ONTARIO REGULATION 153 STANDARDS: 2004 vs. 2011

SOIL (µg/g)

Contaminant	Table 1: Background				Table 2: Potable Ground Water												Table 3: Non-Potable Ground Water								Table 8: Potable GW		Table 9: Non-Potable GW	Sediment All Tables
	Agricultural or Other Property Use		Residential/ Parkland / Institutional / Industrial / Commercial / Community Property Use		Agricultural or Other Property Use				Residential/ Parkland/ Institutional Property Use				Industrial/ Commercial/ Community Property Use				Residential/ Parkland / Institutional Property Use				Industrial/ Commercial / Community Property Use				Agricultural or Other Property Use	Res / Park / Institutional / Ind / Com / Community Property Use	Res / Park / Institutional / Ind / Com / Community Property Use	All Types of Property Use
	2004	2011	2004	2011	2004		2011		2004		2011		2004		2011		2004		2011		2004		2011		2011	2011	2011	2004 & 2011
	All Textures	All Textures	All Textures	All Textures	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Values compared to 2004 Table 1	Values compared to 2004 Table 1	Values compared to 2004 Table 1	
BTEX/PHCs																												
Benzene	0.002	0.02	0.002	0.02	0.24		0.17	0.21	0.24		0.17	0.21	0.24		0.4	0.32	25	5.3	0.17	0.21	25	5.3	0.4	0.32	0.02	0.02	0.02	NV
Ethylbenzene	0.002	0.05	0.002	0.05	0.28		1.6	1.1	0.28		1.6	1.1	0.28		1.6	1.1	500	290	15	2	1000	290	19	9.5	0.05	0.05	0.05	NV
Toluene	0.002	0.2	0.002	0.2	2.1		6	2.3	2.1		6	2.3	2.1		9	6.4	150	34	6	2.3	150	34	78	68	0.2	0.2	0.2	NV
Xylene Mixture	0.002	0.05	0.002	0.05	25		25	3.1	25		25	3.1	25		30	26	210	34	25	3.1	210	34	30	26	0.05	0.05	0.05	NV
Petroleum Hydrocarbons F1*	NV	17	NV	25	180	30	65	55	180	30	65	55	180	230	65	55	260	30	65	55	660	230	65	55	17	25	25	NV
Petroleum Hydrocarbons F2	NV	10	NV	10	250	150	150	98	250	150	150	98	250	150	250	230	900	150	150	98	1500	150	250	230	10	10	10	NV
Petroleum Hydrocarbons F3	NV	240	NV	240	800	400	1300	300	800	400	1300	300	2500	1700	2500	1700	800	400	1300	300	2500	1700	2500	1700	240	240	240	NV
Petroleum Hydrocarbons F4	NV	120	NV	120	5600	2800	5600	2800	5600	2800	5600	2800	6600	3300	6600	3300	5600	2800	5600	2800	6600	3300	6600	3300	120	120	120	NV
Inorganics																												
Antimony	1	1	1	1.3	13		7.5		13		7.5		44	40	50	40	13		7.5		44	40	50	40	1	1.3	1.3	NV
Arsenic	14	11	17	18	25	20	11		25	20	18	18	50	40	18	18	25	20	18	18	50	40	18	18	11	18	18	6
Barium	190	210	210	220	1000	750	390	390	1000	750	390	390	2000	1500	670	670	1000	750	390	390	2000	1500	670	670	210	220	220	NV
Beryllium	1.2	2.5	1.2	2.5	1.2		5	4	1.2		5	4	1.2		10	8	1.2		5	4	1.2		10	8	2.5	2.5	2.5	NV
Boron (HWS for Surface Soils only)**	NV	NA	NV	NA	1.5		1.5		1.5		1.5		2		2		1.5		1.5		2		2		1.5	1.5	1.5	NA
Boron (total) (**NEW**)		36		36			120				120				120				120				120		36	36	36	NV
Cadmium	1	1	1	1.2	4	3	1	1	12		1.2		12		1.9		12		1.2		12		1.9		1	1.2	1.2	0.6
Chloride	58	NA	330	NA	NV		NA		NV		NA		NV		NA		NV		NA		NV		NA		NA	NA	NA	NV
Chromium Total	67	67	71	70	1000	750	160	160	1000	750	160	160	1000	750	160	160	1000	750	160	160	1000	750	160	160	67	70	70	26
Chromium VI	2.5	0.66	2.5	0.66	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8	0.66	0.66	0.66	NV
Cobalt	19	19	21	21	50	40	22	22	50	40	22	22	100	80	100	80	50	40	22	22	100	80	100	80	22	22	22	50
