# "Appendix to Regulation 346"

"Appendix to Regulation 346" means the Appendix to Regulation 346 of the Revised Regulations of Ontario, 1990 (General - Air Pollution) made under the Act, as that regulation read immediately before it was revoked on November 30, 2005

### PIBs# 5208e

- 1. In this Appendix, wherever the height of a building or structure is referred to, there shall not be included in calculating such height the height of any flagpole, aerial or stack designed for venting emissions.
- 2. The concentration of a contaminant at a point of impingement shall be calculated as follows:
  - (a) where the point of impingement is located on the building or structure or is within five metres horizontally of the building or structure on which the point of emission is located, and,
    - (i) the height above grade at the point of emission is less than twice the height of the highest part of the building or structure on which the point of emission is located where the highest part of the building or structure is at a height of not more than twenty metres above grade, (*see figures 1 and 2*)
    - (ii) the height of the highest part of the building or structure on which the point of emission is located is greater than twenty metres above grade and the point of emission is less than twenty metres above the highest part of the building or structure on which it is located, or (*see figure 3*)
    - (iii) there is a building or structure upwind from the point of emission such that,
      - a. the height above grade of the building or structure is greater than the height above grade at the point of emission, and
      - b. the building or structure is a horizontal distance of 100 metres or less from the point of emission, (*see figures 4 and 5*)

the following formula shall be applied:

(see notes 1 and 2)

$$\mathbf{K} = \frac{0.6 \times 10^6 \times Q}{L^2}$$

Where:

K is the half hour average concentration at the point of impingement in micrograms per cubic metre,

Q is the rate of emission in grams per second of the contaminant,

L is,

- (i) where the point of impingement is at the same height or higher above grade than the point of emission, the straight line distance in metres between the point of emission and the point of impingement, or
- (ii) where the point of impingement is lower in height above grade than the point of emission, the product of 1.57 and the straight line distance in metres between the point of emission and the point of impingement.

Notes:

- 1. Where a building or structure adjacent to the building or structure on which the point of emission is located is within five metres of that building or structure, it shall be treated as being part of the building or structure on which the point of emission is located.
- 2. Where K yields a value greater than the concentration of the contaminant at the point of emission, the concentration of the contaminant at the point of emission shall be deemed to be the value of K.

- (b) where the point of impingement is a horizontal distance of five metres or more from the building or structure on which the point of emission is located and,
  - (i) the height above grade at the point of emission is less than twice the height of the highest part of the building or structure on which the point of emission is located where the highest part of the building or structure is at a height of not more than twenty metres above grade, (*see figures 6 and 7*)
  - (ii) the height of the highest part of the building or structure on which the point of emission is located is greater than twenty metres above grade and the point of emission is less than twenty metres above the highest part of the building or structure on which it is located, or (*see figure 8*)
  - (iii) there is a building or structure upwind from the point of emission such that,
    - 1. the height above grade of the building or structure is greater than the height above grade at the point of emission, and
    - 2. the building or structure is a horizontal distance of 100 metres or less from the point of emission, (*see figures 9 and 10*)

the following formula shall be applied:

(see notes 1 and 3)

$$\mathbf{K} = \frac{10^6 \times Q \times F}{31.4 \times 6_y \times 6_z} \times \exp\left[-\frac{1}{2}\left(\frac{Y}{6_y}\right)^2\right] \times \left\{\exp\left[-\frac{1}{2}\left(\frac{Z-H}{6_z}\right)^2\right] + \exp\left[-\frac{1}{2}\left(\frac{Z+H}{6_z}\right)^2\right]\right\}$$

Where:

- K is the half hour average concentration of the contaminant at the point of impingement in micrograms per cubic metre
- Q is the rate of emission in grams per second of the contaminant (see note 2)
- exp is the exponential function where e = 2.7183
  - Y is the perpendicular distance in metres between the point of impingement and a vertical plane parallel to the chosen direction of the wind through the wind-oriented centre of the building or structure on which the point of emission is located (*see figures 11 and 12*)

(see notes 4 and 5)

- Z is the difference in height, in metres, between the point of impingement and the ground level at or beneath the point of impingement
- H is a function of the height, in metres, above grade of the building or structure on which the point of emission is located
- F is a factor related to the atmospheric stability of the air
- $6_{y}$  is a function which defines the amount of dispersion of the contaminant in a horizontal direction at the

#### point of impingement

 $6_z$  is a function which defines the amount of dispersion of the contaminant in a vertical direction at the point of impingement

Determination of K

- 1. Two values for K shall be determined using the formula in clause (b).
- 2. The maximum value obtained for K shall be applied in this Regulation.

