-08	8.83E-06
Mercury (inorganic)	0.00E+00	0.00E+00	NA
Nickel	1.29E-06	5.26E-08	3.35E-05
Potassium	6.52E-05	2.66E-06	1.69E-03
Selenium	3.04E-07	1.24E-08	7.91E-06
Silver	6.69E-07	2.73E-08	1.74E-05
Sodium	1.15E-03	4.69E-05	2.98E-02
Vanadium	1.69E-07	6.91E-09	4.40E-06
Zinc	5.47E-06	2.23E-07	1.42E-04
TICs			
Acetophenone	9.34E-14	1.17E-14	2.56E-12
Benzonitrile	3.71E-14	4.64E-15	1.02E-12
Bromobenzene	3.61E-14	4.51E-15	9.88E-13
2-Butenal / 2-Methyl-2-propenal	3.30E-14	4.13E-15	9.05E-13
2-(2-Butoxyethoxy)ethanol	6.66E-11	8.33E-12	1.82E-09
Chlorocyclohexanol	NA	NA	NA
Decane	5.82E-14	7.28E-15	1.59E-12
4,4-Dimethyl-2-oxetanone	NA	NA	NA
Dioctyl adipate	9.26E-08	1.16E-08	2.54E-06
2-(2-Ethoxyethoxy)ethanol	9.02E-13	1.13E-13	2.47E-11
Ethyl benzaldehyde	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA
Hexenal	NA	NA	NA
Hexenedione	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	2.98E-13	3.73E-14	8.17E-12
Iodine	3.26E-14	4.08E-15	8.93E-13
Iodobenzene	1.35E-13	1.69E-14	3.71E-12
Iodomethane	2.24E-16	2.80E-17	6.13E-15
Methyl benzoate	2.61E-13	3.27E-14	7.15E-12
Methyl hexenone	5.06E-14	6.34E-15	1.39E-12
Nonanoic acid	NA	NA	NA
Silane	0.00E+00	0.00E+00	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-23 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Silage (Pv_s)
Drake Chemical Site
Lock Haven, PA

Table 5C-23 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Silage (Pv_s)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_s Silage Concentration Due to Air-to-Plant Transfer (mg/kg)
Organics			
Acetaldehyde	2.42E-06	5.98E-03	5.80E-12
Acetone	6.76E-06	1.81E-03	4.89E-12
Acetonitrile	2.05E-05	3.01E-03	2.47E-11
Acrolein	2.42E-06	2.53E-02	2.46E-11
Acrylonitrile	1.58E-06	1.86E-03	1.18E-12
Aldrin	1.31E-07	1.76E+01	9.22E-10
Aniline	6.30E-06	9.36E-06	2.37E-14
Benzaldehyde	1.47E-05	2.02E-01	1.19E-09
Benzene	4.51E-04	4.65E-03	8.40E-10
Benzoic acid	1.49E-05	1.95E+02	1.16E-06
Benzotrichloride	1.57E-07	1.83E-01	1.15E-11
Benzoyl chloride	1.69E-05	NA	NA
Benzyl chloride	9.26E-07	1.23E-01	4.58E-11
Biphenyl	1.83E-06	7.90E-01	5.80E-10
Bis(2-chloroethoxy)methane	5.48E-08	8.08E+00	1.78E-10
Bis(2-ethylhexyl)phthalate	4.28E-06	7.48E+04	1.28E-04
Bromochloromethane	3.53E-06	3.06E-03	4.34E-12
Bromodichloromethane	3.26E-06	6.59E-03	8.62E-12
Bromoform	1.25E-06	8.95E-02	4.47E-11
Bromomethane	8.44E-06	4.12E-04	1.39E-12
2-Butanone (MEK)	5.64E-06	5.64E-03	1.28E-11
Butyl benzyl phthalate	3.48E-07	3.84E+03	5.36E-07
Carbazole	5.48E-08	8.06E+00	1.77E-10
Carbon disulfide	1.13E-06	1.30E-03	5.89E-13
Carbon tetrachloride	8.47E-07	2.82E-03	9.59E-13
alpha-Chlordane	7.83E-08	1.08E+02	3.40E-09
gamma-Chlordane	3.19E-08	7.16E+01	9.17E-10
4-Chloroaniline	5.48E-08	1.16E+00	2.54E-11
Chlorobenzene	3.01E-06	7.42E-03	8.95E-12
Chloroethane	3.84E-07	5.47E-04	8.42E-14
2-Chloroethyl vinyl ether	8.37E-08	5.62E-02	1.89E-12
Chloroform	1.50E-05	5.14E-03	3.10E-11
Chloromethane	9.15E-07	1.47E-05	5.39E-15
4-Chloro-3-methylphenol	5.48E-08	1.11E+02	2.45E-09
beta-Chloronaphthalene	5.48E-08	5.55E+00	1.22E-10
2-Chlorophenol	5.48E-08	2.63E+00	5.78E-11
2-Chloropropane	4.42E-07	8.63E-04	1.53E-13
Dalapon	5.75E-08	1.49E+01	3.43E-10
4,4'-DDD	1.61E-07	1.66E+04	1.07E-06
4,4'-DDE	2.44E-07	5.09E+04	4.99E-06
4,4'-DDT	1.38E-07	2.17E+02	1.20E-08
Decanol	2.39E-06	2.14E+02	2.05E-07
Dibenzofuran	5.48E-08	4.56E+03	1.00E-07
Dibromochloromethane	1.02E-06	2.99E-02	1.22E-11
Dicamba	2.00E-08	1.57E+04	1.26E-07
1,2-Dichlorobenzene	1.64E-07	2.30E-01	1.51E-11
1,3-Dichlorobenzene	5.48E-08	2.93E-01	6.43E-12

Table 5C-23 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Silage (Pv_s)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_s Silage Concentration Due to Air-to-Plant Transfer (mg/kg)
1,4-Dichlorobenzene	8.85E-08	1.25E-01	4.42E-12
3,3'-Dichlorobenzidine	5.08E-08	5.08E+03	1.04E-07
1,1-Dichloroethane	3.53E-06	1.91E-03	2.70E-12
1,2-Dichloroethane	3.55E-07	4.45E-03	6.34E-13
1,1-Dichloroethene	2.15E-07	9.88E-04	8.54E-14
cis-1,2-Dichloroethene	1.02E-06	7.51E-03	3.07E-12
trans-1,2-Dichloroethene	2.62E-07	7.85E-04	8.25E-14
2,4-Dichlorophenol	1.65E-07	9.01E+01	5.98E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	8.12E-08	3.49E+05	1.14E-05
Dichloroprop	5.11E-08	1.79E+04	3.66E-07
Diethyl phthalate	2.01E-06	7.02E+01	5.65E-08
2,4-Dimethylphenol	5.48E-08	5.98E+00	1.31E-10
Dimethyl phthalate	2.10E-06	5.99E+01	5.06E-08
Di-n-butyl phthalate	2.37E-06	8.21E+04	7.80E-05
2,4-Dinitrophenol	5.48E-08	8.53E+03	1.88E-07
Di-n-octyl phthalate	3.41E-07	9.16E+03	1.25E-06
Dioctadecyl ester phosphoric acid	NA	NA	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.29E-12	6.40E+04	1.36E-10
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	2.96E-12	1.20E+05	1.42E-10
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	9.13E-13	4.70E+05	1.72E-10
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	5.84E-13	4.70E+05	1.10E-10
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	7.62E-13	4.70E+05	1.44E-10
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	2.11E-12	3.60E+05	3.04E-10
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	4.88E-13	9.00E+06	1.76E-09
2,3,7,8-Tetrachlorodibenzofuran	2.12E-11	8.50E+04	7.23E-10
2,3,4,7,8-Pentachlorodibenzofuran	1.22E-11	4.90E+04	2.39E-10
1,2,3,7,8-Pentachlorodibenzofuran	1.12E-11	4.90E+04	2.21E-10
1,2,3,4,7,8-Hexachlorodibenzofuran	4.44E-12	1.60E+05	2.85E-10
1,2,3,6,7,8-Hexachlorodibenzofuran	3.17E-12	1.60E+05	2.03E-10
1,2,3,7,8,9-Hexachlorodibenzofuran	8.00E-13	1.60E+05	5.13E-11
2,3,4,6,7,8-Hexachlorodibenzofuran	3.32E-12	1.60E+05	2.13E-10
1,2,3,4,6,7,8-Heptachlorodibenzofuran	9.42E-12	4.70E+05	1.78E-09
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.15E-12	4.70E+05	2.17E-10
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.95E-13	1.30E+06	2.06E-10
Endosulfan I	8.02E-08	9.87E+00	3.17E-10
Endosulfan sulfate	1.61E-08	4.23E+01	2.74E-10
Endrin	2.62E-08	3.20E+05	3.36E-06
Endrin aldehyde	8.13E-09	4.41E+07	1.44E-04
Ethylbenzene	8.01E-07	3.91E-02	1.26E-11
2-Ethyl hexanoic acid	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	3.10E-06	1.98E+04	2.45E-05
2-Fluoro-4-nitrophenol	NA	NA	NA
Heptachlor	1.33E-08	7.02E-01	3.73E-12
Hexachlorobenzene	5.48E-08	3.70E+01	8.12E-10
Hexachlorobutadiene	5.48E-08	8.98E-01	1.97E-11
beta-Hexachlorocyclohexane	9.05E-09	6.74E+03	2.45E-08
Hexachlorocyclopentadiene	5.48E-08	1.54E-01	3.39E-12

Table 5C-23 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Silage (Pv_s)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration (µg/m³) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_s Silage Concentration Due to Air-to-Plant Transfer (mg/kg)
Hexachloroethane	5 48E-08	2.24E-02	4.92E-13
Hexadecanoic acid	NA	NA	NA
2-Hexanone	5 63E-06	2.34E-03	5.29E-12
MCPP	3 13E-07	5 93E+04	7 44E-06
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	6.52E-07	4.56E−03	1.19E-06
Methylene chloride	6.25E-06	9.35E-04	2.34E-12
Methyl ester acetic acid	1.75E-06	2.46E-03	1 73E-12
Methyl-3-heptanol	NA	NA	NA
2-Methylnaphthalene	2.21E-07	3.60E+00	3 18E-10
4-Methyl-2-pentanone	8 48E-07	1.73E-01	5 87E-11
2-Methylphenol	2.10E-07	1 97E+01	1.66E-09
3-Methylphenol	8 47E-07	2.40E+01	8 14E-09
4-Methylphenol	2 15E-07	4.13E+01	3.57E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA
Naphthalene	4.33E-07	4.62E-01	8.02E-11
Naphthalene carbonitrile	NA	NA	NA
beta-Naphthylamine	5 48E-08	1.11E+04	2 43E-07
2-Nitroaniline	5 48E-08	1.34E-01	2 94E-12
4-Nitroaniline	1 03E-07	3 69E+02	1.52E-08
Nitrobenzene	4.25E-06	5 46E-01	9.30E-10
2-Nitrophenol	2 53E-06	3.20E+00	3.25E-09
4-Nitrophenol	5 94E-07	5.01E-01	1.19E-10
n-Nitrosodiphenylamine	1 15E-07	9 57E-05	4 40E-15
Octadecanoic acid	2.02E-07	1 76E+12	1.43E+02
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA
PAHs			
Acenaphthene	5 48E-08	8.63E+00	1.90E-10
Acenaphthylene	5.48E-08	2.64E+01	5.79E-10
Anthracene	5.48E-08	8.87E+01	1.95E-09
Benzo(a)anthracene	1.26E-08	1.99E+05	1.00E-06
Benzo(a)pyrene	1.68E-08	9.12E+05	6.15E-06
Benzo(b)fluoranthene	5.33E-08	3.35E+03	7.16E-08
Benzo(e)pyrene	1.84E-08	3.52E+05	2.59E-06
Benzo(g,h,i)perylene	1.28E-09	1.36E+07	6.97E-06
Benzo(j)fluoranthene	5.31E-08	7.78E+03	1.66E-07
Benzo(k)fluoranthene	1.10E-09	2.57E+03	1.13E-09
Chrysene	4.21E-08	1.25E+05	2.11E-06
Dibenzo(a,h)anthracene	3 72E-09	1.59E+07	2.38E-05
Fluoranthene	5.42E-08	3.54E+03	7.68E-08
Fluorene	5.48E-08	4.23E+01	9.31E-10
Indeno(1,2,3-cd)pyrene	3.32E-10	2.43E+09	3.23E-04
Phenanthrene	2 61E-07	2.60E+02	2.73E-08
Pyrene	9.71E-08	4.29E+03	1.67E-07
PCBs			
Monochlorobiphenyls	2.25E-08	1.29E+01	1.17E-10
Dichlorobiphenyls	1.15E-08	1.11E+02	5.12E-10
Trichlorobiphenyls	1 75E-08	3.16E+02	2.22E-09

Table 5C-23 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Silage (Pv_s)
Drake Chemical Site
Lock Haven, PA

Chemical	C_y Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_s Silage Concentration Due to Air-to-Plant Transfer (mg/kg)
Tetrachlorobiphenyls	3.51E-08	1.38E+03	1.95E-05
Pentachlorobiphenyls	3.34E-08	1.31E+03	1.75E-05
Hexachlorobiphenyls	2.10E-08	9.17E+03	7.71E-05
Heptachlorobiphenyls	5.19E-09	5.15E+04	1.07E-07
Octachlorobiphenyls	1.80E-09	1.95E+04	1.41E-06
Nonachlorobiphenyls	8.94E-11	2.29E+04	8.21E-10
Decachlorobiphenyls	2.50E-11	4.23E+05	4.25E-09
Pentachlorobenzene	5.48E-08	6.28E+00	1.38E-07
Pentachlorophenol	1.26E-07	1.41E+04	7.11E-07
3-Pentanol	NA	NA	NA
4-Penten-2-ol	NA	NA	NA
Phenol	1.20E-05	3.84E+00	1.85E-04
Phthalic anhydride	6.76E-06	4.90E+00	1.33E-04
Quinoline	8.09E-07	8.11E+01	2.63E-08
Quinone	6.76E-06	2.19E-01	5.92E-10
Styrene	2.66E-07	7.01E-02	7.46E-12
1,2,4,5-Tetrachlorobenzene	9.75E-08	1.41E+00	5.50E-11
Tetrachloroethene	4.88E-07	2.16E-02	4.23E-12
2,3,4,6-Tetrachlorophenol	5.48E-08	9.11E+02	2.00E-05
Toluene	1.64E-06	1.72E-02	1.13E-11
1,2,4-Trichlorobenzene	5.48E-08	6.81E-01	1.50E-11
1,2,5-Trichlorobenzene	2.47E-05	6.81E-01	6.76E-09
1,1,1-Trichloroethane	5.35E-07	1.53E-02	3.28E-12
Trichloroethene	2.08E-07	3.82E-03	3.19E-13
Trichlorofluoromethane	4.02E-04	1.18E-03	1.90E-10
2,3,6-Trichlorophenol	8.76E-06	5.06E+02	1.78E-06
2,4,5-Trichlorophenol	5.48E-08	5.73E+02	1.26E-08
2,4,6-Trichlorophenol	1.88E-07	2.96E+02	2.23E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1.50E-08	3.45E+04	2.07E-07
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	8.58E-09	4.21E+03	1.45E-08
Undecane	2.45E-05	1.87E+00	1.84E-05
Vinyl acetate	8.47E-07	1.73E-03	5.88E-15
Vinyl chloride	6.53E-07	1.08E-05	2.83E-15
o-Xylene	4.16E-07	5.97E-02	9.96E-12
m,p-Xylene	1.13E-06	5.16E-02	2.34E-11
Metals - Inorganics			
Aluminum	NA	not applicable	NA
Antimony	NA	not applicable	NA
Arsenic	NA	not applicable	NA
Barium	NA	not applicable	NA
Beryllium	NA	not applicable	NA
Cadmium	NA	not applicable	NA
Calcium	NA	not applicable	NA
Chromium III	NA	not applicable	NA
Cobalt	NA	not applicable	NA
Copper	NA	not applicable	NA
Iron	NA	not applicable	NA
Lead	NA	not applicable	NA

Table 5C-23 (RB1)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Silage (Pv_s)
Drake Chemical Site
Lock Haven, PA

Chemical	C_y Vapor Phase Air Concentration (µg/m³) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_s Silage Concentration Due to Air-to-Plant Transfer (mg/kg)
Magnesium	NA	not applicable	NA
Manganese	NA	not applicable	NA
Mercury (inorganic)	5.88E-05	1.00E+03	2.36E-05
Nickel	NA	not applicable	NA
Potassium	NA	not applicable	NA
Selenium	NA	not applicable	NA
Silver	NA	not applicable	NA
Sodium	NA	not applicable	NA
Vanadium	NA	not applicable	NA
Zinc	NA	not applicable	NA
TICs			
Acetophenone	2.42E-06	6.26E-01	6.07E-10
Benzonitrile	7.38E-07	1.22E-01	3.62E-11
Bromobenzene	3.08E-06	1.02E-01	1.26E-10
2-Butenal / 2-Methyl-2-propenal	2.56E-05	1.31E-01	1.34E-09
2-(2-Butoxyethoxy)ethanol	3.45E-05	3.56E+01	4.92E-07
Chlorocyclohexanol	NA	NA	NA
Decane	2.15E-06	6.31E-02	5.45E-11
4,4-Dimethyl-2-oxetanone	NA	NA	NA
Dioctyl adipate	2.04E-06	1.03E+06	8.42E-04
2-(2-Ethoxyethoxy)ethanol	2.94E-06	7.61E-01	8.98E-10
Ethyl benzaldehyde	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA
Hexenal	NA	NA	NA
Hexenedione	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	7.49E-06	7.37E-01	2.21E-09
Iodine	7.39E-06	6.40E-03	1.90E-11
Iodobenzene	3.42E-06	5.22E-01	7.16E-10
Iodomethane	2.32E-06	1.07E-03	9.96E-13
Methyl benzoate	6.76E-06	7.77E-01	2.11E-09
Methyl hexenone	4.94E-06	NA	NA
Nonanoic acid	NA	NA	NA
Silane	2.42E-06	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-24 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Silage (CV_s)
Drake Chemical Site
Lock Haven, PA

Table 5C-24 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Silage (CV_s)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_s Total Silage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics				
Acetaldehyde	3 71E-06	1.24E-06	2.47E-07	1.85E-07
Acetone	2.28E-05	7.59E-06	1.52E-06	1.14E-06
Acetonitrile	8 00E-05	2.67E-05	5.33E-06	4.00E-06
Acrolein	6 04E-06	2 01E-06	4.03E-07	3 02E-07
Acrylonitrile	2.92E-06	9.73E-07	1.95E-07	1 46E-07
Aldrin	2 91E-08	1.71E-08	4.76E-09	3.57E-09
Aniline	4.38E-06	1.46E-06	2.92E-07	2.19E-07
Benzaldehyde	8.91E-06	2.97E-06	5 94E-07	4.46E-07
Benzene	3.94E-04	1.36E-04	2 72E-05	2.04E-05
Benzoic acid	9.38E-06	3.14E-06	6.28E-07	4 71E-07
Benzotrichloride	5.71E-08	3.24E-08	8.33E-09	6 25E-09
Benzoyl chloride	1.17E-05	4.28E-06	8.59E-07	6 44E-07
Benzyl chloride	7.72E-07	2 83E-07	5 68E-08	4.26E-08
Biphenyl	7.06E-07	4.61E-07	1 56E-07	1 18E-07
Bis(2-chloroethoxy)methane	3 10E-08	1.03E-08	2.07E-09	1.55E-09
Bis(2-ethylhexyl)phthalate	1.59E-04	5.35E-05	1.13E-05	8.61E-06
Bromochloromethane	1.60E-06	5.32E-07	1.06E-07	7.98E-08
Bromodichloromethane	1.22E-06	4 09E-07	8.19E-08	6.14E-08
Bromoform	3.58E-07	1.37E-07	2.76E-08	2.07E-08
Bromomethane	5.25E-06	1.75E-06	3.50E-07	2.63E-07
2-Butanone (MEK)	7.80E-06	2.60E-06	5.20E-07	3.90E-07
Butyl benzyl phthalate	5.98E-07	2.09E-07	5.60E-08	4.60E-08
Carbazole	1.51E-08	1.16E-08	7 94E-09	6.65E-09
Carbon disulfide	1.04E-06	3.50E-07	7.00E-08	5.25E-08
Carbon tetrachloride	7.24E-07	3.28E-07	6.95E-08	5.21E-08
alpha-Chlordane	7.92E-09	3.02E-09	1.18E-09	1.06E-09
gamma-Chlordane	2.39E-09	9 48E-10	4.22E-10	3.86E-10
4-Chloroaniline	2 78E-08	9.29E-09	1.86E-09	1.39E-09
Chlorobenzene	2.37E-06	8.29E-07	1.66E-07	1.24E-07
Chloroethane	5.59E-07	1.86E-07	3.72E-08	2.79E-08
2-Chloroethyl vinyl ether	6.21E-08	2.07E-08	4.14E-09	3.11E-09
Chloroform	1.36E-05	4.58E-06	9.17E-07	6.87E-07
Chloromethane	1.01E-06	3.35E-07	6.70E-08	5.03E-08
4-Chloro-3-methylphenol	3.41E-08	2.09E-08	6.45E-09	4.85E-09
beta-Chloronaphthalene	6.30E-09	5.03E-09	4.53E-09	4.15E-09
2-Chlorophenol	3.32E-08	1.15E-08	2.30E-09	1.73E-09
2-Chloropropane	4.17E-07	1.40E-07	2.80E-08	2.10E-08
Dalapon	4.63E-08	1.54E-08	3.08E-09	2.31E-09
4,4'-DDD	1.10E-06	3.66E-07	7.47E-08	5.65E-08
4,4'-DDE	5.00E-06	1.67E-06	3.34E-07	2.50E-07
4,4'-DDT	1.37E-07	4.59E-08	9.78E-09	7.51E-09
Decanol	2.05E-07	6.84E-08	1.37E-08	1.03E-08
Dibenzofuran	1.05E-07	3.76E-08	1.05E-08	8.49E-09
Dibromochloromethane	3.19E-07	1.09E-07	2.18E-08	1.64E-08
Dicamba	1.40E-07	4.70E-08	9.40E-09	7.05E-09
1,2-Dichlorobenzene	7.20E-08	5.13E-08	2.35E-08	1.81E-08
1,3-Dichlorobenzene	1.92E-08	1 45E-08	8 75E-09	7 10E-09

Table 5C-24 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Silage (CV_s)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_s Total Silage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,4-Dichlorobenzene	3 93E-08	2 79E-08	1.26E-08	9 72E-09
3,3'-Dichlorobenzidine	1.28E-07	4.69E-08	1.02E-08	7.63E-09
1,1-Dichloroethane	2.34E-06	7 82E-07	1.56E-07	1 17E-07
1,2-Dichloroethane	2 73E-07	9 09E-08	1.82E-08	1 36E-08
1,1-Dichloroethene	1 91E-07	6 60E-08	1.32E-08	9 90E-09
cis-1,2-Dichloroethene	8 14E-07	2 87E-07	5 74E-08	4 30E-08
trans-1,2-Dichloroethene	1 55E-07	5 18E-08	1 04E-08	7 77E-09
2,4-Dichlorophenol	6 89E-08	4 10E-08	1,20E-08	9 04E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	1 14E-05	3 81E-06	7 69E-07	5 77E-07
Dichloroprop	3.66E-07	1.22E-07	2 44E-08	1 83E-08
Diethyl phthalate	1.38E-06	5 56E-07	1 13E-07	8 48E-08
2,4-Dimethylphenol	3 88E-08	1 42E-08	2 86E-09	2.14E-09
Dimethyl phthalate	1 42E-06	4.87E-07	9 74E-08	7.31E-08
Di-n-butyl phthalate	7.83E-05	2 62E-05	5.32E-06	4 01E-06
2,4-Dinitrophenol	2 05E-07	6 83E-08	1.37E-08	1 02E-08
Di-n-octyl phthalate	1.26E-06	4.22E-07	8 84E-08	6 75E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA
Dioxins/Furans				
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1 46E-10	4 86E-11	9 75E-12	7.32E-12
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	1 62E-10	5 42E-11	1.09E-11	8 17E-12
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1 99E-10	6 62E-11	1 32E-11	9 94E-12
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.80E-10	6.00E-11	1.20E-11	9 03E-12
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1 91E-10	6.35E-11	1.27E-11	9.56E-12
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	5 41E-10	1 80E-10	3.61E-11	2 71E-11
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	2.29E-09	7 64E-10	1 53E-10	1 15E-10
2,3,7,8-Tetrachlorodibenzofuran	7.44E-10	2 48E-10	4 97E-11	3 73E-11
2,3,4,7,8-Pentachlorodibenzofuran	3.05E-10	1.02E-10	2 05E-11	1.54E-11
1,2,3,7,8-Pentachlorodibenzofuran	2.58E-10	8.60E-11	1.73E-11	1.30E-11
1,2,3,4,7,8-Hexachlorodibenzofuran	4.50E-10	1.50E-10	3.01E-11	2.26E-11
1,2,3,6,7,8-Hexachlorodibenzofuran	3.13E-10	1.04E-10	2.09E-11	1.57E-11
1,2,3,7,8,9-Hexachlorodibenzofuran	6.66E-11	2.22E-11	4 45E-12	3.34E-12
2,3,4,6,7,8-Hexachlorodibenzofuran	3.20E-10	1.07E-10	2 14E-11	1.61E-11
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.28E-09	7.59E-10	1.52E-10	1 14E-10
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.22E-10	1.07E-10	2 15E-11	1 61E-11
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	6 43E-10	2 14E-10	4 29E-11	3.22E-11
Endosulfan I	9 53E-09	6.65E-09	3 92E-09	3 19E-09
Endosulfan sulfate	4 23E-09	3 10E-09	1 96E-09	1 61E-09
Endrin	3 36E-06	1.12E-06	2.24E-07	1.68E-07
Endrin aldehyde	1 44E-04	4 80E-05	9 59E-06	7 19E-06
Ethylbenzene	4 71E-07	3.06E-07	1.02E-07	7 71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	2.60E-05	9.18E-06	1.99E-06	1.50E-06
2-Fluoro-4-nitrophenol	NA	NA	NA	NA
Heptachlor	9 76E-10	7.64E-10	5.94E-10	5 17E-10
Hexachlorobenzene	2.58E-09	1.72E-09	1 66E-09	1.63E-09
Hexachlorobutadiene	3 09E-09	2 54E-09	2.76E-09	2 71E-09
beta-Hexachlorocyclohexane	2.66E-08	9 79E-09	2 84E-09	2.26E-09
Hexachlorocyclopentadiene	4.37E-09	3.48E-09	2.95E-09	2 64E-09

Table 5C-24 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Silage (CV_s)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_s Total Silage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachloroethane	2.73E-09	1.92E-09	8.30E-10	6.37E-10
Hexadecanoic acid	NA	NA	NA	NA
2-Hexanone	3.56E-06	1.19E-06	2.37E-07	1.78E-07
MCPP	7.63E-06	2.60E-06	5.33E-07	4.00E-07
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.69E-06	5.65E-07	1.13E-07	8.48E-08
Methylene chloride	4.77E-06	1.59E-06	3.18E-07	2.38E-07
Methyl ester acetic acid	1.74E-12	5.80E-13	1.16E-13	8.70E-14
Methyl-3-heptanol	NA	NA	NA	NA
2-Methylnaphthalene	4.34E-08	3.40E-08	2.63E-08	2.28E-08
4-Methyl-2-pentanone	5.56E-07	1.85E-07	3.71E-08	2.78E-08
2-Methylphenol	1.52E-07	5.09E-08	1.02E-08	7.64E-09
3-Methylphenol	6.15E-07	2.07E-07	4.14E-08	3.10E-08
4-Methylphenol	1.57E-07	5.26E-08	1.05E-08	7.89E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA
Naphthalene	2.46E-07	1.48E-07	4.17E-08	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA
beta-Naphthylamine	2.73E-07	9.13E-08	1.83E-08	1.37E-08
2-Nitroaniline	3.53E-08	1.18E-08	2.36E-09	1.77E-09
4-Nitroaniline	6.18E-08	2.06E-08	4.12E-09	3.09E-09
Nitrobenzene	2.95E-06	9.85E-07	1.97E-07	1.48E-07
2-Nitrophenol	1.24E-06	4.14E-07	8.29E-08	6.22E-08
4-Nitrophenol	2.89E-07	9.70E-08	1.94E-08	1.46E-08
n-Nitrosodiphenylamine	6.37E-08	4.10E-08	1.34E-08	1.00E-08
Octadecanoic acid	1.43E+02	4.76E+01	9.52E+00	7.14E+00
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA
PAHs				
Acenaphthene	9.27E-09	7.26E-09	5.84E-09	5.14E-09
Acenaphthylene	8.30E-09	6.39E-09	5.53E-09	5.01E-09
Anthracene	5.80E-09	3.80E-09	3.33E-09	3.16E-09
Benzo(a)anthracene	1.10E-06	3.68E-07	7.44E-08	5.60E-08
Benzo(a)pyrene	6.24E-06	2.08E-06	4.16E-07	3.12E-07
Benzo(b)fluoranthene	7.56E-08	2.54E-08	5.33E-09	4.07E-09
Benzo(e)pyrene	2.68E-06	8.93E-07	1.79E-07	1.34E-07
Benzo(g,h,i)perylene	7.10E-06	2.37E-06	4.73E-07	3.55E-07
Benzo(j)fluoranthene	2.93E-07	9.82E-08	2.04E-08	1.55E-08
Benzo(k)fluoranthene	1.27E-07	4.25E-08	8.64E-09	6.52E-09
Chrysene	2.14E-06	7.14E-07	1.43E-07	1.08E-07
Dibenzo(a,h)anthracene	2.39E-05	7.96E-06	1.59E-06	1.19E-06
Fluoranthene	8.04E-08	2.78E-08	7.05E-09	5.71E-09
Fluorene	8.63E-09	6.55E-09	5.94E-09	5.51E-09
Indeno(1,2,3-cd)pyrene	3.24E-04	1.08E-04	2.16E-05	1.62E-05
Phenanthrene	4.98E-08	2.74E-08	2.08E-08	1.97E-08
Pyrene	1.79E-07	6.22E-08	1.63E-08	1.34E-08
PCBs				
Monochlorobiphenyls	1.14E-09	8.75E-10	8.61E-10	8.23E-10
Dichlorobiphenyls	7.52E-10	3.67E-10	2.48E-10	2.37E-10
Trichlorobiphenyls	2.39E-09	8.73E-10	2.94E-10	2.56E-10

Table 5C-24 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Silage (CV_s)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_s Total Silage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Tetrachlorobiphenyls	1.99E-08	6.73E-09	1.52E-09	1.19E-09
Pentachlorobiphenyls	1.79E-08	6.02E-09	1.31E-09	1.01E-09
Hexachlorobiphenyls	7.86E-08	2.62E-08	5.27E-09	3.96E-09
Heptachlorobiphenyls	1.09E-07	3.65E-08	7.30E-09	5.48E-09
Octachlorobiphenyls	1.44E-08	4.81E-09	9.64E-10	7.24E-10
Nonachlorobiphenyls	1.95E-09	6.50E-10	1.31E-10	9.80E-11
Decachlorobiphenyls	4.35E-09	1.45E-09	2.90E-10	2.17E-10
Pentachlorobenzene	2.31E-09	1.84E-09	2.00E-09	1.97E-09
Pentachlorophenol	7.16E-07	2.41E-07	5.22E-08	4.03E-08
3-Pentanol	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA
Phenol	7.86E-06	2.62E-06	5.24E-07	3.93E-07
Phthalic anhydride	2.56E-05	8.53E-06	1.71E-06	1.28E-06
Quinoline	5.16E-07	1.75E-07	3.49E-08	2.62E-08
Quinone	8.42E-06	2.81E-06	5.62E-07	4.21E-07
Styrene	1.79E-07	1.04E-07	2.74E-08	2.06E-08
1,2,4,5-Tetrachlorobenzene	3.75E-09	3.06E-09	3.24E-09	3.15E-09
Tetrachloroethene	2.16E-07	1.55E-07	7.29E-08	5.65E-08
2,3,4,6-Tetrachlorophenol	2.47E-08	1.04E-08	4.69E-09	4.06E-09
Toluene	1.47E-06	7.05E-07	1.53E-07	1.15E-07
1,2,4-Trichlorobenzene	6.39E-09	5.11E-09	4.40E-09	3.96E-09
1,2,5-Trichlorobenzene	2.88E-06	2.30E-06	1.98E-06	1.78E-06
1,1,1-Trichloroethane	4.67E-07	1.92E-07	3.93E-08	2.95E-08
Trichloroethene	1.79E-07	6.55E-08	1.31E-08	9.85E-09
Trichlorofluoromethane	3.77E-04	1.60E-04	3.29E-05	2.47E-05
2,3,6-Trichlorophenol	3.09E-06	1.62E-06	8.95E-07	7.58E-07
2,4,5-Trichlorophenol	1.93E-08	9.57E-09	5.30E-09	4.59E-09
2,4,6-Trichlorophenol	5.66E-08	3.38E-08	1.90E-08	1.57E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2.12E-07	7.19E-08	1.47E-08	1.10E-08
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.75E-08	6.02E-09	1.21E-09	9.06E-10
Undecane	1.85E-08	6.17E-09	1.23E-09	9.25E-10
Vinyl acetate	7.60E-07	2.53E-07	5.07E-08	3.80E-08
Vinyl chloride	7.62E-07	2.54E-07	5.08E-08	3.81E-08
o-Xylene	2.78E-07	1.78E-07	5.73E-08	4.31E-08
m,p-Xylene	6.06E-07	4.03E-07	1.44E-07	1.09E-07
Metals Inorganics				
Aluminum	6.52E-03	2.18E-03	4.39E-04	3.30E-04
Antimony	2.39E-06	8.33E-07	1.98E-07	1.52E-07
Arsenic	2.32E-07	7.83E-08	1.68E-08	1.29E-08
Barium	5.08E-04	1.75E-04	4.08E-05	3.15E-05
Beryllium	3.55E-07	1.19E-07	2.42E-08	1.83E-08
Cadmium	5.63E-06	1.97E-06	4.05E-07	3.04E-07
Calcium	1.30E-02	4.81E-03	9.87E-04	7.40E-04
Chromium III	7.79E-06	2.60E-06	5.32E-07	4.02E-07
Cobalt	4.90E-07	1.64E-07	3.36E-08	2.53E-08
Copper	5.93E-05	2.21E-05	6.09E-06	4.72E-06
Iron	5.94E-04	1.98E-04	3.98E-05	2.98E-05
Lead	2.28E-05	7.69E-06	1.69E-06	1.31E-06

Table 5C-24 (RB1)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Silage (CV_s)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_s Total Silage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Magnesium	3.74E-03	1.33E-03	2.71E-04	2.03E-04
Manganese	9.26E-06	3.28E-06	8.51E-07	6.70E-07
Mercury (inorganic)	8.21E-05	5.52E-05	4.55E-05	4.17E-05
Nickel	3.41E-05	1.17E-05	2.74E-06	2.15E-06
Potassium	2.00E-03	7.21E-04	1.49E-04	1.12E-04
Selenium	7.97E-06	2.69E-06	5.83E-07	4.49E-07
Silver	1.88E-05	6.85E-06	1.88E-06	1.47E-06
Sodium	3.05E-02	1.05E-02	2.44E-03	1.90E-03
Vanadium	4.40E-06	1.47E-06	2.97E-07	2.24E-07
Zinc	1.96E-04	8.84E-05	3.59E-05	2.89E-05
TICs				
Acetophenone	1.29E-06	4.31E-07	8.63E-08	6.47E-08
Benzonitrile	4.38E-07	1.46E-07	2.92E-08	2.19E-08
Bromobenzene	1.25E-06	7.41E-07	2.04E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	1.90E-05	6.34E-06	1.27E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	2.18E-05	7.25E-06	1.45E-06	1.09E-06
Chlorocyclohexanol	NA	NA	NA	NA
Decane	5.61E-11	1.87E-11	3.75E-12	2.81E-12
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA
Dioctyl adipate	8.44E-04	2.82E-04	5.63E-05	4.22E-05
2-(2-Ethoxyethoxy)ethanol	8.21E-06	2.74E-06	5.47E-07	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA
Hexenedione	NA,	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	2.23E-09	7.42E-10	1.48E-10	1.11E-10
Iodine	2.01E-11	6.71E-12	1.34E-12	1.01E-12
Iodobenzene	7.20E-10	2.40E-10	4.81E-11	3.61E-11
Iodomethane	1.00E-12	3.34E-13	6.69E-14	5.01E-14
Methyl benzoate	2.11E-09	7.05E-10	1.41E-10	1.06E-10
Methyl hexenone	1.39E-12	4.63E-13	9.25E-14	6.94E-14
Nonanoic acid	NA	NA	NA	NA
Silane	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-25 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Grain (Pr_g)
Drake Chemical Site
Lock Haven, PA