Copper	56	62	85	92	200	150	180	140	300	225	180	140	300	225	300	230	300	225	180	140	300	225	300	230	62	92	92	16
Cyanide (CN-)	0.12	0.051	0.12	0.051	100		0.051		100		0.051		100		0.051		100		0.051		100		0.051		0.051	0.051	0.051	0.1
Electrical Conductivity (mS/cm)	0.47	0.47	0.57	0.57	0.7		0.7		0.7		0.7		1.4		1.4		0.7		0.7		1.4		1.4		0.7	0.7	0.7	NA
Lead	55	45	120	120	200		45		200		120		1000		120		200		120		1000		120		45	120	120	31
Mercury	0.16	0.16	0.23	0.27	10		1.8	0.25	10		1.8	0.27	10		20	3.9	10		1.8	0.27	10		20	3.9	0.2	0.27	0.27	0.2
Molybdenum	2.5	2	2.5	2	5		6.9		40		6.9		40		40		40		6.9		40		40		2	2	2	NV
Nickel	43	37	43	82	200	150	130	100	200	150	130	100	200	150	340	270	200	150	130	100	200	150	340	270	37	82	82	16
Nitrate/Nitrite+	40	NA	61	NA																								
Nitrogen (Total)+	0.007	NA	0.007	NA																								
Selenium	1.4	1.2	1.9	1.5	2		2.4		10		2.4		10		5.5		10		2.4		10		5.5		1.2	1.5	1.5	NV
Silver	0.35	0.5	0.42	0.5	25	20	25	20	25	20	25	20	50	40	50	40	25	20	25	20	50	40	50	40	0.5	0.5	0.5	0.5
Sodium	NA	NA	NA	NA	NV		NA		NV		NA		NV		NA		NV		NA		NV		NA		NA	NA	NA	NV
Sodium Adsorption Ratio	1	1	2.4	2.4	5		5		5		5		12		12		5		5		12		12		5	5	5	NA
Thallium	2.5	1	2.5	1	4.1		1		4.1		1		32		3.3		4.1		1		32		3.3		1	1	1	NV
Uranium (**NEW**)		1.9		2.5			23				23				33				23				33		1.9	2.5	2.5	NV
Vanadium	91	86	91	86	250	200	86	86	250	200	86	86	250	200	86	86	250	200	86	86	250	200	86	86	86	86	86	NV
Zinc	150	290	160	290	800	600	340	340	800	600	340	340	800	600	340	340	800	600	340	340	800	600	340	340	290	290	290	120
VOC																												
Acetone	NV	0.5	NV	0.5	3.5		28	16	3.5		28	16	3.5		28	16	3.8		28	16	3.8		28	16	0.5	0.5	0.5	NV
Benzene	0.002	0.02	0.002	0.02	0.24		0.17	0.21	0.24		0.17	0.21	0.24		0.4	0.32	25	5.3	0.17	0.21	25	5.3	0.4	0.32	0.02	0.02	0.02	NV
Bromodichloromethane	NV	0.05	NV	0.05	0.12		1.9	1.5	0.12		1.9	1.5	0.12		1.9	1.5	14		13		25		18		0.05	0.05	0.05	NV
Bromoform	0.002	0.05	0.002	0.05	0.11		0.26	0.27	0.11		0.26	0.27	0.11		1.7	0.61	14	2.3	0.26	0.27	14	2.3	1.7	0.61	0.05	0.05	0.05	NV
Bromomethane	0.003	0.05	0.003	0.05	0.38	0.061	0.05	0.05	0.38	0.061	0.05	0.05	0.38	0.061	0.05	0.05	0.38	0.061	0.05	0.05	0.38	0.061	0.05	0.05	0.05	0.05	0.05	NV
Carbon Tetrachloride	0.002	0.05	0.002	0.05	0.64	0.1	0.12	0.05	0.64	0.1	0.12	0.05	0.64	0.1	0.71	0.21	0.64	0.1	0.12	0.05	0.64	0.1	1.5	0.21	0.05	0.05	0.05	NV
Chlorobenzene	0.002	0.05	0.002	0.05	2.4		2.7	2.4	2.4		2.7	2.4	2.4		2.7	2.4	30	8	2.7	2.4	30	8	2.7	2.4	0.05	0.05	0.05	NV
Chloroform	0.006	0.05	0.006	0.05	0.13		0.17	0.05	0.13		0.17	0.05	0.13		0.18	0.47	4.9	0.79	0.17	0.05	4.9	0.79	0.18	0.47	0.05	0.05	0.05	NV
Dibromochloromethane	0.003	0.05	0.003	0.05	0.09		2.9	2.3	0.09		2.9	2.3	0.09		2.9	2.3	10		9.4		18		13		0.05	0.05	0.05	NV
Dichlorobenzene, 1,2-	0.002	0.05	0.002	0.05	0.88		1.7	1.2	0.88		1.7	1.2	0.88		1.7	1.2	30		4.3	3.4	30		8.5	6.8	0.05	0.05	0.05	NV
Dichlorobenzene, 1,3-	0.002	0.05	0.002	0.05	30		6	4.8	30		6	4.8	30		12	9.6	30		6	4.8	30		12	9.6	0.05	0.05	0.05	NV
Dichlorobenzene, 1,4-	0.002	0.05	0.002	0.05	0.32		0.097	0.083	0.32		0.097	0.083	0.32		0.57	0.2	30		0.097	0.083	30		0.84	0.2	0.05	0.05	0.05	NV
Dichlorodifluoromethane (**NEW**)		0.05		0.05			25	16			25	16			25	16			25	16			25	16	0.05	0.05	0.05	NV
Dichloroethane, 1,1-	0.002	0.05	0.002	0.05	3		0.6	0.47	3		0.6	0.47	3		0.6	0.47	100	22	11	3.5	140	22	21	17	0.05	0.05	0.05	NV
