Ontario

Ministry of Environment and Energy

Ministère de l'Environnement et de l'Énergie

135 St. Clair Avenue West
Suite 100
Toronto ON M4V 1P5

135, avenue St. Clair ouest
Bureau 100
Toronto ON M4V 1P5

Standards Development Branch
135 St. Clair Ave. W, Ste. 100
Toronto, Ontario.
M4V 1P5

Memorandum:

To: Users of the "*Guidance on Site Specific Risk Assessment for Use at Contaminated Sites in Ontario - July 1996*"

From: Standards Development Branch

Date: April 24, 1997

Subject: **ERRATUM : UPPER CONCENTRATION LIMITS FOR SOIL AND NON-POTABLE GROUNDWATER**

Appendix E of *Guidance on Site Specific Risk Assessment for Use at Contaminated Sites in Ontario*

This notice is being issued to revise certain upper concentration limits for soil and non-potable groundwater that are found in Appendix E of the support document: "*Guidance on Site Specific Risk Assessment for Use at Contaminated Sites in Ontario - July 1996*.

The upper concentration limits for soil are based on a 10 fold multiple of the highest of the S-1, S-2 or S-3 soil contact component values, capped at a maximum concentration of 10,000 ug/g. The upper concentration limits for non-potable groundwater are based on a 10 fold multiple of the higher of the GW-2 or GW-3 component values for medium/fine textured soil situations, capped at a maximum concentration of 100,000 ug/L and adjusted for ½ solubility.

The need for revisions has resulted because of earlier modifications to the generic criteria in Tables A to D of Appendix 2 of the guideline document "*Guideline for Use at Contaminated Sites in Ontario* - Feb 1997".

The revisions to Appendix E are shown in the table below. A complete, revised version of Appendix E is also provided for those who wish to insert the entire table into their existing document rather than making the changes to the affected parameters.

Revised Values for Appendix E

Chemical Compound	Upper Concentration Limit for Soil (ug/g)	Upper Concentration Limit for Non-Potable Groundwater (ug/L)
BARIUM	Remove asterisk	
BIPHENYL, 1,1-		3800
BIS(2-CHLOROETHYL)ETHER	5.9	
CADMIUM	410	
CHLORDANE		28
CHLOROBENZENE		78,000
CHROMIUM (TOTAL)	Remove asterisk	
CHROMIUM (VI)	Remove asterisk	
COBALT	Remove asterisk	
COPPER	Remove asterisk	
DIBENZO(a,h))ANTHRACENE	72	
DICHLOROBENZENE, 1,2- (o-DCB)	10,000	73,000
DICHLOROBENZENE, 1,3- (m-DCB)	10,000	62,000
DICHLOROBENZENE, 1,4- (p-DCB)		40,000
DDD		60
DICHLOROETHANE,1,1-	10,000	
DICHLOROETHYLENE, CIS-,1,2-	10,000	
DIELDRIN		110
ENDOSULFAN	3,600	
ETHYLBENZENE		81,000
ETHYLENE DIBROMIDE	0.66	
FLUORENE		950
HEPTACHLOR		16
HEXACHLOROBENZENE		55
HEXACHLOROETHANE		25,000
METHYL TERT BUTYL ETHER	10,000	
MOLYBDENUM	5500	

Chemical Compound	Upper Concentration Limit for Soil (ug/g)	Upper Concentration Limit for Non-Potable Groundwater (ug/L)
NAPHTHALENE		16,000
PENTACHLOROPHENOL		7,000
PHENANTHRENE		410
POLYCHLORINATED BIPHENYLS		16
PYRENE		80
STYRENE		59,000
TETRACHLOROETHYLENE		100,000
TRICHLOROBENZENE, 1,2,4-	10,000	9,500
TRICHLOROETHANE, 1,1,1-	10,000	
TRICHLOROETHYLENE	5100	
VANADIUM	9100	
XYLENES		85,000

Because the changes affect only Appendix E of the SSRA support document, the entire SSRA document will not be revised or re-issued at this time.