Table 5C-25 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Grain (Pr_g)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Br	Pr_g Grain Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics					
Acetaldehyde	2.19E+01	3.71E-06	1.24E-06	2.47E-07	1.85E-07
Acetone	5.33E+01	2.28E-05	7.59E-06	1.52E-06	1.14E-06
Acetonitrile	6.09E+01	8.00E-05	2.67E-05	5.33E-06	4.00E-06
Acrolein	4.37E+01	6.04E-06	2.01E-06	4.03E-07	3.02E-07
Acrylonitrile	2.78E+01	2.92E-06	9.73E-07	1.95E-07	1.46E-07
Aldrin	7.05E-01	2.74E-08	1.65E-08	4.64E-09	3.48E-09
Aniline	1.17E+01	4.38E-06	1.46E-06	2.92E-07	2.19E-07
Benzaldehyde	5.40E+00	8.91E-06	2.97E-06	5.94E-07	4.46E-07
Benzene	2.27E+00	3.94E-04	1.36E-04	2.72E-05	2.04E-05
Benzoic acid	3.21E+00	8.22E-06	2.75E-06	5.50E-07	4.13E-07
Benzotrichloride	7.95E-01	5.71E-08	3.24E-08	8.33E-09	6.25E-09
Benzoyl chloride	1.81E+00	1.17E-05	4.28E-06	8.59E-07	6.44E-07
Benzyl chloride	1.81E+00	7.72E-07	2.83E-07	5.68E-08	4.26E-08
Biphenyl	5.77E-01	7.05E-07	4.61E-07	1.56E-07	1.17E-07
Bis(2-chloroethoxy)methane	7.24E+00	3.08E-08	1.03E-08	2.06E-09	1.54E-09
Bis(2-ethylhexyl)phthalate	5.78E-02	7.71E-07	6.37E-07	6.91E-07	6.79E-07
Bromochloromethane	5.93E+00	1.60E-06	5.32E-07	1.06E-07	7.98E-08
Bromodichloromethane	3.17E+00	1.22E-06	4.09E-07	8.19E-08	6.14E-08
Bromoform	1.63E+00	3.57E-07	1.37E-07	2.76E-08	2.07E-08
Bromomethane	7.95E+00	5.25E-06	1.75E-06	3.50E-07	2.63E-07
2-Butanone (MEK)	2.74E+01	7.80E-06	2.60E-06	5.20E-07	3.90E-07
Butyl benzyl phthalate	6.78E-02	1.97E-08	1.63E-08	1.75E-08	1.71E-08
Carbazole	2.74E-01	1.50E-08	1.16E-08	7.93E-09	6.64E-09
Carbon disulfide	2.70E+00	1.04E-06	3.50E-07	7.00E-08	5.25E-08
Carbon tetrachloride	1.18E+00	7.24E-07	3.28E-07	6.95E-08	5.21E-08
alpha-Chlordane	2.67E-02	7.58E-10	6.29E-10	7.02E-10	6.97E-10
gamma-Chlordane	2.67E-02	3.06E-10	2.54E-10	2.83E-10	2.81E-10
4-Chloroaniline	3.39E+00	2.78E-08	9.28E-09	1.86E-09	1.39E-09
Chlorobenzene	2.13E+00	2.37E-06	8.29E-07	1.66E-07	1.24E-07
Chloroethane	5.77E+00	5.59E-07	1.86E-07	3.72E-08	2.79E-08
2-Chloroethyl vinyl ether	1.04E+01	6.21E-08	2.07E-08	4.14E-09	3.11E-09
Chloroform	2.81E+00	1.36E-05	4.58E-06	9.17E-07	6.87E-07
Chloromethane	1.15E+01	1.01E-06	3.35E-07	6.70E-08	5.03E-08
4-Chloro-3-methylphenol	6.25E-01	3.17E-08	2.01E-08	6.28E-09	4.72E-09
beta-Chloronaphthalene	1.61E-01	6.18E-09	4.98E-09	4.52E-09	4.15E-09
2-Chlorophenol	2.21E+00	3.31E-08	1.15E-08	2.30E-09	1.73E-09
2-Chloropropane	3.09E+00	4.17E-07	1.40E-07	2.80E-08	2.10E-08
Dalapon	1.38E+01	4.59E-08	1.53E-08	3.06E-09	2.30E-09
4,4'-DDD	1.28E-02	1.91E-09	1.59E-09	1.79E-09	1.78E-09
4,4'-DDE	6.69E-03	6.65E-10	5.52E-10	6.22E-10	6.20E-10
4,4'-DDT	8.16E-03	7.77E-10	6.45E-10	7.27E-10	7.25E-10
Decanol	8.84E-02	8.92E-12	7.33E-12	7.63E-12	7.37E-12
Dibenzofuran	1.61E-01	5.19E-09	4.18E-09	3.80E-09	3.48E-09
Dibromochloromethane	2.40E+00	3.19E-07	1.09E-07	2.18E-08	1.64E-08
Dicamba	2.04E+00	1.44E-08	5.07E-09	1.02E-09	7.62E-10
1,2-Dichlorobenzene	4.31E-01	7.19E-08	5.13E-08	2.35E-08	1.81E-08
1,3-Dichlorobenzene	3.22E-01	1.92E-08	1.45E-08	8.75E-09	7.10E-09

Table 5C-25 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Grain (Pr_g)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Br	Pr_g Grain Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,4-Dichlorobenzene	4.37E-01	3.93E-08	2.79E-08	1.26E-08	9.72E-09
3,3'-Dichlorobenzidine	6.96E-01	1.53E-08	9.29E-09	2.65E-09	1.99E-09
1,1-Dichloroethane	3.58E+00	2.34E-06	7.82E-07	1.56E-07	1.17E-07
1,2-Dichloroethane	5.40E+00	2.73E-07	9.09E-08	1.82E-08	1.36E-08
1,1-Dichloroethene	2.27E+00	1.91E-07	6.60E-08	1.32E-08	9.90E-09
cis-1,2-Dichloroethene	2.07E+00	8.14E-07	2.87E-07	5.74E-08	4.30E-08
trans-1,2-Dichloroethene	5.40E+00	1.55E-07	5.18E-08	1.04E-08	7.77E-09
2,4-Dichlorophenol	6.60E-01	6.29E-08	3.90E-08	1.16E-08	8.75E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53E-01	2.62E-08	1.95E-08	1.09E-08	8.65E-09
Dichloroprop	7.14E-01	1.49E-11	8.90E-12	2.48E-12	1.86E-12
Diethyl phthalate	1.45E+00	1.32E-06	5.36E-07	1.09E-07	8.20E-08
2,4-Dimethylphenol	1.81E+00	3.87E-08	1.42E-08	2.85E-09	2.13E-09
Dimethyl phthalate	2.30E+00	1.36E-06	4.70E-07	9.41E-08	7.05E-08
Di-n-butyl phthalate	5.70E-02	1.16E-07	9.58E-08	1.04E-07	1.02E-07
2,4-Dinitrophenol	5.26E+00	1.72E-08	5.74E-09	1.15E-09	8.60E-10
Di-n-octyl phthalate	3.72E-02	5.21E-09	4.32E-09	4.78E-09	4.74E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.62E-03	4.63E-14	3.84E-14	4.33E-14	4.32E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5.62E-03	5.37E-14	4.46E-14	5.03E-14	5.01E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	1.20E-14	9.98E-15	1.13E-14	1.12E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	2.97E-14	2.47E-14	2.78E-14	2.78E-14
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	3.91E-14	3.24E-14	3.66E-14	3.65E-14
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	5.83E-14	4.84E-14	5.47E-14	5.45E-14
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	2.89E-13	2.40E-13	2.71E-13	2.70E-13
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	1.71E-13	1.42E-13	1.60E-13	1.59E-13
2,3,4,7,8-Pentachlorodibenzofuran	3.87E-03	1.30E-13	1.08E-13	1.22E-13	.22E-13
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	1.05E-13	8.73E-14	9.85E-14	9.82E-14
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	1.41E-13	1.17E-13	1.32E-13	1.32E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	9.39E-14	7.79E-14	8.79E-14	8.77E-14
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	1.39E-14	1.15E-14	1.30E-14	1.30E-14
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	9.22E-14	7.66E-14	8.64E-14	8.62E-14
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	1.89E-13	1.57E-13	1.77E-13	1.76E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	3.88E-14	3.22E-14	3.63E-14	3.62E-14
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.17E-04	4.75E-14	3.94E-14	4.45E-14	4.43E-14
Endosulfan I	3.13E-01	8.16E-09	6.19E-09	3.83E-09	.12E-09
Endosulfan sulfate	2.97E-01	3.93E-09	3.00E-09	1.94E-09	.60E-09
Endrin	2.24E-02	2.28E-10	1.89E-10	2.12E-10	2.11E-10
Endrin aldehyde	2.24E-02	1.75E-10	1.45E-10	1.63E-10	.62E-10
Ethylbenzene	5.85E-01	4.71E-07	3.06E-07	1.02E-07	7.71E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.48E-01	1.49E-06	9.93E-07	3.55E-07	2.68E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	9.64E-10	7.60E-10	5.93E-10	5.16E-10
Hexachlorobenzene	3.30E-02	1.74E-09	1.44E-09	1.60E-09	1.59E-09
Hexachlorobutadiene	5.70E-02	3.07E-09	2.54E-09	2.76E-09	2.71E-09
beta-Hexachlorocyclohexane	2.46E-01	2.10E-09	1.64E-09	1.21E-09	1.04E-09
Hexachlorocyclopentadiene	1.91E-01	4.36E-09	3.48E-09	2.95E-09	2.64E-09

Table 5C-25 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Grain (Pr_g)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Br	Pr_g Grain Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachloroethane	4.54E-01	2.72E-09	1.92E-09	8.30E-10	6.37E-10
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	3.56E-06	1.19E-06	2.37E-07	1.78E-07
MCPP	6.01E-01	1.66E-07	1.07E-07	3.49E-08	2.62E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	4.50E-07	1.54E-07	3.07E-08	2.30E-08
Methylene chloride	7.34E+00	4.77E-06	1.59E-06	3.18E-07	2.38E-07
Methyl ester acetic acid	3.05E+01	3.52E-15	1.17E-15	2.35E-16	1.76E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	4.30E-08	3.39E-08	2.62E-08	2.28E-08
4-Methyl-2-pentanone	7.95E+00	5.56E-07	1.85E-07	3.71E-08	2.78E-08
2-Methylphenol	2.89E+00	1.50E-07	5.04E-08	1.01E-08	7.56E-09
3-Methylphenol	2.85E+00	6.07E-07	2.04E-07	4.09E-08	3.06E-08
4-Methylphenol	2.93E+00	1.53E-07	5.14E-08	1.03E-08	7.71E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	2.46E-07	1.48E-07	4.17E-08	3.13E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	2.98E-08	1.02E-08	2.03E-09	1.52E-09
2-Nitroaniline	3.30E+00	3.53E-08	1.18E-08	2.36E-09	1.77E-09
4-Nitroaniline	6.09E+00	4.66E-08	1.55E-08	3.10E-09	2.33E-09
Nitrobenzene	3.30E+00	2.94E-06	9.85E-07	1.97E-07	1.48E-07
2-Nitrophenol	3.58E+00	1.24E-06	4.13E-07	8.27E-08	6.20E-08
4-Nitrophenol	3.05E+00	2.89E-07	9.69E-08	1.94E-08	1.45E-08
n-Nitrosodiphenylamine	6.01E-01	6.37E-08	4.10E-08	1.34E-08	1.00E-08
Octadecanoic acid	6.78E-04	1.19E-09	9.85E-10	1.11E-09	1.11E-09
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	2.10E-01	9.08E-09	7.20E-09	5.82E-09	5.13E-09
Acenaphthylene	1.72E-01	7.71E-09	6.20E-09	5.49E-09	4.98E-09
Anthracene	1.04E-01	3.84E-09	3.15E-09	3.20E-09	3.06E-09
Benzo(a)anthracene	2.22E-02	1.00E-09	8.33E-10	9.33E-10	9.28E-10
Benzo(a)pyrene	1.14E-02	5.04E-10	4.18E-10	4.71E-10	4.69E-10
Benzo(b)fluoranthene	1.12E-02	3.33E-10	2.76E-10	3.11E-10	3.10E-10
Benzo(e)pyrene	1.25E-02	5.63E-10	4.68E-10	5.26E-10	5.24E-10
Benzo(g,h,i)perylene	5.19E-03	2.28E-10	1.89E-10	2.13E-10	2.12E-10
Benzo(j)fluoranthene	1.12E-02	9.85E-10	8.18E-10	9.21E-10	9.17E-10
Benzo(k)fluoranthene	4.31E-03	1.88E-10	1.56E-10	1.76E-10	1.75E-10
Chrysene	2.22E-02	7.57E-10	6.28E-10	7.03E-10	6.99E-10
Dibenzo(a,h)anthracene	6.78E-03	3.02E-10	2.51E-10	2.82E-10	2.82E-10
Fluoranthene	5.70E-02	2.03E-09	1.68E-09	1.82E-09	1.79E-09
Fluorene	1.43E-01	7.68E-09	6.23E-09	5.88E-09	5.46E-09
Indeno(1,2,3-cd)pyrene	6.06E-03	2.65E-10	2.20E-10	2.48E-10	2.47E-10
Phenanthrene	8.84E-02	2.21E-08	1.82E-08	1.89E-08	1.83E-08
Pyrene	5.85E-02	5.32E-09	4.40E-09	4.77E-09	4.68E-09
PCBs					
Monochlorobiphenyls	1.01E-01	1.02E-09	8.36E-10	8.53E-10	8.17E-10
Dichlorobiphenyls	4.55E-02	2.35E-10	1.95E-10	2.14E-10	2.11E-10
Trichlorobiphenyls	1.97E-02	1.56E-10	1.29E-10	1.45E-10	1.44E-10

Table 5C-25 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Grain (Pr_g)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Br	Pr_g Grain Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Tetrachlorobiphenyls	1 41E-02	2.24E-10	1 86E-10	2.09E-10	2 09E-10
Pentachlorobiphenyls	8 73E-03	1.32E-10	1 10E-10	1.24E-10	1 23E-10
Hexachlorobiphenyls	3 35E-03	3.34E-11	2 77E-11	3 12E-11	3 12E-11
Heptachlorobiphenyls	4.25E-03	1.32E-11	1.10E-11	1.24E-11	1.23E-11
Octachlorobiphenyls	2.50E-03	2.35E-12	1 95E-12	2.20E-12	2 19E-12
Nonachlorobiphenyls	1 51E-03	6 40E-13	5.32E-13	6 00E-13	5 98E-13
Decachlorobiphenyls	6.51E-04	2 80E-14	2.33E-14	2 63E-14	2 62E-14
Pentachlorobenzene	3 98E-02	2 17E-09	1 80E-09	1 99E-09	1 96E-09
Pentachlorophenol	4.25E-02	5.26E-09	4 35E-09	4 80E-09	4 74E-09
3-Pentanol	6.25E+00	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	5.55E+00	7.84E-06	2 61E-06	5.23E-07	3 92E-07
Phthalic anhydride	8 84E+01	2.56E-05	8.52E-06	1.70E-06	1.28E-06
Quinoline	2.60E+00	4 90E-07	1.66E-07	3.32E-08	2 49E-08
Quinone	2.97E+01	8.42E-06	2.81E-06	5 62E-07	4.21E-07
Styrene	7.64E-01	1 79E-07	1.04E-07	2 74E-08	2.06E-08
1,2,4,5-Tetrachlorobenzene	7.44E-02	3.69E-09	3 04E-09	3.23E-09	3 15E-09
Tetrachloroethene	4.20E-01	2 16E-07	1.55E-07	7.29E-08	5 65E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	4.63E-09	3 73E-09	3.35E-09	3.06E-09
Toluene	1 08E+00	1 47E-06	7.05E-07	1.53E-07	1.15E-07
1,2,4-Trichlorobenzene	1.84E-01	6.37E-09	5 10E-09	4.39E-09	3 95E-09
1,2,5-Trichlorobenzene	1.84E-01	2.88E-06	2 30E-06	1.98E-06	1 78E-06
1,1,1-Trichloroethane	1 41E+00	4.67E-07	1 92E-07	3.93E-08	2 95E-08
Trichloroethene	1.84E+00	1.79E-07	6 55E-08	1.31E-08	9 85E-09
Trichlorofluoromethane	1.34E+00	3 77E-04	1.60E-04	3.29E-05	2 47E-05
2,3,6-Trichlorophenol	2 37E-01	1.31E-06	1.03E-06	7.76E-07	6.69E-07
2,4,5-Trichlorophenol	1.99E-01	6 74E-09	5.36E-09	4 46E-09	3 96E-09
2,4,6-Trichlorophenol	2.85E-01	3 43E-08	2.64E-08	1 75E-08	1 46E-08
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6 01E-01	3 77E-09	2 43E-09	7.91E-10	5.95E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.51E+00	2.96E-09	1.18E-09	2.39E-10	1 79E-10
Undecane	3.77E-03	8.58E-14	7.12E-14	8.03E-14	8 01E-14
Vinyl acetate	1.47E+01	7.60E-07	2.53E-07	5.07E-08	3 80E-08
Vinyl chloride	1 74E+01	7.62E-07	2.54E-07	5.08E-08	3.81E-08
o-Xylene	6 09E-01	2 78E-07	1.78E-07	5.73E-08	4.31E-08
m,p-Xylene	5 48E-01	6 06E-07	4 03E-07	1 44E-07	1 09E-07
Metals - Inorganics					
Aluminum	6.50E-04	1 41E-06	1 17E-06	1.29E-06	1.28E-06
Antimony	3 00E-02	2 19E-08	1.69E-08	1.15E-08	9.58E-09
Arsenic	6.00E-03	4.56E-10	3.72E-10	3.69E-10	3 49E-10
Barium	1.50E-02	2.38E-06	1 87E-06	1.42E-06	1.22E-06
Beryllium	1.5[illegible]3	1.76E-10	1.46E-10	1.58E-10	1 55E-10
Cadmium	1.5[illegible]1	1.88E-07	1.03E-07	2.53E-08	1.90E-08
Calcium	3.5[illegible]01	6.63E-04	3.10E-04	6.65E-05	4 99E-05
Chromium III	4.50E-03	1.16E-08	9.61E-09	1.05E-08	1.03E-08
Cobalt	7.00E-03	1.08E-09	8.35E-10	5.66E-10	4 73E-10
Copper	2.50E-01	4.21E-06	3 18E-06	1.92E-06	1.56E-06
Iron	1.00E-03	1.81E-07	1.32E-07	6.66E-08	5.22E-08
Lead	9.00E-03	6.75E-08	5.58E-08	6.11E-08	6 02E-08

Table 5C-25 (RB1)

Estimated Chemical Concentrations Due to Root Uptake in Grain (Pr_g)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Br	Pr_g Grain Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Magnesium	5.50E-01	3.77E-04	1.83E-04	4.03E-05	3.02E-05
Manganese	5.00E-02	1.42E-07	1.12E-07	8.73E-08	7.60E-08
Mercury (inorganic)	2.00E-01	2.13E-05	1.72E-05	1.60E-05	1.48E-05
Nickel	6.00E-02	6.59E-07	5.35E-07	5.09E-07	4.75E-07
Potassium	5.50E-01	2.14E-04	1.11E-04	2.58E-05	1.93E-05
Selenium	2.50E-02	6.54E-08	5.37E-08	5.55E-08	5.34E-08
Silver	1.00E-01	5.51E-07	4.25E-07	2.88E-07	2.41E-07
Sodium	5.50E-02	5.35E-04	4.29E-04	3.77E-04	3.42E-04
Vanadium	3.00E-03	4.30E-09	3.45E-09	3.03E-09	2.75E-09
Zinc	9.00E-01	4.03E-05	3.08E-05	1.98E-05	1.63E-05
TICs					
Acetophenone	4.69E+00	1.29E-06	4.31E-07	8.62E-08	6.47E-08
Benzonitrile	4.82E+00	4.38E-07	1.46E-07	2.92E-08	2.19E-08
Bromobenzene	7.14E-01	1.25E-06	7.41E-07	2.04E-07	1.53E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	1.90E-05	6.34E-06	1.27E-06	9.50E-07
2-(2-Butoxyethoxy)ethanol	1.15E+01	2.13E-05	7.09E-06	1.42E-06	1.06E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	1.32E-02	7.17E-15	5.95E-15	6.69E-15	6.66E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	1.11E-02	2.68E-08	2.23E-08	2.51E-08	2.50E-08
2-(2-Ethoxyethoxy)ethanol	7.97E+01	8.20E-06	2.73E-06	5.47E-07	4.10E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4.41E+01	4.70E-12	1.57E-12	3.13E-13	2.35E-13
Iodine	1.39E+00	2.14E-13	8.81E-14	1.80E-14	1.35E-14
Iodobenzene	5.05E-01	5.56E-13	3.78E-13	1.44E-13	1.10E-13
Iodomethane	5.15E+00	1.07E-15	3.58E-16	7.15E-17	5.37E-17
Methyl benzoate	2.28E+00	1.58E-12	5.44E-13	1.09E-13	8.16E-14
Methyl hexenone	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters

RISK BURN 2

Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Organics							
Acetaldehyde	2.19E+01	9.34E-06	2.56E-06	3.11E-06	6.23E-07	8.53E-07	1.28E-07
Acetone	5.33E+01	5.92E-05	1.62E-05	1.97E-05	3.95E-06	5.40E-06	8.11E-07
Acetonitrile	6.09E+01	1.99E-04	5.45E-05	6.63E-05	1.33E-05	1.82E-05	2.72E-06
Acrolein	4.37E+01	1.52E-05	4.17E-06	5.08E-06	1.02E-06	1.39E-06	2.09E-07
Acrylonitrile	2.78E+01	6.76E-06	1.85E-06	2.25E-06	4.51E-07	6.17E-07	9.26E-08
Aldrin	7.05E-01	6.02E-08	1.62E-08	3.63E-08	1.03E-08	9.76E-09	2.06E-09
Aniline	1.17E+01	1.05E-05	2.89E-06	3.52E-06	7.03E-07	9.63E-07	1.45E-07
Benzaldehyde	5.40E+00	6.06E-05	1.66E-05	2.02E-05	4.04E-06	5.53E-06	8.30E-07
Benzene	2.27E+00	1.22E-03	3.34E-04	4.21E-04	8.43E-05	1.15E-04	1.73E-05
Benzoic acid	3.21E+00	3.64E-04	9.97E-05	1.22E-04	2.44E-05	3.34E-05	5.00E-06
Benzotrichloride	7.95E-01	1.24E-07	3.39E-08	7.06E-08	1.82E-08	1.93E-08	3.72E-09
Benzoyl chloride	1.81E+00	4.46E-05	1.22E-05	1.63E-05	3.28E-06	4.47E-06	6.73E-07
Benzyl chloride	1.81E+00	1.76E-06	4.83E-07	6.47E-07	1.30E-07	1.77E-07	2.66E-08
Biphenyl	5.77E-01	3.17E-06	8.67E-07	2.07E-06	7.05E-07	5.67E-07	1.45E-07
Bis(2-chloroethoxy)methane	7.24E+00	3.70E-08	1.01E-08	1.23E-08	2.47E-09	3.38E-09	5.07E-10
Bis(2-ethylhexyl)phthalate	5.78E-02	3.47E-06	2.84E-07	2.87E-06	3.16E-06	2.34E-07	2.50E-07
Bromochloromethane	5.93E+00	3.78E-06	1.03E-06	1.26E-06	2.52E-07	3.45E-07	5.17E-08
Bromodichloromethane	3.17E+00	3.22E-06	8.81E-07	1.08E-06	2.15E-07	2.95E-07	4.43E-08
Bromoform	1.63E+00	5.63E-07	1.54E-07	2.15E-07	4.34E-08	5.89E-08	8.91E-09
Bromomethane	7.95E+00	1.20E-05	3.28E-06	3.99E-06	7.98E-07	1.09E-06	1.64E-07
2-Butanone (MEK)	2.74E+01	3.51E-05	9.61E-06	1.17E-05	2.34E-06	3.20E-06	4.81E-07
Butyl benzyl phthalate	6.78E-02	6.17E-08	1.47E-08	5.10E-08	5.55E-08	1.22E-08	1.27E-08
Carbazole	2.74E-01	1.80E-08	4.92E-09	1.39E-08	9.64E-09	3.80E-09	2.18E-09
Carbon disulfide	2.70E+00	2.53E-06	6.93E-07	8.55E-07	1.71E-07	2.34E-07	3.51E-08
Carbon tetrachloride	1.18E+00	1.96E-06	5.36E-07	8.88E-07	1.88E-07	2.43E-07	3.85E-08
alpha-Chlordane	2.67E-02	1.83E-09	4.42E-10	1.52E-09	1.72E-09	3.66E-10	4.06E-10
gamma-Chlordane	2.67E-02	7.00E-10	1.74E-10	5.82E-10	6.59E-10	1.44E-10	1.60E-10
4-Chloroaniline	3.39E+00	3.33E-08	9.13E-09	1.11E-08	2.23E-09	3.05E-09	4.58E-10

Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Chlorobenzene	2.13E+00	1.36E-05	3.73E-06	4.76E-06	9.54E-07	1.30E-06	1.96E-07
Chloroethane	5.77E+00	2.27E-07	6.22E-08	7.57E-08	1.51E-08	2.07E-08	3.11E-09
2-Chloroethyl vinyl ether	1.04E+01	1.33E-07	3.63E-08	4.42E-08	8.84E-09	1.21E-08	1.82E-09
Chloroform	2.81E+00	2.45E-05	6.71E-06	8.26E-06	1.65E-06	2.26E-06	3.39E-07
Chloromethane	1.15E+01	2.29E-06	6.28E-07	7.64E-07	1.53E-07	2.09E-07	3.14E-08
4-Chloro-3-methylphenol	6.25E-01	1.85E-07	5.07E-08	1.18E-07	3.70E-08	3.21E-08	7.57E-09
beta-Chloronaphthalene	1.61E-01	7.42E-09	2.03E-09	6.00E-09	5.52E-09	1.64E-09	1.36E-09
2-Chlorophenol	2.21E+00	3.98E-08	1.09E-08	1.38E-08	2.76E-09	3.78E-09	5.67E-10
2-Chloropropane	3.09E+00	9.33E-07	2.55E-07	3.13E-07	6.25E-08	8.56E-08	1.28E-08
Dalapon	1.38E+01	9.70E-08	2.66E-08	3.23E-08	6.47E-09	8.86E-09	1.33E-09
4,4'-DDD	1.28E-02	4.18E-09	1.00E-09	3.47E-09	3.97E-09	8.31E-10	9.32E-10
4,4'-DDE	6.69E-03	9.44E-10	2.40E-10	7.85E-10	8.99E-10	1.99E-10	2.23E-10
4,4'-DDT	8.16E-03	3.00E-09	3.53E-10	2.49E-09	2.85E-09	2.93E-10	3.29E-10
Decanol	8.84E-02	8.65E-11	5.78E-12	7.12E-11	7.52E-11	4.75E-12	4.77E-12
Dibenzofuran	1.61E-01	6.23E-09	1.70E-09	5.03E-09	4.63E-09	1.37E-09	1.14E-09
Dibromochloromethane	2.40E+00	1.00E-06	2.74E-07	3.43E-07	6.86E-08	9.39E-08	1.41E-08
Dicamba	2.04E+00	2.96E-08	8.07E-09	1.04E-08	2.09E-09	2.85E-09	4.28E-10
1,2-Dichlorobenzene	4.31E-01	1.40E-07	3.83E-08	9.99E-08	4.60E-08	2.73E-08	9.64E-09
1,3-Dichlorobenzene	3.22E-01	2.30E-08	6.30E-09	1.74E-08	1.06E-08	4.76E-09	2.33E-09
1,4-Dichlorobenzene	4.37E-01	9.08E-08	2.48E-08	6.47E-08	2.94E-08	1.77E-08	6.14E-09
3,3'-Dichlorobenzidine	6.96E-01	2.44E-08	5.00E-09	1.48E-08	4.22E-09	3.03E-09	6.48E-10
1,1-Dichloroethane	3.58E+00	5.55E-06	1.52E-06	1.85E-06	3.71E-07	5.07E-07	7.61E-08
1,2-Dichloroethane	5.40E+00	4.59E-08	1.26E-08	1.53E-08	3.06E-09	4.19E-09	6.28E-10
1,1-Dichloroethene	2.27E+00	1.48E-07	4.06E-08	5.12E-08	1.02E-08	1.40E-08	2.10E-09
cis-1,2-Dichloroethene	2.07E+00	1.86E-06	5.10E-07	6.56E-07	1.31E-07	1.80E-07	2.70E-08
trans-1,2-Dichloroethene	5.40E+00	4.63E-08	1.27E-08	1.54E-08	3.09E-09	4.23E-09	6.34E-10
2,4-Dichlorophenol	6.60E-01	2.50E-08	6.85E-09	1.56E-08	4.65E-09	4.25E-09	9.52E-10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53E-01	5.60E-08	1.53E-08	4.17E-08	2.34E-08	1.14E-08	5.06E-09
Dichloroprop	7.14E-01	1.20E-10	8.04E-12	7.21E-11	2.01E-11	4.81E-12	1.01E-12

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Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Diethyl phthalate	1.45E+00	1.75E-06	4.80E-07	7.12E-07	1.45E-07	1.95E-07	2.97E-08
2,4-Dimethylphenol	1.81E+00	4.64E-08	1.27E-08	1.70E-08	3.42E-09	4.66E-09	7.02E-10
Dimethyl phthalate	2.30E+00	4.98E-06	1.36E-06	1.72E-06	3.43E-07	4.70E-07	7.05E-08
Di-n-butyl phthalate	5.70E-02	2.45E-07	6.16E-08	2.03E-07	2.24E-07	5.09E-08	5.43E-08
2,4-Dinitrophenol	5.26E+00	2.07E-08	5.66E-09	6.89E-09	1.38E-09	1.89E-09	2.83E-10
Di-n-octyl phthalate	3.72E-02	1.04E-08	2.80E-09	8.66E-09	9.74E-09	2.32E-09	2.55E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA	NA
Dioxins/Furans							
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.62E-03	2.03E-13	2.48E-14	1.69E-13	1.93E-13	2.06E-14	2.32E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5.62E-03	1.64E-14	1.41E-15	1.36E-14	1.56E-14	1.17E-15	1.31E-15
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	4.68E-14	3.35E-15	3.90E-14	4.46E-14	2.79E-15	3.13E-15
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	1.35E-13	9.18E-15	1.12E-13	1.29E-13	7.62E-15	8.57E-15
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	2.25E-13	1.55E-14	1.87E-13	2.14E-13	1.29E-14	1.45E-14
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	2.47E-13	1.68E-14	2.06E-13	2.36E-13	1.40E-14	1.57E-14
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	9.07E-13	6.07E-14	7.54E-13	8.64E-13	5.04E-14	5.67E-14
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	2.81E-13	4.33E-14	2.34E-13	2.67E-13	3.60E-14	4.04E-14
2,3,4,7,8-Pentachlorodibenzofuran	3.87E-03	4.05E-13	3.66E-14	3.37E-13	3.86E-13	3.04E-14	3.41E-14
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	2.52E-13	2.60E-14	2.10E-13	2.40E-13	2.16E-14	2.43E-14
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	5.53E-13	3.90E-14	4.60E-13	5.27E-13	3.24E-14	3.64E-14
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	2.63E-13	1.87E-14	2.19E-13	2.51E-13	1.55E-14	1.74E-14
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	3.76E-14	2.79E-15	3.13E-14	3.58E-14	2.31E-15	2.60E-15
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	2.06E-13	1.47E-14	1.72E-13	1.97E-13	1.22E-14	1.37E-14
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	4.78E-13	3.32E-14	3.97E-13	4.55E-13	2.76E-14	3.10E-14
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	1.01E-13	6.91E-15	8.41E-14	9.64E-14	5.74E-15	6.46E-15
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.17E-04	9.80E-14	6.56E-15	8.15E-14	9.34E-14	5.44E-15	6.13E-15
Endosulfan I	3.13E-01	1.81E-08	4.77E-09	1.37E-08	8.58E-09	3.62E-09	1.82E-09
Endosulfan sulfate	2.97E-01	8.04E-09	2.20E-09	6.16E-09	4.02E-09	1.68E-09	8.93E-10
Endrin	2.24E-02	5.69E-10	1.29E-10	4.73E-10	5.38E-10	1.07E-10	1.19E-10
Endrin aldehyde	2.24E-02	4.46E-10	9.56E-11	3.71E-10	4.21E-10	7.93E-11	8.83E-11

Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Ethylbenzene	5.85E-01	5.25E-07	1.44E-07	3.42E-07	1.15E-07	9.34E-08	2.35E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.48E-01	3.53E-06	9.64E-07	2.35E-06	8.45E-07	6.42E-07	1.73E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	1.96E-09	5.36E-10	1.55E-09	1.22E-09	4.22E-10	2.87E-10
Hexachlorobenzene	3.30E-02	2.09E-09	5.72E-10	1.74E-09	1.96E-09	4.74E-10	5.23E-10
Hexachlorobutadiene	5.70E-02	3.69E-09	1.01E-09	3.05E-09	3.37E-09	8.34E-10	8.89E-10
beta-Hexachlorocyclohexane	2.46E-01	4.23E-09	1.16E-09	3.31E-09	2.47E-09	9.04E-10	5.70E-10
Hexachlorocyclopentadiene	1.91E-01	5.24E-09	1.43E-09	4.19E-09	3.59E-09	1.14E-09	8.67E-10
Hexachloroethane	4.54E-01	3.27E-09	8.95E-10	2.31E-09	1.01E-09	6.30E-10	2.09E-10
Hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	3.00E-06	8.22E-07	1.00E-06	2.00E-07	2.74E-07	4.11E-08
MCPP	6.01E-01	3.97E-07	1.01E-07	2.56E-07	8.35E-08	6.50E-08	1.59E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	1.08E-06	2.79E-07	3.69E-07	7.38E-08	9.50E-08	1.43E-08
Methylene chloride	7.34E+00	6.61E-06	1.81E-06	2.20E-06	4.41E-07	6.04E-07	9.05E-08
Methyl ester acetic acid	3.05E+01	3.38E-14	2.26E-15	1.13E-14	2.26E-15	7.55E-16	1.13E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	1.28E-08	3.51E-09	1.01E-08	7.94E-09	2.77E-09	1.86E-09
4-Methyl-2-pentanone	7.95E+00	1.10E-06	3.02E-07	3.67E-07	7.34E-08	1.01E-07	1.51E-08
2-Methylphenol	2.89E+00	1.06E-06	2.89E-07	3.55E-07	7.10E-08	9.72E-08	1.46E-08
3-Methylphenol	2.85E+00	1.49E-06	4.08E-07	5.01E-07	1.00E-07	1.37E-07	2.06E-08
4-Methylphenol	2.93E+00	1.63E-06	4.45E-07	5.46E-07	1.09E-07	1.50E-07	2.24E-08
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	1.46E-06	4.00E-07	8.82E-07	2.49E-07	2.41E-07	5.09E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	3.58E-08	9.78E-09	1.22E-08	2.44E-09	3.34E-09	5.01E-10
2-Nitroaniline	3.30E+00	4.24E-08	1.16E-08	1.42E-08	2.84E-09	3.88E-09	5.83E-10
4-Nitroaniline	6.09E+00	2.97E-08	8.14E-09	9.90E-09	1.98E-09	2.71E-09	4.07E-10
Nitrobenzene	3.30E+00	4.37E-06	1.20E-06	1.46E-06	2.92E-07	4.00E-07	6.00E-08

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Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
2-Nitrophenol	3.58E+00	3.21E-06	8.80E-07	1.07E-06	2.15E-07	2.94E-07	4.41E-08
4-Nitrophenol	3.05E+00	3.20E-08	8.76E-09	1.07E-08	2.15E-09	2.94E-09	4.41E-10
n-Nitrosodiphenylamine	6.01E-01	1.37E-07	3.76E-08	8.86E-08	2.89E-08	2.42E-08	5.93E-09
Octadecanoic acid	6.78E-04	1.15E-08	7.68E-10	9.57E-09	1.10E-08	6.38E-10	7.18E-10
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA	NA
PAHs							
Acenaphthene	2.10E-01	1.09E-08	2.98E-09	8.66E-09	7.10E-09	2.37E-09	1.69E-09
Acenaphthylene	1.72E-01	9.27E-09	2.53E-09	7.46E-09	6.69E-09	2.04E-09	1.64E-09
Anthracene	1.04E-01	1.71E-08	4.69E-09	1.41E-08	1.45E-08	3.84E-09	3.73E-09
Benzo(a)anthracene	2.22E-02	3.75E-09	3.15E-10	3.12E-09	3.55E-09	2.61E-10	2.91E-10
Benzo(a)pyrene	1.14E-02	1.78E-09	1.58E-10	1.48E-09	1.70E-09	1.31E-10	1.47E-10
Benzo(b)fluoranthene	1.12E-02	4.47E-10	1.09E-10	3.72E-10	4.25E-10	9.06E-11	1.02E-10
Benzo(c)pyrene	1.25E-02	1.92E-09	1.78E-10	1.59E-09	1.82E-09	1.47E-10	1.65E-10
Benzo(g,h,i)perylene	5.19E-03	1.03E-09	7.02E-11	8.57E-10	9.81E-10	5.83E-11	6.55E-11
Benzo(j)fluoranthene	1.12E-02	5.47E-09	6.05E-10	4.55E-09	5.20E-09	5.02E-10	5.63E-10
Benzo(k)fluoranthene	4.31E-03	8.56E-10	5.78E-11	7.12E-10	8.15E-10	4.80E-11	5.40E-11
Chrysene	2.22E-02	1.67E-09	2.44E-10	1.39E-09	1.58E-09	2.02E-10	2.25E-10
Dibenzo(a,h)anthracene	6.78E-03	1.31E-09	9.34E-11	1.09E-09	1.24E-09	7.76E-11	8.72E-11
Fluoranthene	5.70E-02	2.54E-09	6.67E-10	2.10E-09	2.32E-09	5.51E-10	5.88E-10
Fluorene	1.43E-01	9.23E-09	2.53E-09	7.50E-09	7.17E-09	2.05E-09	1.80E-09
Indeno(1,2,3-cd)pyrene	6.06E-03	1.22E-09	8.15E-11	1.01E-09	1.16E-09	6.77E-11	7.61E-11
Phenanthrene	8.84E-02	3.02E-08	8.26E-09	2.49E-08	2.63E-08	6.79E-09	6.83E-09
Pyrene	5.85E-02	1.52E-08	3.88E-09	1.25E-08	1.38E-08	3.20E-09	3.41E-09
PCBs							
Monochlorobiphenyls	1.01E-01	6.45E-09	1.77E-09	5.30E-09	5.49E-09	1.45E-09	1.41E-09
Dichlorobiphenyls	4.55E-02	7.10E-10	1.94E-10	5.89E-10	6.57E-10	1.61E-10	1.74E-10
Trichlorobiphenyls	1.97E-02	2.18E-10	5.97E-11	1.82E-10	2.07E-10	4.95E-11	5.52E-11
Tetrachlorobiphenyls	1.41E-02	1.31E-10	3.56E-11	1.09E-10	1.25E-10	2.95E-11	3.30E-11

Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Pentachlorobiphenyls	8.73E-03	1.46E-10	3.95E-11	1.22E-10	1.39E-10	3.28E-11	3.68E-11
Hexachlorobiphenyls	3.35E-03	3.30E-11	7.87E-12	2.74E-11	3.14E-11	6.53E-12	7.35E-12
Heptachlorobiphenyls	4.25E-03	1.80E-11	2.85E-12	1.49E-11	1.71E-11	2.37E-12	2.66E-12
Octachlorobiphenyls	2.50E-03	1.54E-12	3.04E-13	1.28E-12	1.47E-12	2.52E-13	2.84E-13
Nonachlorobiphenyls	1.51E-03	2.85E-12	2.06E-13	2.37E-12	2.72E-12	1.71E-13	1.93E-13
Decachlorobiphenyls	6.51E-04	3.38E-13	2.85E-14	2.81E-13	3.22E-13	2.37E-14	2.66E-14
Pentachlorobenzene	3.98E-02	2.61E-09	7.13E-10	2.16E-09	2.43E-09	5.90E-10	6.45E-10
Pentachlorophenol	4.25E-02	7.17E-09	1.96E-09	5.94E-09	6.66E-09	1.62E-09	1.77E-09
3-Pentanol	6.25E+00	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA	NA
Phenol	5.55E+00	2.87E-05	7.85E-06	9.55E-06	1.91E-06	2.62E-06	3.93E-07
Phthalic anhydride	8.84E+01	6.64E-05	1.82E-05	2.21E-05	4.43E-06	6.07E-06	9.10E-07
Quinoline	2.60E+00	1.11E-06	3.05E-07	3.77E-07	7.55E-08	1.03E-07	1.55E-08
Quinone	2.97E+01	2.19E-05	6.00E-06	7.29E-06	1.46E-06	2.00E-06	3.00E-07
Styrene	7.64E-01	2.70E-06	7.38E-07	1.57E-06	4.15E-07	4.28E-07	8.48E-08
1,2,4,5-Tetrachlorobenzene	7.44E-02	7.59E-09	2.08E-09	6.26E-09	6.76E-09	1.71E-09	1.77E-09
Tetrachloroethene	4.20E-01	4.37E-07	1.20E-07	3.14E-07	1.49E-07	8.58E-08	3.13E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	5.56E-09	1.52E-09	4.49E-09	4.09E-09	1.23E-09	1.01E-09
Toluene	1.08E+00	5.64E-06	1.54E-06	2.71E-06	5.90E-07	7.40E-07	1.21E-07
1,2,4-Trichlorobenzene	1.84E-01	7.66E-09	2.09E-09	6.14E-09	5.36E-09	1.68E-09	1.30E-09
1,2,5-Trichlorobenzene	1.84E-01	7.20E-06	1.97E-06	5.77E-06	5.04E-06	1.58E-06	1.22E-06
1,1,1-Trichloroethane	1.41E+00	3.47E-07	9.51E-08	1.43E-07	2.92E-08	3.91E-08	5.99E-09
Trichloroethene	1.84E+00	4.61E-07	1.26E-07	1.68E-07	3.37E-08	4.60E-08	6.93E-09
Trichlorofluoromethane	1.34E+00	3.56E-06	9.74E-07	1.51E-06	3.11E-07	4.12E-07	6.37E-08
2,3,6-Trichlorophenol	2.37E-01	3.18E-06	8.70E-07	2.50E-06	1.91E-06	6.83E-07	4.45E-07
2,4,5-Trichlorophenol	1.99E-01	8.10E-09	2.21E-09	6.46E-09	5.43E-09	1.76E-09	1.30E-09
2,4,6-Trichlorophenol	2.85E-01	1.20E-08	3.29E-09	9.25E-09	6.23E-09	2.53E-09	1.40E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6.01E-01	8.65E-09	2.10E-09	5.58E-09	1.82E-09	1.35E-09	3.31E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.51E+00	6.00E-09	1.63E-09	2.38E-09	4.84E-10	6.46E-10	9.83E-11

Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Undecane	3.77E-03	5.94E-14	3.97E-15	4.94E-14	5.66E-14	3.30E-15	3.71E-15
Vinyl acetate	1.47E+01	3.48E-06	9.54E-07	1.16E-06	2.32E-07	3.18E-07	4.77E-08
Vinyl chloride	1.74E+01	3.69E-07	1.01E-07	1.23E-07	2.46E-08	3.37E-08	5.06E-09
o-Xylene	6.09E-01	1.03E-06	2.81E-07	6.59E-07	2.12E-07	1.80E-07	4.35E-08
m,p-Xylene	5.48E-01	2.06E-06	5.65E-07	1.38E-06	4.94E-07	3.76E-07	1.01E-07
Metals / Inorganics							
Aluminum	9.18E-04	2.32E-05	2.05E-06	1.92E-05	2.17E-05	1.70E-06	1.87E-06
Antimony	4.36E-02	1.73E-07	1.53E-08	1.33E-07	9.15E-08	1.18E-08	6.68E-09
Arsenic	8.72E-03	1.27E-07	1.13E-08	1.04E-07	1.05E-07	9.20E-09	8.64E-09
Barium	2.58E-02	4.60E-05	4.07E-06	3.62E-05	2.78E-05	3.20E-06	2.09E-06
Beryllium	2.18E-03	1.07E-09	9.52E-11	8.89E-10	9.78E-10	7.86E-11	8.35E-11
Cadmium	1.82E-01	3.09E-06	2.73E-07	1.70E-06	4.16E-07	1.50E-07	2.76E-08
Calcium	6.02E-01	1.25E-02	1.11E-03	5.85E-03	1.26E-03	5.18E-04	8.34E-05
Chromium VI	4.74E-03	2.46E-08	2.18E-09	2.04E-08	2.27E-08	1.80E-09	1.94E-09
Cobalt	8.04E-03	2.80E-08	2.48E-09	2.16E-08	1.48E-08	1.91E-09	1.08E-09
Copper	2.62E-01	1.46E-05	1.29E-06	1.10E-05	6.72E-06	9.74E-07	4.78E-07
Iron	1.24E-03	3.07E-06	2.72E-07	2.24E-06	1.14E-06	1.98E-07	7.84E-08
Lead	1.19E-02	1.51E-06	1.33E-07	1.25E-06	1.39E-06	1.10E-07	1.19E-07
Magnesium	5.86E-01	5.04E-03	4.46E-04	2.45E-03	5.40E-04	2.17E-04	3.58E-05
Manganese	6.60E-02	1.71E-06	1.51E-07	1.35E-06	1.06E-06	1.19E-07	8.08E-08
Mercury (inorganic)	2.56E-01	1.96E-04	5.36E-05	1.59E-04	1.49E-04	4.34E-05	3.72E-05
Methyl mercury	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	6.00E-02	1.59E-05	1.41E-06	1.29E-05	1.25E-05	1.14E-06	1.01E-06
Potassium	5.86E-01	2.05E-03	1.81E-04	1.07E-03	2.48E-04	9.44E-05	1.64E-05
Selenium	2.50E-02	6.44E-07	5.70E-08	5.29E-07	5.55E-07	4.68E-08	4.66E-08
Silver	1.24E-01	9.21E-07	8.16E-08	7.12E-07	4.88E-07	6.29E-08	3.56E-08
Sodium	5.66E-02	5.89E-03	5.22E-04	4.74E-03	4.22E-03	4.19E-04	3.33E-04
Vanadium	3.20E-03	1.91E-08	1.70E-09	1.54E-08	1.37E-08	1.36E-09	1.08E-09
Zinc	9.48E-01	5.52E-04	4.89E-05	4.22E-04	2.75E-04	3.73E-05	1.98E-05

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Table 5C-11 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Aboveground Vegetables (Pr_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_{ag} Aboveground Vegetable Concentration Due to Root Uptake (mg/kg)					
		RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
		Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
TICs							
Acetophenone	4 69E+00	4 40E-06	1 20E-06	1 47E-06	2 93E-07	4 02E-07	6 02E-08
Benzonitrile	4 82E+00	2 19E-06	5 99E-07	7 29E-07	1 46E-07	2 00E-07	2 99E-08
Bromobenzene	7 14E-01	6 05E-06	1 66E-06	3 60E-06	9 95E-07	9 85E-07	2 04E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	2.03E-05	5 57E-06	6 78E-06	1 36E-06	1 86E-06	2 79E-07
2-(2-Butoxyethoxy)ethanol	1 15E+01	2 05E-04	5 63E-05	6 85E-05	1 37E-05	1 88E-05	2 81E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA	NA
Decane	1.32E-02	3 68E-14	2 46E-15	3 06E-14	3 49E-14	2.04E-15	2 28E-15
Dichlorocyclohexane	NA	NA	NA	NA	NA	NA	NA
Difluoroethane	1.42E+01	2 28E-05	6 25E-06	7.61E-06	1 52E-06	2 08E-06	3 13E-07
Dimethylcyclohexane	6 50E-01	4.64E-13	3 10E-14	2 88E-13	8 63E-14	1 92E-14	4.31E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA	NA
Dioctyl adipate	1 11E-02	1 05E-07	1 39E-08	8.70E-08	9.95E-08	1 15E-08	1 29E-08
Dodecane	1 67E-02	4.30E-08	1.18E-08	3 58E-08	4 08E-08	9 77E-09	1 09E-08
2-(2-Ethoxyethoxy)ethanol	7.97E+01	1.68E-05	4.61E-06	5.61E-06	1 12E-06	1 54E-06	2 31E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4 41E+01	3 26E-11	2 18E-12	1.09E-11	2 18E-12	7 28E-13	1.09E-13
Iodobenzene	5.05E-01	1 04E-11	6 95E-13	7 08E-12	2 72E-12	4 72E-13	1 37E-13
Methyl benzoate	2 28E+00	4 28E-11	2 86E-12	1 47E-11	2 95E-12	9 84E-13	1 48E-13
Methyl hexenone	NA	NA	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Organics						
Acetaldehyde	5.44E-16	8.29E-16	7.62E-17	1.57E-17	1.72E-15	1.42E-16
Acetone	4.36E-15	6.64E-15	6.10E-16	1.26E-16	1.38E-14	1.13E-15
Acetonitrile	3.86E-14	5.88E-14	5.40E-15	1.11E-15	1.22E-13	1.00E-14
Acrolein	1.92E-15	2.92E-15	2.68E-16	5.54E-17	6.07E-15	4.99E-16
Acrylonitrile	1.77E-15	2.69E-15	2.47E-16	5.10E-17	5.60E-15	4.60E-16
Aldrin	1.16E-10	1.76E-10	1.62E-11	3.33E-12	3.66E-10	3.01E-11
Aniline	1.50E-12	2.28E-12	2.09E-13	4.32E-14	4.74E-12	3.89E-13
Benzaldehyde	5.21E-11	7.93E-11	7.28E-12	1.50E-12	1.65E-10	1.35E-11
Benzene	9.71E-13	1.48E-12	1.36E-13	2.80E-14	3.08E-12	2.53E-13
Benzoic acid	5.73E-10	8.72E-10	8.01E-11	1.65E-11	1.81E-09	1.49E-10
Benzotrichloride	5.43E-14	8.27E-14	7.60E-15	1.57E-15	1.72E-13	1.41E-14
Benzoyl chloride	4.26E-12	6.48E-12	5.95E-13	1.23E-13	1.35E-11	1.11E-12
Benzyl chloride	1.13E-13	1.73E-13	1.59E-14	3.27E-15	3.59E-13	2.95E-14
Biphenyl	1.90E-11	2.90E-11	2.66E-12	5.49E-13	6.03E-11	4.95E-12
Bis(2-chloroethoxy)methane	4.35E-14	6.62E-14	6.08E-15	1.25E-15	1.38E-13	1.13E-14
Bis(2-ethylhexyl)phthalate	2.66E-06	4.05E-06	3.72E-07	7.68E-08	8.43E-06	6.92E-07
Bromochloromethane	4.76E-15	7.25E-15	6.66E-16	1.37E-16	1.51E-14	1.24E-15
Bromodichloromethane	1.13E-14	1.73E-14	1.59E-15	3.27E-16	3.59E-14	2.95E-15
Bromoform	2.31E-14	3.52E-14	3.23E-15	6.67E-16	7.32E-14	6.02E-15
Bromomethane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA
2-Butanone (MEK)	1.68E-14	2.55E-14	2.34E-15	4.83E-16	5.30E-14	4.36E-15
Butyl benzyl phthalate	7.30E-09	1.11E-08	1.02E-09	2.11E-10	2.31E-08	1.90E-09
Carbazole	3.15E-14	4.79E-14	4.40E-15	9.09E-16	9.97E-14	8.19E-15
Carbon disulfide	6.11E-16	9.30E-16	8.54E-17	1.76E-17	1.93E-15	1.59E-16
Carbon tetrachloride	1.34E-15	2.04E-15	1.87E-16	3.86E-17	4.24E-15	3.48E-16
alpha-Chlordane	5.01E-10	7.64E-10	7.01E-11	1.45E-11	1.59E-09	1.30E-10
gamma-Chlordane	1.51E-10	2.31E-10	2.12E-11	4.37E-12	4.79E-10	3.94E-11
4-Chloroaniline	4.75E-14	7.24E-14	6.65E-15	1.37E-15	1.50E-13	1.24E-14

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Chlorobenzene	9 68E-14	1 47E-13	1 35E-14	2 79E-15	3.06E-13	2 52E-14
Chloroethane	0 00E+00	0 00E+00	0 00E+00	0 00E+00	NA	NA
2-Chloroethyl vinyl ether	3 94E-16	5 99E-16	5 50E-17	1.14E-17	1 25E-15	1 02E-16
Chloroform	1 12E-14	1 70E-14	1 56E-15	3.23E-16	3 54E-14	2 91E-15
Chloromethane	0 00E+00	0 00E+00	0 00E+00	0 00E+00	NA	NA
4-Chloro-3-methylphenol	1 39E-13	2 11E-13	1 94E-14	4 01E-15	4 40E-13	3 61E-14
beta-Chloronaphthalene	9 85E-14	1 50E-13	1 38E-14	2 84E-15	3 12E-13	2 56E-14
2-Chlorophenol	1 98E-15	3 01E-15	2 76E-16	5.70E-17	6 26E-15	5 14E-16
2-Chloropropane	1 27E-16	1 93E-16	1 77E-17	3 66E-18	4 01E-16	3 30E-17
Dalapon	6 69E-14	1 02E-13	9 36E-15	1 93E-15	2 12E-13	1 74E-14
4,4'-DDD	2 53E-09	3 85E-09	3 53E-10	7 29E-11	8 00E-09	6 57E-10
4,4'-DDE	6 44E-10	9 80E-10	9 00E-11	1 86E-11	2 04E-09	1 67E-10
4,4'-DDT	1 32E-08	2 01E-08	1 84E-09	3 80E-10	4 17E-08	3 43E-09
Decanol	4 69E-11	7 14E-11	6 56E-12	1 35E-12	1 49E-10	1 22E-11
Dibenzofuran	2 08E-13	3 17E-13	2 92E-14	6 01E-15	6 60E-13	5 42E-14
Dibromochloromethane	2 78E-15	4 23E-15	3 88E-16	8 01E-17	8 79E-15	7 22E-16
Dicamba	8 59E-12	1 31E-11	1 20E-12	2.48E-13	2 72E-11	2 23E-12
1,2-Dichlorobenzene	1 40E-14	2 13E-14	1 96E-15	4 04E-16	4 44E-14	3 64E-15
1,3-Dichlorobenzene	1 89E-15	2 88E-15	2 64E-16	5 45E-17	5 98E-15	4 92E-16
1,4-Dichlorobenzene	3 47E-15	5 28E-15	4 85E-16	1 00E-16	1 10E-14	9 02E-16
3,3'-Dichlorobenzidine	6 97E-10	1 06E-09	9 75E-11	2 01E-11	2 21E-09	1 81E-10
1,1-Dichloroethane	2 36E-15	3 59E-15	3 30E-16	6 81E-17	7 47E-15	6 14E-16
1,2-Dichloroethane	5 00E-17	7 61E-17	6 99E-18	1 44E-18	1 58E-16	1 30E-17
1,1-Dichloroethene	1 87E-17	2 85E-17	2 62E-18	5 39E-19	5 92E-17	4 86E-18
cis-1,2-Dichloroethene	7 63E-16	1 16E-15	1 07E-16	2 20E-17	2 42E-15	1 99E-16
trans-1,2-Dichloroethene	1 56E-17	2 37E-17	2 18E-18	4 50E-19	4 94E-17	4 06E-18
2,4-Dichlorophenol	3 24E-14	4 93E-14	4 53E-15	9 34E-16	1 02E-13	8 42E-15
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	1 07E-13	1 63E-13	1 50E-14	3 09E-15	3 39E-13	2 79E-14
Dichloroprop	1 02E-11	1 56E-11	1 43E-12	2 95E-13	3 23E-11	2 66E-12

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Diethyl phthalate	1.06E-10	1.62E-10	1.49E-11	3.07E-12	3.37E-10	2.77E-11
2,4-Dimethylphenol	1.38E-13	2.11E-13	1.94E-14	3.99E-15	4.38E-13	3.60E-14
Dimethyl phthalate	5.07E-11	7.72E-11	7.09E-12	1.46E-12	1.61E-10	1.32E-11
Di-n-butyl phthalate	2.22E-08	3.38E-08	3.11E-09	6.41E-10	7.03E-08	5.78E-09
2,4-Dinitrophenol	1.20E-12	1.83E-12	1.68E-13	3.46E-14	3.80E-12	3.12E-13
Di-n-octyl phthalate	3.16E-10	4.81E-10	4.42E-11	9.12E-12	1.00E-09	8.22E-11
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA
Dioxins/Furans						
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1.25E-12	1.91E-12	1.75E-13	3.61E-14	3.97E-12	3.26E-13
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	1.26E-13	1.91E-13	1.76E-14	3.63E-15	3.98E-13	3.27E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.79E-12	2.72E-12	2.50E-13	5.16E-14	5.66E-12	4.65E-13
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	5.25E-12	7.99E-12	7.34E-13	1.51E-13	1.66E-11	1.37E-12
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	4.53E-12	6.90E-12	6.34E-13	1.31E-13	1.43E-11	1.18E-12
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	1.66E-11	2.52E-11	2.32E-12	4.78E-13	5.25E-11	4.31E-12
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	2.72E-11	4.14E-11	3.80E-12	7.84E-13	8.60E-11	7.06E-12
2,3,7,8-Tetrachlorodibenzofuran	1.18E-12	1.80E-12	1.66E-13	3.42E-14	3.75E-12	3.08E-13
2,3,4,7,8-Pentachlorodibenzofuran	4.41E-12	6.71E-12	6.17E-13	1.27E-13	1.40E-11	1.15E-12
1,2,3,7,8-Pentachlorodibenzofuran	2.15E-12	3.27E-12	3.01E-13	6.20E-14	6.81E-12	5.59E-13
1,2,3,4,7,8-Hexachlorodibenzofuran	1.11E-11	1.68E-11	1.55E-12	3.19E-13	3.50E-11	2.87E-12
1,2,3,6,7,8-Hexachlorodibenzofuran	5.26E-12	8.00E-12	7.35E-13	1.52E-13	1.66E-11	1.37E-12
1,2,3,7,8,9-Hexachlorodibenzofuran	7.39E-13	1.13E-12	1.03E-13	2.13E-14	2.34E-12	1.92E-13
2,3,4,6,7,8-Hexachlorodibenzofuran	4.12E-12	6.27E-12	5.76E-13	1.19E-13	1.30E-11	1.07E-12
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.13E-11	3.25E-11	2.99E-12	6.16E-13	6.76E-11	5.55E-12
1,2,3,4,7,8,9-Heptachlorodibenzofuran	4.54E-12	6.92E-12	6.36E-13	1.31E-13	1.44E-11	1.18E-12
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	1.47E-11	2.24E-11	2.05E-12	4.24E-13	4.65E-11	3.82E-12
Endosulfan I	1.40E-10	2.13E-10	1.96E-11	4.04E-12	4.43E-10	3.64E-11
Endosulfan sulfate	3.27E-12	4.98E-12	4.57E-13	9.44E-14	1.04E-11	8.51E-13
Endrin	2.76E-10	4.20E-10	3.86E-11	7.95E-12	8.73E-10	7.17E-11
Endrin aldehyde	2.70E-10	4.12E-10	3.78E-11	7.80E-12	8.56E-10	7.04E-11

Table 5C -12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Ethylbenzene	5 89E-15	8 96E-15	8 23E-16	1 70E-16	1 86E-14	1 53E-15
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1 08E-09	1 64E-09	1 51E-10	3 11E-11	3 42E-09	2 81E-10
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA
Heptachlor	1 02E-12	1 55E-12	1 42E-13	2 93E-14	3 21E-12	2 64E-13
Hexachlorobenzene	1 76E-12	2 67E-12	2 46E-13	5 06E-14	5 56E-12	4 57E-13
Hexachlorobutadiene	2 90E-14	4 41E-14	4 05E-15	8 36E-16	9 18E-14	7 54E-15
beta-Hexachlorocyclohexane	2 57E-16	3 92E-16	3 60E-17	7 42E-18	8 14E-16	6 69E-17
Hexachlorocyclopentadiene	5 43E-14	8 27E-14	7 60E-15	1 57E-15	1 72E-13	1 41E-14
Hexachloroethane	2.26E-16	3.44E-16	3.16E-17	6 52E-18	7 15E-16	5 88E-17
Hexadecanoic acid	NA	NA	NA	NA	NA	NA
2-Hexanone	1 57E-13	2 39E-13	2 19E-14	4 52E-15	4 96E-13	4 08E-14
MCPP	3.49E-09	5 32E-09	4 88E-10	1 01E-10	1 11E-08	9 08E-10
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	6.38E-09	9 71E-09	8 92E-10	1 84E-10	2 02E-08	1 66E-09
Methylene chloride	1 33E-15	2 03E-15	1 87E-16	3 85E-17	4 22E-15	3 47E-16
Methyl ester acetic acid	1 34E-15	2 04E-15	1.87E-16	3 86E-17	4 24E-15	3 48E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	4 53E-14	6.91E-14	6 34E-15	1 31E-15	1 44E-13	1 18E-14
4-Methyl-2-pentanone	1.11E-14	1 69E-14	1 55E-15	3 20E-16	3 52E-14	2 89E-15
2-Methylphenol	3 15E-13	4 80E-13	4 41E-14	9 10E-15	9 99E-13	8 21E-14
3-Methylphenol	1 25E-12	1.90E-12	1 75E-13	3 60E-14	3 95E-12	3 25E-13
4-Methylphenol	9 72E-13	1 48E-12	1 36E-13	2 81E-14	3 08E-12	2 53E-13
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA
Naphthalene	5.09E-13	7 75E-13	7 12E-14	1 47E-14	1 61E-12	1 32E-13
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	1 96E-12	2 99E-12	2 74E-13	5 66E-14	6 21E-12	5 10E-13
2-Nitroaniline	4 74E-13	7 22E-13	6 63E-14	1 37E-14	1 50E-12	1 23E-13
4-Nitroaniline	1 45E-13	2 21E-13	2 03E-14	4 19E-15	4 60E-13	3 78E-14
Nitrobenzene	1 70E-12	2 59E-12	2 38E-13	4 91E-14	5 38E-12	4 42E-13

AR317596

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Dyd** Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
2-Nitrophenol	2.16E-12	3.28E-12	3.02E-13	6.22E-14	6.83E-12	5.61E-13
4-Nitrophenol	1.56E-12	2.38E-12	2.18E-13	4.50E-14	4.94E-12	4.06E-13
n-Nitrosodiphenylamine	5.53E-14	8.42E-14	7.74E-15	1.60E-15	1.75E-13	1.44E-14
Octadecanoic acid	8.08E-07	1.23E-06	1.13E-07	2.33E-08	2.56E-06	2.10E-07
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA
PAHs						
Acenaphthene	3.45E-13	5.25E-13	4.82E-14	9.94E-15	1.09E-12	8.96E-14
Acenaphthylene	8.95E-13	1.36E-12	1.25E-13	2.58E-14	2.84E-12	2.33E-13
Anthracene	8.38E-13	1.28E-12	1.17E-13	2.42E-14	2.65E-12	2.18E-13
Benzo(a)anthracene	7.41E-09	1.13E-08	1.04E-09	2.14E-10	2.34E-08	1.93E-09
Benzo(a)pyrene	6.67E-09	1.02E-08	9.33E-10	1.92E-10	2.11E-08	1.73E-09
Benzo(b)fluoranthene	2.73E-10	4.15E-10	3.81E-11	7.87E-12	8.63E-10	7.09E-11
Benzo(e)pyrene	6.39E-09	9.73E-09	8.94E-10	1.84E-10	2.02E-08	1.66E-09
Benzo(g,h,i)perylene	9.39E-09	1.43E-08	1.31E-09	2.71E-10	2.97E-08	2.44E-09
Benzo(j)fluoranthene	1.83E-08	2.79E-08	2.56E-09	5.28E-10	5.79E-08	4.76E-09
Benzo(k)fluoranthene	9.42E-09	1.43E-08	1.32E-09	2.72E-10	2.98E-08	2.45E-09
Chrysene	2.23E-09	3.39E-09	3.12E-10	6.43E-11	7.05E-09	5.79E-10
Dibenzo(a,h)anthracene	8.96E-09	1.36E-08	1.25E-09	2.59E-10	2.84E-08	2.33E-09
Fluoranthene	1.14E-10	1.74E-10	1.59E-11	3.29E-12	3.61E-10	2.97E-11
Fluorene	1.43E-12	2.18E-12	2.00E-13	4.12E-14	4.53E-12	3.72E-13
Indeno(1,2,3-cd)pyrene	9.55E-09	1.45E-08	1.34E-09	2.76E-10	3.03E-08	2.49E-09
Phenanthrene	2.99E-11	4.55E-11	4.18E-12	8.63E-13	9.47E-11	7.78E-12
Pyrene	1.06E-09	1.62E-09	1.49E-10	3.07E-11	3.37E-09	2.77E-10
PCBs						
Monochlorobiphenyls	6.27E-13	9.55E-13	8.77E-14	1.81E-14	1.99E-12	1.63E-13
Dichlorobiphenyls	1.10E-12	1.67E-12	1.54E-13	3.17E-14	3.48E-12	2.86E-13
Trichlorobiphenyls	9.33E-13	1.42E-12	1.30E-13	2.69E-14	2.95E-12	2.43E-13
Tetrachlorobiphenyls	6.49E-12	9.88E-12	9.08E-13	1.87E-13	2.06E-11	1.69E-12

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Pentachlorobiphenyls	1 31E-11	1 99E-11	1.83E-12	3 78E-13	4 14E-11	3 40E-12
Hexachlorobiphenyls	7 91E-11	1 20E-10	1 11E-11	2 28E-12	2 50E-10	2 06E-11
Heptachlorobiphenyls	1 12E-10	1.70E-10	1 56E-11	3.22E-12	3 54E-10	2 90E-11
Octachlorobiphenyls	1.09E-11	1 67E-11	1 53E-12	3 16E-13	3 46E-11	2 84E-12
Nonachlorobiphenyls	8 78E-11	1 34E-10	1 23E-11	2 53E-12	2 78E-10	2 28E-11
Decachlorobiphenyls	2 26E-11	3 44E-11	3 16E-12	6 52E-13	7 16E-11	5 88E-12
Pentachlorobenzene	1 56E-13	2 38E-13	2 19E-14	4.51E-15	4 95E-13	4 07E-14
Pentachlorophenol	1 95E-12	2 97E-12	2 73E-13	5 62E-14	6 17E-12	5 07E-13
3-Pentanol	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA
Phenol	4.84E-12	7.37E-12	6 77E-13	1 40E-13	1 53E-11	1 26E-12
Phthalic anhydride	4.42E-10	6.73E-10	6.18E-11	1 27E-11	1 40E-09	1 15E-10
Quinoline	1.28E-12	1 95E-12	1 79E-13	3 69E-14	4.05E-12	3 33E-13
Quinone	1 26E-12	1 92E-12	1 76E-13	3 63E-14	3 99E-12	3 27E-13
Styrene	5.29E-14	8 05E-14	7 40E-15	1 53E-15	1 67E-13	1 38E-14
1,2,4,5-Tetrachlorobenzene	1.08E-14	1.64E-14	1 51E-15	3 11E-16	3.41E-14	2 80E-15
Tetrachloroethene	3.43E-15	5.23E-15	4 80E-16	9 90E-17	1.09E-14	8 93E-16
2,3,4,6-Tetrachlorophenol	6 38E-13	9.72E-13	8 93E-14	1 84E-14	2 02E-12	1 66E-13
Toluene	1.48E-14	2.26E-14	2.07E-15	4 27E-16	4.69E-14	3 85E-15
1,2,4-Trichlorobenzene	1 50E-14	2 28E-14	2 10E-15	4 32E-16	4 75E-14	3 90E-15
1,2,5-Trichlorobenzene	1 41E-11	2 15E-11	1 97E-12	4 07E-13	4 46E-11	3 67E-12
1,1,1-Trichloroethane	2.63E-16	4 00E-16	3 67E-17	7 58E-18	8 32E-16	6 83E-17
Trichloroethene	4.59E-16	6 98E-16	6 42E-17	1 32E-17	1 45E-15	1 19E-16
Trichlorofluoromethane	3 65E-16	5 56E-16	5 11E-17	1 05E-17	1 16E-15	9 50E-17
2,3,6-Trichlorophenol	1 11E-10	1 70E-10	1 56E-11	3 21E-12	3 53E-10	2 90E-11
2,4,5-Trichlorophenol	6 18E-14	9 41E-14	8 65E-15	1 78E-15	1 96E-13	1 61E-14
2,4,6-Trichlorophenol	1 15E-13	1 75E-13	1 60E-14	3 31E-15	3 63E-13	2 98E-14
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1 23E-10	1 87E-10	1 72E-11	3 55E-12	3 89E-10	3 20E-11
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	5 15E-12	7 84E-12	7 20E-13	1 49E-13	1 63E-11	1 34E-12

AR317568

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Dyd** Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
Undecane	7.50E-13	1.14E-12	1.05E-13	2.16E-14	2.37E-12	1.95E-13
Vinyl acetate	2.56E-15	3.91E-15	3.59E-16	7.40E-17	8.12E-15	6.67E-16
Vinyl chloride	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA
o-Xylene	1.52E-14	2.31E-14	2.12E-15	4.37E-16	4.80E-14	3.94E-15
m,p-Xylene	3.04E-14	4.64E-14	4.26E-15	8.78E-16	9.64E-14	7.92E-15
Metals / Inorganics						
Aluminum	1.73E-03	1.31E-03	2.60E-04	9.58E-06	3.85E-03	4.37E-04
Antimony	2.84E-07	2.16E-07	4.28E-08	1.58E-09	6.35E-07	7.20E-08
Arsenic	1.01E-06	7.65E-07	1.52E-07	5.59E-09	2.25E-06	2.55E-07
Barium	1.26E-04	9.60E-05	1.90E-05	7.01E-07	2.82E-04	3.20E-05
Beryllium	3.38E-08	2.56E-08	5.08E-09	1.87E-10	7.54E-08	8.55E-09
Cadmium	1.60E-06	1.21E-06	2.40E-07	8.85E-09	3.56E-06	4.04E-07
Calcium	2.33E-03	1.77E-03	3.50E-04	1.29E-05	5.20E-03	5.90E-04
Chromium VI	3.56E-07	2.70E-07	5.35E-08	1.97E-09	7.94E-07	9.01E-08
Cobalt	2.50E-07	1.90E-07	3.76E-08	1.39E-09	5.57E-07	6.32E-08
Copper	4.04E-06	3.07E-06	6.08E-07	2.24E-08	9.03E-06	1.02E-06
Iron	1.85E-04	1.40E-04	2.78E-05	1.02E-06	4.12E-04	4.68E-05
Lead	8.67E-06	6.59E-06	1.31E-06	4.81E-08	1.94E-05	2.20E-06
Magnesium	9.17E-04	6.97E-04	1.38E-04	5.09E-06	2.05E-03	2.32E-04
Manganese	1.83E-06	1.39E-06	2.75E-07	1.01E-08	4.08E-06	4.63E-07
Mercury (inorganic)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	NA	NA
Methyl mercury	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	1.83E-05	1.39E-05	2.76E-06	1.02E-07	4.10E-05	4.65E-06
Potassium	3.47E-04	2.63E-04	5.21E-05	1.92E-06	7.74E-04	8.78E-05
Selenium	1.77E-06	1.35E-06	2.66E-07	9.82E-09	3.95E-06	4.48E-07
Silver	5.33E-07	4.05E-07	8.02E-08	2.96E-09	1.19E-06	1.35E-07
Sodium	7.27E-03	5.52E-03	1.09E-03	4.03E-05	1.62E-02	1.84E-03
Vanadium	4.18E-07	3.17E-07	6.28E-08	2.32E-09	9.32E-07	1.06E-07
Zinc	4.20E-05	3.19E-05	6.32E-06	2.33E-07	9.38E-05	1.06E-05

AR311569

Table 5C-12 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Aboveground Vegetables (Pd_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	RESIDENTIAL LOCATION		FARMER LOCATION		Pd_{ag} Aboveground Vegetable Concentration Due to Direct Deposition (mg/kg)	
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	RESIDENTIAL LOCATION	FARMER LOCATION
TICs						
Acetophenone	5.43E-13	8 27E-13	7 60E-14	1 57E-14	1 72E-12	1 41E-13
Benzonitrile	3 17E-13	4 82E-13	4.43E-14	9 13E-15	1 00E-12	8 24E-14
Bromobenzene	2 99E-13	4 55E-13	4 18E-14	8 63E-15	9 47E-13	7 78E-14
2-Butenal / 2-Methyl-2-propenal	6 04E-14	9 20E-14	8 45E-15	1 74E-15	1 91E-13	1 57E-14
2-(2-Butoxyethoxy)ethanol	1.10E-09	1.68E-09	1.54E-10	3.17E-11	3 48E-09	2 86E-10
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA
Decane	1 33E-13	2 03E-13	1 86E-14	3 84E-15	4 21E-13	3 46E-14
Dichlorocyclohexane	NA	NA	NA	NA	NA	NA
Difluoroethane	0 00E+00	0 00E+00	0 00E+00	0 00E+00	NA	NA
Dimethylcyclohexane	4.20E-14	6 40E-14	5 88E-15	1 21E-15	1 33E-13	1.09E-14
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA
Dioctyl adipate	3.06E-07	4.67E-07	4.29E-08	8.84E-09	9 71E-07	7 97E-08
Dodecane	1.73E-12	2 63E-12	2 42E-13	4 99E-14	5 48E-12	4 50E-13
2-(2-Ethoxyethoxy)ethanol	3.17E-12	4 82E-12	4 43E-13	9 14E-14	1 00E-11	8 24E-13
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	9 24E-13	1 41E-12	1 29E-13	2 67E-14	2.93E-12	2 40E-13
Iodobenzene	1 13E-12	1 72E-12	1 58E-13	3 26E-14	3 57E-12	2 94E-13
Methyl benzoate	3 15E-12	4 80E-12	4 41E-13	9 09E-14	9 98E-12	8 20E-13
Methyl hexenone	2 56E-13	3 90E-13	3 58E-14	7 38E-15	8 10E-13	6 65E-14
Nonanoic acid	NA	NA	NA	NA	NA	NA
Silane	0 00E+00	0 00E+00	0 00E+00	0 00E+00	NA	NA

NA= Sufficient information not available to calculate parameters

Table 5C-13 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-13 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Cy Vapor Phase Air Concentration (µg/m³)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
Organics					
Acetaldehyde	6.09E-06	1.67E-06	5.98E-03	2.92E-13	8.01E-14
Acetone	1.76E-05	4.81E-06	1.81E-03	2.54E-13	6.96E-14
Acetonitrile	5.08E-05	1.39E-05	3.01E-03	1.23E-12	3.36E-13
Acrolein	6.09E-06	1.67E-06	2.53E-02	1.24E-12	3.39E-13
Acrylonitrile	3.66E-06	1.00E-06	1.86E-03	5.47E-14	1.50E-14
Aldrin	2.83E-07	7.74E-08	1.76E+01	3.98E-11	1.09E-11
Aniline	1.52E-05	4.15E-06	9.36E-06	1.14E-15	3.12E-16
Benzaldehyde	1.00E-04	2.74E-05	2.02E-01	1.62E-10	4.43E-11
Benzene	1.40E-03	3.82E-04	4.65E-03	5.20E-11	1.43E-11
Benzoic acid	6.58E-04	1.80E-04	1.95E+02	1.03E-06	2.81E-07
Benzotrichloride	3.40E-07	9.31E-08	1.83E-01	4.97E-13	1.36E-13
Benzoyl chloride	6.44E-05	1.76E-05	NA	NA	NA
Benzyl chloride	2.11E-06	5.79E-07	1.23E-01	2.09E-12	5.73E-13
Biphenyl	8.22E-06	2.25E-06	7.90E-01	5.21E-11	1.43E-11
Bis(2-chloroethoxy)methane	6.58E-08	1.80E-08	8.08E+00	4.26E-12	1.17E-12
Bis(2-ethylhexyl)phthalate	6.04E-06	1.65E-06	7.48E+04	3.62E-06	9.93E-07
Bromochloromethane	8.35E-06	2.29E-06	3.06E-03	2.05E-13	5.62E-14
Bromodichloromethane	8.58E-06	2.35E-06	6.59E-03	4.53E-13	1.24E-13
Bromoform	1.96E-06	5.37E-07	8.95E-02	1.41E-12	3.85E-13
Bromomethane	1.92E-05	5.27E-06	4.12E-04	6.36E-14	1.74E-14
2-Butanone (MEK)	2.53E-05	6.94E-06	5.64E-03	1.15E-12	3.14E-13
Butyl benzyl phthalate	9.50E-07	2.60E-07	3.84E+03	2.93E-08	8.02E-09
Carbazole	6.58E-08	1.80E-08	8.06E+00	4.25E-12	1.16E-12
Carbon disulfide	2.75E-06	7.54E-07	1.30E-03	2.88E-14	7.88E-15
Carbon tetrachloride	2.29E-06	6.27E-07	2.82E-03	5.18E-14	1.42E-14
alpha-Chlordane	1.67E-07	4.57E-08	1.08E+02	1.45E-10	3.97E-11
gamma-Chlordane	6.64E-08	1.82E-08	7.16E+01	3.81E-11	1.04E-11
4-Chloroaniline	6.58E-08	1.80E-08	1.16E+00	6.09E-13	1.67E-13
Chlorobenzene	1.73E-05	4.73E-06	7.42E-03	1.03E-12	2.82E-13
Chloroethane	1.56E-07	4.28E-08	5.47E-04	6.85E-16	1.88E-16
2-Chloroethyl vinyl ether	1.79E-07	4.89E-08	5.62E-02	8.05E-14	2.21E-14
Chloroform	2.71E-05	7.42E-06	5.14E-03	1.12E-12	3.06E-13
Chloromethane	2.09E-06	5.72E-07	1.47E-05	2.46E-16	6.73E-17
4-Chloro-3-methylphenol	3.21E-07	8.78E-08	1.11E+02	2.86E-10	7.84E-11
beta-Chloronaphthalene	6.58E-08	1.80E-08	5.55E+00	2.93E-12	8.02E-13
2-Chlorophenol	6.58E-08	1.80E-08	2.63E+00	1.39E-12	3.80E-13
2-Chloropropane	9.88E-07	2.71E-07	8.63E-04	6.84E-15	1.87E-15
Dalapon	1.21E-07	3.33E-08	1.49E+01	1.45E-11	3.97E-12
4,4'-DDD	3.09E-07	8.46E-08	1.66E+04	4.11E-08	1.13E-08
4,4'-DDE	3.22E-07	8.81E-08	5.09E+04	1.31E-07	3.60E-08
4,4'-DDT	2.36E-07	6.46E-08	2.17E+02	4.11E-10	1.13E-10
Decanol	6.04E-06	1.65E-06	2.14E+02	1.03E-08	2.84E-09
Dibenzofuran	6.58E-08	1.80E-08	4.56E+03	2.40E-09	6.59E-10
Dibromochloromethane	3.19E-06	8.75E-07	2.99E-02	7.65E-13	2.09E-13
Dicamba	4.10E-08	1.12E-08	1.57E+04	5.16E-09	1.41E-09