Dichloroethane, 1,2-	0.002	0.05	0.002	0.05	0.05	0.022	0.05	0.05	0.05	0.022	0.05	0.05	0.05	0.022	0.05	0.05	0.14	0.022	0.05	0.05	0.14	0.022	0.05	0.05	0.05	0.05	0.05	NV
Dichloroethylene, 1,1-	0.002	0.05	0.002	0.05	0.015	0.0024	0.05	0.05	0.015	0.0024	0.05		0.015	0.0024	0.48	0.064	0.015	0.0024	0.05	0.05	0.015	0.0024	0.48	0.064	0.05	0.05	0.05	NV
Dichloroethylene, cis-1,2-	NV	0.05	NV	0.05	2.3		2.5	1.9	2.3		2.5	1.9	2.3		2.5	1.3	2.3		30	3.4	2.3		37	55	0.05	0.05	0.05	NV
Dichloroethylene, trans-1,2-	0.003	0.05	0.003	0.05	4.1		0.75	0.084	4.1		0.75	0.084	4.1		2.5	1.3	4.1		0.75	0.084	4.1		9.3	1.3	0.05	0.05	0.05	NV
Dichloropropane, 1,2-	0.002	0.05	0.002	0.05	0.12	0.019	0.085	0.05	0.12	0.019	0.085	0.05	0.12	0.019	0.68	0.16	0.12	0.019	0.085	0.05	0.12	0.019	0.68	0.16	0.05	0.05	0.05	NV
Dichloropropene, 1,3-	0.003	0.05	0.003	0.05	0.04	0.0066	0.081	0.05	0.04	0.0066	0.081	0.05	0.04	0.0066	0.081	0.059	0.041	0.0066	0.083	0.05	0.041	0.0066	0.21	0.18	0.05	0.05	0.05	NV
Ethylbenzene	0.002	0.05	0.002	0.05	0.28		1.6	1.1	0.28		1.6	1.1	0.28		1.6	1.1	500	290	15	2	1000	290	19	9.5	0.05	0.05	0.05	NV
Ethylene dibromide	0.004	0.05	0.004	0.05	0.01	0.0056	0.05	0.05	0.01	0.0056	0.05	0.05	0.012	0.0056	0.05	0.05	0.01	0.0056	0.05	0.05	0.02	0.0056	0.05	0.05	0.05	0.05	0.05	NV
Hexane (n) (**NEW**)		0.05		0.05			34	2.8			34	2.8			88	46			34	2.8			88	46	0.05	0.05	0.05	NV
Methyl Ethyl Ketone	NV	0.5	NV	0.5	0.27		44	16	0.27		44	16	0.27		88	70	38		44	16	38		88	70	0.5	0.5	0.5	NV
Methyl Isobutyl Ketone	NV	0.5	NV	0.5	0.48		4.3	1.7	0.48		4.3	1.7	0.48		210	31	69	58	4.3	1.7	69	58	210	31	0.5	0.5	0.5	NV
Methyl tert-Butyl Ether (MTBE)	NV	0.05	NV	0.05	5.7		1.4	0.75	5.7		1.4	0.75	5.7		2.3	1.6	100		1.4	0.75	410	120	3.2	11	0.05	0.05	0.05	NV
Methylene Chloride	0.003	0.05	0.003	0.05	1.1		0.96	0.1	1.1		0.96	0.1	1.1		2	1.6	120		0.96	0.1	200	140	2	1.6	0.05	0.05	0.05	NV
Styrene	0.002	0.05	0.002	0.05	1.7	1.2	2.2	0.7	1.7	1.2	2.2	0.7	1.7	1.2	43	34	7.7	1.2	2.2	0.7	7.7	1.2	43	34	0.05	0.05	0.05	NV
Tetrachloroethane, 1,1,1,2-	NV	0.05	NV	0.05	0.12	0.019	0.05	0.058	0.12	0.019	0.05	0.058	0.12	0.019	0.11	0.087	0.12	0.019	0.05	0.058	0.12	0.019	0.11	0.087	0.05	0.05	0.05	NV
Tetrachloroethane, 1,1,2,2-	0.004	0.05	0.004	0.05	0.01		0.05	0.05	0.01		0.05		0.01		0.094	0.05	0.23	0.037	0.05	0.05	0.23	0.037	0.094	0.05	0.05	0.05	0.05	NV
Tetrachloroethylene	0.002	0.05	0.002	0.05	0.45		2.3	0.28	0.45		2.3	0.28	0.45		2.5	1.9	0.45		2.3	0.28	0.45		21	4.5	0.05	0.05	0.05	NV
Toluene	0.002	0.2	0.002	0.2	2.1		6	2.3	2.1		6	2.3	2.1		9	6.4	150	34	6	2.3	150	34	78	68	0.2	0.2	0.2	NV
Trichloroethane, 1,1,1-	0.008	0.05	0.009	0.05	34	26	3.4	0.38	34	26	3.4	0.38	34	26	12	6.1	34	26	3.4	0.38	34	26	12	6.1	0.05	0.05	0.05	NV
Trichloroethane, 1,1,2-	0.002	0.05	0.002	0.05	0.28		0.05		0.28		0.05		0.28		0.11	0.05	2.3		0.05	0.05	3.1		0.11	0.05	0.05	0.05	0.05	NV
Trichloroethylene	0.004	0.05	0.004	0.05	3.9	1.1	0.52	0.061	3.9	1.1	0.52	0.061	3.9	1.1	0.61	0.55	3.9	1.1	0.52	0.061	3.9	1.1	0.61	0.91	0.05	0.05	0.05	NV
Trichlorofluoromethane (**NEW**)		0.05		0.25			5.8	4			5.8	4			5.8	4			5.8	4			5.8	4	0.05	0.25	0.25	NV
Vinyl Chloride	0.003	0.02	0.003	0.02	0.0075	0.003	0.022	0.02	0.0075	0.003	0.022	0.02	0.0075	0.003	0.25	0.032	0.0075	0.003	0.022	0.02	0.0075	0.003	0.25	0.032	0.02	0.02	0.02	NV
Xylene Mixture	0.002	0.05	0.002	0.05	25		25	3.1	25		25	3.1	25		30	26	210	34	25	3.1	210	34	30	26	0.05	0.05	0.05	NV

