

APPENDIX D

ANALYTICAL METHODS AND DETECTION LIMITS

Volatiles, 8021B (BTEX)

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
MTBE	1	1
Benzene	1	1
Toluene	1	1
Ethylbenzene	1	1
Xylene (total)	1	1

Note:

CRDL: Contract Required Detection Limit

Volatiles, 8260B

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
Chloromethane	5	5
Bromomethane	5	5
Vinyl Chloride	5	5
Chloroethane	5	5
Methylene Chloride	5	5
Acetone	5	5
Carbon Disulfide	5	5
1,1-Dichloroethene	5	5
1,1-Dichloroethane	5	5
1,2-Dichloroethene (total)	5	5
Chloroform	5	5
1,2-Dichloroethane	5	5
2-Butanone	5	5
1,1,1-Trichloroethane	5	5
Carbon Tetrachloride	5	5
Bromodichloromethane	5	5
1,2-Dichloropropane	5	5
cis-1,3-Dichloropropane	5	5
Trichloroethene	5	5
Dibromochloromethane	5	5
1,1,2-Trichloroethane	5	5
Benzene	5	5
trans-1,3-Dichloropropene	5	5
Bromoform	5	5
4-Methyl-2-Pentanone	5	5
2-Hexanone	5	5
Tetrachloroethene	5	5
1,1,2,2-Tetrachloroethane	5	5
Toluene	5	5
Chlorobenzene	5	5
Ethylbenzene	5	5
Styrene	5	5
Xylene (total)	5	5

Note:

NYSDEC ASP list, 5030B/8260B

CRDL: Contract Required Detection Limit

Volatiles, 8260B

ANALYTE	SOIL CRDL ug/kg	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
	5035A, NaHSO ₄ , 5g/5mL	5035A, MeOH, 5g/5mL	
Dichlorodifluoromethane	5	250	5
Chloromethane	5	250	5
Vinyl chloride	5	250	5
Bromomethane	5	250	5
Chloroethane	5	250	5
Trichlorofluoromethane	5	250	5
1,1-Dichloroethene	5	250	5
Carbon disulfide	5	250	5
Iodomethane	5	250	5
Acetone	5	250	5
Methylene chloride	5	250	5
trans-1,2-Dichloroethene	5	250	5
1,1-Dichloroethane	5	250	5
Vinyl acetate	5	250	5
2,2-Dichloropropane	5	250	5
cis-1,2-Dichloroethene	5	250	5
Methyl ethyl ketone	5	250	5
Bromochloromethane	5	250	5
Chloroform	5	250	5
1,1,1-Trichloroethane	5	250	5
Carbon tetrachloride	5	250	5
1,1-Dichloropropene	5	250	5
Benzene	5	250	5
1,2-Dichloroethane	5	250	5
Trichloroethene	5	250	5
1,2-Dichloropropane	5	250	5
Dibromomethane	5	250	5
Bromodichloromethane	5	250	5
2-Chloroethyl vinyl ether	5	250	5
cis-1,3-Dichloropropene	5	250	5
4-Methyl-2-pentanone	5	250	5
Toluene	5	250	5
trans-1,3-Dichloropropene	5	250	5
1,1,2-Trichloroethane	5	250	5
Tetrachloroethene	5	250	5
1,3-Dichloropropane	5	250	5
2-Hexanone	5	250	5
Dibromochloromethane	5	250	5
1,2-Dibromoethane (EDB)	5	250	5
Chlorobenzene	5	250	5
1,1,1,2-Tetrachloroethane	5	250	5
Ethylbenzene	5	250	5
Xylenes, total	5	250	5
Styrene	5	250	5

Volatiles, 8260B (cont.)

Bromoform	5	250	5
Isopropylbenzene	5	250	5
Bromobenzene	5	250	5
1,1,2,2-Tetrachloroethane	5	250	5
1,2,3-Trichloropropane	5	250	5
n-Propylbenzene	5	250	5
2-Chlorotoluene	5	250	5
4-Chlorotoluene	5	250	5
1,3,5-Trimethylbenzene	5	250	5
tert-Butylbenzene	5	250	5
1,2,4-Trimethylbenzene	5	250	5
sec-Butylbenzene	5	250	5
1,3-Dichlorobenzene	5	250	5
4-Isopropyltoluene	5	250	5
1,4-Dichlorobenzene	5	250	5
1,2-Dichlorobenzene	5	250	5
n-Butylbenzene	5	250	5
1,2-Dibromo-3-chloropropane	5	250	5
1,2,4-Trichlorobenzene	5	250	5
Hexachlorobutadiene	5	250	5
1,2,3-Trichlorobenzene	5	250	5
MTBE	5	250	5
Naphthalene	5	250	5