Table 5C-13 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
1,2-Dichlorobenzene	3.18E-07	8.71E-08	2.30E-01	5.87E-13	1.61E-13
1,3-Dichlorobenzene	6.58E-08	1.80E-08	2.93E-01	1.54E-13	4.23E-14
1,4-Dichlorobenzene	2.04E-07	5.59E-08	1.25E-01	2.04E-13	5.59E-14
3,3'-Dichlorobenzidine	6.10E-08	1.67E-08	5.08E+03	2.49E-09	6.81E-10
1,1-Dichloroethane	8.35E-06	2.29E-06	1.91E-03	1.28E-13	3.50E-14
1,2-Dichloroethane	5.97E-08	1.64E-08	4.45E-03	2.13E-15	5.84E-16
1,1-Dichloroethene	1.67E-07	4.58E-08	9.88E-04	1.32E-15	3.63E-16
cis-1,2-Dichloroethene	2.33E-06	6.39E-07	7.51E-03	1.40E-13	3.85E-14
trans-1,2-Dichloroethene	7.81E-08	2.14E-08	7.85E-04	4.92E-16	1.35E-16
2,4-Dichlorophenol	6.58E-08	1.80E-08	9.01E+01	4.75E-11	1.30E-11
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	1.73E-07	4.75E-08	3.49E+05	4.85E-07	1.33E-07
Dichloroprop	1.08E-07	2.95E-08	1.79E+04	1.54E-08	4.22E-09
Diethyl phthalate	2.66E-06	7.28E-07	7.02E+01	1.50E-09	4.10E-10
2,4-Dimethylphenol	6.58E-08	1.80E-08	5.98E+00	3.15E-12	8.63E-13
Dimethyl phthalate	7.67E-06	2.10E-06	5.99E+01	3.69E-09	1.01E-09
Di-n-butyl phthalate	4.60E-06	1.26E-06	8.21E+04	3.03E-06	8.30E-07
2,4-Dinitrophenol	6.58E-08	1.80E-08	8.53E+03	4.50E-09	1.23E-09
Di-n-octyl phthalate	6.69E-07	1.83E-07	9.16E+03	4.92E-08	1.35E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1.06E-11	2.91E-12	6.40E+04	5.46E-12	1.50E-12
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	2.96E-13	8.12E-14	1.20E+05	2.85E-13	7.81E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	9.87E-13	2.70E-13	4.70E+05	3.72E-12	1.02E-12
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	7.01E-13	1.92E-13	4.70E+05	2.64E-12	7.24E-13
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.18E-12	3.22E-13	4.70E+05	4.44E-12	1.22E-12
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	2.36E-12	6.47E-13	3.60E+05	6.82E-12	1.87E-12
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	3.99E-13	1.09E-13	9.00E+06	2.88E-11	7.90E-12
2,3,7,8-Tetrachlorodibenzofuran	2.00E-11	5.47E-12	8.50E+04	1.36E-11	3.73E-12
2,3,4,7,8-Pentachlorodibenzofuran	1.30E-11	3.56E-12	4.90E+04	5.11E-12	1.40E-12
1,2,3,7,8-Pentachlorodibenzofuran	1.05E-11	2.88E-12	4.90E+04	4.13E-12	1.13E-12
1,2,3,4,7,8-Hexachlorodibenzofuran	4.77E-12	1.31E-12	1.60E+05	6.12E-12	1.68E-12
1,2,3,6,7,8-Hexachlorodibenzofuran	2.44E-12	6.70E-13	1.60E+05	3.14E-12	8.59E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	6.19E-13	1.70E-13	1.60E+05	7.95E-13	2.18E-13
2,3,4,6,7,8-Hexachlorodibenzofuran	2.05E-12	5.61E-13	1.60E+05	2.63E-12	7.19E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	6.43E-12	1.76E-12	4.70E+05	2.42E-11	6.64E-12
1,2,3,4,7,8,9-Heptachlorodibenzofuran	7.97E-13	2.18E-13	4.70E+05	3.00E-12	8.23E-13
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	2.13E-13	5.83E-14	1.30E+06	2.22E-12	6.07E-13
Endosulfan I	1.71E-07	4.69E-08	9.87E+00	1.35E-11	3.71E-12
Endosulfan sulfate	3.29E-08	9.02E-09	4.23E+01	1.12E-11	3.06E-12
Endrin	5.42E-08	1.49E-08	3.20E+05	1.39E-07	3.81E-08
Endrin aldehyde	1.63E-08	4.47E-09	4.41E+07	5.78E-06	1.58E-06
Ethylbenzene	8.90E-07	2.44E-07	3.91E-02	2.79E-13	7.65E-14
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	7.31E-06	2.00E-06	1.98E+04	1.16E-06	3.17E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	2.69E-08	7.37E-09	7.02E-01	1.51E-13	4.15E-14

Table 5C-13 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})

Drake Chemical Site

Lock Haven, PA

Chemical	C_V Vapor Phase Air Concentration ($\mu g/m^3$)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
Hexachlorobenzene	6.57E-08	1.80E-08	3.70E+01	1.95E-11	5.34E-12
Hexachlorobutadiene	6.58E-08	1.80E-08	8.98E-01	4.74E-13	1.30E-13
beta-Hexachlorocyclohexane	1.82E-08	4.98E-09	6.74E+03	9.82E-10	2.69E-10
Hexachlorocyclopentadiene	6.58E-08	1.80E-08	1.54E-01	8.14E-14	2.23E-14
Hexachloroethane	6.58E-08	1.80E-08	2.24E-02	1.18E-14	3.23E-15
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	4.74E-06	1.30E-06	2.34E-03	8.91E-14	2.44E-14
MCPP	6.93E-07	1.90E-07	5.93E+04	3.30E-07	9.04E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.47E-06	4.04E-07	4.56E+03	5.38E-08	1.48E-08
Methylene chloride	8.66E-06	2.37E-06	9.35E-04	6.49E-14	1.78E-14
Methyl ester acetic acid	4.38E-06	1.20E-06	2.46E-03	8.65E-14	2.37E-14
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	6.58E-08	1.80E-08	3.60E+00	1.90E-12	5.20E-13
4-Methyl-2-pentanone	1.68E-06	4.60E-07	1.73E-01	2.33E-12	6.37E-13
2-Methylphenol	1.48E-06	4.05E-07	1.97E+01	2.34E-10	6.41E-11
3-Methylphenol	2.08E-06	5.69E-07	2.40E+01	3.99E-10	1.09E-10
4-Methylphenol	2.29E-06	6.27E-07	4.13E+01	7.58E-10	2.08E-10
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	2.58E-06	7.06E-07	4.62E-01	9.55E-12	2.62E-12
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	6.57E-08	1.80E-08	1.11E+04	5.84E-09	1.60E-09
2-Nitroaniline	6.58E-08	1.80E-08	1.34E-01	7.04E-14	1.93E-14
4-Nitroaniline	6.58E-08	1.80E-08	3.69E+02	1.94E-10	5.33E-11
Nitrobenzene	6.30E-06	1.73E-06	5.46E-01	2.76E-11	7.55E-12
2-Nitrophenol	6.58E-06	1.80E-06	3.20E+00	1.69E-10	4.63E-11
4-Nitrophenol	6.57E-08	1.80E-08	5.01E-01	2.64E-13	7.24E-14
n-Nitrosodiphenylamine	2.47E-07	6.76E-08	9.57E-05	1.89E-16	5.19E-17
Octadecanoic acid	5.10E-07	1.40E-07	1.76E+12	7.21E+00	1.97E+00
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	6.58E-08	1.80E-08	8.63E+00	4.55E-12	1.25E-12
Acenaphthylene	6.58E-08	1.80E-08	2.64E+01	1.39E-11	3.81E-12
Anthracene	2.44E-07	6.68E-08	8.87E+01	1.73E-10	4.75E-11
Benzo(a)anthracene	1.51E-08	4.14E-09	1.99E+05	2.41E-08	6.59E-09
Benzo(a)pyrene	2.02E-08	5.52E-09	9.12E+05	1.47E-07	4.04E-08
Benzo(b)fluoranthene	6.39E-08	1.75E-08	3.35E+03	1.72E-09	4.71E-10
Benzo(e)pyrene	2.20E-08	6.04E-09	3.52E+05	6.22E-08	1.70E-08
Benzo(g,h,i)perylene	1.54E-09	4.21E-10	1.36E+07	1.67E-07	4.58E-08
Benzo(j)fluoranthene	1.23E-07	3.36E-08	7.78E+03	7.66E-09	2.10E-09
Benzo(k)fluoranthene	1.32E-09	3.61E-10	2.57E+03	2.72E-11	7.45E-12
Chrysene	5.05E-08	1.38E-08	1.25E+05	5.06E-08	1.39E-08
Dibenzo(a,h)anthracene	4.46E-09	1.22E-09	1.59E+07	5.70E-07	1.56E-07
Fluoranthene	6.50E-08	1.78E-08	3.54E+03	1.84E-09	5.05E-10
Fluorene	6.58E-08	1.80E-08	4.23E+01	2.23E-11	6.12E-12
Indeno(1,2,3-cd)pyrene	3.99E-10	1.09E-10	2.43E+09	7.76E-06	2.13E-06

Table 5C-13 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	C_V Vapor Phase Air Concentration ($\mu g/m^3$)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
Phenanthrene	3.56E-07	9 75E-08	2 60E+02	7.44E-10	2 04E-10
Pyrene	2.59E-07	7 08E-08	4.29E+03	8 90E-09	2 44E-09
PCBs					
Monochlorobiphenyls	1.42E-07	3 90E-08	1.29E+01	1 48E-11	4 05E-12
Dichlorobiphenyls	3 46E-08	9 47E-09	1.11E+02	3.08E-11	8 45E-12
Trichlorobiphenyls	2 45E-08	6 72E-09	3.16E+02	6.22E-11	1 70E-11
Tetrachlorobiphenyls	2 03E-08	5.57E-09	1.38E+03	2.25E-10	6 16E-11
Pentachlorobiphenyls	3.65E-08	9 99E-09	1.31E+03	3.83E-10	1 05E-10
Hexachlorobiphenyls	1.81E-08	4 96E-09	9 17E+03	1.33E-09	3 65E-10
Heptachlorobiphenyls	4.15E-09	1.14E-09	5.15E+04	1.71E-09	4 70E-10
Octachlorobiphenyls	8.60E-10	2.35E-10	1.95E+04	1.34E-10	3 68E-11
Nonachlorobiphenyls	1.12E-10	3.06E-11	2.29E+04	2.05E-11	5.61E-12
Decachlorobiphenyls	9.75E-11	2 67E-11	4.23E+05	3.31E-10	9 06E-11
Pentachlorobenzene	6 58E-08	1 80E-08	6.28E+00	3 31E-12	9.07E-13
Pentachlorophenol	1 71E-07	4 69E-08	1 41E+04	1 93E-08	5 30E-09
3-Pentanol	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	4.38E-05	1.20E-05	3.84E+00	1.35E-09	3 70E-10
Phthalic anhydride	1.76E-05	4 81E-06	4 90E+00	6.91E-10	1.89E-10
Quinoline	1.84E-06	5 04E-07	8 11E+01	1.20E-09	3.27E-10
Quinone	1.76E-05	4 81E-06	2.19E-01	3.08E-11	8 43E-12
Styrene	4 00E-06	1 10E-06	7.01E-02	2.25E-12	6.16E-13
1,2,4,5-Tetrachlorobenzene	2.00E-07	5.48E-08	1.41E+00	2.26E-12	6 19E-13
Tetrachloroethene	9 86E-07	2.70E-07	2.16E-02	1 71E-13	4 68E-14
2,3,4,6-Tetrachlorophenol	6.58E-08	1.80E-08	9.11E+02	4.80E-10	1.32E-10
Toluene	6.27E-06	1.72E-06	1 72E-02	8.66E-13	2.37E-13
1,2,4-Trichlorobenzene	6.58E-08	1.80E-08	6.81E-01	3.59E-13	9.84E-14
1,2,5-Trichlorobenzene	6.18E-05	1.69E-05	6 81E-01	3.38E-10	9 25E-11
1,1,1-Trichloroethane	3 97E-07	1 09E-07	1.53E-02	4.87E-14	1 33E-14
Trichloroethene	5.34E-07	1 46E-07	3.82E-03	1 64E-14	4.48E-15
Trichlorofluoromethane	3 79E-06	1.04E-06	1.18E-03	3.59E-14	9 84E-15
2,3,6-Trichlorophenol	2.13E-05	5.83E-06	5.06E+02	8.63E-08	2.36E-08
2,4,5-Trichlorophenol	6.58E-08	1.80E-08	5.73E+02	3.02E-10	8.28E-11
2,4,6-Trichlorophenol	6.58E-08	1 80E-08	2 96E+02	1.56E-10	4.27E-11
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3.05E-08	8.37E-09	3.45E+04	8 45E-09	2.32E-09
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.72E-08	4 71E-09	4.21E+03	5.81E-10	1.59E-10
Undecane	4 43E-06	1.21E-06	1 87E+00	6.65E-11	1 82E-11
Vinyl acetate	3.88E-06	1.06E-06	1.73E-03	5.39E-14	1 48E-14
Vinyl chloride	3 16E-07	8.67E-08	1.08E-05	2.74E-17	7.52E-18
o-Xylene	1.53E-06	4.20E-07	5.97E-02	7.34E-13	2 01E-13
m,p-Xylene	3 85E-06	1.05E-06	5.16E-02	1.59E-12	4.36E-13
Metals / Inorganics					
Aluminum	NA	NA	not applicable	NA	NA
Antimony	NA	NA	not applicable	NA	NA
Arsenic	NA	NA	not applicable	NA	NA
Barium	NA	NA	not applicable	NA	NA

Table 5C-13 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Aboveground Vegetables (Pv_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	Cy Vapor Phase Air Concentration ($\mu g/m^3$)		B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_{ag} Aboveground Vegetable Concentration Due to Air-to-Plant Transfer (mg/kg)	
	RESIDENTIAL LOCATION	FARMER LOCATION		RESIDENTIAL LOCATION	FARMER LOCATION
Beryllium	NA	NA	not applicable	NA	NA
Cadmium	NA	NA	not applicable	NA	NA
Calcium	NA	NA	not applicable	NA	NA
Chromium VI	NA	NA	not applicable	NA	NA
Cobalt	NA	NA	not applicable	NA	NA
Copper	NA	NA	not applicable	NA	NA
Iron	NA	NA	not applicable	NA	NA
Lead	NA	NA	not applicable	NA	NA
Magnesium	NA	NA	not applicable	NA	NA
Manganese	NA	NA	not applicable	NA	NA
Mercury (inorganic)	4.23E-04	1.16E-04	1.00E+03	3.39E-06	9.29E-07
Methyl mercury	NA	NA	not applicable	NA	NA
Nickel	NA	NA	not applicable	NA	NA
Potassium	NA	NA	not applicable	NA	NA
Selenium	NA	NA	not applicable	NA	NA
Silver	NA	NA	not applicable	NA	NA
Sodium	NA	NA	not applicable	NA	NA
Vanadium	NA	NA	not applicable	NA	NA
Zinc	NA	NA	not applicable	NA	NA
TICs					
Acetophenone	8.22E-06	2.25E-06	6.26E-01	4.13E-11	1.13E-11
Benzonitrile	3.68E-06	1.01E-06	1.22E-01	3.61E-12	9.89E-13
Bromobenzene	1.49E-05	4.09E-06	1.02E-01	1.22E-11	3.34E-12
2-Butenal / 2-Methyl-2-propenal	2.74E-05	7.51E-06	1.31E-01	2.88E-11	7.88E-12
2-(2-Butoxyethoxy)ethanol	3.33E-04	9.12E-05	3.56E+01	9.50E-08	2.60E-08
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	2.88E-06	7.88E-07	6.31E-02	1.46E-12	3.99E-13
Dichlorocyclohexane	NA	NA	NA	NA	NA
Difluoroethane	2.00E-05	5.48E-06	7.05E-06	1.13E-15	3.10E-16
Dimethylcyclohexane	1.23E-05	3.38E-06	5.31E-04	5.25E-14	1.44E-14
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	3.94E-06	1.08E-06	1.03E+06	3.26E-05	8.92E-06
Dodecane	3.08E-06	8.44E-07	2.82E-02	6.98E-13	1.91E-13
2-(2-Ethoxyethoxy)ethanol	6.04E-06	1.65E-06	7.61E-01	3.69E-11	1.01E-11
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	1.36E-05	3.72E-06	7.37E-01	8.02E-11	2.20E-11
Iodobenzene	1.66E-05	4.56E-06	5.22E-01	6.97E-11	1.91E-11
Methyl benzoate	4.77E-05	1.31E-05	7.77E-01	2.97E-10	8.14E-11
Methyl hexenone	1.46E-05	4.00E-06	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	3.18E-06	8.71E-07	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-14 (RB2)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Table 5C-14 (RB2)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Organics			
Acetaldehyde	0.43	6.67E-05	2.22E+01
Acetone	-0.24	4.28E-05	6.69E+00
Acetonitrile	-0.34	2.01E-05	1.11E+01
Acrolein	-0.09	4.40E-06	9.39E+01
Acrylonitrile	0.25	1.38E-04	6.89E+00
Aldrin	3.01	1.27E-05	6.51E+04
Aniline	0.9	1.35E-01	3.47E-02
Benzaldehyde	1.48	2.60E-05	7.47E+02
Benzene	2.13	5.55E-03	1.72E+01
Benzoic acid	1.87	7.00E-08	7.22E+05
Benzotrichloride	2.92	9.81E-04	6.76E+02
Benzoyl chloride	2.3	not available	NA
Benzyl chloride	2.3	3.17E-04	4.57E+02
Biphenyl	3.16	4.08E-04	2.93E+03
Bis(2-chloroethoxy)methane	1.26	3.78E-07	2.99E+04
Bis(2-ethylhexyl)phthalate	4.89	3.00E-07	2.77E+08
Bromochloromethane	1.41	1.44E-03	1.14E+01
Bromodichloromethane	1.88	2.12E-03	2.44E+01
Bromoform	2.38	5.32E-04	3.32E+02
Bromomethane	1.19	6.24E-03	1.53E+00
2-Butanone (MEK)	0.26	4.66E-05	2.09E+01
Butyl benzyl phthalate	4.77	4.35E-06	1.42E+07
Carbazole	3.72	1.58E-04	2.99E+04
Carbon disulfide	2	1.44E-02	4.83E+00
Carbon tetrachloride	2.62	3.04E-02	1.05E+01
alpha-Chlordane	5.47	8.60E-04	4.01E+05
gamma-Chlordane	5.47	1.30E-03	2.65E+05
4-Chloroaniline	1.83	1.07E-05	4.28E+03
Chlorobenzene	2.18	3.93E-03	2.75E+01
Chloroethane	1.43	8.48E-03	2.03E+00
2-Chloroethyl vinyl ether	0.99	2.80E-05	2.08E+02
Chloroform	1.97	3.39E-03	1.90E+01
Chloromethane	0.91	8.82E-02	5.44E-02
4-Chloro-3-methylphenol	3.1	2.50E-06	4.13E+05
beta-Chloronaphthalene	4.12	6.12E-04	2.06E+04
2-Chlorophenol	2.15	1.03E-05	9.75E+03
2-Chloropropane	1.9	1.70E-02	3.20E+00
Dalapon	0.778	6.30E-08	5.51E+04
4,4'-DDD	6.02	2.16E-05	6.15E+07
4,4'-DDE	6.51	2.34E-05	1.89E+08
4,4'-DDT	6.36	3.80E-03	8.05E+05
Decanol	4.57	4.79E-05	7.92E+05
Dibenzofuran	4.12	7.45E-07	1.69E+07
Dibromochloromethane	2.09	7.83E-04	1.11E+02
Dicamba	2.21	2.00E-09	5.81E+07

Table 5C-14 (RB2)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
1,2-Dichlorobenzene	3.38	2.40E-03	8.54E+02
1,3-Dichlorobenzene	3.6	3.24E-03	1.08E+03
1,4-Dichlorobenzene	3.37	4.33E-03	4.62E+02
3,3'-Dichlorobenzidine	3.02	4.50E-08	1.88E+07
1,1-Dichloroethane	1.79	5.87E-03	7.07E+00
1,2-Dichloroethane	1.48	1.18E-03	1.65E+01
1,1-Dichloroethene	2.13	2.61E-02	3.66E+00
cis-1,2-Dichloroethene	2.2	4.08E-03	2.78E+01
trans-1,2-Dichloroethene	1.48	6.67E-03	2.91E+00
2,4-Dichlorophenol	3.06	2.80E-06	3.34E+05
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53	2.29E-09	1.29E+09
Dichloroprop	3	1.22E-08	6.62E+07
Diethyl phthalate	2.47	8.46E-07	2.60E+05
2,4-Dimethylphenol	2.3	6.55E-06	2.21E+04
Dimethyl phthalate	2.12	4.20E-07	2.22E+05
Di-n-butyl phthalate	4.9	2.80E-07	3.04E+08
2,4-Dinitrophenol	1.5	6.45E-10	3.16E+07
Di-n-octyl phthalate	5.22	5.50E-06	3.40E+07
Dioctadecyl ester phosphoric acid	not available	not available	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	6.64	1.60E-05	5.92E+06
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	6.64	2.60E-06	1.15E+07
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	7.79	1.20E-05	4.39E+07
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	7.79	1.20E-05	4.39E+07
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	7.3	1.20E-05	4.39E+07
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	8.2	7.50E-06	3.35E+07
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	7.59	7.00E-09	8.32E+08
2,3,7,8-Tetrachlorodibenzofuran	6.53	8.60E-06	7.87E+06
2,3,4,7,8-Pentachlorodibenzofuran	6.92	6.20E-06	4.50E+06
1,2,3,7,8-Pentachlorodibenzofuran	6.79	6.20E-06	4.50E+06
1,2,3,4,7,8-Hexachlorodibenzofuran	7.3	1.40E-05	1.44E+07
1,2,3,6,7,8-Hexachlorodibenzofuran	7.3	6.10E-06	1.44E+07
1,2,3,7,8,9-Hexachlorodibenzofuran	7.3	1.00E-05	1.44E+07
2,3,4,6,7,8-Hexachlorodibenzofuran	7.3	1.00E-05	1.44E+07
1,2,3,4,6,7,8-Heptachlorodibenzofuran	7.9	5.30E-05	4.31E+07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	7.9	5.30E-05	4.31E+07
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	8.8	1.90E-06	1.23E+08
Endosulfan I	3.62	1.01E-04	3.66E+04
Endosulfan sulfate	3.66	2.60E-05	1.57E+05
Endrin	5.6	4.10E-07	1.19E+09
Endrin aldehyde	5.6	2.90E-09	1.64E+11
Ethylbenzene	3.15	8.04E-03	1.45E+02
2-Ethyl hexanoic acid	not available	not available	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	3.2	1.80E-08	7.32E+07
2-Fluoro-4-nitrophenol	not available	not available	NA
Heptachlor	3.87	2.62E-03	2.60E+03

Table 5C-14 (RB2)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Hexachlorobenzene	5.31	1.70E-03	1.37E+05
Hexachlorobutadiene	4 9	2.56E-02	3.33E-03
beta-Hexachlorocyclohexane	3.8	2.30E-07	2.50E-07
Hexachlorocyclopentadiene	3.99	1.60E-02	5.72E-02
Hexachloroethane	3.34	2.24E-02	8.29E+01
Hexadecanoic acid	not available	not available	NA
2-Hexanone	1.38	1.75E-03	8.68E+00
MCPP	3.13	5.05E-09	2.20E+08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2 07	4.89E-09	1.69E+07
Methylene chloride	1.25	3.19E-03	3.46E+00
Methyl ester acetic acid	0.18	8.78E-05	9.12E+00
Methyl-3-heptanol	not available	not available	NA
2-Methylnaphthalene	3.86	4.99E-04	1.33E+04
4-Methyl-2-pentanone	1.19	1 49E-05	6.40E+02
2-Methylphenol	1.95	8.41E-07	7.31E+04
3-Methylphenol	1.96	7.09E-07	8.89E+04
4-Methylphenol	1.94	3.92E-07	1.53E+05
Mono(2-ethylhexyl)ester hexadecanoic acid	not available	not available	NA
Naphthalene	3.01	4.83E-04	1.71E+03
Naphthalene carbonitrile	not available	not available	NA
beta-Naphthylamine	2.07	2.01E-09	4.10E+07
2-Nitroaniline	1.85	9.72E-05	4.95E+02
4-Nitroaniline	1.39	1.14E-08	1.37E+06
Nitrobenzene	1.85	2.38E-05	2.02E+03
2-Nitrophenol	1.79	3.50E-06	1.19E+04
4-Nitrophenol	1.91	3.00E-05	1.86E+03
n-Nitrosodiphenylamine	3.13	3.13E+00	3.55E-01
Octadecanoic acid	8.23	4.59E-11	6.53E+15
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	not available	not available	NA
PAHs			
Acenaphthene	3.92	2.41E-04	3.20E+04
Acenaphthylene	4.07	1.14E-04	9.76E+04
Anthracene	4.45	8.60E-05	3.29E+05
Benzo(a)anthracene	5.61	6.60E-07	7.36E+08
Benzo(a)pyrene	6.11	4.90E-07	3.38E+09
Benzo(b)fluoranthene	6.124	1.38E-04	1.24E+07
Benzo(e)pyrene	6.04	1.07E-06	1.30E+09
Benzo(g,h,i)perylene	6.7	1.40E-07	5.03E+10
Benzo(j)fluoranthene	6.12	5.89E-05	2.88E+07
Benzo(k)fluoranthene	6.84	1.04E-03	9.54E+06
Chrysene	5.61	1.05E-06	4.63E+08
Dibenzo(a,h)anthracene	6.5	7.30E-08	5.90E+10
Fluoranthene	4.9	6.50E-06	1.31E+07
Fluorene	4.21	1.00E-04	1.57E+05
Indeno(1,2,3-cd)pyrene	6.584	5.89E-10	8.99E+12

Table 5C-14 (RB2)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Phenanthrene	4.57	3.93E-05	9.65E+05
Pyrene	4.88	5.10E-06	1.59E+07
PCBs			
Monochlorobiphenyls	4.47	6.19E-04	4.79E+04
Dichlorobiphenyls	5.07	3.14E-04	4.12E+05
Trichlorobiphenyls	5.7	5.17E-04	1.17E+06
Tetrachlorobiphenyls	5.95	2.19E-04	5.11E+06
Pentachlorobiphenyls	6.31	5.57E-04	4.86E+06
Hexachlorobiphenyls	7.03	4.65E-04	3.40E+07
Heptachlorobiphenyls	6.85	5.33E-05	1.91E+08
Octachlorobiphenyls	7.25	3.76E-04	7.21E+07
Nonachlorobiphenyls	7.63	8.11E-04	8.48E+07
Decachlorobiphenyls	8.26	2.06E-04	1.57E+09
Pentachlorobenzene	5.17	7.10E-03	2.33E+04
Pentachlorophenol	5.12	2.80E-06	5.22E+07
3-Pentanol	1.37	not available	NA
4-Penten-2-ol	not available	not available	NA
Phenol	1.46	1.30E-06	1.42E+04
Phthalic anhydride	-0.62	6.20E-09	1.82E+04
Quinoline	2.03	2.49E-07	3.00E+05
Quinone	0.2	1.04E-06	8.10E+02
Styrene	2.95	2.75E-03	2.60E+02
1,2,4,5-Tetrachlorobenzene	4.7	1.00E-02	5.22E+03
Tetrachloroethene	3.4	2.69E-02	8.00E+01
2,3,4,6-Tetrachlorophenol	4.1	3.55E-06	3.37E+06
Toluene	2.69	5.92E-03	6.37E+01
1,2,4-Trichlorobenzene	4.02	3.90E-03	2.52E+03
1,2,5-Trichlorobenzene	4.02	3.90E-03	2.52E+03
1,1,1-Trichloroethane	2.49	4.08E-03	5.66E+01
Trichloroethene	2.29	1.00E-02	1.42E+01
Trichlorofluoromethane	2.53	5.83E-02	4.37E+00
2,3,6-Trichlorophenol	3.83	3.29E-06	1.88E+06
2,4,5-Trichlorophenol	3.96	4.00E-06	2.12E+06
2,4,6-Trichlorophenol	3.69	4.00E-06	1.10E+06
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	3.13	8.68E-09	1.28E+08
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	2.44	1.31E-08	1.56E+07
Undecane	6.94	1.83E+00	6.94E+03
Vinyl acetate	0.73	4.81E-04	6.42E+00
Vinyl chloride	0.6	5.60E-02	4.01E-02
o-Xylene	3.12	4.90E-03	2.21E+02
m,p-Xylene	3.2	6.90E-03	1.91E+02
Metals / Inorganics			
Aluminum	not available	not available	not applicable
Antimony	not available	not available	not applicable
Arsenic	not available	not available	not applicable
Barium	not available	not available	not applicable

Table 5C-14 (RB2)

Chemical-Specific Bacci Volumetric Air-to-Leaf Biotransfer Factors (B_{vol})
Drake Chemical Site
Lock Haven, PA

Chemical	Log K_{ow}	Henry's Law Constant (atm-m^3/mol)	B_{vol} Bacci Air-to-Leaf Biotransfer Factor (mg/kg WW)/(mg/kg air)
Beryllium	not available	not available	not applicable
Cadmium	not available	not available	not applicable
Calcium	not available	not available	not applicable
Chromium VI	not available	not available	not applicable
Cobalt	not available	not available	not applicable
Copper	not available	not available	not applicable
Iron	not available	not available	not applicable
Lead	not available	not available	not applicable
Magnesium	not available	not available	not applicable
Manganese	not available	not available	not applicable
Mercury (inorganic)	not available	1.14E-02	NA
Methyl mercury	not available	not applicable	not applicable
Nickel	not available	not available	not applicable
Potassium	not available	not available	not applicable
Selenium	not available	not available	not applicable
Silver	not available	not available	not applicable
Sodium	not available	not available	not applicable
Vanadium	not available	not available	not applicable
Zinc	not available	not available	not applicable
TICs			
Acetophenone	1.58	1.07E-05	2.32E+03
Benzonitrile	1.56	5.21E-05	4.53E+02
Bromobenzene	2.99	2.09E-03	3.78E+02
2-Butenal / 2-Methyl-2-propenal	1.09	1.54E-05	4.84E+02
2-(2-Butoxyethoxy)ethanol	0.91	3.64E-08	1.32E+05
Chlorocyclohexanol	not available	not available	NA
Decane	5.98	5.15E+00	2.34E+02
Dichlorocyclohexane	not available	not available	NA
Difluoroethane	0.75	1.24E-01	2.61E-02
Dimethylcyclohexane	3.06	4.75E-01	1.97E+00
4,4-Dimethyl-2-oxetanone	not available	not available	NA
Dioctyl adipate	6.11	4.34E-07	3.82E+09
Dodecane	5.8	7.40E+00	1.05E+02
2-(2-Ethoxyethoxy)ethanol	-0.54	4.86E-08	2.82E+03
Ethyl benzaldehyde	not available	not available	NA
Ethyl methyl benzoate	not available	not available	NA
Hexenal	not available	not available	NA
Hexenedione	not available	not available	NA
4-Hydroxy-4-methyl-2-pentanone	-0.098	1.48E-07	2.73E+03
Iodobenzene	3.25	7.70E-04	1.94E+03
Methyl benzoate	2.12	3.24E-05	2.88E+03
Methyl hexenone	not available	not available	NA
Nonanoic acid	not available	not available	NA
Silane	not available	not available	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-15 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Table 5C-15 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Organics						
Acetaldehyde	9.34E-06	2.56E-06	3.11E-06	6.23E-07	8.53E-07	1.28E-07
Acetone	5.92E-05	1.62E-05	1.97E-05	3.95E-06	5.40E-06	8.11E-07
Acetonitrile	1.99E-04	5.45E-05	6.63E-05	1.33E-05	1.82E-05	2.72E-06
Acrolein	1.52E-05	4.17E-06	5.08E-06	1.02E-06	1.39E-06	2.09E-07
Acrylonitrile	6.76E-06	1.85E-06	2.25E-06	4.51E-07	6.17E-07	9.26E-08
Aldrin	6.06E-08	1.62E-08	3.64E-08	1.03E-08	9.77E-09	2.06E-09
Aniline	1.05E-05	2.89E-06	3.52E-06	7.03E-07	9.63E-07	1.45E-07
Benzaldehyde	6.06E-05	1.66E-05	2.02E-05	4.04E-06	5.53E-06	8.30E-07
Benzene	1.22E-03	3.34E-04	4.21E-04	8.43E-05	1.15E-04	1.73E-05
Benzoic acid	3.65E-04	1.00E-04	1.22E-04	2.44E-05	3.34E-05	5.02E-06
Benzotrichloride	1.24E-07	3.39E-08	7.06E-08	1.82E-08	1.93E-08	3.72E-09
Benzoyl chloride	4.46E-05	1.22E-05	1.63E-05	3.28E-06	4.47E-06	6.73E-07
Benzyl chloride	1.76E-06	4.83E-07	6.47E-07	1.30E-07	1.77E-07	2.66E-08
Biphenyl	3.17E-06	8.67E-07	2.07E-06	7.05E-07	5.67E-07	1.45E-07
Bis(2-chloroethoxy)methane	3.70E-08	1.01E-08	1.23E-08	2.47E-09	3.38E-09	5.07E-10
Bis(2-ethylhexyl)phthalate	1.55E-05	1.97E-06	6.89E-06	3.97E-06	7.96E-07	3.34E-07
Bromochloromethane	3.78E-06	1.03E-06	1.26E-06	2.52E-07	3.45E-07	5.17E-08
Bromodichloromethane	3.22E-06	8.81E-07	1.08E-06	2.15E-07	2.95E-07	4.43E-08
Bromoform	5.63E-07	1.54E-07	2.15E-07	4.34E-08	5.89E-08	8.91E-09
Bromomethane	1.20E-05	3.28E-06	3.99E-06	7.98E-07	1.09E-06	1.64E-07
2-Butanone (MEK)	3.51E-05	9.61E-06	1.17E-05	2.34E-06	3.20E-06	4.81E-07
Butyl benzyl phthalate	1.14E-07	2.47E-08	6.85E-08	5.90E-08	1.55E-08	1.32E-08
Carbazole	1.80E-08	4.92E-09	1.39E-08	9.64E-09	3.80E-09	2.18E-09
Carbon disulfide	2.53E-06	6.93E-07	8.55E-07	1.71E-07	2.34E-07	3.51E-08
Carbon tetrachloride	1.96E-06	5.36E-07	8.88E-07	1.88E-07	2.43E-07	3.85E-08
alpha-Chlordane	3.56E-09	6.12E-10	2.10E-09	1.84E-09	4.23E-10	4.15E-10
gamma-Chlordane	1.22E-09	2.24E-10	7.54E-10	6.94E-10	1.61E-10	1.62E-10
4-Chloroaniline	3.33E-08	9.13E-09	1.11E-08	2.23E-09	3.05E-09	4.58E-10
Chlorobenzene	1.36E-05	3.73E-06	4.76E-06	9.54E-07	1.30E-06	1.96E-07
Chloroethane	2.27E-07	6.22E-08	7.57E-08	1.51E-08	2.07E-08	3.11E-09
2-Chloroethyl vinyl ether	1.33E-07	3.63E-08	4.42E-08	8.84E-09	1.21E-08	1.82E-09
Chloroform	2.45E-05	6.71E-06	8.26E-06	1.65E-06	2.26E-06	3.39E-07
Chloromethane	2.29E-06	6.28E-07	7.64E-07	1.53E-07	2.09E-07	3.14E-08
4-Chloro-3-methylphenol	1.86E-07	5.08E-08	1.18E-07	3.70E-08	3.22E-08	7.57E-09
beta-Chloronaphthalene	7.43E-09	2.03E-09	6.00E-09	5.52E-09	1.64E-09	1.36E-09
2-Chlorophenol	3.98E-08	1.09E-08	1.38E-08	2.76E-09	3.78E-09	5.67E-10
2-Chloropropane	9.33E-07	2.55E-07	3.13E-07	6.25E-08	8.56E-08	1.28E-08
Dalapon	9.70E-08	2.66E-08	3.23E-08	6.47E-09	8.86E-09	1.33E-09
4,4'-DDD	5.33E-08	1.29E-08	1.98E-08	7.24E-09	4.80E-09	1.53E-09
4,4'-DDE	1.34E-07	3.64E-08	4.53E-08	9.79E-09	1.23E-08	2.03E-09
4,4'-DDT	4.51E-08	3.89E-09	1.65E-08	5.66E-09	1.47E-09	5.06E-10
Decanol	1.06E-08	2.85E-09	3.57E-09	7.75E-10	9.54E-10	1.47E-10
Dibenzofuran	8.63E-09	2.36E-09	5.83E-09	4.79E-09	1.59E-09	1.18E-09
Dibromochloromethane	1.00E-06	2.74E-07	3.43E-07	6.86E-08	9.39E-08	1.41E-08
Dicamba	3.47E-08	9.48E-09	1.22E-08	2.44E-09	3.32E-09	4.99E-10