Maxxam Analytics

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ONTARIO REGULATION 153 STANDARDS: 2004 vs. 2011

SOIL (µg/g)

Contaminant	Table 1: Background				Table 2: Potable Ground Water										Table 3: Non-Potable Ground Water								Table 8: Potable GW		Table 9: Non-Potable GW	Sediment All Tables
	Agricultural or Other Property Use		Residential/ Parkland / Institutional / Industrial / Commercial / Community Property Use		Agricultural or Other Property Use				Residential/ Parkland/ Institutional Property Use				Industrial/ Commercial/ Community Property Use				Residential/ Parkland / Institutional Property Use				Industrial/ Commercial / Community Property Use				Agricultural or Other Property Use	Res / Park / Institutional / Ind / Com / Community Property Use	Res / Park / Institutional / Ind / Com / Community Property Use	All Types of Property Use
	2004	2011	2004	2011	2004		2011		2004		2011		2004		2011		2004		2011		2004		2011		2011	2011	2011	2004 & 2011
	All Textures	All Textures	All Textures	All Textures	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Values compared to 2004 Table 1	Values compared to 2004 Table 1	Values compared to 2004 Table 1	
PAH																												
Acenaphthene	0.05	0.05	0.07	0.072	15		29	7.9	15		29	7.9	15		29	21	1000		58	7.9	1300		96		0.05	0.072	0.072	NV
Acenaphthylene	0.08	0.093	0.08	0.093	100		0.17	0.15	100		0.17	0.15	130		0.17	0.15	100		0.17	0.15	840		0.17	0.15	0.093	0.093	0.093	NV
Anthracene	0.05	0.05	0.16	0.16	28		0.74	0.67	28		0.74	0.67	28		0.74	0.67	28		0.74	0.67	28		0.74	0.67	0.22	0.22	0.22	0.22
Benzo[a]anthracene	0.1	0.095	0.74	0.36	6.6		0.63	0.5	6.6		0.63	0.5	6.6		0.96		40		0.63	0.5	40		0.96		0.32	0.36	0.36	0.32
Benzo[a]pyrene	0.1	0.05	0.49	0.3	1.2		0.078		1.2		0.3		1.9		0.3		1.2		0.3		1.9		0.3		0.078	0.3	0.3	0.37
Benzo[b]fluoranthene	0.3	0.3	0.47	0.47	12		0.78		12		0.78		18		0.96		12		0.78		19		0.96		0.3	0.47	0.47	NV
Benzo[g,h,i]perylene	0.2	0.2	0.68	0.68	40		7.8	6.6	40		7.8	6.6	40		9.6		40		7.8	6.6	40		9.6		0.2	0.68	0.68	0.17
Benzo[k]fluoranthene	0.05	0.05	0.48	0.48	12		0.78		12		0.78		18		0.96		12		0.78		19		0.96		0.24	0.48	0.48	0.24
Chrysene	0.18	0.18	0.69	2.8	12		7.8	7	12		7.8	7	17		9.6		12		7.8	7	19		9.6		0.34	2.8	2.8	0.34
Dibenzo[a,h]anthracene	0.15	0.1	0.16	0.1	1.2		0.1		1.2		0.1		1.9		0.1		1.2		0.1		1.9		0.1		0.1	0.1	0.1	0.06
Fluoranthene	0.24	0.24	1.1	0.56	40		0.69		40		0.69		40		9.6		40		0.69		40		9.6		0.69	0.69	0.69	0.75
Fluorene	0.05	0.05	0.12	0.12	340		69	62	340		69	62	340		69	62	350		69	62	350		69	62	0.19	0.19	0.19	0.19
Indeno[1,2,3-cd]pyrene	0.11	0.11	0.38	0.23	12		0.48	0.38	12		0.48	0.38	19		0.95	0.76	12		0.48	0.38	19		0.95	0.76	0.2	0.23	0.23	0.2
Methylnaphthalene, 1-	0.05	NV	0.26	NV																								
Methylnaphthalene, 2-	0.05	NV	0.29	NV																								
Methylnaphthalene, 2-(1-)***		0.05		0.59	1.2		3.4	0.99	1.2		3.4	0.99	1.2		42	30	1000	280	3.4	0.99	1600	280	85	76	0.05	0.59	0.59	NV
Naphthalene	0.05	0.05	0.09	0.09	4.6		0.75	0.6	4.6		0.75	0.6	4.6		28	9.6	40		0.75	0.6	40		28	9.6	0.05	0.09	0.09	NV
Phenanthrene	0.19	0.19	0.69	0.69	40		7.8	6.2	40		7.8	6.2	40		16	12	40		7.8	6.2	40		16	12	0.56	0.69	0.69	0.56
Pyrene	0.19	0.19	1	1	250		78		250		78		250		96		250		78		250		96		0.49	1	1	0.49
ABNs																												
Biphenyl, 1,1'-	NV	0.05	NV	0.05	0.89		1.1	0.31	0.89		1.1	0.31	0.89		210	52	4.3		1.1	0.31	4.3		210	52	0.05	0.05	0.05	NV
bis(2-chloroethyl)ether	NV	0.5	NV	0.5	0.66		0.5		0.66		0.5		0.66		0.5		0.66		0.5		0.66		0.5		0.5	0.5	0.5	NV
bis(2-chloroisopropyl)ether	NV	0.5	NV	0.5	0.66		1.8	0.67	0.66		1.8	0.67	0.66		13	11	1.9	0.82	1.8	0.67	2.6	0.82	14	11	0.5	0.5	0.5	NV
bis(2-ethylhexyl)phthalate	NV	5	NV	5	100		5		100		5		100		35	28	130		5		330		35	28	5	5	5	NV
Chloroaniline, p-	NV	0.5	NV	0.5	1.3		0.53	0.5	1.3		0.53	0.5	1.3		0.53	0.5	1.3		0.53	0.5	1.3		0.53	0.5	0.5	0.5	0.5	NV
