

2003/02/11-01

THE WORKERS' COMPENSATION BOARD OF BRITISH COLUMBIA
RESOLUTION OF THE BOARD OF DIRECTORS

Re: Approval to Release to Public Hearing Proposed Amendments to the *Occupational Health and Safety Regulation (BC Regulation 296/97, as amended)*, the *Regulations for Agricultural Operations (BC Regulation 146/93, as amended)*, and the *Industrial Health and Safety Regulation (BC Regulation 585/77): Occupational Exposure Limits*

WHEREAS

Pursuant to section 225(1) of the *Workers Compensation Act* and amendments thereto ("*Act*"), the Workers' Compensation Board ("Board") may make regulations the Board considers necessary or advisable in relation to occupational health and safety and occupational environment;

AND WHEREAS:

Pursuant to section 226(1)(a) of the *Act*, the Board, before making a regulation, must give notice of the proposed regulation in the BC Gazette and in at least 3 newspapers, of which one must be published in the City of Victoria and one in the City of Vancouver;

AND WHEREAS:

Pursuant to section 226(1)(b) of the *Act*, the Board, before making a regulation, must hold at least one public hearing on the proposed regulation;

AND WHEREAS:

The Board has drafted proposed amendments to replace the existing occupational exposure limits and designations for chemical substances in the *Occupational Health and Safety Regulation* and the *Regulations for Agricultural Operations* with the 2002 Threshold Limit Values as established by the American Conference of Governmental Industrial Hygienists;

THE BOARD OF DIRECTORS RESOLVES THAT:

1. The proposed amendments to the *Occupational Health and Safety Regulation*, the *Regulations for Agricultural Operations*, and the *Industrial Health and Safety Regulation* set out in Appendices A, B, and C be released to public hearing.
2. The Director General of the Policy and Regulation Development Bureau is appointed to chair the public hearing and may designate additional members of the public hearing panel as necessary.
3. A public hearing on the proposed amendments will take place in Richmond, BC and in such other locations in BC as may be deemed appropriate by the Director General of the Policy and Regulation Development Bureau.
4. Notice of the proposed amendments will be published in the BC Gazette and in newspapers published in the City of Victoria and in the City of Vancouver and in at least one other location as may be deemed appropriate by the Director General of the Policy and Regulation Development Bureau.

Dated at Richmond, British Columbia, February 11, 2003.

By the Workers' Compensation Board

**DOUG ENNS, CHAIR
BOARD OF DIRECTORS**

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 1: DEFINITIONS

1.1

“mg/m³”

means milligrams of a substance per cubic meter of air.

Note: It is a measure of weight and generally applies to aerosols such as dusts, fumes and mists.

“ppm”

means parts of a vapour or a gas per million parts of contaminated air by volume at 25 degrees Celsius and 760 torr (mmHg).

Explanatory Note

It was thought prudent to define these fundamental definitions under Part 1. These definitions are primarily referenced in Parts 4 and 5, but other Parts such as Part 22 also make reference to them.

The “note” has been added to provide clarification as to what the measure applies.

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 4: GENERAL CONDITIONS

WORK AREA REQUIREMENTS

- | | | |
|-------------------------------------|-------------|---|
| Cleaning with compressed air | 4.42 | <ul style="list-style-type: none">(1) Compressed air or steam must not be used for blowing dust, chips, or other substances from equipment, materials and structures if any person could be exposed to the jet, or to the material it expels or propels and an injury or health hazard due to fire, explosion or other cause is likely to result.(2) Subject to subsection (4) compressed air may not be used for blowing harmful or hazardous dusts or other harmful substances from clothing being worn by workers.(3) If clothing is to be cleaned before leaving the work area, suitable cleaning equipment must be used.(4) Compressed air may be used in specially designated areas for blowing dusts or other substances from clothing being worn by workers, provided that<ul style="list-style-type: none">(a) the substances have an exposure limit greater than 1.0 mg/m³, as provided in Table 5-4 in Part 5 (Chemical and Biological Substances), established by section 5.48,(b) appropriate respiratory and eye protection is worn, and(c) the compressed air supply pressure is limited to a pressure of 70 kPa gauge (10 psig), or safety nozzles which have the same pressure limiting effect are used. |
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Explanatory Note

THIS AMENDMENT REFERENCES EXPOSURE LIMITS ESTABLISHED BY SECTION 5.48 IN PLACE OF TABLE 5-4.

Proposed Amendments to the *Occupational Health and Safety Regulation re: OELs*

APPENDIX A

PART 4: GENERAL CONDITIONS

INDOOR AIR QUALITY

- | | | |
|----------------------|-------------|--|
| Investigation | 4.79 | <p>(1) The employer must ensure that the indoor air quality is investigated when</p> <ul style="list-style-type: none">(a) complaints are reported,(b) occupancy in the space changes substantially, or(c) renovations involving significant changes to the ventilation system occur. <p>(2) An air quality investigation must include</p> <ul style="list-style-type: none">(a) assessment of the ventilation rate, unless the indoor carbon dioxide level is less than 650 ppm above ambient outdoor levels,(b) inspection of the ventilation system as required in section 4.78(2),(c) sampling for airborne contaminants suspected to be present in concentrations associated with the reported complaints, and(d) a record of the complaint, the findings of the investigation, and any actions taken. |
|----------------------|-------------|--|

Note: In subsection (2)(a) carbon dioxide is considered a marker indicator of sufficient outdoor air, not as a toxic air contaminant for which the exposure limit in ~~Table 5-4~~ **established by section 5.48** would apply. Normally, ambient levels are approximately 350 ppm, but may be higher in locations such as urban areas or during weather conditions such as inversions. Ambient levels may be assumed to be 350 ppm unless sampling establishes otherwise.

Explanatory Note

This amendment references exposure limits established by section 5.48 in place of Table 5-4.

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 5: CHEMICAL AND BIOLOGICAL SUBSTANCES

Definitions 5.1

8-hour exposure TWA limit means the time weighted average (TWA) concentration of a substance in air which may not be exceeded over a normal 8 hour work period;

“15 minute short-term exposure limit” or “STEL” means the time weighted average (TWA) concentration of a substance in air which may not be exceeded over any 15 minute period, limited to no more than 4 such periods in an 8 hour work shift with at least one hour between any 2 successive 15 minute excursion periods;

“as low as reasonable achievable” or “ALARA” means, in reference to a substance **as defined in subsection 5.57(1)**, that measures must be taken to keep a worker's exposure to a level as low as is reasonably achievable;

“ACGIH” means the American Conference of Governmental Industrial Hygienists in the publication entitled **“Threshold Limit Values and Biological Exposure Indices”**, dated 2002, as amended from time to time;

“carcinogen” means a substance or a mixture of substances which is identified as a carcinogen in ~~Table 5-4~~ **section 5.57(1)**, or

- (a) causes an increased incidence of benign or malignant neoplasms, or
- (b) substantially decreases the latency period between exposure and onset of neoplasms in humans, or
- (c) results in the induction of tumors at a site other than the site of administration in one or more experimental mammalian species as a result of any oral, respiratory, or dermal exposure, or any other exposure, or
- (d) is metabolized into one or more potential occupational carcinogens by mammals;

“IARC” means the International Agency for Research on Cancer publication **“Monographs on the Evaluation of Carcinogenic Risks to Humans”**, as amended from time to time;

Explanatory Note

The definition of the terms “8-hour exposure limit” and “15-minute exposure limit” have been renamed to match the terminology used by the American Conference of Governmental Industrial Hygienists (“ACGIH”).

The proposed amendment to the term “carcinogen” references the ACGIH and International Agency for Research on Cancer (“IARC”) designations, as appropriate, of potential or known human carcinogenicity, in place of Table 5-4. In addition, the amendment refers to section 5.57 of the *Occupational Health and Safety Regulation* (“OHSR”), as amended, which is where ALARA designated substances are identified.

A definition of “ACGIH” and “IARC” has been established.

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 5: CHEMICAL AND BIOLOGICAL SUBSTANCES

CONTROLLING EXPOSURE

- | | | |
|------------------------|-------------|---|
| Exposure limits | 5.48 | (1) The employer must ensure that a worker's exposure to a substance does not exceed the established exposure limits listed in Table 5-4 . |
| | | (2) Except as otherwise determined by the board, the exposure limits established are the ceiling limit, short-term exposure limit and 8-hour TWA limit as adopted by the ACGIH. |

Explanatory Note

Proposed amendments adopt exposure limits from the American Conference of Governmental Industrial Hygienists ("ACGIH"), but clarifies that it applies to Threshold Limit Values and not "biological exposure indices". Section 5.48(2) authorizes the Board to set exposures limits different from the ACGIH values, or to develop exposure limits for substances not listed by the ACGIH.

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CONTROLLING EXPOSURE

- Excursion limits 5.49** If a substance listed in Table 5-4 referred to under section 5.48(2) is provided only with an 8-hour ~~TWA exposure~~ limit, the employer must, in addition to the requirement of section 5.48, ensure that a worker's exposure to the substance does not exceed
- (a) three times the 8-hour ~~TWA exposure~~ limit for more than a total of 30 minutes during the work period, and
 - (b) five times the 8-hour ~~TWA exposure~~ limit at any time.

Explanatory Note

The proposed amendments references exposure limits established under section 5.48 in place of Table 5-4. The term "8-hour exposure limit" has been updated as shown in section 5.1.

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- Extended work periods** **5.50** (1) If the work period is more than 8 hours in a 24 hour day, the 8-hour **TWA exposure** limit must be reduced by multiplying the **TWA exposure** limit by the following factors:

Factor	Length of work period (in hours)
0.7	more than 8, but not more than 10
0.5	more than 10, but not more than 12
0.25	more than 12, but not more than 16
0.1	more than 16

- (2) For some substances with an extended biological half-life, with written permission from the board, a factor other than those in subsection (1), or a time-weighted averaging period other than 8 hours may be used to accommodate extended work periods, provided that any such adjustment is based upon recognized occupational hygiene principles, and provides adequate protection from adverse health effects.

Explanatory Note

The term "8-hour exposure limit" has been updated as shown in section 5.1.

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Additive effects

5.51

If there is exposure to a mixture of 2 or more substances with established exposure limits, **which exhibit similar toxicological effects**, the effects of such exposure must be considered additive unless it is known otherwise, and the additive exposure must not exceed 100% when calculated as follows:

$$AE = \%EL(A) + \%EL(B) + \dots \%EL(N) \quad AE = \%EL_1 + \%EL_2 + \dots \%EL_n$$

where

- ~~AE is the calculated additive exposure to the mixture,~~
- ~~N is the number of components in the mixture,~~
- ~~%EL(A) is the measured exposure to component A of the mixture expressed as a percentage of its exposure limit, and~~
- ~~%EL(B) is the measured exposure to component B of the mixture expressed as a percentage of its exposure limit,~~

- (a) AE is the calculated additive exposure to the mixture,**
- (b) %EL₁ is the measured exposure to component 1 of the mixture expressed as a percentage of its exposure limit,**
- (c) %EL₂ is the measured exposure to component 2 of the mixture expressed as a percentage of its exposure limit, and**
- (d) %EL_n is the measured exposure to any additional components of the mixture expressed as a percentage of their respective exposure limits.**

Explanatory Note

The proposed amendments bring this section closer to the definition of additive effects in the American Conference of Governmental Industrial Hygienists (“ACGIH”) TLV booklet.

Similar “toxicological effects” mean the substances adversely affect similar organs or organ systems and exhibit similar toxic effects to these organs or organ systems; hence substances to which the worker is exposed are assumed to act in a toxicologically additive manner unless otherwise known.

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Skin designation

5.52 If skin absorption may contribute to the overall exposure, effective measures must be taken to limit exposure by this route.

Note: Substances which can contribute to exposure by skin absorption are identified in ~~Table 5-4~~ with a "sSkin" designation **notation by the ACGIH.**

Explanatory Note

The purpose of this additional information is to clearly identify where to find a list of substances with the "skin" notation.

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- Type of controls** **5.55** (1) If there is a risk to a worker from exposure to a hazardous substance by any route of exposure, the employer must eliminate the exposure, or otherwise control it below harmful levels and below the applicable exposure limit ~~listed in Table 5-4~~ **established under section 5.48(2)** by
- (a) substitution,
 - (b) engineering control,
 - (c) administrative control, or
 - (d) personal protective equipment.
- (2) When selecting a suitable substitute, the employer must ensure that the hazards of the substitute are known, and that the risk to workers is reduced by its use.
- (3) The use of personal protective equipment as the primary means to control exposure is permitted only when
- (a) substitution, or engineering or administrative controls are not practicable, or
 - (b) additional protection is required because engineering or administrative controls are insufficient to reduce exposure below the applicable exposure limits, or
 - (c) the exposure results from temporary or emergency conditions only.