Table 5C-15 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
1,2-Dichlorobenzene	1 40E-07	3 83E-08	9 99E-08	4 60E-08	2 73E-08	9 64E-09
1,3-Dichlorobenzene	2.30E-08	6 30E-09	1.74E-08	1 06E-08	4 76E-09	2 33E-09
1 4-Dichlorobenzene	9 08E-08	2 48E-08	6 47E-08	2 94E-08	1 77E-08	6 14E-09
3,3'-Dichlorobenzidine	2.91E-08	5.86E-09	1 64E-08	4.54E-09	3.32E-09	6 91E-10
1,1-Dichloroethane	5 55E-06	1.52E-06	1.85E-06	3 71E-07	5 07E-07	7 61E-08
1,2-Dichloroethane	4.59E-08	1.26E-08	1.53E-08	3.06E-09	4 19E-09	6 28E-10
1,1-Dichloroethene	1 48E-07	4.06E-08	5 12E-08	1 02E-08	1 40E-08	2 10E-09
cis-1,2-Dichloroethene	1.86E-06	5 10E-07	6.56E-07	1.31E-07	1.80E-07	2 70E-08
trans-1,2-Dichloroethene	4 63E-08	1.27E-08	1.54E-08	3 09E-09	4.23E-09	6.34E-10
2,4-Dichlorophenol	2.51E-08	6.87E-09	1.56E-08	4 66E-09	4.25E-09	9 53E-10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	5.41E-07	1 48E-07	2 03E-07	5 58E-08	5.57E-08	1 17E-08
Dichloroprop	1.55E-08	4.23E-09	5.21E-09	1.05E-09	1 41E-09	2 12E-10
Diethyl phthalate	1 76E-06	4 80E-07	7.12E-07	1 45E-07	1 95E-07	2 98E-08
2,4-Dimethylphenol	4.64E-08	1.27E-08	1 70E-08	3 42E-09	4 66E-09	7 02E-10
Dimethyl phthalate	4.98E-06	1 36E-06	1.72E-06	3 44E-07	4 70E-07	7.05E-08
Di-n-butyl phthalate	3.35E-06	8 98E-07	1.24E-06	4.31E-07	3.30E-07	9 61E-08
2,4-Dinitrophenol	2.52E-08	6.89E-09	8.39E-09	1 68E-09	2 30E-09	3 44E-10
Di-n-octyl phthalate	6.06E-08	1.64E-08	2.54E-08	1 31E-08	6 84E-09	3.22E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA
Dioxins/Furans						
2,3,7,8-Tetrachlorodibenzo(p)dioxin	9.63E-12	1 85E-12	3.31E-12	8.21E-13	6.28E-13	1 14E-13
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	7 00E-13	1 12E-13	2 41E-13	6 11E-14	3.81E-14	6.85E-15
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	9.43E-12	1 49E-12	3.17E-12	6 70E-13	4.98E-13	7 74E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1 94E-11	2.10E-12	6.53E-12	1 41E-12	7.04E-13	1.13E-13
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1 90E-11	2.41E-12	6.45E-12	1 47E-12	8.11E-13	1.34E-13
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	5.96E-11	6.20E-12	2.00E-11	4.19E-12	2.07E-12	3.25E-13
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.16E-10	1.50E-11	3.90E-11	8.52E-12	5.04E-12	8.05E-13
2,3,7,8-Tetrachlorodibenzofuran	1 76E-11	4.08E-12	6.02E-12	1 42E-12	1.38E-12	2.42E-13
2,3,4,7,8-Pentachlorodibenzofuran	1.95E-11	2.58E-12	6.69E-12	1.66E-12	8.79E-13	1 61E-13
1,2,3,7,8-Pentachlorodibenzofuran	1.12E-11	1.72E-12	3.86E-12	9.70E-13	5 85E-13	1 09E-13
1,2,3,4,7,8-Hexachlorodibenzofuran	4.17E-11	4.59E-12	1.42E-11	3.27E-12	1 55E-12	2.64E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	2.00E-11	2.24E-12	6.81E-12	1.57E-12	7.58E-13	1.29E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	3.17E-12	4 13E-13	1.08E-12	2.45E-13	1.39E-13	2.31E-14
2,3,4,6,7,8-Hexachlorodibenzofuran	1.59E-11	1 80E-12	5.39E-12	1.24E-12	6.09E-13	1.03E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	9.23E-11	1.22E-11	3.10E-11	6.58E-12	4.09E-12	6 41E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	. 75E-11	2 01E-12	5.88E-12	1.26E-12	6.74E-13	1.07E-13
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	4.88E-11	4 43E-12	1.63E-11	3.34E-12	1.48E-12	2.28E-13
Endosulfan I	1.85E-08	4.81E-09	1.39E-08	8.61E-09	3.63E-09	1.83E-09
Endosulfan sulfate	8.06E-09	2.20E-09	6.16E-09	4.02E-09	1 68E-09	8.94E-10
Endrin	1 41E-07	3.83E-08	4.71E-08	9.87E-09	1.28E-08	2.03E-09
Endrin aldehyde	5.78E-06	1.58E-06	1.93E-06	3.86E-07	5.28E-07	7.92E-08
Ethylbenzene	5.25E-07	1 44E-07	3 42E-07	1.15E-07	9.34E-08	2.35E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	4.69E-06	1.28E-06	2 74E-06	9.22E-07	7 48E-07	1.89E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA
Heptachlor	1.96E-09	5.36E-10	1.55E-09	1.22E-09	4.22E-10	2.87E-10

Table 5C-15 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Hexachlorobenzene	2.12E-09	5.78E-10	1.75E-09	1.96E-09	4.76E-10	5.23E-10
Hexachlorobutadiene	3.69E-09	1.01E-09	3.05E-09	3.37E-09	8.34E-10	8.89E-10
beta-Hexachlorocyclohexane	5.21E-09	1.43E-09	3.64E-09	2.54E-09	9.94E-10	5.84E-10
Hexachlorocyclopentadiene	5.24E-09	1.43E-09	4.19E-09	3.59E-09	1.14E-09	8.67E-10
Hexachloroethane	3.27E-09	8.95E-10	2.31E-09	1.01E-09	6.30E-10	2.09E-10
Hexadecanoic acid	NA	NA	NA	NA	NA	NA
2-Hexanone	3.00E-06	8.22E-07	1.00E-06	2.00E-07	2.74E-07	4.11E-08
MCPP	7.37E-07	1.92E-07	3.69E-07	1.06E-07	9.54E-08	2.05E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.16E-06	2.95E-07	3.94E-07	7.87E-08	1.00E-07	1.51E-08
Methylene chloride	6.61E-06	1.81E-06	2.20E-06	4.41E-07	6.04E-07	9.05E-08
Methyl ester acetic acid	1.25E-13	2.63E-14	4.15E-14	8.30E-15	8.77E-15	1.31E-15
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	1.28E-08	3.51E-09	1.01E-08	7.94E-09	2.77E-09	1.86E-09
4-Methyl-2-pentanone	1.10E-06	3.02E-07	3.67E-07	7.34E-08	1.01E-07	1.51E-08
2-Methylphenol	1.06E-06	2.89E-07	3.55E-07	7.10E-08	9.73E-08	1.46E-08
3-Methylphenol	1.49E-06	4.08E-07	5.01E-07	1.00E-07	1.37E-07	2.06E-08
4-Methylphenol	1.63E-06	4.45E-07	5.46E-07	1.09E-07	1.50E-07	2.24E-08
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA
Naphthalene	1.46E-06	4.00E-07	8.82E-07	2.49E-07	2.41E-07	5.09E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	4.16E-08	1.14E-08	1.41E-08	2.83E-09	3.87E-09	5.81E-10
2-Nitroaniline	4.24E-08	1.16E-08	1.42E-08	2.84E-09	3.88E-09	5.83E-10
4-Nitroaniline	2.99E-08	8.19E-09	9.96E-09	1.99E-09	2.73E-09	4.09E-10
Nitrobenzene	4.37E-06	1.20E-06	1.46E-06	2.92E-07	4.00E-07	6.00E-08
2-Nitrophenol	3.21E-06	8.80E-07	1.07E-06	2.15E-07	2.94E-07	4.41E-08
4-Nitrophenol	3.20E-08	8.76E-09	1.07E-08	2.15E-09	2.94E-09	4.41E-10
n-Nitrosodiphenylamine	1.37E-07	3.76E-08	8.86E-08	2.89E-08	2.42E-08	5.93E-09
Octadecanoic acid	7.21E+00	1.97E+00	2.40E+00	4.80E-01	6.58E-01	9.87E-02
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA
PAHs						
Acenaphthene	1.09E-08	2.99E-09	8.66E-09	7.10E-09	2.37E-09	1.69E-09
Acenaphthylene	9.28E-09	2.54E-09	7.46E-09	6.70E-09	2.04E-09	1.64E-09
Anthracene	1.73E-08	4.73E-09	1.41E-08	1.45E-08	3.85E-09	3.73E-09
Benzo(a)anthracene	5.13E-08	8.83E-09	1.90E-08	6.71E-09	3.10E-09	7.17E-10
Benzo(a)pyrene	1.70E-07	4.23E-08	5.77E-08	1.29E-08	1.42E-08	2.25E-09
Benzo(b)fluoranthene	3.03E-09	6.51E-10	1.23E-09	5.97E-10	2.71E-10	1.29E-10
Benzo(e)pyrene	8.43E-08	1.89E-08	2.91E-08	7.32E-09	6.38E-09	1.10E-09
Benzo(g,h,i)perylene	1.98E-07	4.83E-08	6.65E-08	1.41E-08	1.62E-08	2.48E-09
Benzo(j)fluoranthene	7.11E-08	7.46E-09	2.64E-08	9.58E-09	2.79E-09	9.06E-10
Benzo(k)fluoranthene	3.07E-08	2.52E-09	1.07E-08	2.81E-09	8.67E-10	1.77E-10
Chrysene	5.93E-08	1.47E-08	2.06E-08	5.43E-09	5.02E-09	9.48E-10
Dibenzo(a,h)anthracene	6.00E-07	1.59E-07	2.01E-07	4.12E-08	5.29E-08	8.02E-09
Fluoranthene	4.75E-09	1.20E-09	2.84E-09	2.47E-09	7.30E-10	6.15E-10
Fluorene	9.26E-09	2.53E-09	7.51E-09	7.18E-09	2.05E-09	1.80E-09
Indeno(1,2,3-cd)pyrene	7.79E-06	2.13E-06	2.60E-06	5.20E-07	7.09E-07	1.06E-07

Table 5C-15 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Phenanthrene	3 11E-08	8 47E-09	2.52E-08	2.64E-08	6 86E-09	6 84E-09
Pyrene	2 74E-08	6.59E-09	1.66E-08	1 46E-08	4 11E-09	3.54E-09
PCBs						
Monochlorobiphenyls	6 47E-09	1 77E-09	5.30E-09	5 49E-09	1 45E-09	1.41E-09
Dichlorobiphenyls	7 44E-10	2 03E-10	6 00E-10	6.60E-10	1 64E-10	1 75E-10
[illegible]chlorobiphenyls	2.84E-10	7 70E-11	2.03E-10	2 11E-10	5 53E-11	5 61E-11
[illegible]rachlorobiphenyls	3 77E-10	9 89E-11	1 91E-10	1 41E-10	5 06E-11	3 62E-11
[illegible]ntachlorobiphenyls	5 71E-10	1 48E-10	2.63E-10	1.68E-10	6 89E-11	4.23E-11
[illegible]xachlorobiphenyls	1.61E-09	3.93E-10	5.55E-10	1.37E-10	1 35E-10	2.66E-11
[illegible]ptachlorobiphenyls	2.09E-09	5.02E-10	7.04E-10	1.55E-10	1 69E-10	2 76E-11
[illegible]tachlorobiphenyls	1.70E-10	3.99E-11	5 76E-11	1.27E-11	1.35E-11	2.26E-12
[illegible]nachlorobiphenyls	3 01E-10	2 87E-11	1.02E-10	2.26E-11	9.66E-12	1.62E-12
[illegible]ecachlorobiphenyls	4.03E-10	9.66E-11	1.34E-10	2.72E-11	3.22E-11	4 85E-12
[illegible]achlorobenzene	2.61E-09	7.14E-10	2 16E-09	2 43E-09	5 91E-10	6 45E-10
[illegible]achlorophenol	2.65E-08	7.26E-09	1.24E-08	7.95E-09	3.39E-09	2.03E-09
[illegible]Pentanol	NA	NA	NA	NA	NA	NA
[illegible]nten-2-ol	NA	NA	NA	NA	NA	NA
[illegible]henol	2.87E-05	7.85E-06	9.55E-06	1.91E-06	2.62E-06	3.93E-07
[illegible]talic anhydride	6.64E-05	1.82E-05	2.21E-05	4 43E-06	6.07E-06	9 10E-07
[illegible]oline	1.11E-06	3.05E-07	3.78E-07	7.56E-08	1 03E-07	1.55E-08
Out[illegible]one	2 19E-05	6.00E-06	7.29E-06	1 46E-06	2.00E-06	3.00E-07
[illegible]ene	2.70E-06	7.38E-07	1.57E-06	4 15E-07	4.28E-07	8 48E-08
[illegible].5-Tetrachlorobenzene	7.59E-09	2.08E-09	6.26E-09	6 76E-09	1 71E-09	1 77E-09
[illegible]achloroethene	4.37E-07	1.20E-07	3 14E-07	1 49E-07	8.58E-08	3.13E-08
2,3,4,6-Tetrachlorophenol	6.05E-09	1.65E-09	4.65E-09	4 12E-09	1.27E-09	1 01E-09
Toluene	5.64E-06	1.54E-06	2 71E-06	5 90E-07	7.40E-07	1.21E-07
[illegible]-Trichlorobenzene	7.66E-09	2.09E-09	6 14E-09	5.36E-09	1 68E-09	1.30E-09
[illegible]-Trichlorobenzene	7.20E-06	1.97E-06	5.77E-06	5.04E-06	1.58E-06	1.22E-06
[illegible]-Trichloroethane	3 47E-07	9 51E-08	1.43E-07	2.92E-08	3.91E-08	5 99E-09
Trichloroethene	4 61E-07	1.26E-07	1.68E-07	3.37E-08	4.60E-08	6 93E-09
Trichlorofluoromethane	3.56E-06	9.74E-07	1.51E-06	3.11E-07	4 12E-07	6.37E-08
2,3,4-Trichlorophenol	3.27E-06	8.94E-07	2.53E-06	1.92E-06	6 91E-07	4 46E-07
2,3,5-Trichlorophenol	8.40E-09	2.30E-09	6.56E-09	5.45E-09	1.79E-09	1.31E-09
2,4,6-Trichlorophenol	1.22E-08	3.33E-09	9.30E-09	6.24E-09	2.54E-09	1.40E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1 75E-08	4.45E-09	8.53E-09	2 41E-09	2.13E-09	4.48E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	6.60E-09	1.79E-09	2.58E-09	5.24E-10	7.00E-10	1 06E-10
Undecane	6.89E-11	1.84E-11	2.30E-11	4.65E-12	6.14E-12	9.24E-13
Vinyl acetate	3 48E-06	9.54E-07	1.16E-06	2.32E-07	3.18E-07	4.77E-08
Vinyl chloride	3.69E-07	1.01E-07	1.23E-07	2 46E-08	3.37E-08	5.06E-09
o-Xylene	1.03E-06	2.81E-07	6.59E-07	2.12E-07	1.80E-07	4.35E-08
m,p-Xylene	2.06E-06	5.65E-07	1.38E-06	4.94E-07	3.76E-07	1.01E-07
Metals / Inorganics						
Aluminum	3.88E-03	4.39E-04	1.30E-03	2.79E-04	1.47E-04	2.37E-05
Antimony	8.08E-07	8 73E-08	3.45E-07	1.34E-07	3.58E-08	1.03E-08
Arsenic	2.38E-06	2.66E-07	8.54E-07	2.55E-07	9 43E-08	2 14E-08
Barium	3.28E-04	3.61E-05	1.30E-04	4.66E-05	1.39E-05	3.69E-06

Table 5C-15 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Aboveground Vegetables (CV_{ag})
Drake Chemical Site
Lock Haven, PA

Chemical	CV_{ag} Total Aboveground Vegetable Concentration (mg/kg)					
	RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
	Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Beryllium	7.65E-08	8.65E-09	2.60E-08	6.00E-09	2 93E-09	5 11E-10
Cadmium	6 65E-06	6.78E-07	2.88E-06	6.54E-07	2.85E-07	4 78E-08
Calcium	1 77E-02	1.70E-03	7.58E-03	1.60E-03	7.14E-04	1 13E-04
Chromium VI	8 19E-07	9.23E-08	2.85E-07	7.56E-08	3 18E-08	6 45E-09
Cobalt	5.85E-07	6.57E-08	2.07E-07	5.20E-08	2.30E-08	4 24E-09
Copper	2.36E-05	2.31E-06	1.40E-05	7.32E-06	1.32E-06	5.29E-07
Iron	4 15E-04	4.70E-05	1.40E-04	2.86E-05	1.58E-05	2 42E-06
Lead	2.09E-05	2.33E-06	7.70E-06	2.68E-06	8.42E-07	2.29E-07
Magnesium	7.08E-03	6.78E-04	3.13E-03	6.76E-04	2.94E-04	4.74E-05
Manganese	5 79E-06	6.14E-07	2.71E-06	1.34E-06	2 73E-07	1.04E-07
Mercury (inorganic)	1 99E-04	5 45E-05	1.60E-04	1.50E-04	4.37E-05	3.72E-05
Methyl mercury	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	5 69E-05	6.05E-06	2.66E-05	1.52E-05	2.69E-06	1.25E-06
Potassium	2.82E-03	2.69E-04	1.32E-03	2.99E-04	1.24E-04	2.08E-05
Selenium	4.60E-06	5.05E-07	1.85E-06	8.19E-07	1 96E-07	6.90E-08
Silver	2.11E-06	2.17E-07	1.11E-06	5.67E-07	1.08E-07	4.24E-08
Sodium	2.21E-02	2.36E-03	1.01E-02	5.30E-03	1.03E-03	4.25E-04
Vanadium	9 52E-07	1.07E-07	3.26E-07	7.59E-08	3.66E-08	6.37E-09
Zinc	6 46E-04	5 95E-05	4.54E-04	2.81E-04	4 09E-05	2.03E-05
TICs						
Acetophenone	4 40E-06	1.20E-06	1.47E-06	2.93E-07	4.02E-07	6.02E-08
Benzonitrile	2.19E-06	5.99E-07	7.29E-07	1.46E-07	2.00E-07	2.99E-08
Bromobenzene	6 05E-06	1.66E-06	3.60E-06	9.95E-07	9.85E-07	2.04E-07
2-Butenal / 2-Methyl-2-propenal	2.03E-05	5.57E-06	6.78E-06	1.36E-06	1.86E-06	2.79E-07
2-(2-Butoxyethoxy)ethanol	2.06E-04	5.63E-05	6.85E-05	1.37E-05	1.88E-05	2.82E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA
Decane	1.91E-12	4.36E-13	6.56E-13	1.60E-13	1 47E-13	2.40E-14
Dichlorocyclohexane	NA	NA	NA	NA	NA	NA
Difluoroethane	2.28E-05	6.25E-06	7.61E-06	1.52E-06	2.08E-06	3.13E-07
Dimethylcyclohexane	6.50E-13	5.64E-14	3.50E-13	9.87E-14	2.77E-14	5.58E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA
Dioctyl adipate	3.36E-05	9.01E-06	1.13E-05	2.33E-06	3.01E-06	4 63E-07
Dodecane	4.30E-08	1.18E-08	3.58E-08	4.08E-08	9.77E-09	1.09E-08
2-(2-Ethoxyethoxy)ethanol	1.68E-05	4.61E-06	5.61E-06	1.12E-06	1.54E-06	2.31E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	1.16E-10	2 44E-11	3.86E-11	7.72E-12	8.13E-12	1.22E-12
Iodobenzene	8.37E-11	2.01E-11	3.15E-11	7.61E-12	6.94E-12	1 11E-12
Methyl benzoate	3.50E-10	8.51E-11	1.17E-10	2.34E-11	2.84E-11	4.26E-12
Methyl hexenone	8 10E-13	6.65E-14	2 70E-13	5.40E-14	2.22E-14	3.33E-15
Nonanoic acid	NA	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Organics								
Acetaldehyde	2.25E-02	8.85E-01	1.12E-06	3.06E-07	3.73E-07	7.46E-08	1.02E-07	1.53E-08
Acetone	3.92E-03	8.40E-01	1.58E-05	4.34E-06	5.28E-06	1.06E-06	1.45E-06	2.17E-07
Acetonitrile	2.88E-03	8.37E-01	6.32E-05	1.73E-05	2.11E-05	4.21E-06	5.77E-06	8.65E-07
Acrolein	6.01E-03	8.46E-01	3.27E-06	8.97E-07	1.09E-06	2.18E-07	2.99E-07	4.48E-08
Acrylonitrile	1.45E-02	8.67E-01	9.70E-07	2.66E-07	3.23E-07	6.47E-08	8.86E-08	1.33E-08
Aldrin	9.00E+00	7.10E+00	4.49E-09	1.21E-09	2.71E-09	7.64E-10	7.27E-10	1.54E-10
Aniline	6.88E-02	9.69E-01	8.48E-07	2.32E-07	2.83E-07	5.65E-08	7.74E-08	1.16E-08
Benzaldehyde	2.65E-01	1.24E+00	3.49E-06	9.57E-07	1.16E-06	2.33E-07	3.19E-07	4.78E-08
Benzene	1.19E+00	2.14E+00	6.45E-05	1.77E-05	2.23E-05	4.46E-06	6.10E-06	9.15E-07
Benzoic acid	6.51E-01	1.65E+00	1.91E-05	5.24E-06	6.41E-06	1.28E-06	1.75E-06	2.63E-07
Benzotrichloride	7.32E+00	6.17E+00	8.77E-09	2.40E-09	4.99E-09	1.28E-09	1.37E-09	2.63E-10
Benzoyl chloride	1.75E+00	2.60E+00	2.43E-06	6.65E-07	8.91E-07	1.79E-07	2.44E-07	3.67E-08
Benzyl chloride	1.75E+00	2.60E+00	9.61E-08	2.63E-08	3.53E-08	7.07E-09	9.65E-09	1.45E-09
Biphenyl	1.27E+01	9.01E+00	2.59E-07	7.09E-08	1.70E-07	5.76E-08	4.63E-08	1.18E-08
Bis(2-chloroethoxy)methane	1.59E-01	1.10E+00	2.36E-09	6.47E-10	7.87E-10	1.57E-10	2.16E-10	3.23E-11
Bis(2-ethylhexyl)phthalate	6.83E+02	1.77E+02	1.04E-06	8.47E-08	8.57E-07	9.45E-07	7.00E-08	7.45E-08
Bromochloromethane	2.25E-01	1.19E+00	2.24E-07	6.14E-08	7.47E-08	1.49E-08	2.05E-08	3.07E-09
Bromodichloromethane	6.66E-01	1.67E+00	1.69E-07	4.63E-08	5.66E-08	1.13E-08	1.55E-08	2.33E-09
Bromoform	2.11E+00	2.87E+00	3.13E-08	8.58E-09	1.20E-08	2.42E-09	3.28E-09	4.96E-10
Bromomethane	1.35E-01	1.07E+00	7.94E-07	2.18E-07	2.65E-07	5.30E-08	7.25E-08	1.09E-08
2-Butanone (MEK)	1.49E-02	8.68E-01	4.98E-06	1.36E-06	1.66E-06	3.32E-07	4.55E-07	6.82E-08
Butyl benzyl phthalate	5.18E+02	1.43E+02	1.68E-08	4.00E-09	1.38E-08	1.51E-08	3.30E-09	3.46E-09
Carbazole	4.62E+01	2.29E+01	2.17E-09	5.94E-10	1.68E-09	1.16E-09	4.59E-10	2.64E-10
Carbon disulfide	8.79E-01	1.87E+00	1.33E-07	3.63E-08	4.48E-08	8.96E-09	1.23E-08	1.84E-09
Carbon tetrachloride	3.67E+00	3.96E+00	1.19E-07	3.26E-08	5.40E-08	1.14E-08	1.48E-08	2.34E-09
alpha-Chlordane	2.60E+03	4.93E+02	8.66E-10	2.09E-10	7.19E-10	8.16E-10	1.74E-10	1.92E-10
gamma-Chlordane	2.60E+03	4.93E+02	3.32E-10	8.24E-11	2.76E-10	3.13E-10	6.84E-11	7.58E-11
4-Chloroaniline	5.94E-01	1.59E+00	1.76E-09	4.82E-10	5.88E-10	1.18E-10	1.61E-10	2.42E-11

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{hg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{hg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Chlorobenzene	1 33E+00	2 26E+00	7 24E-07	1 98E-07	2.54E-07	5 08E-08	6 94E-08	1 04E-08
Chloroethane	2 36E-01	1.20E+00	1.34E-08	3.66E-09	4.45E-09	8 91E-10	1 22E-09	1 83E-10
2-Chloroethyl vinyl ether	8.49E-02	9.95E-01	9 99E-09	2 74E-09	3 33E-09	6 66E-10	9.13E-10	1 37E-10
Chloroform	8 20E-01	1 81E+00	1.28E-06	3 52E-07	4 32E-07	8 65E-08	1 18E-07	1 78E-08
Chloromethane	7 04E-02	9 72E-01	1 83E-07	5 01E-08	6 10E-08	1 22E-08	1 67E-08	2 51E-09
4-Chloro-3-methylphenol	1 11E+01	8 18E+00	1.46E-08	3 99E-09	9 26E-09	2 91E-09	2 53E-09	5 96E-10
beta-Chloronaphthalene	1.16E+02	4 57E+01	1 21E-09	3.32E-10	9 80E-10	9 01E-10	2 68E-10	2 23E-10
2-Chlorophenol	1 24E+00	2 19E+00	2 11E-09	5 77E-10	7 31E-10	1 46E-10	2 00E-10	3 00E-11
2-Chloropropane	6.98E-01	1 70E+00	4 89E-08	1 34E-08	1 64E-08	3 28E-09	4 49E-09	6 74E-10
Dalapon	5.16E-02	9 40E-01	8 56E-09	2.35E-09	2 85E-09	5 71E-10	7.82E-10	1.17E-10
4,4'-DDD	9 21E+03	1.31E+03	3 07E-09	7.37E-10	2 55E-09	2.92E-09	6 12E-10	6 85E-10
4,4'-DDE	2.85E+04	3 11E+03	1 03E-09	2 61E-10	8.55E-10	9 79E-10	2 17E-10	2 43E-10
4,4'-DDT	2 02E+04	2.38E+03	2 89E-09	3.41E-10	2.41E-09	2.76E-09	2 83E-10	3 18E-10
Decanol	3.27E+02	1.01E+02	2.01E-11	1 34E-12	1.65E-11	1 75E-11	1 10E-12	1 11E-12
Dibenzofuran	1 16E+02	4.57E+01	1.02E-09	2.78E-10	8 22E-10	7 56E-10	2 24E-10	1 87E-10
Dibromochloromethane	1.08E+00	2 05E+00	5.27E-08	1.44E-08	1.81E-08	3 61E-09	4 94E-09	7 42E-10
Dicamba	1 43E+00	2.34E+00	1.58E-09	4 31E-10	5 59E-10	1 12E-10	1 52E-10	2 29E-11
1,2-Dichlorobenzene	2.11E+01	1.29E+01	1.32E-08	3 62E-09	9 46E-09	4 36E-09	2 58E-09	9 13E-10
1,3-Dichlorobenzene	3.50E+01	1.87E+01	2 54E-09	6 96E-10	1 93E-09	1 18E-09	5.26E-10	2 58E-10
1,4-Dichlorobenzene	2 06E+01	1.27E+01	8.54E-09	2 34E-09	6 08E-09	2.76E-09	1 66E-09	5 78E-10
3,3'-Dichlorobenzidine	9.21E+00	7 21E+00	1 83E-09	3 75E-10	1 11E-09	3 17E-10	2 27E-10	4 86E-11
1,1-Dichloroethane	5 41E-01	1.54E+00	2.95E-07	8 07E-08	9 83E-08	1 97E-08	2 69E-08	4 04E-09
1,2-Dichloroethane	2 65E-01	1 24E+00	2 64E-09	7 24E-10	8 81E-10	1 76E-10	2 41E-10	3 62E-11
1,1-Dichloroethene	1.19E+00	2 14E+00	7 84E-09	2 15E-09	2 71E-09	5 42E-10	7 41E-10	1 11E-10
cis-1,2-Dichloroethene	1 39E+00	2 31E+00	9 95E-08	2 72E-08	3 50E-08	7 01E-09	9 59E-09	1 44E-09
trans-1,2-Dichloroethene	2 65E-01	1.24E+00	2.67E-09	7 31E-10	8 90E-10	1 78E-10	2 44E-10	3 66E-11
2,4-Dichlorophenol	1 01E+01	7 68E+00	1 92E-09	5 26E-10	1 19E-09	3 57E-10	3 26E-10	7 31E-11
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	2 98E+01	1 66E+01	5 89E-09	1 61E-09	4 39E-09	2 45E-09	1 20E-09	5 32E-10
Dichloroprop	8 80E+00	6 99E+00	8 91E-12	5 95E-13	5 34E-12	1 49E-12	3 56E-13	7 45E-14

AR317591

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Diethyl phthalate	2.60E+00	3.23E+00	1.01E-07	2.75E-08	4.08E-08	8.32E-09	1.12E-08	1.70E-09
2,4-Dimethylphenol	1.75E+00	2.60E+00	2.53E-09	6.93E-10	9.28E-10	1.86E-10	2.54E-10	3.82E-11
Dimethyl phthalate	1.16E+00	2.12E+00	2.63E-07	7.20E-08	9.06E-08	1.81E-08	2.48E-08	3.72E-09
Di-n-butyl phthalate	6.99E+02	1.80E+02	7.38E-08	1.85E-08	6.11E-08	6.74E-08	1.53E-08	1.63E-08
2,4-Dinitrophenol	2.77E-01	1.25E+00	1.18E-09	3.24E-10	3.94E-10	7.88E-11	1.08E-10	1.62E-11
Di-n-octyl phthalate	1.46E+03	3.17E+02	4.05E-09	1.09E-09	3.36E-09	3.78E-09	9.02E-10	9.89E-10
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA	NA	NA	NA
Dioxins/Furans								
2,3,7,8-Tetrachlorodibenzo(p)dioxin	2.70E+04	3.92E+03	3.48E-13	4.27E-14	2.90E-13	3.32E-13	3.55E-14	3.98E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	2.70E+04	3.92E+03	2.81E-14	2.42E-15	2.34E-14	2.68E-14	2.01E-15	2.26E-15
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	3.80E+05	3.01E+04	2.03E-13	1.45E-14	1.69E-13	1.93E-13	1.21E-14	1.36E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.20E+05	3.01E+04	1.85E-12	1.26E-13	1.54E-12	1.77E-12	1.05E-13	1.18E-13
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.20E+05	1.26E+04	6.74E-13	4.66E-14	5.61E-13	6.43E-13	3.87E-14	4.35E-14
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	9.80E+05	6.22E+04	1.48E-12	1.01E-13	1.23E-12	1.41E-12	8.38E-14	9.43E-14
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	2.40E+05	2.11E+04	3.35E-12	2.24E-13	2.78E-12	3.19E-12	1.86E-13	2.09E-13
2,3,7,8-Tetrachlorodibenzofuran	2.10E+04	3.22E+03	4.41E-13	6.81E-14	3.67E-13	4.20E-13	5.65E-14	6.35E-14
2,3,4,7,8-Pentachlorodibenzofuran	5.10E+04	6.43E+03	8.79E-13	7.94E-14	7.31E-13	8.37E-13	6.59E-14	7.41E-14
1,2,3,7,8-Pentachlorodibenzofuran	3.80E+04	5.11E+03	4.91E-13	5.06E-14	4.08E-13	4.68E-13	4.20E-14	4.72E-14
1,2,3,4,7,8-Hexachlorodibenzofuran	1.20E+05	1.26E+04	1.66E-12	1.17E-13	1.38E-12	1.58E-12	9.72E-14	1.09E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	1.20E+05	1.26E+04	7.89E-13	5.60E-14	6.57E-13	7.52E-13	4.65E-14	5.23E-14
1,2,3,7,8,9-Hexachlorodibenzofuran	1.20E+05	1.26E+04	1.13E-13	8.36E-15	9.39E-14	1.08E-13	6.94E-15	7.81E-15
2,3,4,6,7,8-Hexachlorodibenzofuran	1.20E+05	1.26E+04	6.19E-13	4.41E-14	5.15E-13	5.90E-13	3.66E-14	4.12E-14
1,2,3,4,6,7,8-Heptachlorodibenzofuran	4.90E+05	3.66E+04	2.26E-12	1.57E-13	1.88E-12	2.15E-12	1.30E-13	1.47E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	4.90E+05	3.66E+04	4.78E-13	3.27E-14	3.98E-13	4.56E-13	2.72E-14	3.06E-14
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.90E+06	1.80E+05	9.51E-13	6.37E-14	7.91E-13	9.07E-13	5.29E-14	5.95E-14
Endosulfan I	3.67E+01	1.93E+01	2.03E-09	5.35E-10	1.54E-09	9.62E-10	4.06E-10	2.05E-10
Endosulfan sulfate	4.02E+01	2.07E+01	9.29E-10	2.54E-10	7.11E-10	4.64E-10	1.94E-10	1.03E-10
Endrin	3.50E+03	6.20E+02	2.99E-10	6.77E-11	2.49E-10	2.83E-10	5.62E-11	6.25E-11
Endrin aldehyde	3.50E+03	6.20E+02	2.34E-10	5.03E-11	1.95E-10	2.22E-10	4.17E-11	4.64E-11

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Ethylbenzene	1.24E+01	8.86E+00	4.26E-08	1.17E-08	2.78E-08	9.31E-09	7.58E-09	1.91E-09
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1.39E+01	9.61E+00	2.96E-07	8.09E-08	1.98E-07	7.09E-08	5.39E-08	1.45E-08
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA	NA	NA	NA
Heptachlor	6.52E+01	2.97E+01	2.65E-10	7.23E-11	2.09E-10	1.65E-10	5.70E-11	3.87E-11
Hexachlorobenzene	1.80E+03	3.71E+02	8.73E-10	2.39E-10	7.25E-10	8.18E-10	1.98E-10	2.18E-10
Hexachlorobutadiene	6.99E+02	1.80E+02	1.11E-09	3.04E-10	9.19E-10	1.01E-09	2.51E-10	2.68E-10
beta-Hexachlorocyclohexane	5.55E+01	2.63E+01	5.42E-10	1.48E-10	4.24E-10	3.16E-10	1.16E-10	7.31E-11
Hexachlorocyclopentadiene	8.60E+01	3.65E+01	7.75E-10	2.12E-10	6.20E-10	5.31E-10	1.69E-10	1.28E-10
Hexachloroethane	1.93E+01	1.21E+01	3.01E-10	8.25E-11	2.12E-10	9.26E-11	5.80E-11	1.93E-11
Hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
2-Hexanone	2.10E-01	1.17E+00	1.80E-07	4.94E-08	6.01E-08	1.20E-08	1.65E-08	2.47E-09
MCPP	1.19E+01	8.58E+00	3.18E-08	8.10E-09	2.05E-08	6.70E-09	5.21E-09	1.28E-09
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.03E+00	2.01E+00	5.68E-08	1.46E-08	1.94E-08	3.88E-09	4.99E-09	7.49E-10
Methylene chloride	1.55E-01	1.10E+00	4.24E-07	1.16E-07	1.41E-07	2.83E-08	3.87E-08	5.81E-09
Methyl ester acetic acid	1.22E-02	8.62E-01	5.24E-15	3.50E-16	1.75E-15	3.49E-16	1.17E-16	1.75E-17
Methyl-3-heptanol	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	6.37E+01	2.91E+01	1.72E-09	4.71E-10	1.36E-09	1.06E-09	3.71E-10	2.49E-10
4-Methyl-2-pentanone	1.35E-01	1.07E+00	7.31E-08	2.00E-08	2.44E-08	4.87E-09	6.67E-09	1.00E-09
2-Methylphenol	7.83E-01	1.78E+00	5.53E-08	1.52E-08	1.86E-08	3.72E-09	5.09E-09	7.64E-10
3-Methylphenol	8.01E-01	1.80E+00	7.80E-08	2.14E-08	2.63E-08	5.25E-09	7.19E-09	1.08E-09
4-Methylphenol	7.65E-01	1.76E+00	8.52E-08	2.33E-08	2.86E-08	5.72E-09	7.83E-09	1.17E-09
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	9.00E+00	7.10E+00	1.09E-07	2.98E-08	6.57E-08	1.86E-08	1.80E-08	3.80E-09
Naphthalene carbonitrile	NA	NA	NA	NA	NA	NA	NA	NA
beta-Naphthylamine	1.03E+00	2.01E+00	1.88E-09	5.14E-10	6.41E-10	1.28E-10	1.75E-10	2.63E-11
2-Nitroaniline	6.22E-01	1.62E+00	2.23E-09	6.12E-10	7.47E-10	1.49E-10	2.05E-10	3.07E-11
4-Nitroaniline	2.15E-01	1.18E+00	1.78E-09	4.87E-10	5.93E-10	1.19E-10	1.62E-10	2.44E-11
Nitrobenzene	6.22E-01	1.62E+00	2.30E-07	6.30E-08	7.69E-08	1.54E-08	2.11E-08	3.16E-09