Dichlorobenzidine, 3,3'-	NV	1	NV	1	1.3		1		1.3		1		1.3		1		1.3		1		1.3		1		1	1	1	NV
Diethyl Phthalate	NV	0.5	NV	0.5	0.71		0.5		0.71		0.5		0.71		0.5		0.71		0.5		0.71		0.5		0.5	0.5	0.5	NV
Dimethylphenol, 2,4-	0.2	0.2	0.2	0.2	0.94		53	38	0.94		53	0.38	0.94		53	38	140		420	390	140		440	390	0.2	0.2	0.2	NV
Dimethylphthalate	NV	0.5	NV	0.5	0.7		0.5		0.7		0.5		0.7		0.5		0.7		0.5		0.7		0.5		0.5	0.5	0.5	NV
Dinitrophenol, 2,4-	0.2	2	0.2	2	0.2		2.9	2	0.2		2.9	2	0.2		2.9	2	4.1		38		4.1		66	59	2	2	2	NV
Dinitrotoluene, 2,4- & 2,6-	NV	0.5	NV	0.5	0.66		0.5		0.66		0.5		0.66		0.5		1.1		0.92		1.8		1.2		0.5	0.5	0.5	NV
Phenol	0.1	0.5	0.1	0.5	40		9.4		40		9.4		40		9.4		40		9.4		40		9.4		0.5	0.5	0.5	NV
Trichlorobenzene, 1,2,4-	NV	0.05	NV	0.05	30		1.4	0.36	30		1.4	0.36	30		16	3.2	30		1.4	0.36	30		16	3.2	0.05	0.05	0.05	NV
Chlorophenols																												
Chlorophenol, 2-	0.1	0.1	0.1	0.1	0.1		2	1.6	0.1		2	1.6	0.1		3.9	3.1	10		2	1.6	10		3.9	3.1	0.1	0.1	0.1	NV
Dichlorophenol, 2,4-	0.1	0.1	0.1	0.1	0.3		0.27	0.19	0.3		0.27	0.19	0.3		0.27	0.19	10		2.1	1.7	10		4.2	3.4	0.1	0.1	0.1	NV
Pentachlorophenol	0.1	0.1	0.1	0.1	5		0.1		5		0.1		5		3.3	2.9	5		0.1		5		3.3	2.9	0.1	0.1	0.1	NV
Trichlorophenol, 2,4,5-	0.1	0.1	0.1	0.1	3.2		5.5	4.4	3.2		5.5	4.4	3.2		10	9.1	10		5.5	4.4	10		10		0.1	0.1	0.1	NV
Trichlorophenol, 2,4,6-	0.1	0.1	0.1	0.1	0.66		2.9	2.1	0.66		2.9	2.1	0.66		2.9	2.1	10		4.2	3.8	10		4.2	3.8	0.1	0.1	0.1	NV
OC Pesticides & PCBs																												
Aldrin	0.05	0.05	0.05	0.05	0.05		0.05		0.05		0.05		0.05		0.11	0.088	0.05		0.05		0.05		0.11	0.088	0.05	0.05	0.05	0.002
Chlordane	0.05	0.05	0.05	0.05	0.29		0.05		0.29		0.05		0.29		0.05		0.29		0.05		0.29		0.05		0.05	0.05	0.05	0.007
DDD	NV	0.05	NV	0.05	2.2		3.3		2.2		3.3		3.5		4.6		2.2		3.3		3.5		4.6		0.05	0.05	0.05	0.008
DDE	NV	0.05	NV	0.05	1.6		0.33	0.26	1.6		0.33	0.26	2.4		0.65	0.52	1.6		0.33	0.26	2.4		0.65	0.52	0.05	0.05	0.05	0.005
DDT	0.12	0.078	1.4	1.4	1.6		0.078		1.6		1.4		2		1.4		1.6		1.4		2		1.4		0.078	1.4	1.4	0.007
Dieldrin	0.05	0.05	0.05	0.05	0.05		0.05		0.05		0.05		0.05		0.11	0.088	0.05		0.05		0.05		0.11	0.088	0.05	0.05	0.05	0.002
Endosulfan	NV	0.04	NV	0.04	0.18		0.04		0.18		0.04		0.18		0.38	0.3	0.29		0.04		0.29		0.38	0.3	0.04	0.04	0.04	NV
Endrin	0.05	0.04	0.05	0.04	0.05		0.04		0.05		0.04		0.05		0.04		0.05		0.04		0.05		0.04		0.04	0.04	0.04	0.003
Heptachlor	0.05	0.05	0.05	0.05	0.12	0.084	0.15	0.15	0.12	0.084	0.15	0.15	0.15	0.084	0.19	0.19	0.12	0.084	0.15	0.15	0.15	0.084	0.19	0.19	0.05	0.05	0.05	NV
Heptachlor Epoxide	0.05	0.05	0.05	0.05	0.06		0.05		0.06		0.05		0.09		0.05		0.06		0.05		0.09		0.05		0.05	0.05	0.05	0.005
Hexachlorobenzene	NV	0.01	NV	0.01	0.46		0.52		0.46		0.52		0.76		0.66		0.46		0.52		0.76		0.66		0.02	0.02	0.02	0.02
Hexachlorobutadiene	NV	0.01	NV	0.01	2.2	0.38	0.014	0.012	2.2	0.38	0.014	0.012	2.2	0.38	0.095	0.031	2.4	0.38	0.014	0.012	2.4	0.38	0.095	0.031	0.01	0.01	0.01	NV
Hexachlorocyclohexane, gamma-	NV	0.01	NV	0.01	0.41		0.063	0.056	0.41		0.063	0.056	0.49		0.063	0.056	0.41		0.063	0.056	0.49		0.063	0.056	0.01	0.01	0.01	NV
Hexachloroethane	NV	0.01	NV	0.01	6.3	3.8	0.07	0.089	6.3	3.8	0.07	0.089	8.5	3.8	0.43	0.21	6.3	3.8	0.07	0.089	13	3.8	0.43	0.21	0.01	0.01	0.01	NV
Methoxychlor	0.05	0.05	0.05	0.05	4		0.13		4		0.13		4		1.6		4		0.13		4		1.6		0.05	0.05	0.05	NV
Polychlorinated Biphenyls	0.3	0.3	0.3	0.3	0.5		0.35		5		0.35		25		1.1		5		0.35		25		1.1		0.3	0.3	0.3	0.07
Additional Parameters																												
Dioxane, 1,4- (**NEW**)		0.2		0.2			0.2				1.8				1.8				1.8				1.8		0.2	0.2	0.2	NV
Dioxin/Furan (TEQ)	0.000007	0.000007	0.000007	0.000007	0.00001		0.000013		0.001		0.000013		0.001		0.00099		0.001		0.000013		0.001		0.000099		0.000007	0.000007	0.000007	NV
Methyl Mercury****	NV	NV	NV	NV	6.8		0.0094	0.0084	6.8		0.0094	0.0084	10		0.0094	0.0084	6.8		0.0094	0.0084	10		0.0094	0.0084	NV	NV	NV	NV