Explanatory Note

This proposed amendment references exposure limits established under section 5.48(2) in place of Table 5-4.

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Designated substances

- 5.57** (1) When a substance bearing **identified in ACGIH or IARC by** any of the following ~~designations in Table 5-4~~ **notations, abbreviations, or endnotes** is present in the workplace, the employer must replace it, whenever practicable, with a material which reduces the risk to workers:
- (a) ~~K1, K2 or K3~~ **ACGIH A1 or A2, or IARC 1, 2A or 2B** carcinogen;
 - (b) ~~R1 or R2~~ **reproductive toxin critical effects;**
 - (c) ~~Z sensitizer.~~ **sensitization critical effect or SEN notation; or**
 - (d) **L endnote.**
- (2) **The substances referred to in subsection (1) are designated to be ALARA substances.**
- (23) For a **an ALARA designated** substance ~~identified in subsection (1) that also bears the designation A in Table 5-4,~~ if it is not practicable to substitute a material which reduces the risk to workers, the employer must implement an exposure control plan to maintain workers' exposure as low as reasonably achievable below the exposure limit ~~listed in the Table~~ **established under section 5.48.**
- (34) The exposure control plan must meet the requirements of section 5.54.

Explanatory Note

The proposed amendment references designations and endnotes associated with exposure limits established under section 5.48 in place of notations previously associated with Table 5-4.

The proposed amendment reflects the fact that the International Agency for Research on Cancer ("IARC") is considered the most authoritative organization in the world for evaluating human carcinogens. The American Conference of Governmental Industrial Hygienists ("ACGIH"), to a large part, references IARC as the primary source for establishing the carcinogenic notations for its list of substances. Furthermore, carcinogenic designations in Workplace Hazardous Materials Information System ("WHMIS") are based on both IARC and ACGIH. Hence, it is considered prudent to include both agencies in this section.

Proposed amendments to section 5.57(2) are based on the premise that the ALARA concept would be retained. The amendments result in a different "list" of ALARA substances than appears in Table 5-4.

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- | | | |
|--------------------------|-------------|---|
| Protective policy | 5.58 | <p>(1) At any worksite where a worker is exposed to a substance which is designated in Table 5-4 as a reproductive toxin or a sensitizer, identified in section 5.57(1) as having an adverse reproductive or sensitizing effect, the employer must develop policy and procedures appropriate to the risk, which may include protective reassignment.</p> <p>(2) The policy and procedures required by subsection (1) must</p> <ul style="list-style-type: none">(a) inform workers about the reproductive toxin and identify ways to minimize exposure to the toxin for a worker who has advised the employer of pregnancy or intent to conceive a child, and(b) identify ways to eliminate or minimize exposure to a sensitizer for a worker who is or may be sensitized to that substance. |
|--------------------------|-------------|---|

Explanatory Note

The proposed amendment references substances deemed to be sensitizers or reproductive toxins under subsection 5.57(1)(a) and 5.57(1)(b). The terms “reproductive toxin and “sensitizer” are, in effect, defined in section 5.57(1) of the *Occupational Health and Safety Regulation* as it refers to the definitions in the American Conference of Governmental Industrial Hygienists, “Threshold Limit Values and Biological Exposure Indices”.

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The proposed amendments references the term “8-hour time weighted average (“TWA”) limit” associated with exposure limits established under section 5.48.

The “Note” section is amended to reflect the current ministry’s name.

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TABLE 5-4: EXPOSURE LIMITS AND DESIGNATIONS

Preamble

An exposure limit in this table is a maximum allowed airborne concentration and is not intended to represent a fine line between safe and harmful conditions. In determining an exposure limit, it is not possible to take into account all factors which could influence the effect that exposure to the substance may have on an individual worker. Therefore, for all hazardous substances, regardless of any assigned exposure limit, the guiding principle is elimination of exposure or reduction to the lowest level that is reasonably achievable below the exposure limit.

Because of wide variation in individual susceptibility, some workers may experience discomfort from some substances at concentrations at or below the exposure limit. Others may be affected more seriously by aggravation of a pre-existing condition, or by development of an occupational illness. Furthermore, other workplace contaminants may affect an individual's response. The effects of combined chemical exposures are often unknown or poorly defined.

Simple asphyxiants which are not known to cause adverse health effect, other than through reducing oxygen levels in the air, do not have exposure limits and are not included in Table 5-4. As noted in section 5.56, simple asphyxiants must not be allowed to create oxygen deficient conditions.

Explanation of headings and designations

Chemical names The chemical names used in the first column of the table are based primarily on the generic chemical names of the substance. Cross references, shown in italics, are provided for some chemicals if more than one name is in common use. The letters (RT) in brackets indicates a registered trademark. Substances are listed alphabetically by chemical name. Numerals and prefixes, for example, 1,2,3, tert, o-, sec-, cis, are disregarded in determining alphabetical order. Footnotes referenced in this column provide additional substance specific information located at the end of the table.

CAS number Column 2 provides, if available, the Chemical Abstracts Service (CAS) registry number. If a substance has more than one CAS number associated with it, for example, inorganic lead and compounds, the CAS number associated with the parent compound is used.

Units Column 3 identifies the units in which exposure limits are reported. Aerosols (dust, fumes, mists) and mixtures are typically reported in milligrams per cubic metre (mg/m³). Pure vapours and gases are reported in parts per million (ppm). Substances where the predominant exposure is to a fibre are reported in fibres per millilitre (f/ml). The exposure limit (EL) for gases and vapours can be converted between ppm and mg/m³ as follows:

$$EL \text{ in mg/m}^3 = \frac{(EL \text{ in ppm})(\text{gram molecular weight of substance})}{24.45}$$

Exposure limits Columns 4 through 6 indicate, respectively, the 8-hour exposure limit, 15-minute exposure limit and ceiling limit.

Designations The last column provides information on whether skin absorption is a significant route of exposure, and toxicological designations associated with each substance. In some cases, substances are provided with a designation only, and do not have numerical exposure limits. Specific requirements regarding the handling and use of such substances must be followed. Designations are as follows:

Skin: The skin designation indicates that skin absorption can contribute to the overall exposure.

Carcinogens:

K1 - a confirmed human carcinogen;

K2 - a suspected human carcinogen;

K3 - a possible human carcinogen.

Reproductive toxins:

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~~R1 – a proven reproductive toxin;~~

~~R2 – a possible reproductive toxin.~~

~~**Sensitizers:** These substances, identified by the letter **Z**, have been shown to produce an allergenic type of response in some workers after an initial exposure, resulting in the development of symptoms upon subsequent exposure at much lower concentrations.~~

~~**ALARA substances:** These are substances to which exposure of workers must be kept as low as reasonably achievable. They are designated in Table 5-4 with the letter **A**.~~

**Proposed Amendments to the Occupational Health and
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Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation
ABATE, RESPIRABLE DUST	3383-96-8	mg/m ³	3			
ABATE, TOTAL DUST	3383-96-8	mg/m ³	10	20		
ACETALDEHYDE	75-07-0	ppm			25	K3
ACETAMIDE	60-35-5					K3
ACETIC ACID	64-19-7	ppm	10	15		
ACETIC ANHYDRIDE	108-24-7	ppm			5	
ACETONE	67-64-1	ppm	250	500		
ACETONE CYANOHYDRIN	75-86-5	ppm			4	SKIN
ACETONITRILE	75-06-8	ppm	20	60		
ACETOPHENONE	98-86-2	ppm	10			
ACETYLENE DICHLORIDE, see 1,2-DICHLOROETHYLENE						
ACETYLENE TETRABROMIDE	79-27-6	ppm	1	1.5		
ACETYLSALICYLIC ACID	50-78-2	mg/m ³	5			R2
ACROLEIN	107-02-8	ppm	0.1	0.3		SKIN
ACRYLAMIDE	79-06-1	mg/m ³	0.03			SKIN, K2
ACRYLIC ACID	79-10-7	ppm	2			SKIN
ACRYLONITRILE	107-13-1	ppm	2			SKIN, K2
ADIPIC ACID	124-04-9	mg/m ³	5			
ADIPONITRILE	111-69-3	ppm	2			SKIN
ALDRIN	309-00-2	mg/m ³	0.25	0.75		SKIN
ALLYL ALCOHOL	107-18-6	ppm	2	4		SKIN
ALLYLAMINE	107-11-9	ppm	2			SKIN
ALLYL CHLORIDE	107-05-1	ppm	1	2		SKIN
ALLYL GLYCIDYL ETHER	106-92-3	ppm	5	10		SKIN, Z, A
ALLYL PROPYL DISULFIDE	2179-59-1	ppm	2	3		
ALUMINUM HYDROXIDE, RESPIRABLE DUST	21645-51-2	mg/m ³	3			
ALUMINUM HYDROXIDE, TOTAL DUST	21645-51-2	mg/m ³	10			
ALUMINUM OXIDE, RESPIRABLE DUST, AS Al ₂ O ₃	1344-28-1	mg/m ³	3			
ALUMINUM OXIDE, TOTAL DUST, AS Al ₂ O ₃	1344-28-1	mg/m ³	10	20		
ALUMINUM, ALKYL COMPOUNDS, AS Al	7429-90-5	mg/m ³	2			
ALUMINUM, PYRO POWDERS, AS Al	7429-90-5	mg/m ³	5			
ALUMINUM, RESPIRABLE DUST, AS Al	7429-90-5	mg/m ³	3			
ALUMINUM, SOLUBLE COMPOUNDS, AS Al	7429-90-5	mg/m ³	2			
ALUMINUM, TOTAL DUST, AS Al	7429-90-5	mg/m ³	10			
ALUNDUM, see ALUMINUM OXIDE						
4-AMINODIPHENYL (see note 1)	92-67-1					SKIN, K1, A
2-AMINOETHANOL, see ETHANOLAMINE						
2-AMINOPYRIDINE	504-29-0	ppm	0.5	2		
AMITROLE	61-82-5	mg/m ³	0.2			K3
AMMONIA	7664-41-7	ppm	25	35	50	
AMMONIUM CHLORIDE, FUME	12125-02-9	mg/m ³	10	20		
AMMONIUM PERFLUOROCTANOATE	3825-26-1	mg/m ³	0.01			SKIN
AMMONIUM SULFAMATE, RESPIRABLE DUST	7773-06-0	mg/m ³	3			
AMMONIUM SULFAMATE, TOTAL DUST	7773-06-0	mg/m ³	10	20		
n-AMYL ACETATE	628-63-7	ppm	100	150		
sec-AMYL ACETATE	626-38-0	ppm	125	150		
ANILINE AND HOMOLOGUES	62-53-3	ppm	2			SKIN
ANISIDINE, o AND p-ISOMERS		mg/m ³	0.5			SKIN, K3
ANTIMONY AND COMPOUNDS, AS Sb	7440-36-0	mg/m ³	0.5			
ANTIMONY TRIOXIDE, AS Sb	1327-33-9	mg/m ³	0.5			K2
ANTU	86-88-4	mg/m ³	0.3	0.9		
ARSENIC, ELEMENTAL, AND INORGANIC COMPOUNDS, AS As	7440-38-2	mg/m ³	0.01			K1, A
ARSINE	7784-42-1	ppm	0.05			
ASBESTOS, ALL FORMS (see note 2)		f/ml	0.1			K1, A
ASPHALT	8052-42-4	mg/m ³			5	
ATRAZINE	1912-24-9	mg/m ³	5			K3
AZINPHOS METHYL	86-50-0	mg/m ³	0.2	0.6		SKIN
BARIUM SULFATE, RESPIRABLE DUST	7727-43-7	mg/m ³	3			
BARIUM SULFATE, TOTAL DUST	7727-43-7	mg/m ³	10			
BARIUM, SOLUBLE COMPOUNDS, AS Ba	7440-39-3	mg/m ³	0.5			