Value number 1 for K is determined as follows:

- H is 0.67 times the height, in metres, above grade of the building or structure on which the point of emission is located
- F is 0.6
- $6_{\rm y}$  is determined as follows:

 $\dot{6_v} = A/4.3$ 

where A is the greatest width, in metres, presented to the wind by the building or structure in which the point of emission is located, measured horizontally and perpendicularly to the direction of the wind (see figure 13).

where  $\dot{6}_{y}$  is equal to or less than 243.45

calculate  $\dot{X_{y}} = 6.554 6_{y}^{(1.08172)}$ 

where  $6_{v}$  is greater than 243.45

calculate  $X'_{y} = 4.524 6'_{y}^{1.14616}$ 

and calculate

 $X_y = G + X'_y$  where G is the horizontal distance, in metres, between the wind-oriented centre of the building or structure on which the point of emission is located and the line where vertical planes, one through the wind-oriented centre of the building or structure on which the point of emission is located and parallel to the chosen direction of the wind, and the other through the point of impingement, meet at right angles.

(see figure 14)

(see note 6)

where the value of  $X_v$  is equal to or less than 2500

calculate  $6_y = 0.176 X_y^{0.92445}$ 

where the value of  $X_y$  is greater than 2500

calculate  $6_v = 0.268 X_v^{0.87248}$ 

 $6_z$  is determined as follows:

 $\dot{G}_z = B/2.15$  where B is the height above ground in metres of the highest part of the building or structure on which the point of emission is located

where  $6_{z}$  is equal to or less than 141.41

calculate  $X'_{z} = 12.027 6'_{z}^{1.08783}$ 

where  $6_{z}$  is greater than 141.41

calculate  $X'_{z} = 10.418 6'_{z}^{1.10419}$ 

and calculate  $X_z = G + X'_z$  where G has the same value for G as used in the equation

 $X_y = G + X_y$ 

Where the value of  $X_z$  is equal to or less than 2500

calculate  $6_z = 0.106 X_z^{0.91926}$ 

where  $X_z$  is greater than 2500

calculate  $6_z = 0.120 X_z^{0.00564}$ 

Value number 2 for K is determined as follows:

Where: H is 0.67 times the height in metres above grade of the building or structure on which the point of emission is located

F is 0.8

 $6_v$  is determined as follows:

 $\dot{6_y} = A/4.3$  where  $\dot{6_y}$  has the same value as  $\dot{6_y}$  determined for value number 1 for K

where  $\hat{6}_{y}$  is equal to or less than 49.01

calculate  $X'_{y} = 10.686 6'_{y}^{1.07455}$ 

where  $6_{y}$  is greater than 49.01 and less than 409.32

calculate  $\dot{X_y} = 10.020 6_y^{1.08889}$ 

where  $6_{y}$  is equal to or greater than 409.32

calculate  $\dot{X_y} = 6.760 \, \dot{6_y}^{1.15556}$ 

and calculate

 $X_y = G + X'_y$  where G has the same value for G determined for value number 1 for K

where the value of  $X_y$  is equal to or less than 700

calculate  $6_v = 0.110 X_v^{0.93062}$ 

where  $X_y$  is greater than 700 and less than 7000

calculate  $6_y = 0.120 X_y^{0.91837}$ 

where  $X_y$  is equal to or greater than 7000

calculate  $6_y = 0.191 X_v^{0.86538}$ 

 $6_z$  is determined as follows:

 $\dot{G}_z = B/2.15$  where B is the vertical height above grade of the highest part of the building or structure on which the point of emission is located

where  $6_{z}$  is equal to or less than 24.64

calculate  $\dot{X_{z}} = 16.524 \ \dot{G_{z}}^{1.16918}$ 

where  $6_{z}$  is greater than 24.64 and less than 110.75

calculate  $\dot{X_{z}} = 4.984 6_{z}^{(1.53965)}$ 

where  $6_{z}$  is equal to or greater than 110.75

calculate  $\dot{X_z} = 1.0906_z^{(1.85677)}$ 

and calculate

 $X_z = G + X_z$  where G has the same value for G determined for value number 1 for K