For additional information on these changes, please contact:

M. Marsh (905) 456-2504
A. L. Kuja (905) 456-2504
R. G. Pearson (416) 323-5102.

Copies of this Erratum can be obtained by written request to the above address, from the MOEE web site or via Fax request to: (905) 456-1003 or (416) 323-5166.

We regret any inconvenience these changes may have caused.

Appendix E: Upper Concentrations Limits for Soil and Groundwater

Chemical Compound	Upper Concentration Limit for Soil (ug/g)	Upper Concentration Limit for Non-Potable Groundwater (ug/L)
ACENAPHTHENE	10,000	1700
ACENAPHTHYLENE	10,000	2000
ACETONE	10,000	100,000
ALDRIN	1.5	8.5
ANTHRACENE	10,000	120
ANTIMONY	440	100,000
ARSENIC	10,000*	4,800
BARIUM	10,000	100,000
BENZENE	2,300	100,000
BENZO(a)ANTHRACENE	7,200	5
BENZO(a)PYRENE	72	1.9
BENZO(b)FLUORANTHENE	720	7
BENZO(g,h,i)PERYLENE	7,200	0.13
BENZO(k)FLUORANTHENE	720	0.4
BERYLLIUM	31	530
BIPHENYL, 1,1-	10,000	3800
BIS(2-CHLOROETHYL)ETHER	5.9	100,000
BIS(2-CHLOROISOPROPYL)ETHER	93	100,000
BIS(2-ETHYLHEXYL)PHTHALATE	10,000	650
BORON	N/V	100,000
BROMODICHLOROMETHANE	900	100,000
BROMOFORM	7,100	100,000
BROMOMETHANE	7,200	32,000
CADMIUM	410	110
CARBON TETRACHLORIDE	430	100,000
CHLORDANE	53	28
CHLOROANILINE, p-	4,400	1,000
CHLOROBENZENE	10,000	78,000

These values are absolute maxima which may not be exceeded without some form of level 2 risk management. Under no circumstances are they to be considered as acceptable or allowable levels. The use of site-specific numeric criteria above the appropriate generic numbers in the main guideline Tables A - D must be fully supported by a complete site-specific risk assessment.

Chemical Compound	Upper Concentration Limit for Soil (ug/g)	Upper Concentration Limit for Non-Potable Groundwater (ug/L)
CHLOROFORM	5,200	100,000
CHLOROPHENOL, 2-	10,000	100,000
CHROMIUM (TOTAL)	10,000	20,000
CHROMIUM (VI)	10,000	1,100
CHRYSENE	720	3
COBALT	10,000	1000
COPPER	10,000	230
CYANIDE	3,900	520
DIBENZO(a,h)ANTHRACENE	72	0.25
DIBROMOCHLOROMETHANE	670	100,000
DICHLOROBENZENE, 1,2- (o-DCB)	10,000	73,000
DICHLOROBENZENE, 1,3- (m-DCB)	10,000	62,000
DICHLOROBENZENE, 1,4- (p-DCB)	2,300	40,000
DICHLOROBENZIDINE, 3,3-	27	1,600
DDD	130	60
DDE	89	20
DDT	89	1.6
DICHLOROETHANE, 1,1-	10,000	100,000
DICHLOROETHANE, 1,2-	610	100,000
DICHLOROETHYLENE, 1,1-	91	100,000
DICHLOROETHYLENE, CIS-1,2-	10,000	100,000
DICHLOROETHYLENE, TRANS-1,2-	10,000	100,000
DICHLOROPHENOL, 2,4-	940	37,000
DICHLOROPROPANE, 1,2-	450	100,000
DICHLOROPROPENE, 1,3-	170	24,000
DIELDRIN	1.5	110
DIETHYL PHTHALATE	10,000	300
DIMETHYL PHTHALATE	10,000	300
DIMETHYLPHENOL, 2,4-	10,000	100,000

These values are absolute maxima which may not be exceeded without some form of level 2 risk management. Under no circumstances are they to be considered as acceptable or allowable levels. The use of site-specific numeric criteria above the appropriate generic numbers in the main guideline Tables A - D must be fully supported by a complete site-specific risk assessment.