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Chemical name	CAS-number	Unit	8-hour-EL	15-minute EL	Ceiling EL	Designation
BENOMYL, RESPIRABLE DUST	17804-35-2	mg/m ³	3			R2
BENOMYL, TOTAL DUST	17804-35-2	mg/m ³	10			R2
BENZ(a)ANTHRACENE	56-55-3					K2, A
BENZENE	71-43-2	ppm	0.5	2.5		SKIN, K1, A
BENZIDINE	92-87-5					SKIN, K1, A
BENZIDINE-BASED DYES						K2, A
BENZO(b)FLUORANTHENE	205-99-2					K2, A
BENZO(a)PYRENE	50-32-8					SKIN, K2, A
p-BENZOQUINONE	106-51-4	ppm	0.1	0.3		
BENZOYL CHLORIDE	98-88-4	ppm			0.5	
BENZOYL PEROXIDE	94-36-0	mg/m ³	5			
BENZYL ACETATE	140-11-4	ppm	10			
BENZYL CHLORIDE	100-44-7	ppm			1	K3
BERYLLIUM AND COMPOUNDS, AS Be ²⁺ (see note 3)	7440-41-7	mg/m ³	0.002			K1, Z, A
BIPHENYL	92-52-4	ppm	0.2	0.6		
BISMUTH TELLURIDE, RESPIRABLE DUST, AS Bi ₂ Te ₃	1304-82-1	mg/m ³	3			
BISMUTH TELLURIDE, SELENIUM DOPED, AS Bi ₂ Te ₃	1304-82-1	mg/m ³	5	10		
BISMUTH TELLURIDE, TOTAL DUST, AS Bi ₂ Te ₃	1304-82-1	mg/m ³	10	20		
BISPHENOL A, see DIGLYCIDYL ETHER						
BORATES, TETRA, SODIUM SALTS, ANHYDROUS	1330-43-4	mg/m ³	1			
BORATES, TETRA, SODIUM SALTS, DECAHYDRATE	1303-96-4	mg/m ³	5			SKIN
BORATES, TETRA, SODIUM SALTS, PENTAHYDRATE	12179-04-3	mg/m ³	1			
BORON OXIDE	1303-86-2	mg/m ³	10	20		
BORON TRIBROMIDE	10294-33-4	ppm			1	
BORON TRIFLUORIDE	7637-07-2	mg/m ³			3	
BROMACIL	314-40-9	mg/m ³	10			
BROMINE	7726-95-6	ppm	0.1	0.2		
BROMINE PENTAFLUORIDE	7789-30-2	mg/m ³	0.7	2		
BROMOCHLOROMETHANE	74-97-5	ppm	200	250		
BROMOETHANE	74-96-4	ppm	5			SKIN, K2
BROMOFORM	75-25-2	ppm	0.5			SKIN
BROMOTRIFLUOROMETHANE	75-63-8	ppm	1000	1200		
1,3-BUTADIENE	106-99-0	ppm	2			K2
n-BUTANE	106-97-8	ppm	600	750		
BUTANETHIOL, see BUTYL MERCAPTAN						
2-BUTANONE, see METHYL ETHYL KETONE						
2-BUTOXYETHANOL	111-76-2	ppm	25			SKIN
2-BUTOXYETHYL ACETATE	112-07-2	ppm	25			SKIN
tert-BUTYL ACETATE	540-88-5	ppm	200	250		
n-BUTYL ACETATE	123-86-4	ppm	20			
sec-BUTYL ACETATE	105-46-4	ppm	200	250		
n-BUTYL ACRYLATE	141-32-2	ppm	10			Z, A
n-BUTYL ALCOHOL	71-36-3	ppm	15		30	SKIN
sec-BUTYL ALCOHOL	78-92-2	ppm	100			SKIN
tert-BUTYL ALCOHOL	75-65-0	ppm	100	150		SKIN
tert-BUTYL CHROMATE	1189-85-1	mg/m ³			0.1	SKIN, K1, Z, A
n-BUTYL GLYCIDYL ETHER	2426-08-6	ppm	25			SKIN, Z, A
tert-BUTYL GLYCIDYL ETHER	7665-72-7					SKIN, Z, A
BUTYL LACTATE	138-22-7	ppm	5			
BUTYL MERCAPTAN	109-79-5	ppm	0.5			
n-BUTYL METHACRYLATE	97-88-1	ppm	50			Z, A
n-BUTYLAMINE	109-73-9	ppm			5	SKIN
o-sec-BUTYLPHENOL	89-72-5	ppm	5			SKIN
p-tert-BUTYL TOLUENE	98-51-1	ppm	1			
CADMIUM AND COMPOUNDS, RESPIRABLE DUST AND FUME, AS Cd	7440-43-9	mg/m ³	0.002			K1, A
CADMIUM AND COMPOUNDS, TOTAL DUST, AS Cd	7440-43-9	mg/m ³	0.01			K1, A
CALCIUM ARSENATE, AS As ₆	7778-44-1	mg/m ³	0.01			K1, R1, A
CALCIUM CARBONATE, RESPIRABLE DUST	1317-65-3	mg/m ³	3			
CALCIUM CARBONATE, TOTAL DUST	1317-65-3	mg/m ³	10	20		

**Proposed Amendments to the Occupational Health and
Safety Regulation re: OELs**

APPENDIX A

Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation
CALCIUM CHROMATE	13765-19-0	mg/m3	0.004			K1, A
CALCIUM CYANAMIDE	156-62-7	mg/m3	0.5	4		SKIN
CALCIUM HYDROXIDE, TOTAL DUST	1305-62-0	mg/m3	5			
CALCIUM OXIDE	1305-78-8	mg/m3	2			
CALCIUM SILICATE, RESPIRABLE DUST	1344-95-2	mg/m3	3			
CALCIUM SILICATE, TOTAL DUST	1344-95-2	mg/m3	10			
CALCIUM SULFATE, RESPIRABLE DUST	7778-18-9	mg/m3	3			
CALCIUM SULFATE, TOTAL DUST	7778-18-9	mg/m3	10	20		
CAMPHOR, SYNTHETIC	76-22-2	mg/m3	2			
CAPROLACTAM, DUST	105-60-2	mg/m3	4	3		
CAPROLACTAM, VAPOUR	105-60-2	ppm	5	40		
CAPTAFOI	2425-06-1	mg/m3	0.1			SKIN, K2
CAPTAN	133-06-2	mg/m3	5	15		
CARBARYL	63-25-2	mg/m3	5	40		SKIN
CARBOFURAN	1563-66-2	mg/m3	0.1			SKIN
CARBON BLACK	1333-86-4	mg/m3	3.5	7		
CARBON DIOXIDE	124-38-9	ppm	5000	15000		
CARBON DISULFIDE	75-15-0	ppm	4	12		SKIN, R2
CARBON MONOXIDE	630-08-0	ppm	25	100		R2
CARBON TETRABROMIDE	558-13-4	ppm	0.1	0.3		
CARBON TETRACHLORIDE	56-23-5	ppm	2			SKIN, K3
CARBONYL CHLORIDE	75-44-5	ppm	0.1			
CARBONYL FLUORIDE	353-50-4	ppm	2	5		
<i>delta</i> -CARENE, see TURPENTINE	13466-78-9					Z, A
CATECHOL	120-80-9	ppm	5			SKIN
CELLULOSE, RESPIRABLE DUST	9004-34-6	mg/m3	3			
CELLULOSE, TOTAL DUST	9004-34-6	mg/m3	10	20		
CERAMIC FIBRES (see notes 4 and 10)		f/ml	0.5			
CESIUM HYDROXIDE	21351-79-1	mg/m3	2			
CHLORDANE	57-74-9	mg/m3	0.5	2		SKIN, K3
CHLORINATED CAMPHENE	8001-35-2	mg/m3	0.5	4		SKIN
CHLORINATED DIPHENYL OXIDE	55720-99-5	mg/m3	0.5	2		SKIN
CHLORINE	7782-50-5	ppm	0.5	4		
CHLORINE DIOXIDE	10049-04-4	ppm	0.1	0.3		
CHLORINE TRIFLUORIDE	7790-91-2	ppm			0.4	
CHLOROACETALDEHYDE	107-20-0	ppm			4	
CHLOROACETIC ACID	79-11-8	ppm	0.3			SKIN
CHLOROACETONE	78-95-5	ppm			4	SKIN
alpha-CHLOROACETOPHENONE	532-27-4	ppm	0.05			
CHLOROACETYL CHLORIDE	79-04-9	ppm	0.05	0.15		SKIN
p-CHLOROANILINE	106-47-8					SKIN, K3
CHLORO BENZENE	108-90-7	ppm	10			
o-CHLORO BENZYLIDENE MALONONITRILE	2698-41-1	ppm			0.05	SKIN
CHLOROBROMOMETHANE, see BROMOCHLOROMETHANE						
2-CHLORO-1,3-BUTADIENE, see beta-CHLOROPRENE						
1-CHLORO-1,1-DIFLUOROETHANE	75-68-3	ppm	1000			
CHLORODIFLUOROMETHANE	75-45-6	ppm	500	1250		
CHLORODIPHENYL (42% chlorine)	53469-21-9	mg/m3	4	2		SKIN, K2, R2
CHLORODIPHENYL (54% chlorine)	11097-69-1	mg/m3	0.5	4		SKIN, K2, R2
1-CHLORO-2,3-EPOXYPROPANE, see EPICHLOROHYDRIN						
2-CHLOROETHANOL, see ETHYLENE CHLOROXYDRIN						
CHLOROETHYLENE, see VINYL CHLORIDE						

**Proposed Amendments to the Occupational Health and
Safety Regulation re: OELs**

APPENDIX A

Chemical name	CAS number	Unit	8-hour EL	15-minute EL	Ceiling EL	Designation
CHLOROFORM	67-66-3	ppm	2			SKIN, K2, R2
bis(CHLOROMETHYL)ETHER	542-88-1	ppm	0.001			K1, A
CHLOROMETHYL METHYL ETHER	107-30-2					K2, A
1-CHLORO-1-NITROPROPANE	600-25-9	ppm	2			
CHLOROPENTAFLUOROETHANE	76-15-3	ppm	1000			
CHLOROPICRIN	76-06-2	ppm	0.1	0.3		
beta-CHLOROPRENE	126-99-8	ppm	10			SKIN
2-CHLOROPROPIONIC ACID	598-78-7	ppm	0.1			SKIN
o-CHLOROSTYRENE	2039-87-4	ppm	50	75		
CHLOROTHALONIL	1897-45-6					Z, A
o-CHLOROTOLUENE	95-49-8	ppm	50	75		SKIN
4-CHLORO-o-TOLUIDINE	95-69-2					K2
2-CHLORO-6-(TRICHLOROMETHYL)-PYRIDINE, RESPIRABLE DUST	1929-82-4	mg/m3	3			
2-CHLORO-6-(TRICHLOROMETHYL)-PYRIDINE, TOTAL DUST	1929-82-4	mg/m3	10	20		
CHLOROTRIFLUOROMETHANE	75-72-9	ppm	1000			
CHLORPYRIFOS	2921-88-2	mg/m3	0.2	0.6		SKIN
CHROMIUM (II) COMPOUNDS, AS Cr	7440-47-3	mg/m3	0.5			
CHROMIUM (III) COMPOUNDS, AS Cr	7440-47-3	mg/m3	0.5			
CHROMIUM (VI) COMPOUNDS, WATER INSOLUBLE, NOT OTHERWISE SPECIFIED, AS Cr	7440-47-3	mg/m3	0.01			K1, Z, A
CHROMIUM (VI) COMPOUNDS, WATER SOLUBLE, AS Cr	7440-47-3	mg/m3	0.025		0.1	K1, Z, A
CHROMIUM, METAL, AS Cr	7440-47-3	mg/m3	0.5			
CHROMYL CHLORIDE	14977-61-8	ppm	0.025			
CHRYSENE	218-01-9					K2, A
CLOPIDOL, RESPIRABLE DUST	2971-90-6	mg/m3	3			
CLOPIDOL, TOTAL DUST	2971-90-6	mg/m3	10	20		
COAL, LESS THAN 5% SiO ₂ RESPIRABLE DUST		mg/m3	2			
COAL TAR PITCH VOLATILES, BENZENE or CYCLOHEXANE SOLUBLE	8007-45-2	mg/m3	0.2			K1, A
COBALT CARBONYL, AS Co	10210-68-1	mg/m3	0.1			K3, A
COBALT, ELEMENTAL AND INORGANIC COMPOUNDS, AS Co	7440-48-4	mg/m3	0.02			Z, K3, A
COBALT HYDROCARBONYL, AS Co	16842-03-8	mg/m3	0.1			K3, A
COPPER, DUST AND MIST, TOTAL DUST, AS Cu	7440-50-8	mg/m3	1	2		
COPPER, RESPIRABLE, AS Cu	7440-50-8	mg/m3	0.2			
CORUNDUM, see ALUMINUM OXIDE	1302-74-5					
COTTON, RAW, DUST		mg/m3	0.2	0.6		
CRAG (RT), see SESONE						
CRESOL, ALL ISOMERS	1319-77-3	mg/m3	10			SKIN
CRESYL GLYCIDYL ETHER	2186-24-5					Z, A
CROTONALDEHYDE	4170-30-3	ppm	2	6		SKIN
CRUFOMATE	299-86-5	mg/m3	5	20		
CUMENE	98-82-8	ppm	25	75		SKIN
CYANAMIDE	420-04-2	mg/m3	2			SKIN
CYANIDES, AS CN		mg/m3			5	SKIN
CYANOGEN	460-19-5	mg/m3	20			SKIN
CYANOGEN CHLORIDE	506-77-4	ppm			0.3	
CYCLOHEXANE	110-82-7	ppm	100	300		
CYCLOHEXANOL	108-93-0	ppm	50			SKIN
CYCLOHEXANONE	108-94-1	ppm	25	50		SKIN
CYCLOHEXENE	110-83-8	ppm	300			
CYCLOHEXYLAMINE	108-91-8	ppm	10			SKIN
CYCLONITE	121-82-4	mg/m3	1.5	3		SKIN
1,3-CYCLOPENTADIENE	542-92-7	ppm	75	150		
CYCLOPENTANE	287-92-3	ppm	600			
CYHEXATIN	13121-70-5	mg/m3	5	10		
DDT	50-29-3	mg/m3	4	3		SKIN, K3