* F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result.

** The boron standards are for hot water soluble extract for all surface soils. For subsurface soils the standards are for total boron (mixed strong acid digest), as ecological criteria are not considered.

***The methylnaphthalene standards are applicable to both 1-methylnaphthalene and 2-methylnaphthalene, with the provision that if both are detected the sum of the two must not exceed the standard.

**** Analysis for methyl mercury only applies when mercury (total) standard is exceeded.

( ) Standard in brackets applies to medium and fine textured soils.

+ No values for Nitrate, Nitrite and Total Nitrogen listed in 2011 criteria.

NOTE: Maxxam has provided a summary of the Site Condition Standards for the convenience of our customers. Maxxam assumes no liability for the information contained within this document and we recommend you consult the official Ontario Ministry of Environment regulations as appropriate.

LEGEND	
NV = No value derived	NA = Not applicable
	Value increased in 2011
	Value decreased in 2011
	Value unchanged in 2011
	New value in 2011

Maxxam Analytics

Mississauga: (905) 817-5700, 1-800-563-6266 Ottawa: (613) 274-0573, 1-877-480-7272 Waterloo: (519) 746-5760 London: (519) 652-9444, 1-800-268-7396

ONTARIO REGULATION 153 STANDARDS: 2004 vs. 2011

Maxxam

Water (µg/L)