Note:

CRDL: Contract Required Detection Limit

PAH's, 8270C

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
Naphthalene	330	10
2-Methylnaphthalene	330	10
Acenaphthylene	330	10
Acenaphthene	330	10
Dibenzofuran	330	10
Fluorene	330	10
Phenanthrene	330	10
Anthracene	330	10
Fluoranthene	330	10
Pyrene	330	10
Benzo (a) anthracene	330	10
Chrysene	330	10
Benzo (b) fluoranthene	330	10
Benzo (k) fluoranthene	330	10
Benzo (a) pyrene	330	10
Indeno (1,2,3-cd) pyrene	330	10
Dibenzo (a,h)anthracene	330	10
Benzo (g,h,i)perylene	330	10

Note:

CRDL: Contract Required Detection Limit

Semivolatiles, 8270C

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
Phenol	330	10
bis(-2-Chloroethyl) Ether	330	10
2-Chlorophenol	330	10
1,3-Dichlorobenzene	330	10
1,4-Dichlorobenzene	330	10
1,2-Dichlorobenzene	330	10
2,Methylphenol	330	10
2,2'-oxybis (1-Chloropropane)	330	10
4-Methylphenol	330	10
N-Nitroso-di-n-propylamine	330	10
Hexachloroethane	330	10
Nitrobenzene	330	10
Isophorone	330	10
2-Nitrophenol	330	10
2,4-Dimethylphenol	330	10
2,4-Dichlorophenol	330	10
1,2,4-Trichlorobenzene	330	10
Naphthalene	330	10
4-Chloroaniline	330	10
bis(2-Chloroethoxy)methane	330	10
Hexachlorobutadiene	330	10
4-Chloro-3-methylphenol	330	10
2-Methylnaphthalene	330	10
Hexachlorocyclopentadiene	330	10
2,4,6-Trichlorophenol	330	10
2,4,5-Trichlorophenol	670	20
2-Chloronaphthalene	330	10
2-Nitroaniline	670	20
Dimethylphthalate	330	10
Acenaphthylene	330	10
2,6-Dinitrotoluene	330	10
3-Nitroaniline	670	20
Acenaphthene	330	10
2,4-Dinitrophenol	670	20
4-Nitrophenol	670	20
Dibenzofuran	330	10
2,4-Dinitrotoluene	330	10
Diethylphthalate	330	10
4-Chlorophenyl-phenylether	330	10
Fluorene	330	10
4-Nitroaniline	670	20
4,6-Dinitro-2--methylphenol	670	20
N-Nitrosodiphenylamine (1)	330	10
4-Bromophenyl-phenylether	330	10

Semivolatiles, 8270C (cont.)

Hexachlorobenzene	330	10
Pentachlorophenol	670	20
Phenanthrene	330	10
Anthracene	330	10
Carbazole	330	10
Di-n-butylphthalate	330	10
Fluoranthene	330	10
Pyrene	330	10
Butylbenzylphthalate	330	10
3,3'-Dichlorobenzidine	330	10
Benzo(a)anthracene	330	10
Chrysene	330	10
bis(2-Ethylhexyl)phthalate	330	10
Benzo(b)fluoranthene	330	10
Benzo(k)fluoranthene	330	10
Benzo(a)pyrene	330	10
Indeno(1,2,3-cd)pyrene	330	10
Dibenzo(a,h)anthracene	330	10
Benzo(g,h,i)perylene	330	10

Note:

CRDL: Contract Required Detection Limit

Pesticides, 8081A

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
alpha-BHC	1.7	0.05
beta-BHC	1.7	0.05
delta-BHC	1.7	0.05
gamma-BHC (Lindane)	1.7	0.05
Heptachlor	1.7	0.05
Aldrin	1.7	0.05
Heptachlor epoxide	1.7	0.05
Endosulfan I	1.7	0.05
Dieldrin	3.3	0.10
4,4'-DDE	3.3	0.10
Endrin	3.3	0.10
Endosulfan II	3.3	0.10
4,4'-DDD	3.3	0.10
Endosulfan sulfate	3.3	0.10
4,4'-DDT	3.3	0.10
Methoxychlor	17	0.50
Endrin ketone	3.3	0.10
Endrin aldehyde	3.3	0.10
alpha-Chlordane	1.7	0.05
gamma-Chlordane	1.7	0.05
Toxaphene	170	5