Proposed Amendments to the Occupational Health and Safety Regulation re: OELs

APPENDIX A

Chemical name	CAS-number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation
<i>DDVP, see DICHLORVOS</i>						
DECABORANE	17702-41-9	ppm	0.05	0.15		SKIN
DEMETON	8065-48-3	ppm	0.01	0.03		SKIN
DEMETON METHYL	8022-00-2	mg/m ³	0.5	1.5		SKIN
DIACETONE ALCOHOL	123-42-2	ppm	50	75		
2,4-DIAMINOANISOLE	615-05-4					K3
4,4'-DIAMINODIPHENYL OXIDE	101-80-4					Z, A
<i>1,2-DIAMINOETHANE, see ETHYLENEDIAMINE</i>						
2,4-DIAMINOTOLUENE	95-80-7					K3
DIAZINON	333-41-5	mg/m ³	0.1	0.3		SKIN
DIAZOMETHANE	334-88-3	ppm	0.2			
DIBORANE	19287-45-7	ppm	0.1			
<i>DIBROM (RT), see 1,2-DIBROMO-3-CHLOROPROPANE</i>						
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8					K3
DIBROMODIFLUOROMETHANE	75-61-6	ppm	100	150		
1,2-DIBROMOETHANE	106-93-4	ppm	0.5			SKIN, K2
DIBUTYL PHENYL PHOSPHATE	2528-36-1	ppm	0.3			SKIN
DIBUTYL PHOSPHATE	107-66-4	ppm	1	2		
DIBUTYL PHTHALATE	84-74-2	mg/m ³	5	10		
2-n-DIBUTYLAMINOETHANOL	102-81-8	ppm	0.5			SKIN
2,6-DI tert-BUTYL-p-CRESOL	128-37-0	mg/m ³	10	20		
DICHLOROACETYLENE	7572-29-4	ppm			0.1	
o-DICHLORO BENZENE	95-50-1	ppm	25		50	SKIN
p-DICHLORO BENZENE	106-46-7	ppm	10			K3
3,3'-DICHLORO BENZIDINE (see note 1)	91-94-1					SKIN, K2, A
1,4-DICHLORO-2-BUTENE	764-41-0	ppm	0.005			SKIN, K2, A
2,2'-DICHLORODIETHYL SULFIDE	505-60-2					K1, A
DICHLORODIFLUOROMETHANE	75-71-8	ppm	1000	1250		
1,3-DICHLORO-5,5-DIMETHYL HYDANTOIN	118-52-5	mg/m ³	0.2	0.4		
1,1-DICHLOROETHANE	75-34-3	ppm	100	250		
1,2-DICHLOROETHANE	107-06-2	ppm	1	2		SKIN, K3
DICHLOROETHYL ETHER	111-44-4	ppm	5	10		SKIN
1,2-DICHLOROETHYLENE	540-59-0	ppm	200	250		
DICHLOROFUOROMETHANE	75-43-4	ppm	10			
<i>DICHLOROMETHANE, see METHYLENE CHLORIDE</i>						
2,2'-DICHLORO-n-METHYLDIETHYLAMINE	51-75-2					SKIN, K2, R2, Z, A
1,1-DICHLORO-1-NITROETHANE	594-72-9	ppm	2		10	
2,4-DICHLOROPHENOXYACETIC ACID AND ITS ESTERS	94-75-7	mg/m ³	10	20		SKIN
1,2-DICHLOROPROPANE	78-87-5	ppm	75	110		
1,3-DICHLOROPROPENE	542-75-6	ppm	1			SKIN, K3
2,2-DICHLOROPROPIONIC ACID	75-99-0	ppm	1			
DICHLOROTETRAFLUOROETHANE	76-14-2	ppm	1000	1250		
DICHLORVOS	62-73-7	ppm	0.1	0.3		SKIN, K3
DICROTOPHOS	141-66-2	mg/m ³	0.25			SKIN
DICYCLOHEXYLMETHANE-4,4'-DIISOCYANATE	5129-30-1	ppm	0.005		0.01	Z, A
DICYCLOPENTADIENE	77-73-6	ppm	5			
DICYCLOPENTADIENYL IRON, RESPIRABLE DUST	102-54-5	mg/m ³	3			
DICYCLOPENTADIENYL IRON, TOTAL DUST	102-54-5	mg/m ³	10	20		
DIESEL EXHAUST (see note 5)						K2
DIELDRIN	60-57-1	mg/m ³	0.25	0.75		SKIN
DIETHANOLAMINE	111-42-2	mg/m ³	2			SKIN
DIETHYL ETHER	60-29-7	ppm	400	500		
DIETHYL KETONE	96-22-0	ppm	200			
DIETHYL PHTHALATE	84-66-2	mg/m ³	5	10		
DIETHYL SULFATE	64-67-5					K2
DIETHYLAMINE	109-89-7	ppm	5	15		SKIN
2-DIETHYLAMINOETHANOL	100-37-8	ppm	2			SKIN
DIETHYLENE TRIAMINE	111-40-0	ppm	1			SKIN, Z, A

**Proposed Amendments to the Occupational Health and
Safety Regulation re: OELs**

APPENDIX A

Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling-EL	Designation
<i>DIFLUORODIBROMOMETHANE, see DIBROMODIFLUOROMETHANE</i>						
DIGLYCIDYL ETHER	2238-07-5	ppm	0.1		0.5	Z, A
<i>DIHYDROXYBENZENE, see HYDROQUINONE</i>						
DIISOBUTYL KETONE	108-83-8	ppm	25			
DIISOCYANATES, NOT OTHERWISE SPECIFIED		ppm	0.005		0.01	Z, A
DIISOPROPYL AMINE	108-18-9	ppm	5			SKIN
3,3'-DIMETHOXYBENZIDINE	119-90-4					K3
DIMETHOXYMETHANE	109-87-5	ppm	1000	1250		
DIMETHYL PHTHALATE	131-11-3	mg/m3	5	10		
DIMETHYL SULFATE	77-78-1	ppm			0.1	SKIN, K2
n,n-DIMETHYLACETAMIDE	127-19-5	ppm	10	15		SKIN
DIMETHYLAMINE	124-40-3	ppm	5	15		
<i>DIMETHYLAMINO BENZENE, see XYLIDENE</i>						
n,n-DIMETHYLANILINE	121-69-7	ppm	5	40		SKIN
<i>DIMETHYLBENZENE, see XYLENE</i>						
3,3'-DIMETHYLBENZIDINE	110-93-7					SKIN, K2
DIMETHYLCARBAMYL CHLORIDE	79-44-7					K2, A
<i>DIMETHYL 1,2-DIBROMO-2-DICHLOROETHYL PHOSPHATE, see 1,2-DIBROMO-3-CHLOROPROPANE</i>						
DIMETHYL ETHER	115-10-6	ppm	1000			
DIMETHYLETHOXSILANE	14857-34-2	ppm	0.5	1.5		
n,n-DIMETHYLFORMAMIDE	68-12-2	ppm	10	20		SKIN, K3, R2
<i>2,6-DIMETHYL-4-HEPTANONE, see DIISOBUTYL KETONE</i>						
1,1-DIMETHYLHYDRAZINE	57-14-7	ppm	0.01			SKIN, K2, Z, A
1,2-DIMETHYLHYDRAZINE	540-73-8					SKIN, K3, Z, A
DINITROBENZENE, ALL ISOMERS	25154-54-5	ppm	0.15	0.5		SKIN
4,6-DINITRO-o-CRESOL	534-52-1	mg/m3	0.2	0.6		SKIN
3,5-DINITRO-o-TOLUAMIDE	148-01-6	mg/m3	5	10		
DINITROTOLUENE	25321-14-6	mg/m3	0.15			SKIN, K2
Di-sec-OCTYL PHTHALATE	117-81-7	mg/m3	5	40		K3
n-DIOCTYL PHTHALATE	117-84-0	mg/m3	5			
1,4-DIOXANE	123-91-1	ppm	25	50		SKIN, K3
DIOXATHION	78-34-2	mg/m3	0.2			SKIN
<i>DIPHENYL, see BIPHENYL</i>						
DIPHENYL ETHER, MIXED WITH DIPHENYL	101-84-8	ppm	1	2		
DIPHENYL ETHER, VAPOUR	101-84-8	ppm	4	2		
DIPHENYLAMINE	122-39-4	mg/m3	10	20		
<i>DIPHENYLMETHANE DIISOCYANATE, see METHYLENE BISPHENYL ISOCYANATE</i>						
DIPROPYL KETONE	123-19-3	ppm	50			
DIPROPYLENE GLYCOL METHYL ETHER	34590-94-8	ppm	100	150		SKIN
DIQUAT, RESPIRABLE DUST	85-00-7	mg/m3	0.1			SKIN
DIQUAT, TOTAL DUST	85-00-7	mg/m3	0.5	1		SKIN
DISULFIRAM	97-77-8	mg/m3	2	5		
DISULFOTON	298-04-4	mg/m3	0.1	0.3		SKIN
<i>DISYSTON, see DISULFOTON</i>						
DIURON	330-54-1	mg/m3	10			
DIVINYLBENZENE	1321-74-0	ppm	10			
DYFONATE	944-22-9	mg/m3	0.1			SKIN
EMERY, RESPIRABLE DUST	12415-34-8	mg/m3	3			
EMERY, TOTAL DUST	12415-34-8	mg/m3	10	20		
ENDOSULFAN	115-29-7	mg/m3	0.1	0.3		SKIN
ENDRIN	72-20-8	mg/m3	0.1	0.3		SKIN
ENFLURANE	13838-16-9	ppm	2			
EPICHLOROHYDRIN	106-89-8	ppm	0.1			SKIN, K2, Z, A