Contaminant	Table 1: Background		Table 2: Potable Ground Water				Table 3: Non-Potable Ground Water				Table 8: Potable GW	Table 9: Non-Potable GW
	All Types of Property Use		All Types of Property Use				All Types of Property Use				All Types of Property Use	All Types of Property Use
	2004	2011	2004		2011		2004		2011		2011	2011
	All Textures	All Textures	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Med / Fine	Coarse	Values compared to 2004 Table 1	Values compared to 2004 Table 1
BTEX/PHCs												
Benzene	5	0.5	5		5		12000	1900	430	44	5	44
Ethylbenzene	2.4	0.5	2.4		2.4		50000	28000	2300	2300	2.4	1800
Toluene	0.8	0.8	24		24		37000	5900	18000	18000	22	14000
Xylene Mixture	72	72	300		300		35000	5600	4200	4200	300	3300
Petroleum Hydrocarbons F1*	NV	420	1000		750		NV		750		420	420
Petroleum Hydrocarbons F2	NV	150			150		NV		150		150	150
Petroleum Hydrocarbons F3	NV	500	1000		500		NV		500		500	500
Petroleum Hydrocarbons F4	NV	500			500		NV		500		500	500
Inorganics												
Antimony	6	1.5	6		6		16000		20000		6	16000
Arsenic	25	13	25		25		480		1900		25	1500
Barium	NV	610	1000		1000		23000		29000		1000	23000
Beryllium	4	0.5	4		4		53		67		4	53
Boron (total)	200	1700	5000		5000		50000		45000		5000	36000
Cadmium	0.5	0.5	5		2.7		11		2.7		2.1	2.1
Chloride	NV	790000	250000		790000		NV		2300000		790000	1800000
Chromium Total	8.9	11	50		50		2000		810		50	640
Chromium VI	10	25	50		25		110		140		25	110
Cobalt	0.9	3.8	100		3.8		100		66		3.8	52
Copper	2.5	5	23		87		23		87		69	69
Cyanide (CN-)	5	5	52		66		52		66		52	52
Electrical Conductivity (mS/cm)	NA	NA	NA		NA		NA		NA		NA	NA
Lead	1	1.9	10		10		32		25		10	20
Mercury	0.02	0.1	0.12		1	0.29	0.12		2.8	0.29	0.29	0.29
Molybdenum	40	23	7300		70		7300		9200		70	7300
Nickel	25	14	100		100		1600		490		100	390
Nitrate+	NV	NV	10000		NV		NV		NV		NV	NV
Nitrite+	NV	NV	1000		NV		2000		NV		NV	NV
Selenium	5	5	10		10		50		63		10	50
Silver	0.25	0.3	1.2		1.5		1.2		1.5		1.2	1.2
Sodium	NV	490000	200000		490000		NV		2300000		490000	1800000
Sodium Adsorption Ratio	NA	NA	NA		NA		NA		NA		NA	NA
Thallium	0.5	0.5	2		2		400		510		2	400
Uranium (**NEW**)		8.9			20				420		20	330
Vanadium	6	3.9	200		6.2		200		250		6.2	200
Zinc	20	160	1100		1100		1100		1100		890	890
VOCs												
Acetone	NV	2700	3000		2700		3300		130000		2700	100000
Benzene	5	0.5	5		5		12000	1900	430	44	5	44
Bromodichloromethane	5	2	5		16		50000		85000		16	67000
Bromoform	5	5	5		25		5200	840	770	380	25	380
Bromomethane	0.9	0.89	10	3.7	0.89	0.89	16	3.7	56	5.6	0.89	5.6
Carbon Tetrachloride	0.5	0.2	5		5	0.79	100	17	8.4	0.79	0.79	0.79
Chlorobenzene	15	0.5	30		30		500		630		30	500
Chloroform	0.5	2	5		22	2.4	2700	430	22	2.4	2.4	2.4
Dibromochloromethane	0.5	2	5		25		50000		82000		25	65000
Dichlorobenzene, 1,2-	2.5	0.5	3		3		7600		9600	4600	3	4600
Dichlorobenzene, 1,3-	2.5	0.5	630		59		7600		9600		59	7600
Dichlorobenzene, 1,4-	1	0.5	1		1		7600		67	8	1	8
Dichlorodifluoromethane (**NEW**)		590			590				4400		590	3500
Dichloroethane, 1,1-	70	0.5	70		5		50000	9000	3100	320	5	320
Dichloroethane, 1,2-	5	0.5	5		5	1.6	110	17	12	1.6	1.6	1.6
Dichloroethylene, 1,1-	0.66	0.5	4.1	0.66	14	1.6	4.1	0.66	17	1.6	1.6	1.6
Dichloroethylene, 1, 2-cis-	70	1.6	70		17	1.6	70		17	1.6	1.6	1.6
Dichloroethylene, 1,2-trans-	100	1.6	100		17	1.6	100		17	1.6	1.6	1.6
Dichloropropane, 1,2-	0.7	0.5	5		5		58	9.3	140	16	5	16
Dichloropropene, 1,3-	1.4	0.5	1.4		0.5		24	3.8	45	5.2	0.5	5.2
Ethylbenzene	2.4	0.5	2.4		2.4		50000	28000	2300	2300	2.4	1800
Ethylene dibromide	1	0.2	1		0.2		21	3.3	0.83	0.25	0.2	0.25
Hexane (n) (**NEW**)		5			520	51			520	51	51	51
Methyl Ethyl Ketone	350	400	350		1800		50000		15000000	470000	1800	470000
Methyl Isobutyl Ketone	NV	640	350		640		50000		580000	140000	640	140000
Methyl tert-Butyl Ether (MTBE)	200	15	700		15		50000		1400	190	15	190
Methylene Chloride	50	5	50		50		50000		5500	610	50	610
Styrene	4	0.5	100		5.4		5900	940	9100	1300	5.4	1300
Tetrachloroethane, 1,1,1,2-	5	1.1	5		1.1		38	6	28	3.4	1.1	3.4
Tetrachloroethane, 1,1,2,2-	1	0.5	1		1		140	22	15	3.2	1	3.2
Tetrachloroethylene	5	0.5	5		17	1.6	5		17	1.6	1.6	1.6
Toluene	0.8	0.8	24		24		37000	5900	18000	18000	22	14000
Trichloroethane, 1,1,1-	10	0.5	200		200		200		6700	640	200	640