AR317593

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{hg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{hg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
2-Nitrophenol	5.41E-01	1.54E+00	1.71E-07	4.67E-08	5.69E-08	1.14E-08	1.56E-08	2.34E-09
4-Nitrophenol	7.14E-01	1.71E+00	1.68E-09	4.60E-10	5.63E-10	1.13E-10	1.54E-10	2.31E-11
n-Nitrosodiphenylamine	1.19E+01	8.58E+00	1.10E-08	3.02E-09	7.11E-09	2.32E-09	1.94E-09	4.76E-10
Octadecanoic acid	1.49E+06	6.56E+04	4.97E-08	3.32E-09	4.13E-08	4.74E-08	2.76E-09	3.10E-09
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA	NA	NA	NA
PAHs								
Acenaphthene	7.32E+01	3.23E+01	1.53E-09	4.18E-10	1.21E-09	9.95E-10	3.32E-10	2.36E-10
Acenaphthylene	1.03E+02	4.19E+01	1.46E-09	3.98E-10	1.17E-09	1.05E-09	3.20E-10	2.57E-10
Anthracene	2.48E+02	8.15E+01	3.61E-09	9.89E-10	2.97E-09	3.06E-09	8.10E-10	7.87E-10
Benzo(a)anthracene	3.58E+03	6.31E+02	1.99E-09	1.67E-10	1.65E-09	1.88E-09	1.38E-10	1.54E-10
Benzo(a)pyrene	1.13E+04	1.53E+03	1.41E-09	1.25E-10	1.17E-09	1.34E-09	1.04E-10	1.17E-10
Benzo(b)fluoranthene	1.17E+04	1.57E+03	3.58E-10	8.72E-11	2.97E-10	3.40E-10	7.24E-11	8.12E-11
Benzo(e)pyrene	9.65E+03	1.35E+03	1.43E-09	1.33E-10	1.19E-09	1.36E-09	1.10E-10	1.24E-10
Benzo(g,h,i)perylene	4.41E+04	4.36E+03	1.31E-09	8.90E-11	1.09E-09	1.24E-09	7.39E-11	8.30E-11
Benzo(j)fluoranthene	1.16E+04	1.56E+03	4.36E-09	4.82E-10	3.63E-09	4.15E-09	4.00E-10	4.49E-10
Benzo(k)fluoranthene	6.09E+04	5.58E+03	1.21E-09	8.20E-11	1.01E-09	1.16E-09	6.81E-11	7.65E-11
Chrysene	3.58E+03	6.31E+02	8.87E-10	1.29E-10	7.38E-10	8.39E-10	1.07E-10	1.19E-10
Dibenzo(a,h)anthracene	2.78E+04	3.06E+03	1.41E-09	1.01E-10	1.17E-09	1.34E-09	8.38E-11	9.42E-11
Fluoranthene	6.99E+02	1.80E+02	7.65E-10	2.01E-10	6.34E-10	6.99E-10	1.66E-10	1.77E-10
Fluorene	1.43E+02	5.35E+01	1.62E-09	4.42E-10	1.31E-09	1.26E-09	3.58E-10	3.14E-10
Indeno(1,2,3-cd)pyrene	3.38E+04	3.55E+03	1.41E-09	9.42E-11	1.17E-09	1.34E-09	7.82E-11	8.79E-11
Phenanthrene	3.27E+02	1.01E+02	7.01E-09	1.92E-09	5.77E-09	6.10E-09	1.57E-09	1.58E-09
Pyrene	6.68E+02	1.74E+02	4.49E-09	1.15E-09	3.72E-09	4.09E-09	9.49E-10	1.01E-09
PCBs								
Monochlorobiphenyls	2.60E+02	8.44E+01	1.38E-09	3.78E-10	1.14E-09	1.18E-09	3.10E-10	3.03E-10
Dichlorobiphenyls	1.03E+03	2.43E+02	2.45E-10	6.69E-11	2.03E-10	2.26E-10	5.53E-11	6.00E-11
Trichlorobiphenyls	4.41E+03	7.40E+02	1.24E-10	3.40E-11	1.03E-10	1.18E-10	2.82E-11	3.15E-11
Tetrachlorobiphenyls	7.84E+03	1.15E+03	9.14E-11	2.47E-11	7.60E-11	8.68E-11	2.05E-11	2.30E-11

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	K_d, Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Pentachlorobiphenyls	1.80E+04	2.18E+03	1.36E-10	3.67E-11	1.13E-10	1.29E-10	3.04E-11	3.42E-11
Hexachlorobiphenyls	9.43E+04	7.82E+03	5.44E-11	1.30E-11	4.53E-11	5.19E-11	1.08E-11	1.21E-11
Heptachlorobiphenyls	6.23E+04	5.68E+03	2.57E-11	4.08E-12	2.14E-11	2.45E-11	3.39E-12	3.81E-12
Octachlorobiphenyls	1.56E+05	1.15E+04	3.04E-12	5.99E-13	2.53E-12	2.90E-12	4.97E-13	5.59E-13
Nonachlorobiphenyls	3.75E+05	2.27E+04	7.62E-12	5.51E-13	6.34E-12	7.27E-12	4.58E-13	5.15E-13
Decachlorobiphenyls	1.60E+06	6.92E+04	1.49E-12	1.26E-13	1.24E-12	1.43E-12	1.05E-13	1.18E-13
Pentachlorobenzene	1.30E+03	2.90E+02	9.72E-10	2.66E-10	8.07E-10	9.05E-10	2.20E-10	2.41E-10
Pentachlorophenol	1.16E+03	2.65E+02	2.57E-09	7.03E-10	2.13E-09	2.39E-09	5.82E-10	6.34E-10
3-Pentanol	2.05E-01	1.16E+00	NA	NA	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	2.53E-01	1.22E+00	1.67E-06	4.56E-07	5.55E-07	1.11E-07	1.52E-07	2.28E-08
Phthalic anhydride	9.71E-04	8.30E-01	4.28E-05	1.17E-05	1.43E-05	2.86E-06	3.91E-06	5.87E-07
Quinoline	9.42E-01	1.92E+00	5.84E-08	1.60E-08	1.98E-08	3.96E-09	5.42E-09	8.13E-10
Quinone	1.28E-02	8.63E-01	3.31E-06	9.08E-07	1.10E-06	2.21E-07	3.03E-07	4.54E-08
Styrene	7.84E+00	6.46E+00	1.94E-07	5.31E-08	1.13E-07	2.98E-08	3.08E-08	6.10E-09
1,2,4,5-Tetrachlorobenzene	4.41E+02	1.26E+02	1.95E-09	5.33E-10	1.61E-09	1.74E-09	4.39E-10	4.55E-10
Tetrachloroethene	2.21E+01	1.34E+01	4.19E-08	1.15E-08	3.01E-08	1.43E-08	8.23E-09	3.00E-09
2,3,4,6-Tetrachlorophenol	1.11E+02	4.42E+01	8.95E-10	2.45E-10	7.22E-10	6.58E-10	1.97E-10	1.62E-10
Toluene	4.31E+00	4.38E+00	3.54E-07	9.69E-08	1.70E-07	3.70E-08	4.64E-08	7.59E-09
1,2,4-Trichlorobenzene	9.21E+01	3.84E+01	1.16E-09	3.17E-10	9.28E-10	8.11E-10	2.54E-10	1.97E-10
1,2,5-Trichlorobenzene	9.21E+01	3.84E+01	1.09E-06	2.98E-07	8.73E-07	7.62E-07	2.38E-07	1.85E-07
1,1,1-Trichloroethane	2.72E+00	3.32E+00	2.01E-08	5.49E-09	8.25E-09	1.69E-09	2.26E-09	3.46E-10
Trichloroethene	1.71E+00	2.57E+00	2.51E-08	6.86E-09	9.15E-09	1.83E-09	2.50E-09	3.77E-10
Trichlorofluoromethane	2.98E+00	3.50E+00	2.08E-07	5.71E-08	8.83E-08	1.82E-08	2.42E-08	3.73E-09
2,3,6-Trichlorophenol	5.95E+01	2.77E+01	4.17E-07	1.14E-07	3.28E-07	2.51E-07	8.95E-08	5.83E-08
2,4,5-Trichlorophenol	8.03E+01	3.46E+01	1.17E-09	3.20E-10	9.33E-10	7.85E-10	2.55E-10	1.88E-10
2,4,6-Trichlorophenol	4.31E+01	2.18E+01	1.42E-09	3.88E-10	1.09E-09	7.35E-10	2.98E-10	1.65E-10
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1.19E+01	8.58E+00	6.94E-10	1.68E-10	4.47E-10	1.46E-10	1.08E-10	2.66E-11
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	2.42E+00	3.10E+00	3.40E-10	9.23E-11	1.35E-10	2.75E-11	3.67E-11	5.58E-12

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd_s Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
Undecane	7.66E+04	6.67E+03	9.13E-14	6.10E-15	7.60E-14	8.70E-14	5.07E-15	5.70E-15
Vinyl acetate	4.61E-02	9.30E-01	3.20E-07	8.76E-08	1.07E-07	2.13E-08	2.92E-08	4.38E-09
Vinyl chloride	3.39E-02	9.07E-01	3.78E-08	1.04E-08	1.26E-08	2.52E-09	3.45E-09	5.18E-10
o-Xylene	1.16E+01	8.45E+00	8.19E-08	2.24E-08	5.25E-08	1.69E-08	1.43E-08	3.47E-09
m,p-Xylene	1.39E+01	9.61E+00	1.73E-07	4.74E-08	1.15E-07	4.14E-08	3.15E-08	8.51E-09
Metals / Inorganics								
Aluminum	1.50E+03	1.00E-01	1.12E-07	9.94E-09	9.32E-08	1.05E-07	8.23E-09	9.04E-09
Antimony	4.50E+01	3.00E-02	1.76E-10	1.56E-11	1.36E-10	9.33E-11	1.20E-11	6.81E-12
Arsenic	2.00E+02	8.00E-03	3.89E-11	3.45E-12	3.18E-11	3.20E-11	2.81E-12	2.64E-12
Barium	6.00E+01	1.50E-02	2.97E-08	2.63E-09	2.34E-08	1.79E-08	2.07E-09	1.35E-09
Beryllium	6.50E+02	1.50E-03	7.58E-14	6.72E-15	6.28E-14	6.90E-14	5.55E-15	5.89E-15
Cadmium	6.50E+00	3.20E-02	5.57E-09	4.93E-10	3.06E-09	7.51E-10	2.71E-10	4.97E-11
Calcium	4.00E+00	1.00E-01	3.46E-05	3.07E-06	1.62E-05	3.48E-06	1.43E-06	2.31E-07
Chromium VI	8.50E+02	4.50E-03	1.83E-12	1.62E-13	1.52E-12	1.69E-12	1.34E-13	1.45E-13
Cobalt	4.50E+01	1.00E-01	5.16E-10	4.57E-11	3.98E-10	2.73E-10	3.52E-11	1.99E-11
Copper	3.50E+01	1.00E-01	1.06E-08	9.37E-10	8.01E-09	4.89E-09	7.08E-10	3.47E-10
Iron	2.50E+01	1.00E-01	6.60E-07	5.85E-08	4.82E-07	2.45E-07	4.26E-08	1.69E-08
Lead	9.00E+02	1.00E-01	9.39E-10	8.31E-11	7.78E-10	8.65E-10	6.88E-11	7.42E-11
Magnesium	4.50E+00	1.00E-01	1.27E-05	1.13E-06	6.20E-06	1.36E-06	5.49E-07	9.05E-08
Manganese	6.50E+01	1.00E-01	2.65E-09	2.35E-10	2.09E-09	1.65E-09	1.85E-10	1.26E-10
Mercury (inorganic)	1.30E+02	7.00E-03	2.75E-09	7.52E-10	2.23E-09	2.09E-09	6.08E-10	5.21E-10
Methyl mercury	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	1.50E+02	4.00E-03	4.71E-10	4.17E-11	3.83E-10	3.69E-10	3.38E-11	3.00E-11
Potassium	5.50E+00	1.00E-01	4.24E-06	3.75E-07	2.21E-06	5.12E-07	1.95E-07	3.39E-08
Selenium	3.00E+02	2.00E-02	1.14E-10	1.01E-11	9.41E-11	9.88E-11	8.32E-12	8.28E-12
Silver	4.50E+01	1.00E-01	1.10E-09	9.75E-11	8.50E-10	5.83E-10	7.52E-11	4.26E-11
Sodium	1.00E+02	1.00E-01	6.94E-06	6.15E-07	5.58E-06	4.97E-06	4.93E-07	3.93E-07
Vanadium	1.00E+02	1.00E-01	3.99E-10	3.53E-11	3.21E-10	2.86E-10	2.83E-11	2.26E-11
Zinc	4.00E+01	1.00E-01	9.70E-08	8.59E-09	7.43E-08	4.83E-08	6.57E-09	3.48E-09

Table 5C-16 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Root Vegetables (Pr_{bg})
Drake Chemical Site
Lock Haven, PA

Chemical	Kd, Soil-Water Partition Coefficient (mL/g)	RCF Ratio of Concentration in Roots to Concentration in Soil Pore Water ([mg/kg FW]/[µg/mL])	Pr_{bg} Root Vegetable Concentration Due to Root Uptake (mg/kg DW)					
			RESIDENTIAL LOCATION	FARMER LOCATION	RESIDENTIAL LOCATION		FARMER LOCATION	
			Maximum 2 Year		6 Year Average	30 Year Average	6 Year Average	40 Year Average
TICs								
Acetophenone	3.33E-01	1.32E+00	2.47E-07	6.76E-08	8.23E-08	1.65E-08	2.25E-08	3.38E-09
Benzonitrile	3.18E-01	1.30E+00	1.23E-07	3.38E-08	4.11E-08	8.23E-09	1.13E-08	1.69E-09
Bromobenzene	8.60E+00	6.88E+00	4.52E-07	1.24E-07	2.69E-07	7.43E-08	7.35E-08	1.52E-08
2-Butenal / 2-Methyl-2-propenal	1.07E-01	1.03E+00	1.44E-06	3.95E-07	4.80E-07	9.61E-08	1.32E-07	1.97E-08
2-(2-Butoxyethoxy)ethanol	7.04E-02	9.72E-01	1.65E-05	4.51E-06	5.49E-06	1.10E-06	1.50E-06	2.25E-07
Chlorocyclohexanol	NA	NA	NA	NA	NA	NA	NA	NA
Decane	8.40E+03	1.22E+03	2.69E-14	1.80E-15	2.24E-14	2.56E-14	1.49E-15	1.67E-15
Dichlorocyclohexane	NA	NA	NA	NA	NA	NA	NA	NA
Difluoroethane	4.83E-02	9.34E-01	2.07E-06	5.66E-07	6.89E-07	1.38E-07	1.89E-07	2.83E-08
Dimethylcyclohexane	1.01E+01	7.68E+00	3.62E-14	2.42E-15	2.25E-14	6.72E-15	1.50E-15	3.36E-16
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA	NA	NA	NA
Dioctyl adipate	1.13E+04	1.53E+03	8.51E-08	1.13E-08	7.08E-08	8.09E-08	9.38E-09	1.05E-08
Dodecane	5.55E+03	8.84E+02	2.73E-08	7.46E-09	2.27E-08	2.58E-08	6.19E-09	6.92E-09
2-(2-Ethoxyethoxy)ethanol	1.40E-03	8.32E-01	8.38E-06	2.30E-06	2.79E-06	5.59E-07	7.65E-07	1.15E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	5.88E-03	8.45E-01	7.09E-12	4.74E-13	2.36E-12	4.72E-13	1.58E-13	2.37E-14
Iodobenzene	1.56E+01	1.04E+01	9.15E-13	6.11E-14	6.23E-13	2.40E-13	4.16E-14	1.21E-14
Methyl benzoate	1.16E+00	2.12E+00	2.28E-12	1.52E-13	7.85E-13	1.57E-13	5.25E-14	7.87E-15
Methyl hexenone	NA	NA	NA	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA	NA	NA	NA

NA = Sufficient information not available to calculate parameters

Table 5C-17 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f) Drake Chemical Site Lock Haven, PA

Table 5C-17 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics					
Acetaldehyde	2 19E+01	2.56E-06	8.53E-07	1 71E-07	1.28E-07
Acetone	5 33E+01	1.62E-05	5.40E-06	1 08E-06	8.11E-07
Acetonitrile	6.09E+01	5 45E-05	1 82E-05	3 63E-06	2 72E-06
Acrolein	4.37E+01	4.17E-06	1.39E-06	2 78E-07	2 09E-07
Acrylonitrile	2 78E+01	1.85E-06	6.17E-07	1.23E-07	9.26E-08
Aldrin	7.05E-01	4.12E-08	1.37E-08	2.75E-09	2.06E-09
Aniline	1 17E+01	2.89E-06	9.63E-07	1.93E-07	1.45E-07
Benzaldehyde	5.40E+00	1.66E-05	5.53E-06	1.11E-06	8.30E-07
Benzene	2.27E+00	3.46E-04	1.15E-04	2.31E-05	1.73E-05
Benzoic acid	3.21E+00	1.00E-04	3.34E-05	6 67E-06	5.00E-06
Benzotrichloride	7 95E-01	7.43E-08	2.48E-08	4 96E-09	3.72E-09
Benzoyl chloride	1.81E+00	1.35E-05	4.49E-06	8 98E-07	6 73E-07
Benzyl chloride	1.81E+00	5.33E-07	1.78E-07	3.55E-08	2.66E-08
Biphenyl	5 77E-01	2.89E-06	9.64E-07	1.93E-07	1.45E-07
Bis(2-chloroethoxy)methane	7.24E+00	1.01E-08	3.38E-09	6.75E-10	5.07E-10
Bis(2-ethylhexyl)phthalate	5.78E-02	5.11E-06	3.62E-06	1.62E-06	1.25E-06
Bromochloromethane	5 93E+00	1.03E-06	3.45E-07	6 90E-08	5.17E-08
Bromodichloromethane	3 17E+00	8.85E-07	2.95E-07	5.90E-08	4.43E-08
Bromoform	1.63E+00	1.78E-07	5.94E-08	1.19E-08	8.91E-09
Bromomethane	7.95E+00	3.28E-06	1.09E-06	2.19E-07	1.64E-07
2-Butanone (MEK)	2 74E+01	9.61E-06	3.20E-06	6.41E-07	4.81E-07
Butyl benzyl phthalate	6.78E-02	2.60E-07	1.80E-07	7.24E-08	5.51E-08
Carbazole	2.74E-01	4.40E-08	1.67E-08	3.37E-09	2.53E-09
Carbon disulfide	2.70E+00	7.02E-07	2.34E-07	4.68E-08	3.51E-08
Carbon tetrachloride	1.18E+00	7.71E-07	2.57E-07	5.14E-08	3.85E-08
alpha-Chlordane	2.67E-02	8.32E-09	6.31E-09	3.90E-09	3.18E-09
gamma-Chlordane	2.67E-02	3.28E-09	2.49E-09	1.53E-09	1.25E-09
4-Chloroaniline	3.39E+00	9.15E-09	3 05E-09	6.10E-10	4.58E-10
Chlorobenzene	2.13E+00	3.92E-06	1.31E-06	2.61E-07	1.96E-07
Chloroethane	5.77E+00	6.22E-08	2.07E-08	4.15E-09	3.11E-09
2-Chloroethyl vinyl ether	1.04E+01	3.63E-08	1.21E-08	2.42E-09	1.82E-09
Chloroform	2.81E+00	6.78E-06	2.26E-06	4.52E-07	3.39E-07
Chloromethane	1.15E+01	6.28E-07	2.09E-07	4.19E-08	3.14E-08
4-Chloro-3-methylphenol	6.25E-01	1.51E-07	5.05E-08	1.01E-08	7.57E-09
beta-Chloronaphthalene	1.61E-01	2.77E-08	1 40E-08	3.17E-09	2.38E-09
2-Chlorophenol	2.21E+00	1.13E-08	3.78E-09	7.56E-10	5.67E-10
2-Chloropropane	3.09E+00	2.57E-07	8.56E-08	1.71E-08	1.28E-08
Dalapon	1.38E+01	2.66E-08	8.86E-09	1 77E-09	1.33E-09
4,4'-DDD	1.28E-02	1.91E-08	1.47E-08	1.01E-08	8.45E-09
4,4'-DDE	6.69E-03	4.58E-09	3.55E-09	2.50E-09	2.12E-09
4,4'-DDT	8.16E-03	6.75E-09	5.23E-09	3.66E-09	3.09E-09
Decanol	8.84E-02	9.75E-11	6.32E-11	2.09E-11	1.57E-11
Dibenzofuran	1.61E-01	2.32E-08	1.18E-08	2.66E-09	1.99E-09
Dibromochloromethane	2.40E+00	2.82E-07	9.39E-08	1.88E-08	1.41E-08
Dicamba	2.04E+00	8.56E-09	2.85E-09	5.71E-10	4.28E-10

Table 5C-17 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,2-Dichlorobenzene	4.31E-01	1.93E-07	6.52E-08	1.30E-08	9.78E-09
1,3-Dichlorobenzene	3.22E-01	4.69E-08	1.68E-08	3.36E-09	2.52E-09
1,4-Dichlorobenzene	4.37E-01	1.23E-07	4.15E-08	8.30E-09	6.22E-09
3,3'-Dichlorobenzidine	6.96E-01	1.30E-08	4.32E-09	8.64E-10	6.48E-10
1,1-Dichloroethane	3.58E+00	1.52E-06	5.07E-07	1.01E-07	7.61E-08
1,2-Dichloroethane	5.40E+00	1.26E-08	4.19E-09	8.37E-10	6.28E-10
1,1-Dichloroethene	2.27E+00	4.21E-08	1.40E-08	2.81E-09	2.10E-09
cis-1,2-Dichloroethene	2.07E+00	5.39E-07	1.80E-07	3.60E-08	2.70E-08
trans-1,2-Dichloroethene	5.40E+00	1.27E-08	4.23E-09	8.45E-10	6.34E-10
2,4-Dichlorophenol	6.60E-01	1.90E-08	6.35E-09	1.27E-09	9.52E-10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53E-01	1.02E-07	3.54E-08	7.08E-09	5.31E-09
Dichloroprop	7.14E-01	2.01E-11	6.70E-12	1.34E-12	1.01E-12
Diethyl phthalate	1.45E+00	5.95E-07	1.98E-07	3.96E-08	2.97E-08
2,4-Dimethylphenol	1.81E+00	1.40E-08	4.68E-09	9.35E-10	7.02E-10
Dimethyl phthalate	2.30E+00	1.41E-06	4.70E-07	9.40E-08	7.05E-08
Di-n-butyl phthalate	5.70E-02	1.11E-06	7.89E-07	3.56E-07	2.75E-07
2,4-Dinitrophenol	5.26E+00	5.66E-09	1.89E-09	3.77E-10	2.83E-10
Di-n-octyl phthalate	3.72E-02	5.22E-08	3.88E-08	2.17E-08	1.73E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.62E-03	4.75E-13	3.68E-13	2.59E-13	2.19E-13
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5.62E-03	2.69E-14	2.09E-14	1.47E-14	1.24E-14
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	6.42E-14	4.99E-14	3.57E-14	3.02E-14
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	1.76E-13	1.36E-13	9.72E-14	8.24E-14
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	2.97E-13	2.31E-13	1.65E-13	1.39E-13
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	3.22E-13	2.50E-13	1.79E-13	1.52E-13
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	1.16E-12	9.03E-13	6.44E-13	5.46E-13
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	8.28E-13	6.42E-13	4.50E-13	3.80E-13
2,3,4,7,8-Pentachlorodibenzofuran	3.87E-03	6.99E-13	5.43E-13	3.85E-13	3.26E-13
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	4.97E-13	3.86E-13	2.73E-13	2.31E-13
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	7.47E-13	5.80E-13	4.13E-13	3.50E-13
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	3.57E-13	2.77E-13	1.98E-13	1.67E-13
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	5.33E-14	4.14E-14	2.95E-14	2.50E-14
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	2.81E-13	2.18E-13	1.56E-13	1.32E-13
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	6.35E-13	4.94E-13	3.53E-13	2.99E-13
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	1.32E-13	1.03E-13	7.35E-14	6.23E-14
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.17E-04	1.26E-13	9.76E-14	6.98E-14	5.92E-14
Endosulfan I	3.13E-01	3.67E-08	1.32E-08	2.65E-09	1.99E-09
Endosulfan sulfate	2.97E-01	1.80E-08	6.61E-09	1.33E-09	9.95E-10
Endrin	2.24E-02	2.44E-09	1.86E-09	1.19E-09	9.80E-10
Endrin aldehyde	2.24E-02	1.81E-09	1.38E-09	8.84E-10	7.28E-10
Ethylbenzene	5.85E-01	4.70E-07	1.57E-07	3.13E-08	2.35E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.48E-01	3.46E-06	1.16E-06	2.31E-07	1.73E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	5.80E-09	2.44E-09	5.01E-10	3.76E-10

Table 5C-17 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachlorobenzene	3.30E-02	1.07E-08	8.03E-09	4.67E-09	3.76E-09
Hexachlorobutadiene	5.70E-02	1.82E-08	1.29E-08	5.84E-09	4.50E-09
beta-Hexachlorocyclohexane	2.46E-01	1.15E-08	4.61E-09	9.35E-10	7.02E-10
Hexachlorocyclopentadiene	1.91E-01	1.76E-08	8.07E-09	1.72E-09	1.29E-09
Hexachloroethane	4.54E-01	4.19E-09	1.41E-09	2.82E-10	2.11E-10
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	8.22E-07	2.74E-07	5.48E-08	4.11E-08
MCPP	6.01E-01	3.18E-07	1.06E-07	2.12E-08	1.59E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	2.85E-07	9.50E-08	1.90E-08	1.43E-08
Methylene chloride	7.34E+00	1.81E-06	6.04E-07	1.21E-07	9.05E-08
Methyl ester acetic acid	3.05E+01	2.26E-15	7.55E-16	1.51E-16	1.13E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	3.76E-08	1.57E-08	3.22E-09	2.41E-09
4-Methyl-2-pentanone	7.95E+00	3.02E-07	1.01E-07	2.01E-08	1.51E-08
2-Methylphenol	2.89E+00	2.92E-07	9.72E-08	1.94E-08	1.46E-08
3-Methylphenol	2.85E+00	4.12E-07	1.37E-07	2.75E-08	2.06E-08
4-Methylphenol	2.93E+00	4.49E-07	1.50E-07	2.99E-08	2.24E-08
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	1.02E-06	3.40E-07	6.79E-08	5.10E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	1.00E-08	3.34E-09	6.67E-10	5.01E-10
2-Nitroaniline	3.30E+00	1.17E-08	3.88E-09	7.77E-10	5.83E-10
4-Nitroaniline	6.09E+00	8.14E-09	2.71E-09	5.42E-10	4.07E-10
Nitrobenzene	3.30E+00	1.20E-06	4.00E-07	8.00E-08	6.00E-08
2-Nitrophenol	3.58E+00	8.81E-07	2.94E-07	5.88E-08	4.41E-08
4-Nitrophenol	3.05E+00	8.81E-09	2.94E-09	5.88E-10	4.41E-10
n-Nitrosodiphenylamine	6.01E-01	1.19E-07	3.95E-08	7.91E-09	5.93E-09
Octadecanoic acid	6.78E-04	1.47E-08	1.14E-08	8.18E-09	6.93E-09
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	2.10E-01	3.41E-08	1.49E-08	3.09E-09	2.32E-09
Acenaphthylene	1.72E-01	3.33E-08	1.62E-08	3.58E-09	2.68E-09
Anthracene	1.04E-01	7.60E-08	4.68E-08	1.38E-08	1.03E-08
Benzo(a)anthracene	2.22E-02	5.95E-09	4.55E-09	2.92E-09	2.40E-09
Benzo(a)pyrene	1.14E-02	3.02E-09	2.33E-09	1.61E-09	1.35E-09
Benzo(b)fluoranthene	1.12E-02	2.08E-09	1.61E-09	1.11E-09	9.34E-10
Benzo(e)pyrene	1.25E-02	3.39E-09	2.61E-09	1.79E-09	1.50E-09
Benzo(g,h,i)perylene	5.19E-03	1.34E-09	1.04E-09	7.38E-10	6.24E-10
Benzo(j)fluoranthene	1.12E-02	1.15E-08	8.92E-09	6.16E-09	5.17E-09
Benzo(k)fluoranthene	4.31E-03	1.11E-09	8.59E-10	6.10E-10	5.16E-10
Chrysene	2.22E-02	4.62E-09	3.52E-09	2.26E-09	1.86E-09
Dibenzo(a,h)anthracene	6.78E-03	1.79E-09	1.39E-09	9.76E-10	8.25E-10
Fluoranthene	5.70E-02	1.20E-08	8.55E-09	3.86E-09	2.98E-09
Fluorene	1.43E-01	3.65E-08	1.97E-08	4.71E-09	3.54E-09
Indeno(1,2,3-cd)pyrene	6.06E-03	1.56E-09	1.21E-09	8.55E-10	7.22E-10

Table 5C-17 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Phenanthrene	8 84E-02	1.39E-07	9.03E-08	2.99E-08	2.25E-08
Pyrene	5.85E-02	6.97E-08	4.93E-08	2.19E-08	1 69E-08
PCBs					
Monochlorobiphenyls	1 01E-01	2 89E-08	1 79E-08	5.38E-09	4 04E-09
Dichlorobiphenyls	4 55E-02	3.57E-09	2.61E-09	1.33E-09	1.05E-09
Trichlorobiphenyls	1.97E-02	1.13E-09	8.67E-10	5.67E-10	4 70E-10
Tetrachlorobiphenyls	1 41E-02	6.77E-10	5.22E-10	3.55E-10	2 97E-10
Pentachlorobiphenyls	8.73E-03	7.55E-10	5.85E-10	4 09E-10	3 45E-10
Hexachlorobiphenyls	3.35E-03	1.51E-10	1.17E-10	8.33E-11	7 05E-11
Heptachlorobiphenyls	4.25E-03	5 46E-11	4.24E-11	3 01E-11	2.55E-11
Octachlorobiphenyls	2.50E-03	5.82E-12	4.52E-12	3.22E-12	2.73E-12
Nonachlorobiphenyls	1 51E-03	3.95E-12	3.07E-12	2.19E-12	1.86E-12
Decachlorobiphenyls	6.51E-04	5.46E-13	4.24E-13	3 03E-13	2.57E-13
Pentachlorobenzene	3 98E-02	1.32E-08	9.78E-09	5.31E-09	4.22E-09
Pentachlorophenol	4.25E-02	3.62E-08	2.66E-08	1 41E-08	1 11E-08
3-Pentanol	6 25E+00	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	5.55E+00	7.85E-06	2.62E-06	5.23E-07	3 93E-07
Phthalic anhydride	8 84E+01	1.82E-05	6.07E-06	1.21E-06	9 10E-07
Quinoline	2.60E+00	3.10E-07	1.03E-07	2.07E-08	1.55E-08
Quinone	2 97E+01	6.00E-06	2 00E-06	4 00E-07	3 00E-07
Styrene	7 64E-01	1 70E-06	5.66E-07	1 13E-07	8 48E-08
1,2,4,5-Tetrachlorobenzene	7 44E-02	3.62E-08	2 45E-08	9.22E-09	6.99E-09
Tetrachloroethene	4.20E-01	6.26E-07	2.12E-07	4.24E-08	3.18E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	2.04E-08	1.02E-08	2.28E-09	1 71E-09
Toluene	1.08E+00	2.42E-06	8.06E-07	1.61E-07	1.21E-07
1,2,4-Trichlorobenzene	1.84E-01	2.64E-08	1.24E-08	2.67E-09	2.00E-09
1,2,5-Trichlorobenzene	1.84E-01	2.48E-05	1.16E-05	2.51E-06	1.88E-06
1,1,1-Trichloroethane	1.41E+00	1.20E-07	4.00E-08	7.99E-09	5.99E-09
Trichloroethene	1.84E+00	1.39E-07	4.62E-08	9.23E-09	6.93E-09
Trichlorofluoromethane	1.34E+00	1.27E-06	4.25E-07	8 49E-08	6.37E-08
2,3,6-Trichlorophenol	2.37E-01	8 99E-06	3.67E-06	7.49E-07	5 62E-07
2,4,5-Trichlorophenol	1 99E-01	2.64E-08	1.18E-08	2.50E-09	1 87E-09
2,4,6-Trichlorophenol	2.85E-01	2.82E-08	1.05E-08	2.11E-09	1 59E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6.01E-01	6.62E-09	2.21E-09	4.42E-10	3 31E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.51E+00	1.97E-09	6.55E-10	1.31E-10	9 83E-11
Undecane	3.77E-03	7.60E-14	5.90E-14	4.20E-14	3.55E-14
Vinyl acetate	1.47E+01	9.54E-07	3.18E-07	6.36E-08	4.77E-08
Vinyl chloride	1.74E+01	1.01E-07	3.37E-08	6.74E-09	5 06E-09
o-Xylene	6.09E-01	8.70E-07	2.90E-07	5.80E-08	4.35E-08
m,p-Xylene	5.48E-01	2.03E-06	6.77E-07	1.35E-07	1.02E-07
Metals / Inorganics					
Aluminum	4.00E-03	1.66E-04	1.24E-04	6.96E-05	5.56E-05
Antimony	2.00E-01	6.18E-07	2.33E-07	4.69E-08	3.52E-08
Arsenic	4.00E-02	8.08E-07	4.75E-07	1.28E-07	9.60E-08
Barium	1.50E-01	2.46E-04	1.01E-04	2.05E-05	1.54E-05

Table 5C-17 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Forage (Pr_f)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic PUF and Inorganic Bv	Pr_f Forage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Beryllium	1.00E-02	7.84E-09	5.53E-09	2.43E-09	1.87E-09
Cadmium	5.50E-01	1.67E-06	5.56E-07	1.11E-07	8.34E-08
Calcium	3.50E+00	9.70E-03	3.23E-03	6.47E-04	4.85E-04
Chromium VI	7.50E-03	6.29E-08	4.54E-08	2.19E-08	1.70E-08
Cobalt	2.00E-02	5.43E-08	2.05E-08	4.12E-09	3.09E-09
Copper	4.00E-01	1.47E-05	5.24E-06	1.05E-06	7.87E-07
Iron	4.00E-03	5.07E-06	1.73E-06	3.47E-07	2.60E-07
Lead	4.50E-02	9.23E-06	6.69E-06	3.28E-06	2.56E-06
Magnesium	1.00E+00	1.22E-03	4.07E-04	8.15E-05	6.11E-05
Manganese	2.50E-01	6.19E-06	2.60E-06	5.34E-07	4.00E-07
Mercury (inorganic)	9.00E-01	2.66E-03	1.39E-03	3.25E-04	2.44E-04
Methyl mercury	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	6.00E-02	2.06E-05	1.12E-05	2.74E-06	2.05E-06
Potassium	1.00E+00	5.60E-04	1.87E-04	3.73E-05	2.80E-05
Selenium	2.50E-02	9.51E-07	6.07E-07	1.94E-07	1.46E-07
Silver	4.00E-01	2.32E-06	8.75E-07	1.76E-07	1.32E-07
Sodium	7.50E-02	8.97E-03	4.33E-03	9.47E-04	7.10E-04
Vanadium	5.50E-03	3.78E-08	1.82E-08	3.99E-09	2.99E-09
Zinc	1.50E+00	6.31E-04	2.32E-04	4.65E-05	3.49E-05
TICs					
Acetophenone	4.69E+00	1.20E-06	4.02E-07	8.03E-08	6.02E-08
Benzonitrile	4.82E+00	5.99E-07	2.00E-07	3.99E-08	2.99E-08
Bromobenzene	7.14E-01	4.07E-06	1.36E-06	2.71E-07	2.04E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	5.57E-06	1.86E-06	3.71E-07	2.79E-07
2-(2-Butoxyethoxy)ethanol	1.15E+01	5.63E-05	1.88E-05	3.75E-06	2.81E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	1.32E-02	4.68E-14	3.61E-14	2.46E-14	2.06E-14
Dichlorocyclohexane	NA	NA	NA	NA	NA
Difluoroethane	1.42E+01	6.25E-06	2.08E-06	4.17E-07	3.13E-07
Dimethylcyclohexane	6.50E-01	8.62E-14	2.87E-14	5.75E-15	4.31E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	1.11E-02	2.65E-07	2.05E-07	1.41E-07	1.19E-07
Dodecane	1.67E-02	2.24E-07	1.72E-07	1.14E-07	9.52E-08
2-(2-Ethoxyethoxy)ethanol	7.97E+01	4.61E-06	1.54E-06	3.07E-07	2.31E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4.41E+01	2.18E-12	7.28E-13	1.46E-13	1.09E-13
Iodobenzene	5.05E-01	2.74E-12	9.17E-13	1.83E-13	1.37E-13
Methyl benzoate	2.28E+00	2.95E-12	9.85E-13	1.97E-13	1.48E-13
Methyl hexenone	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-18 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Table 5C-18 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Organics			
Acetaldehyde	7.62E-17	1.57E-17	8.95E-15
Acetone	6.10E-16	1.26E-16	7.17E-14
Acetonitrile	5.40E-15	1.11E-15	6.35E-13
Acrolein	2.68E-16	5.54E-17	3.15E-14
Acrylonitrile	2.47E-16	5.10E-17	2.91E-14
Aldrin	1.62E-11	3.33E-12	1.90E-09
Aniline	2.09E-13	4.32E-14	2.46E-11
Benzaldehyde	7.28E-12	1.50E-12	8.56E-10
Benzene	1.36E-13	2.80E-14	1.60E-11
Benzoic acid	8.01E-11	1.65E-11	9.42E-09
Benzotrichloride	7.60E-15	1.57E-15	8.93E-13
Benzoyl chloride	5.95E-13	1.23E-13	7.00E-11
Benzyl chloride	1.59E-14	3.27E-15	1.87E-12
Biphenyl	2.66E-12	5.49E-13	3.13E-10
Bis(2-chloroethoxy)methane	6.08E-15	1.25E-15	7.15E-13
Bis(2-ethylhexyl)phthalate	3.72E-07	7.68E-08	4.38E-05
Bromochloromethane	6.66E-16	1.37E-16	7.83E-14
Bromodichloromethane	1.59E-15	3.27E-16	1.86E-13
Bromoform	3.23E-15	6.67E-16	3.80E-13
Bromomethane	0.00E+00	0.00E+00	NA
2-Butanone (MEK)	2.34E-15	4.83E-16	2.75E-13
Butyl benzyl phthalate	1.02E-09	2.11E-10	1.20E-07
Carbazole	4.40E-15	9.09E-16	5.18E-13
Carbon disulfide	8.54E-17	1.76E-17	1.00E-14
Carbon tetrachloride	1.87E-16	3.86E-17	2.20E-14
alpha-Chlordane	7.01E-11	1.45E-11	8.24E-09
gamma-Chlordane	2.12E-11	4.37E-12	2.49E-09
4-Chloroaniline	6.65E-15	1.37E-15	7.81E-13
Chlorobenzene	1.35E-14	2.79E-15	1.59E-12
Chloroethane	0.00E+00	0.00E+00	NA
2-Chloroethyl vinyl ether	5.50E-17	1.14E-17	6.47E-15
Chloroform	1.56E-15	3.23E-16	1.84E-13
Chloromethane	0.00E+00	0.00E+00	NA
4-Chloro-3-methylphenol	1.94E-14	4.01E-15	2.28E-12
beta-Chloronaphthalene	1.38E-14	2.84E-15	1.62E-12
2-Chlorophenol	2.76E-16	5.70E-17	3.25E-14
2-Chloropropane	1.77E-17	3.66E-18	2.08E-15
Dalapon	9.36E-15	1.93E-15	1.10E-12
4,4'-DDD	3.53E-10	7.29E-11	4.15E-08
4,4'-DDE	9.00E-11	1.86E-11	1.06E-08
4,4'-DDT	1.84E-09	3.80E-10	2.17E-07
Decanol	6.56E-12	1.35E-12	7.71E-10
Dibenzofuran	2.92E-14	6.01E-15	3.43E-12
Dibromochloromethane	3.88E-16	8.01E-17	4.56E-14
Dicamba	1.20E-12	2.48E-13	1.41E-10