**Proposed Amendments to the Occupational Health and
Safety Regulation re: OELs**

APPENDIX A

Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation
EPN	2104-64-5	mg/m3	0.5			SKIN
1,2-EPOXYPROPANE, see PROPYLENE OXIDE						
2,3-EPOXY-1-PROPANOL, see GLYCIDOL						
ETHANETHIOL, see ETHYL MERCAPTAN						
ETHANOL, see ETHYL ALCOHOL						
ETHANOLAMINE	141-43-5	ppm	3	6		
ETHION	563-12-2	mg/m3	0.4			SKIN
2-ETHOXYETHANOL	110-80-5	ppm	5			SKIN, R2, A
2-ETHOXYETHYL ACETATE	111-15-9	ppm	5			SKIN, R2, A
ETHYL ACETATE	141-78-6	ppm	150			
ETHYL ACRYLATE	140-88-5	ppm	5	15		SKIN, K2, Z, A
ETHYL ALCOHOL	64-17-5	ppm	1000			
ETHYL AMINE	75-04-7	ppm	5	15		SKIN
ETHYL see AMYL KETONE	541-85-5	ppm	25			
ETHYL BENZENE	100-41-4	ppm	100	125		SKIN
ETHYL BROMIDE, see BROMOETHANE						
ETHYL BUTYL KETONE	106-35-4	ppm	50	75		
ETHYL CHLORIDE	75-00-3	ppm	100			SKIN
ETHYL ETHER, see DIETHYL ETHER						
ETHYL FORMATE	109-94-4	ppm	100	150		
ETHYL MERCAPTAN	75-08-1	ppm	0.5			
ETHYL METHACRYLATE	97-63-2	ppm	50			Z, A
ETHYL SILICATE	78-10-4	ppm	40			
ETHYLENE CHLOROXYDRIN	107-07-3	ppm			1	SKIN
ETHYLENEDIAMINE	107-15-3	ppm	40			SKIN, Z, A
ETHYLENE DIBROMIDE, see 1,2-DIBROMOETHANE						
ETHYLENE DICHLORIDE, see 1,2-DICHLOROETHANE						
ETHYLENE GLYCOL ACRYLATE	818-61-1					SKIN, Z, A
ETHYLENE GLYCOL DINITRATE	628-96-6	mg/m3		0.1		SKIN
ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE, see 2-METHOXYETHYL ACETATE						
ETHYLENE GLYCOL, PARTICULATE	107-21-1	mg/m3	10	20		SKIN
ETHYLENE GLYCOL, VAPOUR	107-21-1	ppm			50	
ETHYLENE OXIDE	75-21-8	ppm	0.1	1		SKIN, K1, A
ETHYLENIMINE	151-56-4	ppm	0.5			SKIN
ETHYLIDENE CHLORIDE, see 1,1-DICHLOROETHANE						
ETHYLIDENE NORBORNENE	16219-75-3	ppm			5	
n-ETHYLMORPHOLINE	100-74-3	ppm	5			SKIN
FENAMIPHOS	22224-92-6	mg/m3	0.1			SKIN
FENSULFOTHION	115-90-2	mg/m3	0.1			
FENTHION	55-38-9	mg/m3	0.2			SKIN
FERBAM, TOTAL DUST	14484-64-1	mg/m3	10	20		
FERROVANADIUM, DUST	12604-58-9	mg/m3	1	3		
FIBROUS GLASS, DUST		mg/m3	10			
FIBROUS GLASS, FIBER, see SYNTHETIC MINERAL FIBRE						
FLUORIDES, AS-F	16984-48-8	mg/m3	2.5			
FLUORINE	7782-41-4	ppm	0.1			
FLUORO TRICHLOROMETHANE, see TRICHLOROFLUOROMETHANE						
FLUOROXENE	406-90-6	ppm	2			
FORMALDEHYDE	50-00-0	ppm	0.3		1	K2, Z, A
FORMAMIDE	75-12-7	ppm	40			SKIN, R2
FORMIC ACID	64-18-6	ppm	5	10		
FURFURAL	98-01-1	ppm	2			SKIN
FURFURYL ALCOHOL	98-00-0	ppm	5	10		SKIN
GASOLINE	8006-61-9	mg/m3	890	1480		K3
GERMANIUM TETRAHYDRIDE	7782-65-2	ppm	0.2	0.6		
GLASS, DUST, see FIBROUS GLASS, DUST						

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Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation
GLUTARALDEHYDE	111-30-8	mg/m ³			0.25	Z, A
GLYCERIN MIST, RESPIRABLE FRACTION	56-81-5	mg/m ³	3			
GLYCERIN MIST, TOTAL FRACTION	56-81-5	mg/m ³	10			
GLYCIDOL	556-52-5	ppm	25			Z, A
GLYCOL MONOETHYL ETHER, see 2-ETHOXYETHANOL						
GRAIN DUST (OAT, WHEAT, BARLEY)		mg/m ³	4			Z, A
GRAPHITE, ALL FORMS, EXCEPT GRAPHITE FIBERS, RESPIRABLE	7440-44-0	mg/m ³	2			
GUTHION (RT), see AZINPHOS METHYL						
GYPNUM, RESPIRABLE DUST	13397-24-5	mg/m ³	3			
GYPNUM, TOTAL DUST	13397-24-5	mg/m ³	10	20		
HAFNIUM	7440-58-6	mg/m ³	0.5	1.5		
HALOTHANE	451-67-7	ppm	2			R2
HEPTACHLOR AND HEPTACHLOR EPOXIDE	76-44-8	mg/m ³	0.05			SKIN, K2
n-HEPTANE	142-82-5	ppm	400	500		
HEXACHLORO BENZENE	118-74-1	mg/m ³	0.025			SKIN, K3
HEXACHLOROBUTADIENE	87-68-3	ppm	0.02			SKIN, K2
HEXACHLOROCYCLOPENTADIENE	77-47-4	ppm	0.01	0.03		
HEXACHLOROETHANE	67-72-1	ppm	1	3		SKIN, K2
HEXACHLORONAPHTHALENE	1335-87-1	mg/m ³	0.2	0.6		SKIN
HEXAFLUOROACETONE	684-16-2	ppm	0.1	0.3		SKIN
HEXAMETHYL PHOSPHORAMIDE	680-31-9					SKIN, K2, A
HEXAMETHYLENE DIISOCYANATE	822-06-0	ppm	0.005		0.01	Z, A
HEXAMETHYLENE TETRAMINE	100-97-0					Z, A
n-HEXANE	110-54-3	ppm	20			
HEXANE, ALL ISOMERS EXCEPT n-HEXANE		ppm	200			
2-HEXANONE, see METHYL BUTYL KETONE						
HEXONE, see METHYL ISOBUTYL KETONE						
sec-HEXYL ACETATE	108-84-9	ppm	50			
HEXYLENE GLYCOL	107-41-5	ppm			25	
HYDRAZINE	302-01-2	ppm	0.01			SKIN, K3, Z, A
HYDROCARBONS, POLYCYCLIC AROMATIC, PARTICULATE, AS BENZENE SOLUBLES, see COAL TAR PITCH VOLATILES						
HYDROGEN BROMIDE	10035-10-6	ppm			3	
HYDROGEN CHLORIDE	7647-01-0	ppm			5	
HYDROGEN CYANIDE, see CYANIDES						
HYDROGEN FLUORIDE	7664-39-3	ppm			2	SKIN
HYDROGEN PEROXIDE	7722-84-1	ppm	1	2		
HYDROGEN SELENIDE	7783-07-5	ppm	0.05			
HYDROGEN SULFIDE	7783-06-4	ppm			10	
HYDROGENATED TERPHENYLS	61788-32-7	ppm	0.5			
HYDROQUINONE	123-31-9	mg/m ³			2	Z, A
2-HYDROXYPROPYL ACRYLATE	999-61-1	ppm	0.5			SKIN, Z, A
INDENE	95-13-6	ppm	10	15		
INDIUM AND COMPOUNDS, AS In	7440-74-6	mg/m ³	0.1	0.3		
IODINE	7553-56-2	ppm			0.1	R2
IODOFORM	75-47-8	ppm	0.6	1		
IODOMETHANE	74-88-4	ppm	2			SKIN, K2
IRON OXIDE, FUME, AS Fe ₂ O ₃	1309-37-1	mg/m ³	5	10		
IRON PENTACARBONYL	13463-40-6	ppm	0.01			
IRON SALTS, SOLUBLE, AS Fe	-	mg/m ³	1	2		
ISOAMYL ACETATE	123-92-2	ppm	100	125		
ISOAMYL ALCOHOL	123-51-3	ppm	100	125		
ISOBUTYL ACETATE	110-19-0	ppm	150	187		
ISOBUTYL ALCOHOL	78-83-1	ppm	50	75		SKIN
ISOBUTYL METHACRYLATE	97-86-9					Z, A
ISOOCTYL ALCOHOL	26952-21-6	ppm	50			SKIN
ISOPHORONE	78-59-1	ppm	4		5	
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ISOPHORONE DIISOCYANATE	4098-71-9	ppm	0.005		0.01	SKIN, Z, A
ISOPROPOXYETHANOL	109-59-1	ppm	25			SKIN
ISOPROPYL ACETATE	108-21-4	ppm	250	310		
ISOPROPYL ALCOHOL	67-63-0	ppm	400	500		SKIN
n-ISOPROPYL ANILINE	768-52-5	ppm	2			SKIN
ISOPROPYL ETHER	108-20-3	ppm	250	310		
ISOPROPYL GLYCIDYL ETHER	4016-14-2	ppm			50	
ISOPROPYLAMINE	75-31-0	ppm	5	10		
KAOLIN, RESPIRABLE DUST	1332-58-7	mg/m3	2			
KAOLIN, TOTAL DUST	1332-58-7	mg/m3	10	20		
KETENE	463-51-4	ppm	0.5	1.5		
LEAD CHROMATE, AS Cr	7758-97-6	mg/m3	0.012			K1, A
LEAD AND COMPOUNDS, INORGANIC, AS Pb	7439-92-1	mg/m3	0.05			K3, R2
LIMESTONE, RESPIRABLE DUST	1317-65-3	mg/m3	3			
LIMESTONE, TOTAL DUST	1317-65-3	mg/m3	10	20		
LINDANE	58-89-9	mg/m3	0.5	1.5		SKIN
LITHIUM HYDRIDE	7580-67-8	mg/m3	0.025			
LITHIUM HYDROXIDE	1310-65-2	mg/m3			4	
MAGNESITE, RESPIRABLE DUST	546-93-0	mg/m3	3			
MAGNESITE, TOTAL DUST	546-93-0	mg/m3	10	20		
MAGNESIUM OXIDE, RESPIRABLE DUST AND FUME, AS Mg	1309-48-4	mg/m3	3	40		
MAGNESIUM OXIDE, TOTAL DUST, AS Mg	1309-48-4	mg/m3	10			
MALATHION, TOTAL DUST	121-75-5	mg/m3	10			SKIN
MALEIC ANHYDRIDE	108-31-6	ppm	0.1			Z, A
MANGANESE AND COMPOUNDS, TOTAL DUST, AS Mn	7439-96-5	mg/m3	0.2			
MANGANESE CYCLOPENTADIENYL TRICARBONYL, AS Mn	12079-65-1	mg/m3	0.1	0.3		SKIN
MANGANESE 2-METHYL CYCLOPENTADIENYL TRICARBONYL	12108-13-3	mg/m3	0.2	0.6		SKIN
MARBLE, RESPIRABLE DUST	1317-65-3	mg/m3	3			
MARBLE, TOTAL DUST	1317-65-3	mg/m3	10	20		
MERCURY, ALKYL COMPOUNDS, AS Hg	7439-97-6	mg/m3	0.01	0.03		SKIN, R2, Z, A
MERCURY, ALL INORGANIC COMPOUNDS INCLUDING METALLIC MERCURY, AS Hg (see note 6)	7439-97-6	mg/m3	0.025			SKIN, R2, Z, A
MERCURY, ARYL COMPOUNDS, AS Hg	7439-97-6	mg/m3	0.05		0.1	SKIN, R2
MESITYL OXIDE	141-79-7	ppm	10	25		
METHACRYLIC ACID	79-41-4	ppm	20			SKIN
METHACRYLONITRILE	126-98-7	ppm	1	2		SKIN
METHANETHIOL, see METHYL MERCAPTAN						
METHANOL, see METHYL ALCOHOL						
METHOMYL	16752-77-5	mg/m3	2.5			SKIN
METHOXYCHLOR, TOTAL DUST	72-43-5	mg/m3	10			
2-METHOXYETHANOL	109-86-4	ppm	5			SKIN, R2, A
2-METHOXYETHYL ACETATE	110-49-6	ppm	5			SKIN, R2, A
METHOXYFLURANE	76-38-0	ppm	2			
4-METHOXYPHENOL	150-76-5	mg/m3	5			
1-METHOXY-2-PROPANOL	107-98-2	ppm	50	75		SKIN
2-METHOXY-1-PROPANOL	1589-47-5	ppm	20	40		R2
1-METHOXYPROPYL-2-ACETATE	108-65-6	ppm	50	75		SKIN
2-METHOXYPROPYL-1-ACETATE	70657-70-4	ppm	20	40		R2
METHYL ACETATE	79-20-9	ppm	200	250		
METHYL ACETYLENE	74-99-7	ppm	1000	1250		
METHYL ACETYLENE, PROPADIENE MIXTURE	-	ppm	1000	1250		
METHYL ACRYLATE	96-33-3	ppm	2			SKIN, Z, A
METHYL ALCOHOL	67-56-1	ppm	200	250		SKIN
METHYL AMYL ALCOHOL, see METHYL ISOBUTYL CARBINOL						
METHYL n-AMYL KETONE	110-43-0	ppm	50	150		