where  $X_z$  is equal to or less than 700

calculate  $6_z = 0.091 X_z^{0.8553}$ 

where  $X_z$  is greater than 700 and less than 7000

calculate  $6_z = 0.352 X_z^{0.6495}$ 

where  $X_z$  is equal to or greater than 7000

calculate  $6_z = 0.955 X_z^{0.53857}$ 

#### Notes:

- 1. Where a building or structure adjacent to the building or structure on which the point of emission is located is within five metres of that building or structure, it shall be treated as being part of the building or structure on which the point of emission is located.
- 2. Where a situation exists as described in subclauses (i), (ii) and (iii) of clause (b) all points of emission of a contaminant shall be considered as if the total emission comes from the building such that the building itself is a point of emission.
- 3. Where K yields a value greater than the concentration of the contaminant at the point of emission, the concentration of the contaminant at the point of emission shall be deemed to be the value of K.
- 4. The wind-oriented centre of a building or structure is obtained by circumscribing the plan view of the building or structure with the smallest possible rectangle, two sides of which are parallel to the chosen wind direction, and the intersection of the diagonals of this rectangle is the wind-oriented centre. (*see figure 11*)
- 5. Where an emission or emissions is from only one building or structure, the wind direction shall be that direction that is parallel to a line joining the wind-oriented centre of the building or structure and the point of impingement and the value of the exponential expression involving Y is one. (In such a situation the value of Y becomes zero)
- 6. Where emissions from only one building or structure are being evaluated the wind direction shall be so chosen that the value of G is the horizontal distance in metres between the point of impingement and a vertical line through the wind-oriented centre of the building or structure on which the point of emission is located. (*see figure 15*)
- (c) where the point of emission is not affected by any of the conditions described in subclause (i), (ii) or (iii) of clause (a) or subclause (i), (ii) or (iii) of clause (b), the following formula shall be applied:

(see figures 16, 17, 18 and 19)

$$\mathbf{K} = \frac{10^{6} \times \mathbf{Q} \times \mathbf{F}}{6.28 \times 6_{y} \times 6_{z} \times \mathbf{U}} \times \exp\left[-\frac{1}{2}\left(\frac{\mathbf{Y}}{6_{y}}\right)^{2}\right] \times \left\{\exp\left[-\frac{1}{2}\left(\frac{\mathbf{Z}-\mathbf{H}}{6_{z}}\right)^{2}\right] + \exp\left[-\frac{1}{2}\left(\frac{\mathbf{Z}+\mathbf{H}}{6_{z}}\right)^{2}\right]\right\}$$

Where:

- K is the half hour average concentration of the contaminant at the point of impingement in micrograms per cubic metre
- Q is the rate of emission in grams per second of the contaminant
- U is the wind speed in metres per second
- exp is the exponential function where e = 2.7183
  - Y is the straight line distance in metres between the point of impingement and a vertical plane through the point of emission in the chosen direction of the wind

(see figure 20)

(see note 3)

- Z is the difference in height, in metres, between the point of impingement and the ground level at or beneath the point of impingement
- H is the effective height of the emission of a contaminant
- F is a factor related to the atmospheric stability of the air
- $6_y$  is a function which defines the amount of dispersion of the contaminant in a horizontal direction at the point of impingement
- $6_z$  is a function which defines the amount of dispersion of the contaminant in a vertical direction at the point of impingement

Determination of K

- 1. Two values for K shall be determined using the formula in clause (c).
- 2. The maximum value obtained for K shall be applied in this Regulation. (see note 1)

Value number 1 for K is determined as follows:

Where:

- U is the speed of the wind in metres per second (see note 2)
- H is determined as follows:

$$H = h + \frac{v_{s}d}{u} \times \left[ 1.5 + 2.68 \frac{(T_{s} - 283)d}{T_{s}} \right]$$

Where:

- h is the height above grade, in metres, of the point of emission
- vs is the speed in metres per second in an upward vertical direction of the contaminant gas stream at the point of emission to the atmosphere (*see note 4*)
- d is the diameter in metres of a circle of equivalent area to that area through which the contaminant gas stream enters the air
- u is the speed of the wind in metres per second (see note 5)
- $T_s$  is the temperature in degrees Kelvin (273° + temperature in Degrees Celsius) of the contaminant gas stream at the point of emission
- F is 0.6
- $6_v$  is determined as follows:

Calculate X where X is the horizontal distance in metres between the point of emission and the line where vertical planes, one through the point of emission and parallel to the chosen direction of the wind and the other through the point of impingement, meet at right angles.