Table 5C-18 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
1,2-Dichlorobenzene	1.96E-15	4.04E-16	2.30E-13
1,3-Dichlorobenzene	2.64E-16	5.45E-17	3.11E-14
1,4-Dichlorobenzene	4.85E-16	1.00E-16	5.70E-14
3,3'-Dichlorobenzidine	9.75E-11	2.01E-11	1.15E-08
1,1-Dichloroethane	3.30E-16	6.81E-17	3.88E-14
1,2-Dichloroethane	6.99E-18	1.44E-18	8.22E-16
1,1-Dichloroethene	2.62E-18	5.39E-19	3.07E-16
cis-1,2-Dichloroethene	1.07E-16	2.20E-17	1.26E-14
trans-1,2-Dichloroethene	2.18E-18	4.50E-19	2.56E-16
2,4-Dichlorophenol	4.53E-15	9.34E-16	5.32E-13
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	1.50E-14	3.09E-15	1.76E-12
Dichloroprop	1.43E-12	2.95E-13	1.68E-10
Diethyl phthalate	1.49E-11	3.07E-12	1.75E-09
2,4-Dimethylphenol	1.94E-14	3.99E-15	2.28E-12
Dimethyl phthalate	7.09E-12	1.46E-12	8.34E-10
Di-n-butyl phthalate	3.11E-09	6.41E-10	3.65E-07
2,4-Dinitrophenol	1.68E-13	3.46E-14	1.97E-11
Di-n-octyl phthalate	4.42E-11	9.12E-12	5.19E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1.75E-13	3.61E-14	2.06E-11
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	1.76E-14	3.63E-15	2.07E-12
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	2.50E-13	5.16E-14	2.94E-11
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	7.34E-13	1.51E-13	8.63E-11
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	6.34E-13	1.31E-13	7.45E-11
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	2.32E-12	4.78E-13	2.73E-10
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	3.80E-12	7.84E-13	4.47E-10
2,3,7,8-Tetrachlorodibenzofuran	1.66E-13	3.42E-14	1.95E-11
2,3,4,7,8-Pentachlorodibenzofuran	6.17E-13	1.27E-13	7.25E-11
1,2,3,7,8-Pentachlorodibenzofuran	3.01E-13	6.20E-14	3.54E-11
1,2,3,4,7,8-Hexachlorodibenzofuran	1.55E-12	3.19E-13	1.82E-10
1,2,3,6,7,8-Hexachlorodibenzofuran	7.35E-13	1.52E-13	8.64E-11
1,2,3,7,8,9-Hexachlorodibenzofuran	1.03E-13	2.13E-14	1.22E-11
2,3,4,6,7,8-Hexachlorodibenzofuran	5.76E-13	1.19E-13	6.77E-11
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.99E-12	6.16E-13	3.51E-10
1,2,3,4,7,8,9-Heptachlorodibenzofuran	6.36E-13	1.31E-13	7.47E-11
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	2.05E-12	4.24E-13	2.41E-10
Endosulfan I	1.96E-11	4.04E-12	2.30E-09
Endosulfan sulfate	4.57E-13	9.44E-14	5.38E-11
Endrin	3.86E-11	7.95E-12	4.53E-09
Endrin aldehyde	3.78E-11	7.80E-12	4.45E-09
Ethylbenzene	8.23E-16	1.70E-16	9.68E-14
2-Ethyl hexanoic acid	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	1.51E-10	3.11E-11	1.77E-08
2-Fluoro-4-nitrophenol	NA	NA	NA
Heptachlor	1.42E-13	2.93E-14	1.67E-11

Table 5C-18 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Hexachlorobenzene	2.46E-13	5.06E-14	2.89E-11
Hexachlorobutadiene	4.05E-15	8.36E-16	4.76E-13
beta-Hexachlorocyclohexane	3.60E-17	7.42E-18	4.23E-15
Hexachlorocyclopentadiene	7.60E-15	1.57E-15	8.93E-13
Hexachloroethane	3.16E-17	6.52E-18	3.71E-15
Hexadecanoic acid	NA	NA	NA
2-Hexanone	2.19E-14	4.52E-15	2.58E-12
MCPP	4.88E-10	1.01E-10	5.74E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	8.92E-10	1.84E-10	1.05E-07
Methylene chloride	1.87E-16	3.85E-17	2.19E-14
Methyl ester acetic acid	1.87E-16	3.86E-17	2.20E-14
Methyl-3-heptanol	NA	NA	NA
2-Methylnaphthalene	6.34E-15	1.31E-15	7.46E-13
4-Methyl-2-pentanone	1.55E-15	3.20E-16	1.83E-13
2-Methylphenol	4.41E-14	9.10E-15	5.19E-12
3-Methylphenol	1.75E-13	3.60E-14	2.05E-11
4-Methylphenol	1.36E-13	2.81E-14	1.60E-11
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA
Naphthalene	7.12E-14	1.47E-14	8.37E-12
Naphthalene carbonitrile	NA	NA	NA
beta-Naphthylamine	2.74E-13	5.66E-14	3.22E-11
2-Nitroaniline	6.63E-14	1.37E-14	7.79E-12
4-Nitroaniline	2.03E-14	4.19E-15	2.39E-12
Nitrobenzene	2.38E-13	4.91E-14	2.80E-11
2-Nitrophenol	3.02E-13	6.22E-14	3.54E-11
4-Nitrophenol	2.18E-13	4.50E-14	2.57E-11
n-Nitrosodiphenylamine	7.74E-15	1.60E-15	9.09E-13
Octadecanoic acid	1.13E-07	2.33E-08	1.33E-05
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA
PAHs			
Acenaphthene	4.82E-14	9.94E-15	5.67E-12
Acenaphthylene	1.25E-13	2.58E-14	1.47E-11
Anthracene	1.17E-13	2.42E-14	1.38E-11
Benzo(a)anthracene	1.04E-09	2.14E-10	1.22E-07
Benzo(a)pyrene	9.33E-10	1.92E-10	1.10E-07
Benzo(b)fluoranthene	3.81E-11	7.87E-12	4.48E-09
Benzo(e)pyrene	8.94E-10	1.84E-10	1.05E-07
Benzo(g,h,i)perylene	1.31E-09	2.71E-10	1.54E-07
Benzo(j)fluoranthene	2.56E-09	5.28E-10	3.01E-07
Benzo(k)fluoranthene	1.32E-09	2.72E-10	1.55E-07
Chrysene	3.12E-10	6.43E-11	3.66E-08
Dibenzo(a,h)anthracene	1.25E-09	2.59E-10	1.47E-07
Fluoranthene	1.59E-11	3.29E-12	1.87E-09
Fluorene	2.00E-13	4.12E-14	2.35E-11
Indeno(1,2,3-cd)pyrene	1.34E-09	2.76E-10	1.57E-07

Table 5C-18 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	Dyw Wet Deposition Rate (g/m^2-yr)	Pd_f Forage Concentration Due to Direct Deposition (mg/kg)
Phenanthrene	4.18E-12	8.63E-13	4.92E-10
Pyrene	1.49E-10	3.07E-11	1.75E-08
PCBs			
Monochlorobiphenyls	8.77E-14	1.81E-14	1.03E-11
Dichlorobiphenyls	1.54E-13	3.17E-14	1.81E-11
Trichlorobiphenyls	1.30E-13	2.69E-14	1.53E-11
Tetrachlorobiphenyls	9.08E-13	1.87E-13	1.07E-10
Pentachlorobiphenyls	1.83E-12	3.78E-13	2.15E-10
Hexachlorobiphenyls	1.11E-11	2.28E-12	1.30E-09
Heptachlorobiphenyls	1.56E-11	3.22E-12	1.84E-09
Octachlorobiphenyls	1.53E-12	3.16E-13	1.80E-10
Nonachlorobiphenyls	1.23E-11	2.53E-12	1.44E-09
Decachlorobiphenyls	3.16E-12	6.52E-13	3.72E-10
Pentachlorobenzene	2.19E-14	4.51E-15	2.57E-12
Pentachlorophenol	2.73E-13	5.62E-14	3.21E-11
3-Pentanol	NA	NA	NA
4-Penten-2-ol	NA	NA	NA
Phenol	6.77E-13	1.40E-13	7.96E-11
Phthalic anhydride	6.18E-11	1.27E-11	7.26E-09
Quinoline	1.79E-13	3.69E-14	2.10E-11
Quinone	1.76E-13	3.63E-14	2.07E-11
Styrene	7.40E-15	1.53E-15	8.70E-13
1,2,4,5-Tetrachlorobenzene	1.51E-15	3.11E-16	1.77E-13
Tetrachloroethene	4.80E-16	9.90E-17	5.64E-14
2,3,4,6-Tetrachlorophenol	8.93E-14	1.84E-14	1.05E-11
Toluene	2.07E-15	4.27E-16	2.44E-13
1,2,4-Trichlorobenzene	2.10E-15	4.32E-16	2.46E-13
1,2,5-Trichlorobenzene	1.97E-12	4.07E-13	2.32E-10
1,1,1-Trichloroethane	3.67E-17	7.58E-18	4.32E-15
Trichloroethene	6.42E-17	1.32E-17	7.54E-15
Trichlorofluoromethane	5.11E-17	1.05E-17	6.00E-15
2,3,6-Trichlorophenol	1.56E-11	3.21E-12	1.83E-09
2,4,5-Trichlorophenol	8.65E-15	1.78E-15	1.02E-12
2,4,6-Trichlorophenol	1.60E-14	3.31E-15	1.88E-12
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	1.72E-11	3.55E-12	2.02E-09
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	7.20E-13	1.49E-13	8.47E-11
Undecane	1.05E-13	2.16E-14	1.23E-11
Vinyl acetate	3.59E-16	7.40E-17	4.22E-14
Vinyl chloride	0.00E+00	0.00E+00	NA
o-Xylene	2.12E-15	4.37E-16	2.49E-13
m,p-Xylene	4.26E-15	8.78E-16	5.00E-13
Metals / Inorganics			
Aluminum	2.60E-04	9.58E-06	2.76E-02
Antimony	4.28E-08	1.58E-09	4.55E-06
Arsenic	1.52E-07	5.59E-09	1.61E-05
Barium	1.90E-05	7.01E-07	2.02E-03

Table 5C-18 (RB2)

Estimated Chemical Concentrations Due to Direct Deposition on Forage (Pd_f)
Drake Chemical Site
Lock Haven, PA

Chemical	FARMER LOCATION		
	Dyd Dry Deposition Rate (g/m^2-yr)	**Dyw** Wet Deposition Rate (g/m^2-yr)	**Pd_f** Forage Concentration Due to Direct Deposition (mg/kg)
Beryllium	5.08E-09	1.87E-10	5.40E-07
Cadmium	2.40E-07	8.85E-09	2.55E-05
Calcium	3.50E-04	1.29E-05	3.73E-02
Chromium VI	5.35E-08	1.97E-09	5.69E-06
Cobalt	3.76E-08	1.39E-09	4.00E-06
Copper	6.08E-07	2.24E-08	6.47E-05
Iron	2.78E-05	1.02E-06	2.96E-03
Lead	1.31E-06	4.81E-08	1.39E-04
Magnesium	1.38E-04	5.09E-06	1.47E-02
Manganese	2.75E-07	1.01E-08	2.93E-05
Mercury (inorganic)	0.00E+00	0.00E+00	NA
Methyl mercury	not applicable	not applicable	not applicable
Nickel	2.76E-06	1.02E-07	2.94E-04
Potassium	5.21E-05	1.92E-06	5.55E-03
Selenium	2.66E-07	9.82E-09	2.83E-05
Silver	8.02E-08	2.96E-09	8.53E-06
Sodium	1.09E-03	4.03E-05	1.16E-01
Vanadium	6.28E-08	2.32E-09	6.68E-06
Zinc	6.32E-06	2.33E-07	6.73E-04
TICs			
Acetophenone	7.60E-14	1.57E-14	8.93E-12
Benzonitrile	4.43E-14	9.13E-15	5.21E-12
Bromobenzene	4.18E-14	8.63E-15	4.92E-12
2-Butenal / 2-Methyl-2-propenal	8.45E-15	1.74E-15	9.94E-13
2-(2-Butoxyethoxy)ethanol	1.54E-10	3.17E-11	1.81E-08
Chlorocyclohexanol	NA	NA	NA
Decane	1.86E-14	3.84E-15	2.19E-12
Dichlorocyclohexane	NA	NA	NA
Difluoroethane	0.00E+00	0.00E+00	NA
Dimethylcyclohexane	5.88E-15	1.21E-15	6.91E-13
4,4-Dimethyl-2-oxetanone	NA	NA	NA
Dioctyl adipate	4.29E-08	8.84E-09	5.04E-06
Dodecane	2.42E-13	4.99E-14	2.84E-11
2-(2-Ethoxyethoxy)ethanol	4.43E-13	9.14E-14	5.21E-11
Ethyl benzaldehyde	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA
Hexenal	NA	NA	NA
Hexenedione	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	1.29E-13	2.67E-14	1.52E-11
Iodobenzene	1.58E-13	3.26E-14	1.86E-11
Methyl benzoate	4.41E-13	9.09E-14	5.18E-11
Methyl hexenone	3.58E-14	7.38E-15	4.21E-12
Nonanoic acid	NA	NA	NA
Silane	0.00E+00	0.00E+00	NA

NA= Sufficient information not available to calculate parameters

Table 5C-19 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f) Drake Chemical Site Lock Haven, PA

Table 5C-19 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Organics			
Acetaldehyde	1.67E-06	5.98E-03	8.01E-12
Acetone	4.81E-06	1.81E-03	6.96E-12
Acetonitrile	1.39E-05	3.01E-03	3.36E-11
Acrolein	1.67E-06	2.53E-02	3.39E-11
Acrylonitrile	1.00E-06	1.86E-03	1.50E-12
Aldrin	7.74E-08	1.76E+01	1.09E-09
Aniline	4.15E-06	9.36E-06	3.12E-14
Benzaldehyde	2.74E-05	2.02E-01	4.43E-09
Benzene	3.82E-04	4.65E-03	1.43E-09
Benzoic acid	1.80E-04	1.95E+02	2.81E-05
Benzotrichloride	9.31E-08	1.83E-01	1.36E-11
Benzoyl chloride	1.76E-05	NA	NA
Benzyl chloride	5.79E-07	1.23E-01	5.73E-11
Biphenyl	2.25E-06	7.90E-01	1.43E-09
Bis(2-chloroethoxy)methane	1.80E-08	8.08E+00	1.17E-10
Bis(2-ethylhexyl)phthalate	1.65E-06	7.48E+04	9.93E-05
Bromochloromethane	2.29E-06	3.06E-03	5.62E-12
Bromodichloromethane	2.35E-06	6.59E-03	1.24E-11
Bromoform	5.37E-07	8.95E-02	3.85E-11
Bromomethane	5.27E-06	4.12E-04	1.74E-12
2-Butanone (MEK)	6.94E-06	5.64E-03	3.14E-11
Butyl benzyl phthalate	2.60E-07	3.84E+03	8.02E-07
Carbazole	1.80E-08	8.06E+00	1.16E-10
Carbon disulfide	7.54E-07	1.30E-03	7.88E-13
Carbon tetrachloride	6.27E-07	2.82E-03	1.42E-12
alpha-Chlordane	4.57E-08	1.08E+02	3.97E-09
gamma-Chlordane	1.82E-08	7.16E+01	1.04E-09
4-Chloroaniline	1.80E-08	1.16E+00	1.67E-11
Chlorobenzene	4.73E-06	7.42E-03	2.82E-11
Chloroethane	4.28E-08	5.47E-04	1.88E-14
2-Chloroethyl vinyl ether	4.89E-08	5.62E-02	2.21E-12
Chloroform	7.42E-06	5.14E-03	3.06E-11
Chloromethane	5.72E-07	1.47E-05	6.73E-15
4-Chloro-3-methylphenol	8.78E-08	1.11E+02	7.84E-09
beta-Chloronaphthalene	1.80E-08	5.55E+00	8.02E-11
2-Chlorophenol	1.80E-08	2.63E+00	3.80E-11
2-Chloropropane	2.71E-07	8.63E-04	1.87E-13
Dalapon	3.33E-08	1.49E+01	3.97E-10
4,4'-DDD	8.46E-08	1.66E+04	1.13E-06
4,4'-DDE	8.81E-08	5.09E+04	3.60E-06
4,4'-DDT	6.46E-08	2.17E+02	1.13E-08
Decanol	1.65E-06	2.14E+02	2.84E-07
Dibenzofuran	1.80E-08	4.56E+03	6.59E-08
Dibromochloromethane	8.75E-07	2.99E-02	2.09E-11
Dicamba	1.12E-08	1.57E+04	1.41E-07

Table 5C-19 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
1,2-Dichlorobenzene	8.71E-08	2.30E-01	1.61E-11
1,3-Dichlorobenzene	1.80E-08	2.93E-01	4.23E-12
1,4-Dichlorobenzene	5.59E-08	1.25E-01	5.59E-12
3,3'-Dichlorobenzidine	1.67E-08	5.08E+03	6.81E-08
1,1-Dichloroethane	2.29E-06	1.91E-03	3.50E-12
1,2-Dichloroethane	1.64E-08	4.45E-03	5.84E-14
1,1-Dichloroethene	4.58E-08	9.88E-04	3.63E-14
cis-1,2-Dichloroethene	6.39E-07	7.51E-03	3.85E-12
trans-1,2-Dichloroethene	2.14E-08	7.85E-04	1.35E-14
2,4-Dichlorophenol	1.80E-08	9.01E+01	1.30E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	4.75E-08	3.49E+05	1.33E-05
Dichloroprop	2.95E-08	1.79E+04	4.22E-07
Diethyl phthalate	7.28E-07	7.02E+01	4.10E-08
2,4-Dimethylphenol	1.80E-08	5.98E+00	8.63E-11
Dimethyl phthalate	2.10E-06	5.99E+01	1.01E-07
Di-n-butyl phthalate	1.26E-06	8.21E+04	8.30E-05
2,4-Dinitrophenol	1.80E-08	8.53E+03	1.23E-07
Di-n-octyl phthalate	1.83E-07	9.16E+03	1.35E-06
Dioctadecyl ester phosphoric acid	NA	NA	NA
Dioxins/Furans			
2,3,7,8-Tetrachlorodibenzo(p)dioxin	2.91E-12	6.40E+04	1.50E-10
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	8.12E-14	1.20E+05	7.81E-12
1,2,3,[illegible]-Hexachlorodibenzo(p)dioxin	2.70E-13	4.70E+05	1.02E-10
1,2,3,[illegible],8-Hexachlorodibenzo(p)dioxin	1.92E-13	4.70E+05	7.24E-11
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	3.22E-13	4.70E+05	1.22E-10
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	6.47E-13	3.60E+05	1.87E-10
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.09E-13	9.00E+06	7.90E-10
2,3,7,8-Tetrachlorodibenzofuran	5.47E-12	8.50E+04	3.73E-10
2,3,4,7,8-Pentachlorodibenzofuran	3.56E-12	4.90E+04	1.40E-10
1,2,3,7,8-Pentachlorodibenzofuran	2.88E-12	4.90E+04	1.13E-10
1,2,3,4,7,8-Hexachlorodibenzofuran	1.31E-12	1.60E+05	1.08E-10
1,2,3,6,7,8-Hexachlorodibenzofuran	6.70E-13	1.60E+05	8.59E-11
1,2,3,7,8,9-Hexachlorodibenzofuran	1.70E-13	1.60E+05	2.18E-11
2,3,4,6,7,8-Hexachlorodibenzofuran	5.61E-13	1.60E+05	7.19E-11
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.76E-12	4.70E+05	6.64E-10
1,2,3,4,7,8,9-Heptachlorodibenzofuran	2.18E-13	4.70E+05	8.25E-11
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	5.83E-14	1.30E+06	6.07E-11
Endosulfan I	4.69E-08	9.87E+00	3.71E-10
Endosulfan sulfate	9.02E-09	4.23E+01	3.06E-10
Endrin	1.49E-08	3.20E+05	3.81E-06
Endrin aldehyde	4.47E-09	4.41E+07	1.58E-04
Ethylbenzene	2.44E-07	3.91E-02	7.65E-12
2-Ethyl hexanoic acid	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	2.00E-06	1.98E+04	3.17E-05
2-Fluoro-4-nitrophenol	NA	NA	NA
Heptachlor	7.37E-09	7.02E-01	4.15E-12

Table 5C-19 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_y Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Hexachlorobenzene	1.80E-08	3.70E+01	5.34E-10
Hexachlorobutadiene	1.80E-08	8.98E-01	1.30E-11
beta-Hexachlorocyclohexane	4.98E-09	6.74E+03	2.69E-08
Hexachlorocyclopentadiene	1.80E-08	1.54E-01	2.23E-12
Hexachloroethane	1.80E-08	2.24E-02	3.23E-13
Hexadecanoic acid	NA	NA	NA
2-Hexanone	1.30E-06	2.34E-03	2.44E-12
MCPP	1.90E-07	5.93E+04	9.04E-06
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	4.04E-07	4.56E+03	1.48E-06
Methylene chloride	2.37E-06	9.35E-04	1.78E-12
Methyl ester acetic acid	1.20E-06	2.46E-03	2.37E-12
Methyl-3-heptanol	NA	NA	NA
2-Methylnaphthalene	1.80E-08	3.60E+00	5.20E-11
4-Methyl-2-pentanone	4.60E-07	1.73E-01	6.37E-11
2-Methylphenol	4.05E-07	1.97E+01	6.41E-09
3-Methylphenol	5.69E-07	2.40E+01	1.09E-08
4-Methylphenol	6.27E-07	4.13E+01	2.08E-08
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA
Naphthalene	7.06E-07	4.62E-01	2.62E-10
Naphthalene carbonitrile	NA	NA	NA
beta-Naphthylamine	1.80E-08	1.11E+04	1.60E-07
2-Nitroaniline	1.80E-08	1.34E-01	1.93E-12
4-Nitroaniline	1.80E-08	3.69E+02	5.33E-09
Nitrobenzene	1.73E-06	5.46E-01	7.55E-10
2-Nitrophenol	1.80E-06	3.20E+00	4.63E-09
4-Nitrophenol	1.80E-08	5.01E-01	7.24E-12
n-Nitrosodiphenylamine	6.76E-08	9.57E-05	5.19E-15
Octadecanoic acid	1.40E-07	1.76E+12	1.97E+02
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid,	NA	NA	NA
PAHs			
Acenaphthene	1.80E-08	8.63E+00	1.25E-10
Acenaphthylene	1.80E-08	2.64E+01	3.81E-10
Anthracene	6.68E-08	8.87E+01	4.75E-09
Benzo(a)anthracene	4.14E-09	1.99E+05	6.59E-07
Benzo(a)pyrene	5.52E-09	9.12E+05	4.04E-06
Benzo(b)fluoranthene	1.75E-08	3.35E+03	4.71E-08
Benzo(e)pyrene	6.04E-09	3.52E+05	1.70E-06
Benzo(g,h,i)perylene	4.21E-10	1.36E+07	4.58E-06
Benzo(j)fluoranthene	3.36E-08	7.78E+03	2.10E-07
Benzo(k)fluoranthene	3.61E-10	2.57E+03	7.45E-10
Chrysene	1.38E-08	1.25E+05	1.39E-06
Dibenzo(a,h)anthracene	1.22E-09	1.59E+07	1.56E-05
Fluoranthene	1.78E-08	3.54E+03	5.05E-08
Fluorene	1.80E-08	4.23E+01	6.12E-10
Indeno(1,2,3-cd)pyrene	1.09E-10	2.43E+09	2.13E-04

Table 5C-19 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_v Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Phenanthrene	9 75E-08	2.60E+02	2 04E-08
Pyrene	7 08E-08	4.29E+03	2.44E-07
PCBs			
Monochlorobiphenyls	3.90E-08	1.29E+01	4.05E-10
Dichlorobiphenyls	9 47E-09	1.11E+02	8.45E-10
Trichlorobiphenyls	6 72E-09	3.16E+02	1.70E-09
Tetrachlorobiphenyls	5.57E-09	1.38E+03	6 16E-09
Pentachlorobiphenyls	9 99E-09	1.31E+03	1.05E-08
Hexachlorobiphenyls	4 96E-09	9 17E+03	3 65E-08
Heptachlorobiphenyls	1 14E-09	5.15E+04	4 70E-08
Octachlorobiphenyls	2.35E-10	1.95E+04	3.68E-09
Nonachlorobiphenyls	3 06E-11	2.29E+04	5.61E-10
Decachlorobiphenyls	2.67E-11	4.23E+05	9.06E-09
Pentachlorobenzene	1.80E-08	6.28E+00	9 07E-11
Pentachlorophenol	4.69E-08	1.41E+04	5.30E-07
3-Pentanol	NA	NA	NA
4-Penten-2-ol	NA	NA	NA
Phenol	1.20E-05	3.84E+00	3 70E-08
Phthalic anhydride	4.81E-06	4.90E+00	1 89E-08
Quinoline	5 04E-07	8 11E+01	3.27E-08
Quinone	4.81E-06	2.19E-01	8 43E-10
Styrene	1 10E-06	7.01E-02	6 16E-11
1,2,4,5-Tetrachlorobenzene	5 48E-08	1 41E+00	6 19E-11
Tetrachloroethene	2.70E-07	2.16E-02	4 68E-12
2,3,4,6-Tetrachlorophenol	1.80E-08	9.11E+02	1.32E-08
Toluene	1.72E-06	1.72E-02	2.37E-11
1,2,4-Trichlorobenzene	1.80E-08	6.81E-01	9 84E-12
1,2,5-Trichlorobenzene	1.69E-05	6.81E-01	9.25E-09
1,1,1-Trichloroethane	1.09E-07	1.53E-02	1.33E-12
Trichloroethene	1.46E-07	3.82E-03	4 48E-13
Trichlorofluoromethane	1.04E-06	1.18E-03	9.84E-13
2,3,6-Trichlorophenol	5.83E-06	5.06E+02	2.36E-06
2,4,5-Trichlorophenol	1.80E-08	5.73E+02	8.28E-09
2,4,6-Trichlorophenol	1.80E-08	2 96E+02	4.27E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	8.37E-09	3 45E+04	2.32E-07
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	4.71E-09	4.21E+03	1 59E-08
Undecane	1.21E-06	1.87E+00	1 82E-09
Vinyl acetate	1.06E-06	1.73E-03	1 48E-12
Vinyl chloride	8.67E-08	1.08E-05	7.52E-16
o-Xylene	4.20E-07	5.97E-02	2.01E-11
m,p-Xylene	1.05E-06	5.16E-02	4.36E-11
Metals / Inorganics			
Aluminum	NA	not applicable	NA
Antimony	NA	not applicable	NA
Arsenic	NA	not applicable	NA
Barium	NA	not applicable	NA

Table 5C-19 (RB2)

Estimated Chemical Concentrations Due to Air-to-Plant Transfer in Forage (Pv_f)
Drake Chemical Site
Lock Haven, PA

Chemical	C_y Vapor Phase Air Concentration ($\mu g/m^3$) FARMER LOCATION	B_v Air-to-Plant Biotransfer Factor ([mg/kg DW]/[mg/kg])	Pv_f Forage Concentration Due to Air-to-Plant Transfer (mg/kg)
Beryllium	NA	not applicable	NA
Cadmium	NA	not applicable	NA
Calcium	NA	not applicable	NA
Chromium VI	NA	not applicable	NA
Cobalt	NA	not applicable	NA
Copper	NA	not applicable	NA
Iron	NA	not applicable	NA
Lead	NA	not applicable	NA
Magnesium	NA	not applicable	NA
Manganese	NA	not applicable	NA
Mercury (inorganic)	1.16E-04	1.00E+03	9.29E-05
Methyl mercury	NA	not applicable	not applicable
Nickel	NA	not applicable	NA
Potassium	NA	not applicable	NA
Selenium	NA	not applicable	NA
Silver	NA	not applicable	NA
Sodium	NA	not applicable	NA
Vanadium	NA	not applicable	NA
Zinc	NA	not applicable	NA
TICs			
Acetophenone	2.25E-06	6.26E-01	1.13E-09
Benzonitrile	1.01E-06	1.22E-01	9.89E-11
Bromobenzene	4.09E-06	1.02E-01	3.34E-10
2-Butenal / 2-Methyl-2-propenal	7.51E-06	1.31E-01	7.88E-10
2-(2-Butoxyethoxy)ethanol	9.12E-05	3.56E+01	2.60E-06
Chlorocyclohexanol	NA	NA	NA
Decane	7.88E-07	6.31E-02	3.99E-11
Dichlorocyclohexane	NA	NA	NA
Difluoroethane	5.48E-06	7.05E-06	3.10E-14
Dimethylcyclohexane	3.38E-06	5.31E-04	1.44E-12
4,4-Dimethyl-2-oxetanone	NA	NA	NA
Dioctyl adipate	1.08E-06	1.03E+06	8.92E-04
Dodecane	8.44E-07	2.82E-02	1.91E-11
2-(2-Ethoxyethoxy)ethanol	1.65E-06	7.61E-01	1.01E-09
Ethyl benzaldehyde	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA
Hexenal	NA	NA	NA
Hexenedione	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	3.72E-06	7.37E-01	2.20E-09
Iodobenzene	4.56E-06	5.22E-01	1.91E-09
Methyl benzoate	1.31E-05	7.77E-01	8.14E-09
Methyl hexenone	4.00E-06	NA	NA
Nonanoic acid	NA	NA	NA
Silane	8.71E-07	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-20 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Table 5C-20 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)

Drake Chemical Site

Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics				
Acetaldehyde	2.56E-06	8.53E-07	1.71E-07	1.28E-07
Acetone	1.62E-05	5.40E-06	1.08E-06	8.11E-07
Acetonitrile	5.45E-05	1.82E-05	3.63E-06	2.72E-06
Acrolein	4.17E-06	1.39E-06	2.78E-07	2.09E-07
Acrylonitrile	1.85E-06	6.17E-07	1.23E-07	9.26E-08
Aldrin	4.42E-08	1.47E-08	2.95E-09	2.21E-09
Aniline	2.89E-06	9.63E-07	1.93E-07	1.45E-07
Benzaldehyde	1.66E-05	5.53E-06	1.11E-06	8.30E-07
Benzene	3.46E-04	1.15E-04	2.31E-05	1.73E-05
Benzoic acid	1.28E-04	4.27E-05	8.55E-06	6.41E-06
Benzotrichloride	7.43E-08	2.48E-08	4.96E-09	3.72E-09
Benzoyl chloride	1.35E-05	4.49E-06	8.98E-07	6.73E-07
Benzyl chloride	5.33E-07	1.78E-07	3.55E-08	2.66E-08
Biphenyl	2.89E-06	9.65E-07	1.93E-07	1.45E-07
Bis(2-chloroethoxy)methane	1.02E-08	3.42E-09	6.83E-10	5.12E-10
Bis(2-ethylhexyl)phthalate	1.48E-04	5.13E-05	1.12E-05	8.40E-06
Bromochloromethane	1.03E-06	3.45E-07	6.90E-08	5.17E-08
Bromodichloromethane	8.85E-07	2.95E-07	5.90E-08	4.43E-08
Bromoform	1.78E-07	5.94E-08	1.19E-08	8.91E-09
Bromomethane	3.28E-06	1.09E-06	2.19E-07	1.64E-07
2-Butanone (MEK)	9.61E-06	3.20E-06	6.41E-07	4.81E-07
Butyl benzyl phthalate	1.18E-06	4.87E-07	1.34E-07	1.01E-07
Carbazole	4.41E-08	1.68E-08	3.38E-09	2.53E-09
Carbon disulfide	7.02E-07	2.34E-07	4.68E-08	3.51E-08
Carbon tetrachloride	7.71E-07	2.57E-07	5.14E-08	3.85E-08
alpha-Chlordane	2.05E-08	1.04E-08	4.71E-09	3.79E-09
gamma-Chlordane	6.81E-09	3.66E-09	1.77E-09	1.43E-09
4-Chloroaniline	9.17E-09	3.06E-09	6.11E-10	4.58E-10
Chlorobenzene	3.92E-06	1.31E-06	2.61E-07	1.96E-07
Chloroethane	6.22E-08	2.07E-08	4.15E-09	3.11E-09
2-Chloroethyl vinyl ether	3.63E-08	1.21E-08	2.42E-09	1.82E-09
Chloroform	6.78E-06	2.26E-06	4.52E-07	3.39E-07
Chloromethane	6.28E-07	2.09E-07	4.19E-08	3.14E-08
4-Chloro-3-methylphenol	1.59E-07	5.31E-08	1.06E-08	7.96E-09
beta-Chloronaphthalene	2.78E-08	1.40E-08	3.18E-09	2.38E-09
2-Chlorophenol	1.14E-08	3.79E-09	7.59E-10	5.69E-10
2-Chloropropane	2.57E-07	8.56E-08	1.71E-08	1.28E-08
Dalapon	2.70E-08	8.99E-09	1.80E-09	1.35E-09
4,4'-DDD	1.19E-06	4.04E-07	8.79E-08	6.68E-08
4,4'-DDE	3.62E-06	1.21E-06	2.43E-07	1.83E-07
4,4'-DDT	2.35E-07	8.12E-08	1.89E-08	1.45E-08
Decanol	2.84E-07	9.48E-08	1.90E-08	1.42E-08
Dibenzofuran	8.91E-08	3.37E-08	7.05E-09	5.29E-09
Dibromochloromethane	2.82E-07	9.39E-08	1.88E-08	1.41E-08
Dicamba	1.50E-07	5.00E-08	1.00E-08	7.50E-09