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n-METHYL ANILINE	100-61-8	ppm	0.5			SKIN
METHYL BROMIDE	74-83-9	ppm	5	40		SKIN
METHYL tert-BUTYL ETHER	1634-04-4	ppm	40			
METHYL BUTYL KETONE	591-78-6	ppm	5			SKIN
METHYL CELLOSOLVE, see 2-METHOXYETHANOL						
METHYL CELLOSOLVE ACETATE, see 2-METHOXYETHYL ACETATE						
METHYL CHLORIDE	74-87-3	ppm	50	100		SKIN, R2
METHYL CHLOROFORM, see 1,1,1-TRICHLOROETHANE						
METHYL 2-CYANOACRYLATE	137-05-3	ppm	2	4		Z, A
METHYL CYCLOHEXANE	108-87-2	ppm	400	500		
METHYL CYCLOHEXANOL	25639-42-3	ppm	50	75		
METHYL DEMETON, see DEMETON METHYL						
METHYL ETHYL KETONE	78-93-3	ppm	50	100		
METHYL ETHYL KETONE PEROXIDE	1338-23-4	mg/m3			1.5	
METHYL FORMATE	107-31-3	ppm	100	150		
METHYL HYDRAZINE	60-34-4	ppm	0.01			SKIN, K2
METHYL IODIDE, see IODOMETHANE						
METHYL ISOAMYL KETONE	110-12-3	ppm	50	150		
METHYL ISOBUTYL CARBINOL	108-11-2	ppm	25	40		SKIN
METHYL ISOBUTYL KETONE	108-10-1	ppm	50	75		SKIN
METHYL ISOCYANATE	624-83-9	ppm	0.02			SKIN, Z, A
METHYL ISOPROPYL KETONE	563-80-4	ppm	200			SKIN
METHYL MERCAPTAN	74-93-1	ppm	0.5			
METHYL MERCURY	22967-92-6					SKIN, K3, R1, Z, A
METHYL METHACRYLATE	80-62-6	ppm	50	125		SKIN, Z, A
METHYL PARATHION	298-00-0	mg/m3	0.2	0.6		SKIN
METHYL SILICATE	681-84-5	ppm	1			
alpha-METHYL STYRENE	98-83-9	ppm	50	75	100	
METHYLACRYLONITRILE, see METHACRYLONITRILE						
METHYLAL, see DIMETHOXYMETHANE						
METHYLAMINE	74-89-5	ppm	5	15		SKIN
o-METHYLCYCLOHEXANONE	583-60-8	ppm	50	75		SKIN
METHYLCYCLOPENTADIENYL MANGANESE TRICARBONYL, see MANGANESE-2-METHYL CYCLOPENTADIENYL TRICARBONYL						
METHYLENE BISPHENYL ISOCYANATE	101-68-8	ppm	0.005		0.01	Z, A
METHYLENE CHLORIDE	75-09-2	ppm	25			SKIN, K2
4,4'-METHYLENE bis(2-CHLOROANILINE)	101-14-4	mg/m3	0.003			SKIN, K2, A
METHYLENE bis-(1-CYCLOHEXYL ISOCYANATE)	5124-30-1	ppm	0.005		0.01	SKIN, Z, A
4,4'-METHYLENEDIANILINE	101-77-9	ppm	0.01			SKIN, K2, Z, A
METRIBUZIN	21087-64-9	mg/m3	5			
MEVINPHOS (RT), see PHOSDRIN						
MICA, RESPIRABLE DUST	12001-26-2	mg/m3	3			
MINERAL SPIRITS	8052-41-3	mg/m3	290	580		SKIN
MINERAL WOOL FIBRE, see SYNTHETIC MINERAL FIBRE						
MOLYBDENUM, INSOLUBLE COMPOUNDS, TOTAL DUST, AS Mo	7439-98-7	mg/m3	10	20		
MOLYBDENUM, SOLUBLE COMPOUNDS, AS Mo	7439-98-7	mg/m3	5	10		
MONOCROTOPHOS	6923-22-4	mg/m3	0.25			SKIN
MONOMETHYL HYDRAZINE, see METHYL HYDRAZINE						
MORPHOLINE	110-91-8	ppm	20	30		SKIN
NALED	300-76-5	mg/m3	3	6		SKIN
NAPHTHALENE	91-20-3	ppm	10	15		
NAPHTHALENE DIISOCYANATE		ppm	0.005		0.01	Z, A
beta-NAPHTHYLAMINE	91-59-8					SKIN, K1, A
1,5-NAPHTHYLENE DIISOCYANATE	3173-72-6	ppm	0.005		0.01	Z, A
NICKEL CARBONYL	13463-39-3	ppm	0.001			K1, A
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NICKEL, METAL, SOLUBLE AND INSOLUBLE COMPOUNDS, AS NI	7440-02-0	mg/m3	0.05			K1, Z, A
NICOTINE	54-11-5	mg/m3	0.5	1.5		SKIN
NITRIC ACID	7697-37-2	ppm	2	4		
<i>NITRIC OXIDE, see NITROGEN MONOXIDE</i>						
p-NITROANILINE	100-01-6	mg/m3	3			SKIN
NITROBENZENE	98-95-3	ppm	4	2		SKIN
4-NITROBIPHENYL (see note 1)	92-93-3					SKIN, K1, A
p-NITROCHLOROENZENE	100-00-5	mg/m3	0.64			SKIN
<i>4-NITRODIPHENYL, see 4-NITROBIPHENYL</i>						
NITROETHANE	79-24-3	ppm	100	150		
NITROGEN DIOXIDE	10102-44-0	ppm			4	
NITROGEN MONOXIDE	10102-43-9	ppm	25	35		
NITROGEN TRIFLUORIDE	7783-54-2	ppm	10	15		
NITROGLYCERIN	55-63-0	mg/m3		0.4		SKIN
NITROMETHANE	75-52-5	ppm	20			
1-NITROPROPANE	108-03-2	ppm	25	35		
2-NITROPROPANE	79-46-9	ppm	5			K2
NITROPYRENE, MONO-, DI-, TRI-TETRA-ISOMERS						K3
n-NITROSODIETHANOLAMINE	1116-54-7					K3
n-NITROSODIETHYLAMINE	55-18-5					K2, A
n-NITROSODIMETHYLAMINE	62-75-9					SKIN, K2, A
n-NITROSOMETHYLETHYLAMINE	10595-95-6					K3
n-NITROSOMORPHOLINE	59-89-2					K3
n-NITROSOPIPERIDINE	100-75-4					K3
n-NITROSOPYRROLIDINE	930-55-2					K3
NITROTOLUENE, ALL ISOMERS	1321-12-6	ppm	2			SKIN
NITROUS OXIDE	10024-97-2	ppm	25			
NONANE	111-84-2	ppm	200	250		
OCTACHLORONAPHTHALENE	2234-13-1	mg/m3	0.1	0.3		SKIN
n-OCTANE	111-65-9	ppm	300	375		
OIL MIST, MINERAL, MILDLY REFINED (see note 7)		mg/m3	0.2			K1, A
OIL MIST, MINERAL, SEVERELY REFINED (see note 8)		mg/m3	1			
OSMIUM TETRAOXIDE, AS Os	20816-12-0	mg/m3	0.002	0.006		
OXALIC ACID	144-62-7	mg/m3	1	2		
OXYGEN DIFLUORIDE	7783-41-7	ppm			0.05	
OZONE	10028-15-6	ppm	0.05			
PARAFFIN WAX, FUME	8002-74-2	mg/m3	2	6		
PARAQUAT AND SALTS, RESPIRABLE DUST, AS PARAQUAT	4685-14-7	mg/m3	0.1	0.3		SKIN
PARAQUAT AND SALTS, TOTAL DUST, AS PARAQUAT	4685-14-7	mg/m3	0.5			SKIN
PARATHION	56-38-2	mg/m3	0.05			SKIN
PARTICULATES, NOT OTHERWISE CLASSIFIED, RESPIRABLE DUST		mg/m3	3			
PARTICULATES, NOT OTHERWISE CLASSIFIED, TOTAL DUST		mg/m3	10			
PENTABORANE	19624-22-7	mg/m3	0.01	0.03		
PENTACHLORONAPHTHALENE	1321-64-8	mg/m3	0.5	2		SKIN
PENTACHLOROPHENOL	87-86-5	mg/m3	0.5	1.5		SKIN, K3
PENTAERYTHRITOL, RESPIRABLE DUST	115-77-5	mg/m3	3			
PENTAERYTHRITOL, TOTAL DUST	115-77-5	mg/m3	10	20		
n-PENTANE	109-66-0	ppm	600	750		
2-PENTANONE	107-87-9	ppm	150	250		
<i>PERCHLOROETHYLENE, see TETRACHLOROETHYLENE</i>						
PERCHLOROMETHYL MERCAPTAN	594-42-3	ppm	0.1			
PERCHLORYL FLUORIDE	7616-94-6	ppm	3	6		
PERFLUOROISOBUTYLENE	382-21-8	ppm			0.01	
PERLITE, RESPIRABLE DUST	60476-38-2	mg/m3	3			
PERLITE, TOTAL DUST	60476-38-2	mg/m3	10			
PERSULFATES, ALKALI METAL						Z, A

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PETROLEUM GAS, LIQUEFIED	68476-85-7	ppm	1000	1250		
PHENOL	108-95-2	ppm	5	40		SKIN
PHENOTHIAZINE	92-84-2	mg/m3	5	10		SKIN
<i>PHENYL ETHER, see DIPHENYL ETHER, VAPOUR</i>						
<i>PHENYL ETHER-DIPHENYL MIXTURE, see DIPHENYL ETHER, MIXED WITH DIPHENYL</i>						
PHENYL GLYCIDYL ETHER	122-60-1	ppm	0.1			SKIN, K3, Z, A
PHENYL HYDRAZINE	100-63-0	ppm	0.1			SKIN, K2, Z, A
PHENYL ISOCYANATE	103-71-9	ppm	0.005		0.01	Z, A
PHENYL MERCAPTAN	108-98-5	ppm			0.1	
PHENYL PHOSPHINE	638-21-1	ppm			0.05	
p-PHENYLENE DIAMINE	106-50-3	mg/m3	0.1			SKIN, Z, A
o-PHENYLENE DIAMINE	95-54-5	mg/m3	0.1			K2
<i>PHENYLETHYLENE, see STYRENE</i>						
n-PHENYL-2-NAPHTHYLAMINE	135-88-6					K2, A
PHORATE	298-02-2	mg/m3	0.05	0.2		SKIN
PHOSDRIN	7786-34-7	mg/m3	0.1	0.3		SKIN
<i>PHOSGENE, see CARBONYL CHLORIDE</i>						
PHOSPHINE	7803-51-2	ppm	0.3	0.3		
PHOSPHORIC ACID	7664-38-2	mg/m3	1	3		
PHOSPHORUS OXYCHLORIDE	10025-87-3	ppm	0.1			
PHOSPHORUS PENTACHLORIDE	10026-13-8	mg/m3	0.85			
PHOSPHORUS PENTASULFIDE	1314-80-3	mg/m3	1	3		
PHOSPHORUS TRICHLORIDE	7719-12-2	ppm	0.2	0.5		
PHOSPHORUS, YELLOW	7723-14-0	mg/m3	0.1	0.3		
PHTHALIC ANHYDRIDE	85-44-9	mg/m3	2		3	Z, A
m-PHTHALODINITRILE	626-17-5	mg/m3	5			
PICLORAM, RESPIRABLE DUST	1918-02-1	mg/m3	3			
PICLORAM, TOTAL DUST	1918-02-1	mg/m3	10	20		
PICRIC ACID	88-89-1	mg/m3	0.1	0.3		SKIN
PINDONE	83-26-1	mg/m3	0.1	0.3		
<i>alpha-PINENE, see TURPENTINE</i>						
<i>beta-PINENE, see TURPENTINE</i>						
PIPERAZINE AND ITS SALTS, AS PIPERAZINE	110-85-0	mg/m3	0.3	1		Z, A
PIPERIDINE	110-89-4	ppm	1			SKIN
<i>PIVAL (RT), see PINDONE</i>						
PLASTER OF PARIS, RESPIRABLE DUST	26499-65-0	mg/m3	3			
PLASTER OF PARIS, TOTAL DUST	26499-65-0	mg/m3	10	20		
PLATINUM METAL, AS Pt	7440-06-4	mg/m3	1			
PLATINUM, SOLUBLE SALTS, AS Pt	7440-06-4	mg/m3	0.002			Z, A
POLYVINYL CHLORIDE, TOTAL DUST	9002-86-2	mg/m3	5			
PORTLAND CEMENT, RESPIRABLE DUST	65997-15-1	mg/m3	3			
PORTLAND CEMENT, TOTAL DUST	65997-15-1	mg/m3	10	20		
POTASSIUM HYDROXIDE	1310-58-3	mg/m3			2	
PROPANE SULFONE	1120-71-4					SKIN, K2, A
PROPARGYL ALCOHOL	107-19-7	ppm	1	3		SKIN
beta-PROPIOLACTONE	57-57-8	ppm	0.5			SKIN, K2, A
PROPIONIC ACID	79-09-4	ppm	10			
PROPOXUR	114-26-1	mg/m3	0.5	2		
n-PROPYL ACETATE	109-60-4	ppm	200	250		
n-PROPYL ALCOHOL	71-23-8	ppm	200	250		SKIN
n-PROPYL NITRATE	627-13-4	ppm	25	40		
<i>PROPYLENE DICHLORIDE, see 1,2-DICHLOROPROPANE</i>						
PROPYLENE GLYCOL DINITRATE	6423-43-4	ppm	0.05		0.2	SKIN
<i>PROPYLENE GLYCOL MONOMETHYL ETHER, see 1-METHOXY-2-PROPANOL</i>						
PROPYLENE IMINE	75-55-8	ppm	2			SKIN, K2, A
Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation

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PROPYLENE OXIDE	75-56-9	ppm	5		SKIN, K3, Z, A
PROPYLENE, see METHYL ACETYLENE					
PYRETHRUM	8003-34-7	mg/m3	5	10	Z, A
PYRIDINE	110-86-1	ppm	5	10	
QUINONE, see p-BENZOQUINONE					
RDX (RT), see CYCLONITE					
RESORCINOL	108-46-3	ppm	10	20	
RHODIUM METAL AND INSOLUBLE COMPOUNDS OF RHODIUM, AS Rh	7440-16-6	mg/m3	0.1	0.3	
RHODIUM, SOLUBLE COMPOUNDS, AS Rh	7440-16-6	mg/m3	0.001	0.003	
RONNEL	299-84-3	mg/m3	10		
ROSIN CORE SOLDER PYROLYSIS PRODUCTS, AS FORMALDEHYDE	50-00-0	ppm	0.3		1 Z, A
ROTENONE, COMMERCIAL	83-79-4	mg/m3	5	10	
ROUGE, RESPIRABLE DUST		mg/m3	3		
ROUGE, TOTAL DUST		mg/m3	10	20	
RUBBER SOLVENT		mg/m3	1600		
SELENIUM AND COMPOUNDS, AS Se	7782-49-2	mg/m3	0.1		
SELENIUM HEXAFLUORIDE	7783-79-1	mg/m3	0.4		
SESONE, RESPIRABLE DUST	136-78-7	mg/m3	3		
SESONE, TOTAL DUST	136-78-7	mg/m3	10	20	
SEVIN (RT), see CARBARYL					
SILANE	7803-62-5	ppm	0.5	1	
SILICA, AMORPHOUS, DIATOMACEOUS EARTH, UNCALCINED, RESPIRABLE DUST (see note 4)		mg/m3	1.5		
SILICA, AMORPHOUS, DIATOMACEOUS EARTH, UNCALCINED, TOTAL DUST (see note 4)	61790-53-2	mg/m3	4		
SILICA, AMORPHOUS, NOT OTHERWISE SPECIFIED, RESPIRABLE DUST		mg/m3	1.5		
SILICA, AMORPHOUS, NOT OTHERWISE SPECIFIED, TOTAL DUST		mg/m3	4		
SILICA, AMORPHOUS, PRECIPITATED SILICA, RESPIRABLE DUST	112926-00-8	mg/m3	1.5		
SILICA, AMORPHOUS, PRECIPITATED SILICA, TOTAL DUST	112926-00-8	mg/m3	4		
SILICA, AMORPHOUS, SILICA FUME, RESPIRABLE DUST	7631-86-9	mg/m3	1.5		
SILICA, AMORPHOUS, SILICA FUME, TOTAL DUST	7631-86-9	mg/m3	4		
SILICA, AMORPHOUS, SILICA FUSED, RESPIRABLE DUST	60676-86-0	mg/m3	0.1		
SILICA, AMORPHOUS, SILICA GEL, RESPIRABLE DUST	112926-00-8	mg/m3	1.5		
SILICA, AMORPHOUS, SILICA GEL, TOTAL DUST	112926-00-8	mg/m3	4		
SILICA, CRYSTALLINE, CRISTOBALITE, RESPIRABLE DUST	14464-46-1	mg/m3	0.05		K2, A
SILICA, CRYSTALLINE, QUARTZ, RESPIRABLE DUST	14808-60-7	mg/m3	0.1		K2, A
SILICA, CRYSTALLINE, TRIDYMITE, RESPIRABLE DUST	15468-32-3	mg/m3	0.05		K2, A
SILICA, CRYSTALLINE, TRIPOLI, RESPIRABLE DUST	1317-95-9	mg/m3	0.1		K2, A
SILICON CARBIDE, RESPIRABLE DUST	409-21-2	mg/m3	3		
SILICON CARBIDE, TOTAL DUST	409-21-2	mg/m3	10	20	
SILICON TETRAHYDRIDE, see SILANE					
SILICON, RESPIRABLE DUST	7440-21-3	mg/m3	3		
SILICON, TOTAL DUST	7440-21-3	mg/m3	10	20	
SILVER AND COMPOUNDS, AS Ag	7440-22-4	mg/m3	0.01	0.03	
SOAPSTONE, RESPIRABLE DUST	14378-12-2	mg/m3	3		
SOAPSTONE, TOTAL DUST	14378-12-2	mg/m3	6		
SODIUM AZIDE	26628-22-8	ppm			0.1
SODIUM BISULFITE	7631-90-5	mg/m3	5		
SODIUM FLUOROACETATE	62-74-8	mg/m3	0.05	0.15	SKIN
SODIUM HYDROXIDE	1310-73-2	mg/m3			2
SODIUM METABISULFITE	7681-57-4	mg/m3	5		

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Chemical name	CAS number	Unit	8-hour-EL	15-minute EL	Ceiling EL	Designation
STARCH, RESPIRABLE DUST	9005-25-8	mg/m ³	3			
STARCH, TOTAL DUST	9005-25-8	mg/m ³	10	20		
STIBINE	7803-52-3	ppm	0.1	0.3		
STODDARD SOLVENT, <i>see</i> MINERAL SPIRITS						
STRONTIUM CHROMATE, AS-Cr	7789-06-2	mg/m ³	0.0005			K1, Z, A
STRYCHNINE	57-24-9	mg/m ³	0.15	0.45		
STYRENE	100-42-5	ppm	50	75		SKIN, K3
SUBTILISINS, ENZYMES, PROTEOLYTIC, AS-100% PURE CRYSTALLINE ENZYME	1395-21-7	mg/m ³			0.00006	Z, A
SUCROSE, RESPIRABLE DUST	57-50-1	mg/m ³	3			
SUCROSE, TOTAL DUST	57-50-1	mg/m ³	10	20		
SULFOMETURON METHYL	74222-97-2	mg/m ³	5			
SULFUR CHLORIDE	10025-67-9	ppm			4	
SULFUR DIOXIDE	7446-09-5	ppm	2	5		
SULFUR HEXAFLUORIDE	2551-62-4	ppm	1000	1250		
SULFUR MONOCHLORIDE, <i>see</i> SULFUR CHLORIDE						
SULFUR PENTAFLUORIDE	5714-22-7	ppm			0.01	
SULFUR TETRAFLUORIDE	7783-60-0	ppm			0.1	
SULFURIC ACID (<i>see note 9</i>)	7664-93-9	mg/m ³	4			K1, A
SULFURYL FLUORIDE	2699-79-8	ppm	5	10		
SULPROFOS	35400-43-2	mg/m ³	4			
SYNTHETIC MINERAL FIBRE (<i>see note 10</i>)		f/ml	4			K3
SYSTOX, <i>see</i> DEMETON						
2,4,5-T	93-76-5	mg/m ³	10	20		SKIN
TALC, CONTAINING NO ASBESTOS FIBRES, RESPIRABLE DUST	14807-96-6	mg/m ³	2			
TANTALUM, METAL AND OXIDE DUST, AS-Ta	7440-25-7	mg/m ³	5	10		
TEDP	3689-24-5	mg/m ³	0.2	0.6		SKIN
TELLURIUM AND COMPOUNDS, AS-Te	13497-80-9	mg/m ³	0.1			
TELLURIUM HEXAFLUORIDE	7783-80-4	mg/m ³	0.2			
TEPP	107-49-3	mg/m ³	0.05	0.2		SKIN
TEREPHTHALIC ACID, RESPIRABLE DUST	100-21-0	mg/m ³	3			
TEREPHTHALIC ACID, TOTAL DUST	100-21-0	mg/m ³	10			
TERPENES, <i>see</i> TURPENTINE						
TERPHENYLS, ALL OR MIXED ISOMERS	26140-60-3	ppm			0.5	
2,3,7,8-TETRACHLORO-DIBENZO-p-DIOXIN	1746-01-6					R2, A
1,1,2,2-TETRACHLORO-1,2-DIFLUOROETHANE	76-12-0	ppm	200			
1,1,1,2-TETRACHLORO-2,2-DIFLUOROETHANE	76-11-9	ppm	500	625		
1,1,2,2-TETRACHLOROETHANE	79-34-5	ppm	4			SKIN
TETRACHLOROETHYLENE	127-18-4	ppm	25	75		SKIN, K3
TETRACHLOROMETHANE, <i>see</i> CARBON TETRACHLORIDE						
TETRACHLORONAPHTHALENE, ALL ISOMERS	1335-88-2	mg/m ³	2	4		SKIN
TETRAETHYL LEAD	78-00-2	mg/m ³	0.075			SKIN
TETRAHYDROFURAN	109-99-9	ppm	200	250		
TETRAMETHYL LEAD	75-74-1	mg/m ³	0.075			SKIN
TETRAMETHYLSUCCINONITRILE	3333-52-6	ppm	0.5	2		SKIN
TETRANITROMETHANE	509-14-8	ppm	0.005			K2, A
TETRASODIUM PYROPHOSPHATE	7722-88-5	mg/m ³	5			
TETRYL	479-45-8	mg/m ³	1.5	3		SKIN, Z, A
THALLIUM, SOLUBLE COMPOUNDS, AS-Tl	7440-28-0	mg/m ³	0.1			SKIN
4,4'-THIOBIS(6- <i>tert</i> -BUTYL- <i>m</i> -CRESOL), TOTAL DUST	96-69-5	mg/m ³	10	20		
4,4'-THIOBIS(6- <i>tert</i> -BUTYL- <i>m</i> -CRESOL), RESPIRABLE DUST	96-69-5	mg/m ³	3			
THIOGLYCOLIC ACID	68-11-1	ppm	1			SKIN
THIONYL CHLORIDE	7719-09-7	ppm			1	
2-THIOUREA	62-56-6					R2
THIRAM	137-26-8	mg/m ³	1			R2, Z, A
TIN OXIDE, AS-Sn	21651-19-4	mg/m ³	2			
TIN, INORGANIC COMPOUNDS, AS-Sn	7440-31-5	mg/m ³	2	4		
TIN, ORGANIC COMPOUNDS, AS-Sn	7440-31-5	mg/m ³	0.1	0.2		SKIN