(see figure 21)

(see notes 6 and 7)

Where the value of X is equal to or less than 2500

$$6_{\rm y} = 0.176 \; {\rm X}^{0.92445}$$

When the value of X is greater than 2500

 $6_y = 0.268 X^{0.87248}$ 

 $6_z$  is determined as follows:

When the value of X is determined in the calculation of  $6_y$  is equal to or less than 2500

 $6_z = 0.106 \ X^{0.91926}$ 

When the value of X is greater than 2500

 $6_z = 0.120 X^{0.90564}$ 

(see note 8)

Value number 2 for K is determined as follows:

H has the same value for H as determined for value number 1 for K

F is 0.8

 $6_y$  is determined as follows:

Where X has the same value for X as determined for value number 1 for K Where the value of X is equal to or less than 700  $6_y = 0.110 X^{0.93062}$ 

Where the value of X is greater than 700 but less than 7000

 $6_v = 0.120 X^{0.91837}$ 

Where the value of X is equal to or greater than 7000

 $6_v = 0.191 X^{0.86538}$ 

 $6_z$  is determined as follows:

Where X has the same value as determined in the calculation of  $6_y$ 

Where X is equal to or less than 700

 $6_z = 0.091 \ X^{0.8553}$ 

Where X is greater than 700 but less than 7000

 $6_z = 0.352 \ X^{0.6495}$ 

Where X is equal to or greater than 7000

 $6_z = 0.955 X^{0.53857}$ 

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(see note 8)
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Notes:

- 1. Where K yields a value greater than the concentration of the contaminant at the point of emission, the concentration of the contaminant at the point of emission shall be deemed to be the value of K.
- 2. The wind speed shall have a minimum value of 2.235 metres per second and a maximum value of 18.235 metres per second. A value of K shall be determined for wind speed increments of 0.5 metres per second until a maximum value of K is found.
- 3. Where only a single point of emission is being evaluated the wind direction shall be so chosen that the value of Y becomes zero (therefore the value of exp expression containing Y becomes equal to one).
- 4. Where the value of  $v_s$  is less than 7 metres per second the value of  $v_s$  shall be zero.
- 5. The value for u shall be consistent with the values substituted directly for u in the equation used for evaluating K.
- 6. Where a single source of emission is being evaluated, the wind direction shall be so chosen that the value of X shall be the horizontal distance in metres between the point of impingement and a vertical line through the point of emission. (*see figure 22*)
- 7. In the calculation of K at ground level, the value of X shall be so chosen that the maximum value of K is found.
- 8. For each point of impingement, for each wind direction chosen, and for each value of X, U shall be varied until the maximum value of K is found.
- (d) where the emissions of a contaminant are from more than one source, the contaminant concentrations at the point of impingement, resulting from each individual source, for the conditions set out in clauses (a), (b) and (c) shall be added together to give an aggregate value for K.

The aggregate value of K shall be determined for all wind directions and all permissible wind speeds for value of K, where applicable. The largest aggregate K obtained shall be the value of K to apply in this Regulation.











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FIGURE









FIGURE 12.

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R.R.O. 1990, Reg. 346, Appendix.

## SCHEDULE 1

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of
			Impingement — Half Hour
			Average
1.	Acetic Acid	Micrograms of acetic acid per cubic metre of air	2,500
2.	Acetylene	Micrograms of acetylene per cubic metre of air	56,000
3.	Acetone	Micrograms of acetone per cubic metre of air	48,000