Note:

CRDL: Contract Required Detection Limit

PCBs, 8082

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
Aroclor-1016	33	1
Aroclor-1221	33	1
Aroclor-1232	33	1
Aroclor-1242	33	1
Aroclor-1248	33	1
Aroclor-1254	33	1
Aroclor-1260	33	1

Note:

CRDL: Contract Required Detection Limit

Herbicides, 8151A

ANALYTE	SOIL CRDL ug/kg	AQUEOUS CRDL ug/L
Dalapon	40	2.5
Dicamba	1.6	0.10
MCPP	16,000	1,000
MCPA	16,000	1,000
Dichloroprop	16	1.0
2,4-D	16	1.0
2,4,5-TP (Silvex)	1.6	0.10
2,4,5-T	1.6	0.10
2,4-DB	16	1.0
Dinoseb	8.0	0.5

Note:

CRDL: Contract Required Detection Limit

RCRA 8 Metals, 6010B, 7470A or 7471A

ANALYTE	SOIL CRDL mg/kg	AQUEOUS CRDL ug/L
Arsenic	2	20
Barium	20	200
Cadmium	0.5	5
Chromium	2	20
Lead	1	10
Mercury	0.1	0.3
Selenium	2	20
Silver	3	30

Note:

CRDL: Contract Required Detection Limit

Total Metals, 6010B, 7470A or 7471A

ANALYTE	SOIL CRDL mg/kg	AQUEOUS CRDL ug/L
Aluminum	30	300
Antimony	3	30
Arsenic	2	20
Barium	20	200
Beryllium	0.6	6
Cadmium	0.5	5
Calcium	80	800
Chromium	2	20
Cobalt	5	50
Copper	3	30
Iron	300	300
Lead	1	10
Magnesium	50	500
Manganese	5	50
Mercury	0.1	0.3
Nickel	5	50
Potassium	200	2000
Selenium	2	20
Silver	3	30
Sodium	10	100
Thallium	1	10
Vanadium	5	50
Zinc	5	50

Note:

CRDL: Contract Required Detection Limit

Total Cyanide, 9010B, 9012A

ANALYTE	SOIL CRDL mg/kg	AQUEOUS CRDL ug/L
Cyanide, total and free	1	20

Total Phenols, 9065

ANALYTE	SOIL CRDL mg/kg	AQUEOUS CRDL ug/L
Phenols	5	100

Hexavalent Chromium, 7196

ANALYTE	SOIL CRDL mg/kg	AQUEOUS CRDL ug/L
Hexavalent Chromium	1	10

Note:

CRDL: Contract Required Detection Limit

TCLP**Volatiles, 8260B**

ANALYTE	AQUEOUS CRDL ug/L
Vinyl Chloride	5
1,1-Dichloroethene	5
Chloroform	5
1,2-Dichloroethane	5
Methyl ethyl ketone (2-Butanone)	5
Carbon Tetrachloride	5
Trichloroethene	5
Benzene	5
Tetrachloroethene	5
Chlorobenzene	5

Semivolatiles, 8270C

ANALYTE	AQUEOUS CRDL ug/L
Pyridine	33
1,4-Dichlorobenzene	33
Cresol, Total	33
Hexachloroethane	33
Nitrobenzene	33
Hexachlorobutadiene	33
2,4,6-Trichlorophenol	33
2,4,5-Trichlorophenol	33
2,4-Dinitrotoluene	33
Hexachlorobenzene	33
Pentachlorophenol	33

Metals, 6010B, 7470A

ANALYTE	AQUEOUS CRDL ug/L
Arsenic	20
Barium	200
Cadmium	5
Chromium	20
Lead	10
Mercury	2
Selenium	20
Silver	30

TCLP (cont.)

Pesticides, 8081A

ANALYTE	AQUEOUS CRDL ug/L
Lindane	0.17
Heptachlor	0.17
Heptachlor epoxide	0.17
Endrin	0.33
Methoxychlor	1.7
Chlordane	17
Toxaphene	17

Herbicides, 8151A

ANALYTE	AQUEOUS CRDL ug/L
2,4-D	3.3
2,4,5-TP (Silvex)	0.33

Note:

CRDL: Contract Required Detection Limit