Chemical Compound	Upper Concentration Limit for Soil (ug/g)	Upper Concentration Limit for Non-Potable Groundwater (ug/L)
DINITROPHENOL, 2,4-	940	15,000
DINITROTOLUENE, 2,4-	66	23,000
DIOXIN/FURAN (ng TEQ/g soil)	10	0.00015
ENDOSULFAN	3600	5.6
ENDRIN	150	0.2
ETHYLBENZENE	10,000	81,000
ETHYLENE DIBROMIDE	0.66	100,000
FLUORANTHENE	10,000	130
FLUORENE	10,000	950
HEPTACHLOR	6.8	16
HEPTACHLOR EPOXIDE	3.3	180
HEXACHLOROBENZENE	28	55
HEXACHLOROBUTADIENE	390	930
HEXACHLOROCYCLOHEXANE, GAMMA	23	8
HEXACHLOROETHANE	470	25,000
INDENO(1,2,3-cd)PYRENE	720	0.27
LEAD	10,000	320
MERCURY	570	1.2
METHOXYCHLOR	3,000	3
METHYL ETHYL KETONE	10,000	100,000
METHYL ISOBUTYL KETONE	10,000	100,000
METHYL MERCURY	180	1.2
METHYL TERT BUTYL ETHER	10,000	100,000
METHYLENE CHLORIDE	7,400	100,000
METHYLNAPHTHALENE, 2-	10,000	13,000
MOLYBDENUM	5500	73,000
NAPHTHALENE	10,000	16,000
NICKEL	7,100	16,000
PENTACHLOROPHENOL	430	7,000
PETROLEUM HYDROCARBONS (gas/diesel)	10,000	100,000
PETROLEUM HYDROCARBONS (heavy oils)	10,000	100,000

These values are absolute maxima which may not be exceeded without some form of level 2 risk management. Under no circumstances are they to be considered as acceptable or allowable levels. The use of site-specific numeric criteria above the appropriate generic numbers in the main guideline Tables A - D must be fully supported by a complete site-specific risk assessment.

Chemical Compound	Upper Concentration Limit for Soil (ug/g)	Upper Concentration Limit for Non-Potable Groundwater (ug/L)
PHENANTHRENE	7,200	410
PHENOL	10,000	100,000
POLYCHLORINATED BIPHENYLS	250	16
PYRENE	10,000	80
SELENIUM	10,000	500
SILVER	2,400	12
STYRENE	1,000	59,000
TETRACHLOROETHANE, 1,1,1,2-	180	100,000
TETRACHLOROETHANE, 1,1,2,2-	24	100,000
TETRACHLOROETHYLENE	10,000	100,000
THALLIUM	1,500	4,000
TOLUENE	10,000	100,000
TRICHLOROBENZENE, 1,2,4-	10,000	9,500
TRICHLOROETHANE, 1,1,1-	10,000	100,000
TRICHLOROETHANE, 1,1,2-	120	100,000
TRICHLOROETHYLENE	5100	100,000
TRICHLOROPHENOL, 2,4,5-	10,000	6,300
TRICHLOROPHENOL 2,4,6-	2,200	100,000
VANADIUM	9100	2,000
VINYL CHLORIDE	19	550
XYLENES	10,000	85,000
ZINC	10,000	11,000
ELECTRICAL CONDUCTIVITY (mS/cm)	N/V	N/V
NITRATE	N/V	N/V
NITRITE	N/V	N/V
SODIUM ADSORPTION RATIO (SAR)	N/V	N/V

N/V = No Value.
* = there is no human health based soil contact number: therefore, number defaults to ceiling value.

These values are absolute maxima which may not be exceeded without some form of level 2 risk management. Under no circumstances are they to be considered as acceptable or allowable levels. The use of site-specific numeric criteria above the appropriate generic numbers in the main guideline Tables A - D must be fully supported by a complete site-specific risk assessment.