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of
			Impingement — Half Hour
			Average
4.	Acrylamide	Micrograms of acrylamide per cubic metre of air	45
4.1	Acrylonitrile	Micrograms of acrylonitrile per cubic metre of air	180
5.	Ammonia	Micrograms of ammonia per cubic metre of air	3,600
6.	Antimony	Total micrograms of antimony in free and combined form	75
		per cubic metre of air	
7.	Arsine	Micrograms of arsine per cubic metre of air	10
8.	Beryllium	Total micrograms of beryllium in free and combined form	0.03
		per cubic metre of air	
9.	Boron Tribromide	Micrograms of boron tribromide per cubic metre of air	100
10.	Boron Trichloride	Micrograms of boron trichloride per cubic metre of air	100
11.	Boron Trifluoride	Micrograms of boron trifluoride per cubic metre of air	5.0
12.	Boron	Total micrograms of boron in free and combined form per	100
		cubic metre of air	
13.	Bromine	Micrograms of bromine per cubic metre of air	70
14.	Cadmium	Total micrograms of cadmium in free and combined form	5.0
		per cubic metre of air	
15.	Calcium hydroxide	Micrograms of calcium hydroxide per cubic metre of air	27
16.	Calcium Oxide	Micrograms of calcium oxide per cubic metre of air	20
17.	Carbon Black	Micrograms of carbon black per cubic metre of air	25
18.	Carbon Disulphide	Micrograms of carbon disulphide per cubic metre of air	330
19.	Carbon Monoxide	Micrograms of carbon monoxide per cubic metre of air	6,000
20.	Chlorine	Micrograms of chlorine per cubic metre of air	300
21.	Chlorine Dioxide	Micrograms of chlorine dioxide per cubic metre of air	85
21.1	Chloroform	Micrograms of chloroform per cubic metre of air	300
22.	Copper	Total micrograms of copper in free and combined form per	100
		cubic metre of air	
23.	Cresols	Micrograms of cresols per cubic metre of air	230
24.	Decaborane	Micrograms of decaborane per cubic metre of air	50
25.	Diborane	Micrograms of diborane per cubic metre of air	20
26.	Dicapryl Phthalate	Micrograms of dicapryl phthalate per cubic metre of air	100
27.	Dimethyl Disulphide	Micrograms of dimethyl disulphide per cubic metre of air	40
28.	Dimethyl Sulphide	Micrograms of dimethyl sulphide per cubic metre of air	30
29.	Dioctyl Phthalate	Micrograms of dioctyl phthalate per cubic metre of air	100
30.	Dustfall	Micrograms per square metre	8,000
31.	Ethyl Acetate	Micrograms of ethyl acetate per cubic metre of air	19,000
32.	Ethyl Acrylate	Micrograms of ethyl acrylate per cubic metre of air	4.5
33.	Ethyl Benzene	Micrograms of ethyl benzene per cubic metre of air	3,000
33.1	Ethyl Ether	Micrograms of ethyl ether per cubic metre of air	7,000
34.	Ferric Oxide	Micrograms of ferric oxide per cubic metre of air	75
35.	Fluorides, (Gaseous)	Micrograms of gaseous, inorganic fluoride per cubic metre	
	(April 15 to October 15)	of air expressed as hydrogen fluoride	4.3
36.	Fluorides. (Total)	Total micrograms of inorganic fluoride per cubic metre of	
	(April 15 to October 15)	air expressed as hydrogen fluoride	8.6
37.	Fluorides, (Total)	Total micrograms of inorganic fluoride per cubic metre of	
	(October 16 to April 14)	air expressed as hydrogen fluoride	17.2
38.	Formaldehyde	Micrograms of formaldehvde per cubic metre of air	65
39.	Formic Acid	Micrograms of formic acid per cubic metre of air	1.500
40.	Furfural	Micrograms of furfural per cubic metre of air	1.000
41.	Furfuryl Alcohol	Micrograms of furfuryl alcohol per cubic metre of air	3.000
41.1	<i>n</i> -Heptane	Micrograms of <i>n</i> -heptane per cubic metre of air	33.000
42.	Hydrogen Chloride	Micrograms of hydrogen chloride per cubic metre of air	100
43	Hydrogen Cyanide	Micrograms of hydrogen cyanide per cubic metre of air	1 150
44	Hydrogen Sulphide	Micrograms of hydrogen sulphide per cubic metre of air	30
45	Iron (metallic)	Micrograms of metallic iron per cubic metre of air	10
45.1	Isonronyl Benzene	Micrograms of isopropyl benzene per cubic metre of air	10
46	Lead	Total micrograms of lead in free and combined form per	100
40.	LAU	cubic metre of air	0
47	Lithium Hydrides	Total micrograms of lithium hydrides per cubic metro of	75
+/.	Liunum Hyundes	air	1.5
48	Lithium	Total micrograms of lithium in other than hydride	60
10.		compounds per cubic metre of air	00
49.	Magnesium Oxide	Total micrograms of magnesium oxide per cubic metre of	100
		air	100