Table 5C-20 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,2-Dichlorobenzene	1 93E-07	6.52E-08	1 30E-08	9 78E-09
1,3-Dichlorobenzene	4 69E-08	1 68E-08	3 36E-09	2 52E-09
1,4-Dichlorobenzene	1 23E-07	4.15E-08	8.30E-09	6 23E-09
3,3'-Dichlorobenzidine	9 25E-08	3.08E-08	6 17E-09	4 63E-09
1,1-Dichloroethane	1 52E-06	5 07E-07	1 01E-07	7 61E-08
1,2-Dichloroethane	1.26E-08	4 19E-09	8.37E-10	6.28E-10
1,1-Dichloroethene	4.21E-08	1 40E-08	2.81E-09	2 10E-09
cis-1,2-Dichloroethene	5.39E-07	1.80E-07	3 60E-08	2 70E-08
trans-1,2-Dichloroethene	1.27E-08	4.23E-09	8 45E-10	6 34E-10
2,4-Dichlorophenol	2.03E-08	6.78E-09	1.36E-09	1 02E-09
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	1.34E-05	4 46E-06	8.93E-07	6 70E-07
Dichloroprop	4.22E-07	1 41E-07	2 81E-08	2 11E-08
Diethyl phthalate	6 37E-07	2.12E-07	4.25E-08	3.19E-08
2,4-Dimethylphenol	1.41E-08	4 71E-09	9 41E-10	7 06E-10
Dimethyl phthalate	1.51E-06	5 04E-07	1 01E-07	7.56E-08
Di-n-butyl phthalate	8 45E-05	2 86E-05	5 92E-06	4 44E-06
2,4-Dinitrophenol	1.29E-07	4.30E-08	8 60E-09	6 45E-09
Di-n-octyl phthalate	1 40E-06	4 90E-07	1.12E-07	8 49E-08
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA
Dioxins/Furans				
2,3,7,8-Tetrachlorodibenzo(p)dioxin	1.71E-10	5.71E-11	1 16E-11	8.73E-12
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	9.90E-12	3.31E-12	6 73E-13	5 06E-13
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.31E-10	4.38E-11	8.79E-12	6.60E-12
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.59E-10	5.30E-11	1 07E-11	8 02E-12
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	1.96E-10	6.56E-11	1.32E-11	9 94E-12
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	4.60E-10	1.53E-10	3.08E-11	2 31E-11
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.24E-09	4.13E-10	8.31E-11	6.24E-11
2,3,7,8-Tetrachlorodibenzofuran	3.93E-10	1.31E-10	2.66E-11	2 00E-11
2,3,4,7,8-Pentachlorodibenzofuran	2.13E-10	7 14E-11	1 46E-11	1 10E-11
1,2,3,7,8-Pentachlorodibenzofuran	1.49E-10	4.99E-11	1.02E-11	7.66E-12
1,2,3,4,7,8-Hexachlorodibenzofuran	3.50E-10	1.17E-10	2.37E-11	1.78E-11
1,2,3,6,7,8-Hexachlorodibenzofuran	1.73E-10	5.77E-11	1.17E-11	8.78E-12
1,2,3,7,8,9-Hexachlorodibenzofuran	3.40E-11	1.14E-11	2.29E-12	1 72E-12
2,3,4,6,7,8-Hexachlorodibenzofuran	1.40E-10	4.68E-11	9.46E-12	7 11E-12
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.02E-09	3.39E-10	6.80E-11	5 11E-11
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.57E-10	5.24E-11	1 05E-11	7 91E-12
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.02E-10	1.01E-10	2.02E-11	1.52E-11
Endosulfan I	3.93E-08	1 41E-08	2.83E-09	2 12E-09
Endosulfan sulfate	1.83E-08	6.73E-09	1.35E-09	1 01E-09
Endrin	3.82E-06	1.27E-06	2.56E-07	1.92E-07
Endrin aldehyde	1.58E-04	5.27E-05	1.06E-05	7.91E-06
Ethylbenzene	4.70E-07	1.57E-07	3.13E-08	2.35E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	3.52E-05	1.17E-05	2.35E-06	1 76E-06
2-Fluoro-4-nitrophenol	NA	NA	NA	NA
Heptachlor	5.82E-09	2 44E-09	5.02E-10	3.77E-10

Table 5C-20 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachlorobenzene	1.13E-08	8.22E-09	4.71E-09	3.79E-09
Hexachlorobutadiene	1.82E-08	1.29E-08	5.84E-09	4.50E-09
beta-Hexachlorocyclohexane	3.84E-08	1.36E-08	2.73E-09	2.05E-09
Hexachlorocyclopentadiene	1.76E-08	8.07E-09	1.72E-09	1.29E-09
Hexachloroethane	4.19E-09	1.41E-09	2.82E-10	2.11E-10
Hexadecanoic acid	NA	NA	NA	NA
2-Hexanone	8.22E-07	2.74E-07	5.48E-08	4.11E-08
MCPP	9.41E-06	3.14E-06	6.28E-07	4.71E-07
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	1.87E-06	6.22E-07	1.24E-07	9.33E-08
Methylene chloride	1.81E-06	6.04E-07	1.21E-07	9.05E-08
Methyl ester acetic acid	2.39E-12	7.98E-13	1.60E-13	1.20E-13
Methyl-3-heptanol	NA	NA	NA	NA
2-Methylnaphthalene	3.77E-08	1.57E-08	3.22E-09	2.42E-09
4-Methyl-2-pentanone	3.02E-07	1.01E-07	2.01E-08	1.51E-08
2-Methylphenol	2.98E-07	9.94E-08	1.99E-08	1.49E-08
3-Methylphenol	4.23E-07	1.41E-07	2.82E-08	2.11E-08
4-Methylphenol	4.69E-07	1.56E-07	3.13E-08	2.35E-08
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA
Naphthalene	1.02E-06	3.40E-07	6.80E-08	5.10E-08
Naphthalene carbonitrile	NA	NA	NA	NA
beta-Naphthylamine	1.70E-07	5.67E-08	1.13E-08	8.50E-09
2-Nitroaniline	1.17E-08	3.89E-09	7.77E-10	5.83E-10
4-Nitroaniline	1.35E-08	4.49E-09	8.98E-10	6.73E-10
Nitrobenzene	1.20E-06	4.00E-07	8.00E-08	6.00E-08
2-Nitrophenol	8.86E-07	2.95E-07	5.91E-08	4.43E-08
4-Nitrophenol	8.85E-09	2.95E-09	5.90E-10	4.42E-10
n-Nitrosodiphenylamine	1.19E-07	3.95E-08	7.91E-09	5.93E-09
Octadecanoic acid	1.97E+02	6.58E+01	1.32E+01	9.87E+00
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA
PAHs				
Acenaphthene	3.43E-08	1.49E-08	3.10E-09	2.33E-09
Acenaphthylene	3.37E-08	1.64E-08	3.60E-09	2.70E-09
Anthracene	8.08E-08	4.84E-08	1.41E-08	1.06E-08
Benzo(a)anthracene	7.87E-07	2.65E-07	5.50E-08	4.15E-08
Benzo(a)pyrene	4.15E-06	1.39E-06	2.78E-07	2.09E-07
Benzo(b)fluoranthene	5.36E-08	1.88E-08	4.55E-09	3.51E-09
Benzo(e)pyrene	1.81E-06	6.05E-07	1.22E-07	9.19E-08
Benzo(g,h,i)perylene	4.74E-06	1.58E-06	3.17E-07	2.38E-07
Benzo(j)fluoranthene	5.22E-07	1.79E-07	4.02E-08	3.07E-08
Benzo(k)fluoranthene	1.57E-07	5.27E-08	1.10E-08	8.30E-09
Chrysene	1.43E-06	4.78E-07	9.71E-08	7.30E-08
Dibenzo(a,h)anthracene	1.58E-05	5.26E-06	1.05E-06	7.90E-07
Fluoranthene	6.44E-08	2.60E-08	7.35E-09	5.59E-09
Fluorene	3.72E-08	1.99E-08	4.76E-09	3.57E-09
Indeno(1,2,3-cd)pyrene	2.13E-04	7.09E-05	1.42E-05	1.06E-05

Table 5C-20 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Phenanthrene	1 60E-07	9 73E-08	3 13E-08	2 36E-08
Pyrene	3 31E-07	1.36E-07	3 93E-08	2 99E-08
PCBs				
Monochlorobiphenyls	2 93E-08	1.81E-08	5 41E-09	4 06E-09
Dichlorobiphenyls	4 43E-09	2 90E-09	1.39E-09	1 09E-09
Trichlorobiphenyls	2 85E-09	1.44E-09	6.82E-10	5.56E-10
Tetrachlorobiphenyls	6 95E-09	2 61E-09	7 73E-10	6 10E-10
Pentachlorobiphenyls	1.15E-08	4.16E-09	1.12E-09	8 80E-10
Hexachlorobiphenyls	3 79E-08	1.27E-08	2 60E-09	1 96E-09
Heptachlorobiphenyls	4 89E-08	1.63E-08	3.28E-09	2 47E-09
Octachlorobiphenyls	3.86E-09	1.29E-09	2.60E-10	1 96E-10
Nonachlorobiphenyls	2 01E-09	6 72E-10	1.36E-10	1 02E-10
Decachlorobiphenyls	9 44E-09	3 15E-09	6.29E-10	4 72E-10
Pentachlorobenzene	1.33E-08	9 81E-09	5.32E-09	4.22E-09
Pentachlorophenol	5.66E-07	2.03E-07	4 94E-08	3 76E-08
3-Pentanol	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA
Phenol	7 89E-06	2.63E-06	5.26E-07	3 94E-07
Phthalic anhydride	1.82E-05	6 07E-06	1.21E-06	9 11E-07
Quinoline	3 43E-07	1.14E-07	2.29E-08	1 71E-08
Quinone	6.00E-06	2.00E-06	4.00E-07	3.00E-07
Styrene	1 70E-06	5 66E-07	1.13E-07	8 48E-08
1,2,4,5-Tetrachlorobenzene	3 62E-08	2.45E-08	9.22E-09	6 99E-09
Tetrachloroethene	6.26E-07	2.12E-07	4.24E-08	3 18E-08
2,3,4,6-Tetrachlorophenol	3.36E-08	1.46E-08	3 16E-09	2.37E-09
Toluene	2 42E-06	8.06E-07	1 61E-07	1.21E-07
1,2,4-Trichlorobenzene	2.64E-08	1.24E-08	2 67E-09	2.00E-09
1,2,5-Trichlorobenzene	2.48E-05	1.17E-05	2.51E-06	1.88E-06
1,1,1-Trichloroethane	1.20E-07	4.00E-08	7 99E-09	5.99E-09
Trichloroethene	1.39E-07	4.62E-08	9.23E-09	6 93E-09
Trichlorofluoromethane	1.27E-06	4.25E-07	8 49E-08	6.37E-08
2,3,6-Trichlorophenol	1.14E-05	4.46E-06	9 07E-07	6 80E-07
2,4,5-Trichlorophenol	3 47E-08	1 46E-08	3.05E-09	2.29E-09
2,4,6-Trichlorophenol	3.24E-08	1.19E-08	2 40E-09	1.80E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	2 40E-07	8 01E-08	1.60E-08	1.20E-08
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.80E-08	5.99E-09	1.20E-09	8 98E-10
Undecane	1 83E-09	6.11E-10	1.22E-10	9 17E-11
Vinyl acetate	9.54E-07	3.18E-07	6.36E-08	4 77E-08
Vinyl chloride	1 01E-07	3.37E-08	6.74E-09	5.06E-09
o-Xylene	8.70E-07	2.90E-07	5.80E-08	4.35E-08
m,p-Xylene	2.03E-06	6 77E-07	1.35E-07	1.02E-07
Metals / Inorganics				
Aluminum	2 78E-02	9.34E-03	1 91E-03	1 44E-03
Antimony	5.17E-06	1 75E-06	3.50E-07	2 63E-07
Arsenic	1.69E-05	5.85E-06	1.20E-06	9 02E-07
Barium	2.27E-03	7.75E-04	1.55E-04	1 17E-04

Table 5C-20 (RB2)

Estimated Total Chemical Concentrations Due to Root Uptake, Direct Deposition, and Air-to-Plant Transfer in Forage (CV_f)
Drake Chemical Site
Lock Haven, PA

Chemical	CV_f Total Forage Concentration (mg/kg)			
	Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Beryllium	5.48E-07	1.86E-07	3.85E-08	2.89E-08
Cadmium	2.72E-05	9.07E-06	1.81E-06	1.36E-06
Calcium	4.70E-02	1.57E-02	3.13E-03	2.35E-03
Chromium VI	5.76E-06	1.94E-06	4.02E-07	3.02E-07
Cobalt	4.05E-06	1.35E-06	2.71E-07	2.03E-07
Copper	7.94E-05	2.68E-05	5.36E-06	4.02E-06
Iron	2.96E-03	9.87E-04	1.97E-04	1.48E-04
Lead	1.48E-04	5.30E-05	1.25E-05	9.50E-06
Magnesium	1.59E-02	5.30E-03	1.06E-03	7.95E-04
Manganese	3.54E-05	1.23E-05	2.48E-06	1.86E-06
Mercury (inorganic)	2.75E-03	1.42E-03	3.31E-04	2.48E-04
Methyl mercury	not applicable	not applicable	not applicable	not applicable
Nickel	3.14E-04	1.09E-04	2.23E-05	1.67E-05
Potassium	6.11E-03	2.04E-03	4.07E-04	3.05E-04
Selenium	2.93E-05	1.01E-05	2.08E-06	1.56E-06
Silver	1.09E-05	3.72E-06	7.45E-07	5.59E-07
Sodium	1.25E-01	4.31E-02	8.70E-03	6.53E-03
Vanadium	6.72E-06	2.25E-06	4.50E-07	3.37E-07
Zinc	1.30E-03	4.56E-04	9.14E-05	6.85E-05
TICs				
Acetophenone	1.21E-06	4.02E-07	8.04E-08	6.03E-08
Benzonitrile	5.99E-07	2.00E-07	3.99E-08	3.00E-08
Bromobenzene	4.07E-06	1.36E-06	2.71E-07	2.04E-07
2-Butenal / 2-Methyl-2-propenal	5.57E-06	1.86E-06	3.71E-07	2.79E-07
2-(2-Butoxyethoxy)ethanol	5.89E-05	1.96E-05	3.93E-06	2.95E-06
Chlorocyclohexanol	NA	NA	NA	NA
Decane	4.21E-11	1.41E-11	2.83E-12	2.12E-12
Dichlorocyclohexane	NA	NA	NA	NA
Difluoroethane	6.25E-06	2.08E-06	4.17E-07	3.13E-07
Dimethylcyclohexane	2.22E-12	7.39E-13	1.48E-13	1.11E-13
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA
Dioctyl adipate	8.97E-04	2.99E-04	5.99E-05	4.50E-05
Dodecane	2.24E-07	1.72E-07	1.14E-07	9.52E-08
2-(2-Ethoxyethoxy)ethanol	4.61E-06	1.54E-06	3.07E-07	2.31E-07
Ethyl benzaldehyde	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	2.21E-09	7.38E-10	1.48E-10	1.11E-10
Iodobenzene	1.93E-09	6.44E-10	1.29E-10	9.66E-11
Methyl benzoate	8.19E-09	2.73E-09	5.46E-10	4.10E-10
Methyl hexenone	4.21E-12	1.40E-12	2.80E-13	2.10E-13
Nonanoic acid	NA	NA	NA	NA
Silane	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.

Table 5C-21 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s) Drake Chemical Site Lock Haven, PA

Table 5C-21 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Organics					
Acetaldehyde	2.19E+01	2.56E-06	8.53E-07	1.71E-07	1.28E-07
Acetone	5.33E+01	1.62E-05	5.40E-06	1.08E-06	8.11E-07
Acetonitrile	6.09E+01	5.45E-05	1.82E-05	3.63E-06	2.72E-06
Acrolein	4.37E+01	4.17E-06	1.39E-06	2.78E-07	2.09E-07
Acrylonitrile	2.78E+01	1.85E-06	6.17E-07	1.23E-07	9.26E-08
Aldrin	7.05E-01	1.62E-08	9.76E-09	2.75E-09	2.06E-09
Aniline	1.17E+01	2.89E-06	9.63E-07	1.93E-07	1.45E-07
Benzaldehyde	5.40E+00	1.66E-05	5.53E-06	1.11E-06	8.30E-07
Benzene	2.27E+00	3.34E-04	1.15E-04	2.31E-05	1.73E-05
Benzoic acid	3.21E+00	9.97E-05	3.34E-05	6.67E-06	5.00E-06
Benzotrichloride	7.95E-01	3.39E-08	1.93E-08	4.95E-09	3.72E-09
Benzoyl chloride	1.81E+00	1.22E-05	4.47E-06	8.98E-07	6.73E-07
Benzyl chloride	1.81E+00	4.83E-07	1.77E-07	3.55E-08	2.66E-08
Biphenyl	5.77E-01	8.67E-07	5.67E-07	1.92E-07	1.45E-07
Bis(2-chloroethoxy)methane	7.24E+00	1.01E-08	3.38E-09	6.75E-10	5.07E-10
Bis(2-ethylhexyl)phthalate	5.78E-02	2.84E-07	2.34E-07	2.54E-07	2.50E-07
Bromochloromethane	5.93E+00	1.03E-06	3.45E-07	6.90E-08	5.17E-08
Bromodichloromethane	3.17E+00	8.81E-07	2.95E-07	5.90E-08	4.43E-08
Bromoform	1.63E+00	1.54E-07	5.89E-08	1.19E-08	8.91E-09
Bromomethane	7.95E+00	3.28E-06	1.09E-06	2.19E-07	1.64E-07
2-Butanone (MEK)	2.74E+01	9.61E-06	3.20E-06	6.41E-07	4.81E-07
Butyl benzyl phthalate	6.78E-02	1.47E-08	1.22E-08	1.30E-08	1.27E-08
Carbazole	2.74E-01	4.92E-09	3.80E-09	2.60E-09	2.18E-09
Carbon disulfide	2.70E+00	6.93E-07	2.34E-07	4.68E-08	3.51E-08
Carbon tetrachloride	1.18E+00	5.36E-07	2.43E-07	5.14E-08	3.85E-08
alpha-Chlordane	2.67E-02	4.42E-10	3.66E-10	4.09E-10	4.06E-10
gamma-Chlordane	2.67E-02	1.74E-10	1.44E-10	1.61E-10	1.60E-10
4-Chloroaniline	3.39E+00	9.13E-09	3.05E-09	6.10E-10	4.58E-10
Chlorobenzene	2.13E+00	3.73E-06	1.30E-06	2.61E-07	1.96E-07
Chloroethane	5.77E+00	6.22E-08	2.07E-08	4.15E-09	3.11E-09
2-Chloroethyl vinyl ether	1.04E+01	3.63E-08	1.21E-08	2.42E-09	1.82E-09
Chloroform	2.81E+00	6.71E-06	2.26E-06	4.52E-07	3.39E-07
Chloromethane	1.15E+01	6.28E-07	2.09E-07	4.19E-08	3.14E-08
4-Chloro-3-methylphenol	6.25E-01	5.07E-08	3.21E-08	1.01E-08	7.57E-09
beta-Chloronaphthalene	2.21E+00	2.03E-09	1.64E-09	1.49E-09	1.36E-09
2-Chlorophenol	2.21E+00	1.09E-08	3.78E-09	7.56E-10	5.67E-10
2-Chloropropane	3.09E+00	2.55E-07	8.56E-08	1.71E-08	1.28E-08
Dalapon	1.38E+01	2.66E-08	8.86E-09	1.77E-09	1.33E-09
4,4'-DDD	1.28E-02	1.00E-09	8.31E-10	9.35E-10	9.32E-10
4,4'-DDE	6.69E-03	2.40E-10	1.99E-10	2.24E-10	2.23E-10
4,4'-DDT	8.16E-03	3.53E-10	2.93E-10	3.30E-10	3.29E-10
Decanol	8.84E-02	5.78E-12	4.75E-12	4.94E-12	4.77E-12
Dibenzofuran	1.61E-01	1.70E-09	1.37E-09	1.25E-09	1.14E-09
Dibromochloromethane	2.40E+00	2.74E-07	9.39E-08	1.88E-08	1.41E-08
Dicamba	2.04E+00	8.07E-09	2.85E-09	5.71E-10	4.28E-10

Table 5C-21 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
1,2-Dichlorobenzene	4.31E-01	3.83E-08	2.73E-08	1.25E-08	9.64E-09
1,3-Dichlorobenzene	3.22E-01	6.30E-09	4.76E-09	2.87E-09	2.33E-09
1,4-Dichlorobenzene	4.37E-01	2.48E-08	1.77E-08	7.97E-09	6.14E-09
3,3'-Dichlorobenzidine	6.96E-01	5.00E-09	3.03E-09	8.63E-10	6.48E-10
1,1-Dichloroethane	3.58E+00	1.52E-06	5.07E-07	1.01E-07	7.61E-08
1,2-Dichloroethane	5.40E+00	1.26E-08	4.19E-09	8.37E-10	6.28E-10
1,1-Dichloroethene	2.27E+00	4.06E-08	1.40E-08	2.81E-09	2.10E-09
cis-1,2-Dichloroethene	2.07E+00	5.10E-07	1.80E-07	3.60E-08	2.70E-08
trans-1,2-Dichloroethene	5.40E+00	1.27E-08	4.23E-09	8.45E-10	6.34E-10
2,4-Dichlorophenol	6.60E-01	6.85E-09	4.25E-09	1.27E-09	9.52E-10
4-(2,4-Dichlorophenoxy)butyric acid (2,4-DB)	3.53E-01	1.53E-08	1.14E-08	6.34E-09	5.06E-09
Dichloroprop	7.14E-01	8.04E-12	4.81E-12	1.34E-12	1.01E-12
Diethyl phthalate	1.45E+00	4.80E-07	1.95E-07	3.96E-08	2.97E-08
2,4-Dimethylphenol	1.81E+00	1.27E-08	4.66E-09	9.35E-10	7.02E-10
Dimethyl phthalate	2.30E+00	1.36E-06	4.70E-07	9.40E-08	7.05E-08
Di-n-butyl phthalate	5.70E-02	6.16E-08	5.09E-08	5.53E-08	5.43E-08
2,4-Dinitrophenol	5.26E+00	5.66E-09	1.89E-09	3.77E-10	2.83E-10
Di-n-octyl phthalate	3.72E-02	2.80E-09	2.32E-09	2.57E-09	2.55E-09
Dioctadecyl ester phosphoric acid	NA	NA	NA	NA	NA
Dioxins/Furans					
2,3,7,8-Tetrachlorodibenzo(p)dioxin	5.62E-03	2.48E-14	2.06E-14	2.32E-14	2.32E-14
1,2,3,7,8-Pentachlorodibenzo(p)dioxin	5.62E-03	1.41E-15	1.17E-15	1.32E-15	1.31E-15
1,2,3,4,7,8-Hexachlorodibenzo(p)dioxin	1.22E-03	3.35E-15	2.79E-15	3.14E-15	3.13E-15
1,2,3,7,8,9-Hexachlorodibenzo(p)dioxin	1.22E-03	9.18E-15	7.62E-15	8.60E-15	8.57E-15
1,2,3,6,7,8-Hexachlorodibenzo(p)dioxin	2.34E-03	1.55E-14	1.29E-14	1.46E-14	1.45E-14
1,2,3,4,6,7,8-Heptachlorodibenzo(p)dioxin	7.05E-04	1.68E-14	1.40E-14	1.58E-14	1.57E-14
Octachlorodibenzo(p)dioxin (1,2,3,4,6,7,8,9-OCDD)	1.59E-03	6.07E-14	5.04E-14	5.69E-14	5.67E-14
2,3,7,8-Tetrachlorodibenzofuran	6.51E-03	4.33E-14	3.60E-14	4.05E-14	4.04E-14
2,3,4,7,8-Pentachlorodibenzofuran	3.87E-03	3.66E-14	3.04E-14	3.42E-14	3.41E-14
1,2,3,7,8-Pentachlorodibenzofuran	4.61E-03	2.60E-14	2.16E-14	2.43E-14	2.43E-14
1,2,3,4,7,8-Hexachlorodibenzofuran	2.34E-03	3.90E-14	3.24E-14	3.65E-14	3.64E-14
1,2,3,6,7,8-Hexachlorodibenzofuran	2.34E-03	1.87E-14	1.55E-14	1.75E-14	1.74E-14
1,2,3,7,8,9-Hexachlorodibenzofuran	2.34E-03	2.79E-15	2.31E-15	2.61E-15	2.60E-15
2,3,4,6,7,8-Hexachlorodibenzofuran	2.34E-03	1.47E-14	1.22E-14	1.38E-14	1.37E-14
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1.05E-03	3.32E-14	2.76E-14	3.11E-14	3.10E-14
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1.05E-03	6.91E-15	5.74E-15	6.48E-15	6.46E-15
Octachlorodibenzofuran (1,2,3,4,6,7,8,9-OCDF)	3.17E-04	6.56E-15	5.44E-15	6.14E-15	6.13E-15
Endosulfan I	3.13E-01	4.77E-09	3.62E-09	2.23E-09	1.82E-09
Endosulfan sulfate	2.97E-01	2.20E-09	1.68E-09	1.08E-09	8.93E-10
Endrin	2.24E-02	1.29E-10	1.07E-10	1.20E-10	1.19E-10
Endrin aldehyde	2.24E-02	9.56E-11	7.93E-11	8.88E-11	8.83E-11
Ethylbenzene	5.85E-01	1.44E-07	9.34E-08	3.12E-08	2.35E-08
2-Ethyl hexanoic acid	NA	NA	NA	NA	NA
Fenac (2,3,6-Trichlorophenylaceticacid)	5.48E-01	9.64E-07	6.42E-07	2.29E-07	1.73E-07
2-Fluoro-4-nitrophenol	NA	NA	NA	NA	NA
Heptachlor	2.24E-01	5.36E-10	4.22E-10	3.29E-10	2.87E-10

Table 5C-21 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Hexachlorobenzene	3.30E-02	5.72E-10	4.74E-10	5.27E-10	5.23E-10
Hexachlorobutadiene	5.70E-02	1.01E-09	8.34E-10	9.06E-10	8.89E-10
beta-Hexachlorocyclohexane	2.46E-01	1.16E-09	9.04E-10	6.67E-10	5.70E-10
Hexachlorocyclopentadiene	1.91E-01	1.43E-09	1.14E-09	9.69E-10	8.67E-10
Hexachloroethane	4.54E-01	8.95E-10	6.30E-10	2.73E-10	2.09E-10
Hexadecanoic acid	NA	NA	NA	NA	NA
2-Hexanone	6.17E+00	8.22E-07	2.74E-07	5.48E-08	4.11E-08
MCPP	6.01E-01	1.01E-07	6.50E-08	2.11E-08	1.59E-08
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	2.46E+00	2.79E-07	9.50E-08	1.90E-08	1.43E-08
Methylene chloride	7.34E+00	1.81E-06	6.04E-07	1.21E-07	9.05E-08
Methyl ester acetic acid	3.05E+01	2.26E-15	7.55E-16	1.51E-16	1.13E-16
Methyl-3-heptanol	NA	NA	NA	NA	NA
2-Methylnaphthalene	2.27E-01	3.51E-09	2.77E-09	2.14E-09	1.86E-09
4-Methyl-2-pentanone	7.95E+00	3.02E-07	1.01E-07	2.01E-08	1.51E-08
2-Methylphenol	2.89E+00	2.89E-07	9.72E-08	1.94E-08	1.46E-08
3-Methylphenol	2.85E+00	4.08E-07	1.37E-07	2.75E-08	2.06E-08
4-Methylphenol	2.93E+00	4.45E-07	1.50E-07	2.99E-08	2.24E-08
Mono(2-ethylhexyl)ester hexadecanoic acid	NA	NA	NA	NA	NA
Naphthalene	7.05E-01	4.00E-07	2.41E-07	6.79E-08	5.09E-08
Naphthalene carbonitrile	NA	NA	NA	NA	NA
beta-Naphthylamine	2.46E+00	9.78E-09	3.34E-09	6.67E-10	5.01E-10
2-Nitroaniline	3.30E+00	1.16E-08	3.88E-09	7.77E-10	5.83E-10
4-Nitroaniline	6.09E+00	8.14E-09	2.71E-09	5.42E-10	4.07E-10
Nitrobenzene	3.30E+00	1.20E-06	4.00E-07	8.00E-08	6.00E-08
2-Nitrophenol	3.58E+00	8.80E-07	2.94E-07	5.88E-08	4.41E-08
4-Nitrophenol	3.05E+00	8.76E-09	2.94E-09	5.88E-10	4.41E-10
n-Nitrosodiphenylamine	6.01E-01	3.76E-08	2.42E-08	7.88E-09	5.93E-09
Octadecanoic acid	6.78E-04	7.68E-10	6.38E-10	7.20E-10	7.18E-10
1,2,3,4,4a,9,10,10a,-Octahydro-1,4a,-dimethyl - 7,1-phenanthrenecarboxylic acid	NA	NA	NA	NA	NA
PAHs					
Acenaphthene	2.10E-01	2.98E-09	2.37E-09	1.91E-09	1.69E-09
Acenaphthylene	1.72E-01	2.53E-09	2.04E-09	1.80E-09	1.64E-09
Anthracene	1.04E-01	4.69E-09	3.84E-09	3.90E-09	3.73E-09
Benzo(a)anthracene	2.22E-02	3.15E-10	2.61E-10	2.92E-10	2.91E-10
Benzo(a)pyrene	1.12E-02	1.58E-10	1.31E-10	1.48E-10	1.47E-10
Benzo(b)fluoranthene	1.12E-02	1.09E-10	9.06E-11	1.02E-10	1.02E-10
Benzo(e)pyrene	1.25E-02	1.78E-10	1.47E-10	1.66E-10	1.65E-10
Benzo(g,h,i)perylene	5.19E-03	7.02E-11	5.83E-11	6.57E-11	6.55E-11
Benzo(j)fluoranthene	1.12E-02	6.05E-10	5.02E-10	5.65E-10	5.63E-10
Benzo(k)fluoranthene	4.31E-03	5.78E-11	4.80E-11	5.41E-11	5.40E-11
Chrysene	2.22E-02	2.44E-10	2.02E-10	2.27E-10	2.25E-10
Dibenzo(a,h)anthracene	6.78E-03	9.34E-11	7.76E-11	8.75E-11	8.72E-11
Fluoranthene	5.70E-02	6.67E-10	5.51E-10	5.99E-10	5.88E-10
Fluorene	1.43E-01	2.53E-09	2.05E-09	1.93E-09	1.80E-09
Indeno(1,2,3-cd)pyrene	6.06E-03	8.15E-11	6.77E-11	7.63E-11	7.61E-11

Table 5C-21 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Phenanthrene	8 84E-02	8 26E-09	6 79E-09	7.07E-09	6 83E-09
Pyrene	5.85E-02	3.88E-09	3.20E-09	3 47E-09	3 41E-09
PCBs					
Monochlorobiphenyls	1.01E-01	1.77E-09	1.45E-09	1 48E-09	1 41E-09
Dichlorobiphenyls	4 55E-02	1.94E-10	1.61E-10	1 77E-10	1 74E-10
Trichlorobiphenyls	1 97E-02	5.97E-11	4 95E-11	5.55E-11	5 52E-11
Tetrachlorobiphenyls	1 41E-02	3.56E-11	2.95E-11	3.32E-11	3.30E-11
Pentachlorobiphenyls	8 73E-03	3 95E-11	3.28E-11	3.70E-11	3 68E-11
Hexachlorobiphenyls	3.35E-03	7.87E-12	6.53E-12	7.37E-12	7.35E-12
Heptachlorobiphenyls	4.25E-03	2.85E-12	2 37E-12	2 67E-12	2 66E-12
Octachlorobiphenyls	2.50E-03	3.04E-13	2.52E-13	2.85E-13	2.84E-13
Nonachlorobiphenyls	1.51E-03	2.06E-13	1 71E-13	1.93E-13	1 93E-13
Decachlorobiphenyls	6.51E-04	2.85E-14	2.37E-14	2 67E-14	2 66E-14
Pentachlorobenzene	3.98E-02	7.13E-10	5 90E-10	6.53E-10	6 45E-10
Pentachlorophenol	4.25E-02	1.96E-09	1.62E-09	1 79E-09	1.77E-09
3-Pentanol	6.25E+00	NA	NA	NA	NA
4-Penten-2-ol	NA	NA	NA	NA	NA
Phenol	5.55E+00	7.85E-06	2.62E-06	5.23E-07	3 93E-07
Phthalic anhydride	8.84E+01	1.82E-05	6.07E-06	1.21E-06	9 10E-07
Quinoline	2.60E+00	3.05E-07	1.03E-07	2.07E-08	1.55E-08
Quinone	2.97E+01	6.00E-06	2 00E-06	4.00E-07	3 00E-07
Styrene	7.64E-01	7.38E-07	4.28E-07	1.13E-07	[illegible]8E-08
1,2,4,5-Tetrachlorobenzene	7.44E-02	2.08E-09	1.71E-09	1.82E-09	77E-09
Tetrachloroethene	4.20E-01	1.20E-07	8.58E-08	4 03E-08	3.13E-08
2,3,4,6-Tetrachlorophenol	1.65E-01	1.52E-09	1.23E-09	1 10E-09	1.01E-09
Toluene	1.08E+00	1.54E-06	7.40E-07	1.61E-07	1.21E-07
1,2,4-Trichlorobenzene	1.84E-01	2.09E-09	1.68E-09	1 44E-09	1.30E-09
1,2,5-Trichlorobenzene	1.84E-01	1.97E-06	1.58E-06	1.36E-06	1.22E-06
1,1,1-Trichloroethane	1 41E+00	9.51E-08	3.91E-08	7 99E-09	5.99E-09
Trichloroethene	1.84E+00	1.26E-07	4.60E-08	9.23E-09	6.93E-09
Trichlorofluoromethane	1.34E+00	9.74E-07	4.12E-07	8 49E-08	6.37E-08
2,3,6-Trichlorophenol	2.37E-01	8.70E-07	6.83E-07	5 16E-07	4 45E-07
2,4,5-Trichlorophenol	1.99E-01	2.21E-09	1.76E-09	1.46E-09	1.30E-09
2,4,6-Trichlorophenol	2.85E-01	3.29E-09	2.53E-09	1.68E-09	1.40E-09
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	6.01E-01	2.10E-09	1.35E-09	4 40E-10	3 31E-10
2-(2,4,5-Trichlorophenoxy) proprionic acid (2,4,5-TP)	1.51E+00	1.63E-09	6.46E-10	1.31E-10	9.83E-11
Undecane	3 77E-03	3 97E-15	3.30E-15	3 72E-15	3 71E-15
Vinyl acetate	1 47E+01	9.54E-07	3.18E-07	6.36E-08	4 77E-08
Vinyl chloride	1.74E+01	1.01E-07	3.37E-08	6.74E-09	5.06E-09
o-Xylene	6.09E-01	2.81E-07	1.80E-07	5.78E-08	4.35E-08
m,p-Xylene	5 48E-01	5.65E-07	3.76E-07	1.34E-07	1.01E-07
Metals / Inorganics					
Aluminum	2.33E-03	5.20E-06	4.31E-06	4 77E-06	4 73E-06
Antimony	1.15E-01	4.04E-08	3.11E-08	2.11E-08	1.76E-08
Arsenic	2.30E-02	2.97E-08	2.43E-08	2.41E-08	2.28E-08
Barium	8.25E-02	1.30E-05	1.02E-05	7.75E-06	6.69E-06

Table 5C-21 (RB2)

Estimated Chemical Concentrations Due to Root Uptake in Silage (Pr_s)
Drake Chemical Site
Lock Haven, PA

Chemical	Organic and Weighted Inorganic PUFs	Pr_s Silage Concentration Due to Root Uptake (mg/kg)			
		Maximum 2 Year	6 Year Average	30 Year Average	40 Year Average
Beryllium	5.75E-03	2.51E-10	2.07E-10	2.25E-10	2.20E-10
Cadmium	3.50E-01	5.26E-07	2.89E-07	7.07E-08	5.30E-08
Calcium	1.93E+00	3.54E-03	1.66E-03	3.56E-04	2.67E-04
Chromium VI	6.00E-03	2.76E-09	2.28E-09	2.50E-09	2.46E-09
Cobalt	1.35E-02	4.16E-09	3.21E-09	2.18E-09	1.82E-09
Copper	3.25E-01	1.60E-06	1.21E-06	7.30E-07	5.92E-07
Iron	2.50E-03	5.48E-07	4.00E-07	2.02E-07	1.58E-07
Lead	2.70E-02	3.03E-07	2.51E-07	2.75E-07	2.71E-07
Magnesium	7.75E-01	5.90E-04	2.87E-04	6.31E-05	4.73E-05
Manganese	1.50E-01	3.44E-07	2.71E-07	2.11E-07	1.84E-07
Mercury (inorganic)	5.50E-01	1.15E-04	9.32E-05	8.65E-05	7.99E-05
Methyl mercury	not applicable	not applicable	not applicable	not applicable	not applicable
Nickel	6.00E-02	1.41E-06	1.14E-06	1.09E-06	1.01E-06
Potassium	7.75E-01	2.40E-04	1.25E-04	2.89E-05	2.17E-05
Selenium	2.50E-02	5.70E-08	4.68E-08	4.84E-08	4.66E-08
Silver	2.50E-01	1.65E-07	1.27E-07	8.60E-08	7.19E-08
Sodium	6.50E-02	5.99E-04	4.81E-04	4.23E-04	3.83E-04
Vanadium	4.25E-03	2.25E-09	1.81E-09	1.59E-09	1.44E-09
Zinc	1.20E+00	6.19E-05	4.73E-05	3.04E-05	2.51E-05
TICs					
Acetophenone	4.69E+00	1.20E-06	4.02E-07	8.03E-08	6.02E-08
Benzonitrile	4.82E+00	5.99E-07	2.00E-07	3.99E-08	2.99E-08
Bromobenzene	7.14E-01	1.66E-06	9.85E-07	2.71E-07	2.04E-07
2-Butenal / 2-Methyl-2-propenal	9.03E+00	5.57E-06	1.86E-06	3.71E-07	2.79E-07
2-(2-Butoxyethoxy)ethanol	1.15E+01	5.63E-05	1.88E-05	3.75E-06	2.81E-06
Chlorocyclohexanol	NA	NA	NA	NA	NA
Decane	1.32E-02	2.46E-15	2.04E-15	2.29E-15	2.28E-15
Dichlorocyclohexane	NA	NA	NA	NA	NA
Difluoroethane	1.42E+01	6.25E-06	2.08E-06	4.17E-07	3.13E-07
Dimethylcyclohexane	6.50E-01	3.10E-14	1.92E-14	5.74E-15	4.31E-15
4,4-Dimethyl-2-oxetanone	NA	NA	NA	NA	NA
Dioctyl adipate	1.11E-02	1.39E-08	1.15E-08	1.30E-08	1.29E-08
Dodecane	1.67E-02	1.18E-08	9.77E-09	1.10E-08	1.09E-08
2-(2-Ethoxyethoxy)ethanol	7.97E+01	4.61E-06	1.54E-06	3.07E-07	2.31E-07
Ethyl benzaldehyde	NA	NA	NA	NA	NA
Ethyl methyl benzoate	NA	NA	NA	NA	NA
Hexenal	NA	NA	NA	NA	NA
Hexenedione	NA	NA	NA	NA	NA
4-Hydroxy-4-methyl-2-pentanone	4.41E+01	2.18E-12	7.28E-13	1.46E-13	1.09E-13
Iodobenzene	5.05E-01	6.95E-13	4.72E-13	1.81E-13	1.37E-13
Methyl benzoate	2.28E+00	2.86E-12	9.84E-13	1.97E-13	1.48E-13
Methyl hexenone	NA	NA	NA	NA	NA
Nonanoic acid	NA	NA	NA	NA	NA
Silane	NA	NA	NA	NA	NA

NA= Sufficient information not available to calculate parameters.