Trichloroethane, 1,1,2-	5	0.5	5		5	4.7	50000	16000	30	4.7	4.7	4.7
Trichloroethylene	20	0.5	50		5	1.6	50		17	1.6	1.6	1.6
Trichlorofluoromethane (**NEW**)		150			150				2500		150	2000
Vinyl Chloride	0.5	0.5	1.3	0.5	1.7	0.5	1.3	0.5	1.7	0.5	0.5	0.5
Xylene Mixture	72	72	300		300		35000	5600	4200	4200	300	3300
PAHs												
Acenaphthene	1	4.1	20		4.1		1700		1700	600	4.1	600
Acenaphthylene	1	1	310		1		2000		1.8		1	1.4
Anthracene	0.05	0.1	12		2.4		12		2.4		1	1
Benzo[a]anthracene	0.1	0.2	0.2		1		5		4.7		1	1.8
Benzo[a]pyrene	0.005	0.01	0.01		0.01		1.9		0.81		0.01	0.81
Benzo[b]fluoranthene	0.05	0.1	0.2		0.1		7		0.75		0.1	0.75
Benzo[g,h,i]perylene	0.1	0.2	0.2		0.2		0.2		0.2		0.2	0.2
Benzo[k]fluoranthene	0.05	0.1	0.2		0.1		0.4		0.4		0.1	0.4
Chrysene	0.05	0.1	0.5		0.1		3		1		0.1	0.7
Dibenz[a,h]anthracene	0.1	0.2	0.2		0.2		0.25		0.52		0.2	0.4
Fluoranthene	1	0.4	130		0.41		130		130		0.41	73
Fluorene	1	120	280		120		290		400		120	290
Indeno[1,2,3-cd]pyrene	0.1	0.2	0.2		0.2		0.27		0.2		0.2	0.2
Methylnaphthalene, 1-	2.5	NV										
Methylnaphthalene, 2-	2.5	NV										
Methylnaphthalene, 2-(1-)**	NV	2	10		3.2		13000		1800		3.2	1500
Naphthalene	7	7	21		11		6200	5900	6400	1400	11	1400
Phenanthrene	1	0.1	63		1		63		580		1	380
Pyrene	0.05	0.2	40		4.1		40		68		4.1	5.7
ABNs												
Biphenyl, 1,1'-	1	0.5	350		0.5		1700		2200	1000	0.5	1700
Bis(2-chloroethyl)ether	4.4	5	4.4		5		710	110	300000	300000	5	240000
Bis(2-chloroisopropyl)ether	1	120	2.2		120		2700	430	20000	20000	120	20000
Bis(2-ethylhexyl)phthalate	3	10	6		10		30		140		10	30
Chloroaniline, p-	NV	10	28		10		100		400		10	320
Dichlorobenzidine, 3,3'-	0.6	0.5	83		0.5		1600		640		0.5	500
Diethyl Phthalate	0.2	30	30		38		30		38		30	30
Dimethylphenol, 2,4-	10	10	140		59		21000		39000		59	31000
Dimethylphthalate	0.2	30	30		38		30		38		30	30
Dinitrophenol, 2,4-	42	10	42		10		1500		11000		10	9000
Dinitrotoluene, 2,4- & 2,6-	0.5	5	0.5		5		2300		2900		5	2300
Phenol	5	5	4200		890		26000		12000		890	9600
Trichlorobenzene, 1,2,4-	0.5	0.5	70		70		500		850	180	70	180
Chlorophenols												
Chlorophenol, 2-	0.3	8.9	0.3		8.9		44000		3300		8.9	2600
Dichlorophenol, 2,4-	0.3	20	0.3		20		3700		4600		20	3700
Pentachlorophenol	0.5	0.5	30		30		130		62		30	50
Trichlorophenol, 2, 4, 5-	18	0.2	200		8.9		630		1600		8.9	1300
Trichlorophenol,2,4,6-	2	0.2	2		2		9700		230		2	180
OC Pesticides & PCBs												
Aldrin	0.005	0.01	0.01		0.35		1.3	0.2	8.5	8.5	0.35	3
Chlordane	0.02	0.06	0.04		7		0.04		28		0.06	0.06
DDD	0.025	1.8	6		10		6		45		1.8	1.8
DDE	0.01	10	20		10		20		20		10	17
DDT	0.05	0.05	0.05		2.8		0.05		2.8		0.05	0.05
Dieldrin	0.01	0.05	0.02		0.35		0.02		0.75		0.35	0.56
Endosulfan	0.06	0.05	0.35		1.5		0.56		1.5		0.56	0.56
Endrin	0.025	0.05	0.05		0.48		0.05		0.48		0.36	0.36
Heptachlor	0.005	0.01	0.04		1.5		0.04		2.5		0.038	0.038
Heptachlor Epoxide	0.01	0.01	3		0.048		37	6	0.048	0.048	0.038	0.038
Hexachlorocyclohexane, gamma-	0.005	0.01	0.8		1.2		0.8		1.2		0.95	0.95
Hexachlorobenzene	0.0065	0.01	1	0.62	1	1	3.9	0.62	3.1	3.1	1	3.1
Hexachlorobutadiene	0.009	0.01	0.45		0.6	0.44	5.4	0.87	4.5	0.44	0.44	0.44
Hexachloroethane	1	0.01	2.5		2.1		78	12	200	94	2.1	94
Methoxychlor	0.04	0.05	0.3		6.5		0.3		6.5		0.3	0.3
Polychlorinated Biphenyls	0.1	0.2	0.2		3		0.2		15	7.8	0.2	0.2
Additional Parameters												
Dioxane, 1,4- (**NEW**)		50			50				7300000	1900000	50	1900000
Dioxin/Furan (TEQ/L)	0.0000007	0.000015	0.000015		0.000015		0.000015		0.023	0.014	0.000015	0.0001
Methyl Mercury***	NV	0.12	0.12		0.15		0.12		0.15		0.12	0.12

* F1 fraction does not include BTEX; however, the proponent has the choice as to whether or not to subtract BTEX from the analytical result.
** The methylnaphthalene standards are applicable to both 1-methylnaphthalene and 2-methylnaphthalene, with the provision that if both are detected the sum of the two must not exceed the standard.
*** Analysis for methyl mercury only applies when mercury (total) standard is exceeded.
( ) Standard in brackets applies to medium and fine textured soils.
\+ No values for Nitrate or Nitrite listed in 2011 criteria.

LEGEND	
NV = No value derived	NA = Not applicable
	Value increased in 2011
	Value decreased in 2011
	Value unchanged in 2011
	New value in 2011