Item	Column 1	Column 2	Column 3
	Name of Contaminant	Unit of Concentration	Concentration at Point of Impingement — Half Hour
			Average
50.	Mercaptans	Total micrograms of mercaptans per cubic metre of air expressed as methyl mercaptans	20
51.	Mercury (alkyl)	Total micrograms of alkyl mercury compounds per cubic metre of air	1.5
52.	Mercury	Total micrograms of mercury in free and combined form per cubic metre of air	5.0
53.	Methyl Acrylate	Micrograms of methyl acrylate per cubic metre of air	4.0
54.	Methyl Alcohol (Methanol)	Micrograms of methyl alcohol per cubic metre of air	12,000
55.	Methyl Chloroform (1-1-1 Trichloroethane)	Micrograms of methyl chloroform per cubic metre of air	350,000
56.	Methyl Ethyl Ketone (2-Butanone)	Micrograms of methyl ethyl ketone per cubic metre of air	30,000
56.1	Methyl Isobutyl Ketone	Micrograms of methyl isobutyl ketone per cubic metre of air	1,200
57.	Methyl Methacrylate	Micrograms of methyl methacrylate per cubic metre of air	860
58.	Milk Powder	Micrograms of milk powder per cubic metre of air	20
58.1	Mineral Spirits	Micrograms of mineral spirits per cubic metre of air	7,800
59.	Monomethyl Amine	Micrograms of monomethyl amine per cubic metre of air	25
60.	Nickel	Total micrograms of nickel in free and combined form per cubic metre of air	5
61.	Nickel Carbonyl	Micrograms of nickel carbonyl per cubic metre of air	1.5
62.	Nitric Acid	Micrograms of nitric acid per cubic metre of air	100
63.	Nitrilotriacetic Acid	Micrograms of nitrilotriacetic acid per cubic metre of air	100
64.	Nitrogen Oxides	Micrograms of nitrogen oxides per cubic metre of air expressed as NO <sub>2</sub>	500
65.	Ozone	Micrograms of ozone per cubic metre of air	200
66.	Pentaborane	Micrograms of pentaborane per cubic metre of air	3.0
67.	Phenol	Micrograms of phenol per cubic metre of air	100
68.	Phosgene	Micrograms of phosgene per cubic metre of air	130
69.	Phosphoric Acids	Micrograms of phosphoric acids per cubic metre of air expressed as $P_2O_5$	100
70.	Phthalic Anhydride	Micrograms of phthalic anhydride per cubic metre of air	100
71.	Propylene Dichloride	Micrograms of propylene dichloride per cubic metre of air	2,400
71.1	Propylene Oxide	Micrograms of propylene oxide per cubic metre of air	450
72.	Silver	Total micrograms of silver in free and combined form per cubic metre of air	3
73.	Styrene	Micrograms of styrene per cubic metre of air	400
74.	Sulphur Dioxide	Micrograms of sulphur dioxide per cubic metre of air	830
75.	Sulphuric Acid	Micrograms of sulphuric acid per cubic metre of air	100
76.	Suspended Particulate Matter (particulate less than 44 microns in size)	Total micrograms of suspended particulate matter per cubic metre of air	100
77.	Tellurium (except hydrogen telluride)	Micrograms of tellurium in free and combined form per cubic metre of air	30
78.	Tetrahydrofuran	Micrograms of tetrahydrofuran per cubic metre of air	93,000
79.	Tin	Total micrograms of tin in free and combined form per cubic metre of air	30
80.	Titanium	Total micrograms of titanium in free and combined form per cubic metre of air	100
81.	Toluene	Micrograms of toluene per cubic metre of air	2,000
82.	Toluene Di-isocyanate	Micrograms of toluene di-isocyanate per cubic metre of air	1.0
83.	Trichloroethylene	Micrograms of trichloroethylene per cubic metre of air	3,500
84.	Trifluorotrichloro Ethane	Micrograms of trifluoro trichloroethane per cubic metre of air	2.4 million
85.	Vanadium	Total micrograms of vanadium in free and combined form per cubic metre of air	5.0
85.1	Vinylidene Chloride	Micrograms of vinylidene chloride per cubic metre of air	30
86.	Xylenes	Micrograms of xylenes per cubic metre of air	2,300
87.	Zinc	Total micrograms of zinc in free and combined form per cubic metre of air	100

R.R.O. 1990, Reg. 346, Sched.; O. Reg. 795/94, s. 1; O. Reg. 342/01, s. 1.