Proposed Amendments to the Occupational Health and Safety Regulation re: OELs

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Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling-EL	Designation
TITANIUM DIOXIDE, RESPIRABLE DUST	13463-67-7	mg/m ³	3			
TITANIUM DIOXIDE, TOTAL DUST	13463-67-7	mg/m ³	10	20		
TOLUENE	108-88-3	ppm	50	100		SKIN, R2
2,4-TOLUENE DIISOCYANATE	584-84-9	ppm	0.005		0.01	SKIN, K3, Z, A
2,6-TOLUENE DIISOCYANATE	91-08-7	ppm	0.005		0.01	K3, Z, A
o-TOLUIDINE	95-53-4	ppm	2			SKIN, K2
m-TOLUIDINE	108-44-1	ppm	2			SKIN
p-TOLUIDINE	106-49-0	ppm	2			SKIN, K2
TOXAPHENE, see CHLORINATED CAMPHENE						
TRIBUTYL PHOSPHATE	126-73-8	mg/m ³	2.2			
TRI-n-BUTYL TIN COMPOUNDS		mg/m ³	0.05			
TRICHLOROACETIC ACID	76-03-9	ppm	4			
1,2,4-TRICHLOROBENZENE	120-82-1	ppm			5	
1,1,1-TRICHLOROETHANE	71-55-6	ppm	350	440		
1,1,2-TRICHLOROETHANE	79-00-5	ppm	10	20		SKIN
TRICHLOROETHYLENE	79-01-6	ppm	50	100		SKIN
TRICHLOROFLUOROMETHANE	75-69-4	ppm			1000	
TRICHLOROMETHANE, see CHLOROFORM						
TRICHLORONAPHTHALENE	1321-65-9	mg/m ³	5	10		SKIN
1,2,3-TRICHLOROPROPANE	96-18-4	ppm	10			SKIN
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1	ppm	500	1250		
TRI-o-CRESYL PHOSPHATE	78-30-8	mg/m ³	0.1	0.3		
TRICYCLOHEXYL TIN HYDROXIDE, see CYHEXATIN						
TRIEETHANOLAMINE	102-71-6	mg/m ³	5			Z, A
TRIEETHYLAMINE	121-44-8	ppm	4			SKIN
TRIEETHYLENETETRAMINE	112-24-3					Z, A
TRIFLUOROMONOBROMOMETHANE, see BROMOTRIFLUOROMETHANE						
TRIMELLITIC ANHYDRIDE	552-30-7	mg/m ³			0.04	Z, A
TRIMETHYL BENZENE, ALL ISOMERS	25551-13-7	ppm	25	35		
TRIMETHYL HEXAMETHYLENE DIISOCYANATE		ppm	0.005		0.01	Z, A
TRIMETHYL PHOSPHITE	121-45-9	ppm	2			
TRIMETHYLAMINE	75-50-3	ppm	5	15		
2,4,6-TRINITROPHENOL, see PICRIC ACID						
2,4,6-TRINITROPHENYL METHYLNITRAMINE, see TETRYL						
2,4,6-TRINITROTOLUENE	118-96-7	mg/m ³	0.1			SKIN
TRIPHENYL AMINE	603-34-9	mg/m ³	5			
TRIPHENYL PHOSPHATE	115-86-6	mg/m ³	3	6		
TUNGSTEN, INSOLUBLE COMPOUNDS, AS W	7440-33-7	mg/m ³	5	10		
TUNGSTEN, SOLUBLE COMPOUNDS, AS W	7440-33-7	mg/m ³	1	3		
TURPENTINE (see note 11)	8006-64-2	ppm	25	50		SKIN, Z, A
URANIUM COMPOUNDS, NATURAL, INSOLUBLE, AS U	7440-61-1	mg/m ³	0.2	0.6		
URANIUM COMPOUNDS, NATURAL, SOLUBLE, AS U	7440-61-1	mg/m ³	0.05			
V.M. AND P. NAPHTHA	8032-32-4	mg/m ³	350			
VALERALDEHYDE	110-62-3	ppm	50			
VANADIUM PENTOXIDE, RESPIRABLE DUST AND FUME, AS V	1314-62-1	mg/m ³			0.05	
VANADIUM PENTOXIDE, TOTAL DUST, AS V	1314-62-1	mg/m ³	0.2			
VEGETABLE OIL MIST, RESPIRABLE FRACTION (see note 12)	8008-89-7	mg/m ³	3			
VEGETABLE OIL MIST, TOTAL FRACTION (see note 12)	8008-89-7	mg/m ³	10			
VINYL ACETATE	108-05-4	ppm	10	15		
VINYL BENZENE, see STYRENE						
VINYL BROMIDE	593-60-2	ppm	5			K2, A
VINYL CHLORIDE	75-01-4	ppm	1			K1, A
VINYL CYANIDE, see ACRYLONITRILE						
4-VINYL CYCLOHEXENE	100-40-3	ppm	0.1			K2

Proposed Amendments to the Occupational Health and Safety Regulation re: OELs

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Chemical name	CAS number	Unit	8-hour-EL	15-minute-EL	Ceiling EL	Designation
VINYL CYCLOHEXENE DIOXIDE	106-87-6	ppm	10			SKIN, K2
VINYL TOLUENE, ALL ISOMERS	25013-15-4	ppm	25	75		SKIN
VINYLDENE CHLORIDE	75-35-4	ppm	1			
WARFARIN	81-81-2	mg/m3	0.1	0.3		R2
WHITE SPIRIT, <i>see MINERAL SPIRITS</i>						
WOOD DUST, ALLERGENIC (see note 13)		mg/m3	1			K1, Z, A
WOOD DUST, NON-ALLERGENIC, HARDWOOD		mg/m3	1			K1, A
WOOD DUST, NON-ALLERGENIC, SOFTWOOD		mg/m3	2.5			K4
m-XYLENE-alpha,alpha'-DIAMINE	1477-55-0	mg/m3			0.1	SKIN, Z, A
XYLENE, o-, m-, AND p- ISOMERS	1330-20-7	ppm	100	150		SKIN
XYLIDINE, ALL ISOMERS	1300-73-8	ppm	0.5			SKIN, K2
YTTRIUM, METAL AND COMPOUNDS, AS Y	7440-65-5	mg/m3	1	3		
ZINC CHLORIDE, FUME	7646-85-7	mg/m3	1	2		
ZINC CHROMATE, AS Cr	13530-65-9	mg/m3	0.01			K1, Z, A
ZINC OXIDE, FUME	1314-13-2	mg/m3	5	10		
ZINC OXIDE, RESPIRABLE DUST	1314-13-2	mg/m3	3			
ZINC OXIDE, TOTAL DUST	1314-13-2	mg/m3	10			
ZINC STEARATE, RESPIRABLE DUST	557-05-1	mg/m3	3			
ZINC STEARATE, TOTAL DUST	557-05-1	mg/m3	10	20		
ZIRCONIUM COMPOUNDS, AS Zr	7440-67-7	mg/m3	5	10		

Explanatory Note

The adoption of exposure limits from the American Conference of Governmental Industrial Hygienists requires the repeal of Table 5-4. See section 5.48

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 9: CONFINED SPACES

Definitions 9.1

"harmful substance" means a WHMIS controlled product, a substance ~~listed in Table 5-4 in Part 5 (Chemical and Biological Substances)~~, **referred to under section 5.48**, or a substance which may have a harmful effect on a worker in a confined space;

Explanatory Note

The proposed amendment references harmful substances as identified in section 5.48 in place of Table 5-4.

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 12: TOOLS, MACHINERY AND EQUIPMENT

PAINTING, COATING AND WORK WITH PLASTICS AND RESIN

Respiratory protection

12.135 Each worker who is or may be exposed to an airborne contaminant generated by a spray operation involving a sensitizing agent **referred to in section 5.57(1)** must be provided with and wear air-supplied respiratory protection.

Explanatory Note

The proposed amendment references sensitizing agents as established in section 5.57(1).

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 30: LABORATORIES

GENERAL REQUIREMENTS

- | | | |
|-------------------|-------------|---|
| Fume hoods | 30.8 | <ul style="list-style-type: none">(1) Controls for the operation of a fume hood and its services must be located outside the fume hood and must be immediately accessible to the laboratory worker, except that water taps may be located inside the cabinet if the main shutoff valve is in a safe location outside the cabinet.(2) A fume hood must be connected to a local exhaust ventilation system which will provide minimum air velocities over the operational face area of the hood of<ul style="list-style-type: none">(a) an average of 0.5 m/s (100 fpm) but not less than 0.4 m/s (80 fpm) at any point across the face, and(b) an average of 0.75 m/s (150 fpm) but not less than 0.65 m/s (125 fpm) at any point across the face if the fume hood is used for carcinogenic substances listed in Table 5-4 in Part 5 (Chemical and Biological Substances) referred to under section 5.57(1), or for radioactive materials.(3) A fume hood must be located to prevent cross drafts or other disruptive forces from lowering the air flow across the operational face to unacceptable levels.(4) A fume hood and its ductwork must be constructed from materials compatible with its use.(5) A fume hood must be clearly labelled with any restrictions on use that apply to it.(6) A fume hood must not be used for storage of chemicals unless it is used exclusively for this purpose and is labelled with this limitation. |
|-------------------|-------------|---|

Explanatory Note

The proposed amendment references carcinogenic substances as defined in subsection 5.57(1), as amended, in place of those designated by Table 5-4.

Proposed Amendments to the *Occupational Health and Safety Regulation* re: OELs

APPENDIX A

PART 31: FIREFIGHTING

TRANSPORTATION

Vehicle exhaust in firehalls	31.32	Unless air monitoring shows that levels of vehicle exhaust gas components are below the exposure limits in Part 5 (Chemical and Biological Substances) established under section 5.48 , effective local venting for the exhaust gases must be provided in vehicle areas in firehalls.
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Explanatory Note

The proposed amendment specifies the exposure limits now referenced in section 5.48, as amended.

**Proposed Amendments to the *Regulations for Agricultural
Operations re: OELs***
APPENDIX B

**Confined Spaces
Precautions Before Entry**

Work procedures and pretesting **57** A worker shall not enter a tank, silo, storage bin, pit or other confined space in which a harmful atmosphere exists or may develop until

- (a) safe work procedures have been developed and the worker has been instructed in these procedures, and
- (b) steps have been taken, including testing, to ensure that no harmful concentrations of gases or other contaminants are present in the air and that the oxygen concentration is greater than ~~18%~~ **19.5%** by volume.

Note: Confined spaces may also present hazards other than a harmful atmosphere; for example, entrapment by materials. Regulation 14 applies where there is a danger of entrapment.

Explanatory Note

The proposed amendment changes the oxygen level in section 57(b) from 18% to 19.5% to be consistent with section 5.56 of the *Occupational Health and Safety Regulation* (“OHSR”) and the oxygen volume in the definition of “oxygen deficient” in section 1.1 of the *OHSR*.

**Proposed Amendments to the *Regulations for Agricultural
Operations re: OELs***
APPENDIX B

**Confined Spaces
Precautions Before Entry**

Ventilation and precleaning **58** Where tests made under ~~regulation~~ **section 57** indicate unsafe conditions, the confined space ~~shall~~ **must** be ventilated or cleaned or both and then retested to ensure that harmful substances are at or below the ~~levels stated in~~ **Appendix A of the *Industrial Health and Safety Regulation* exposure limits established under section 5.48 of the *Occupational Health and Safety Regulation*** and that the oxygen concentration is greater than ~~18%~~ **19.5%** by volume before a worker enters the confined space.

Note: Some of the harmful substances that may be encountered in confined spaces in the agriculture sector are:

*Carbon Monoxide
Hydrogen Sulfide
Methane
Nitrogen Dioxide
Welding Fumes*

~~See Appendix A of the *Industrial Health and Safety Regulation* for a complete listing of maximum permitted exposures to air contaminants.~~

Explanatory Note

The proposed amendment references the new exposure limits established under section 5.48 of the *Occupational Health and Safety Regulation* (“OHSR”), as amended. It replaces the permissible concentrations in the *Industrial Health and Safety Regulation*.

The proposed amendment changes the oxygen level in section 58 from 18% to 19.5% to be consistent with section 5.56 of the *OHSR* and the oxygen volume in the definition of “oxygen deficient” in section 1.1 of the *OHSR*.

**Proposed Amendments to the *Regulations for Agricultural
Operations re: OELs***
APPENDIX B

**Respiratory protection
When required**

When required	85	<p>When workers are or may be exposed to an atmosphere with less than 18% oxygen or to concentrations of air contaminants in excess of the permissible concentrations specified in Appendix A of the <i>Industrial Health and Safety Regulation</i>.</p> <p>(a) mechanical means or engineering design shall be used to prevent or to eliminate such hazardous conditions of exposure, and</p> <p>(b) where the prevention or elimination of such hazardous conditions is not reasonably practicable, or where the exposure results from temporary or emergency conditions only, every worker who may be exposed shall wear protective respiratory equipment.</p> <p>(1) When workers are or may be exposed to an atmosphere with less than 19.5% oxygen or to concentrations of air contaminants in excess of the exposure limits established under section 5.48 of the <i>Occupational Health and Safety Regulation</i> mechanical means or engineering design must be used to prevent or to eliminate such hazardous exposure conditions.</p> <p>(2) If the prevention or elimination of the hazardous exposure conditions is not reasonably practicable, or if the exposure results from temporary or emergency conditions only, every worker who may be exposed must wear protective respiratory equipment.</p>
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Explanatory Note

The proposed amendment changes the oxygen level in section 85 from 18% to 19.5% to be consistent with section 5.56 of the *Occupational Health and Safety Regulation* (“OHSR”) and the oxygen volume in the definition of “oxygen deficient” in section 1.1 of the *OHSR*.

The proposed amendment references the new exposure limits established under section 5.48 of the *OHSR*, as amended. It replaces the permissible concentrations in the *Industrial Health and Safety Regulation*.

Proposed Amendments to the *Industrial Health and Safety Regulation* re: OELs

APPENDIX C

**Places of Employment – General Requirements
Housekeeping**

- Use of compressed air for cleaning** **8.56** (1) Compressed air or steam shall not be used for blowing dust, chips, or other substances, from equipment, materials and structures, if any person could be exposed to the jet, or to the material expelled or propelled thereby, or if a fire, explosion or other injury or health hazard is likely to result.
- (2) Subject to clause (3) compressed air shall not be used for blowing harmful or hazardous dusts or other harmful substances from clothing being worn by workers. Where such clothing is cleaned prior to leaving the work area, suitable cleaning equipment shall be used.
- (3) Compressed air may be used in specially designated areas for blowing dusts or other substances from clothing being worn by workers, provided that
- (a) the substances have ~~a permissible concentration greater than 1.0 mg/m³, as listed in Table 1 of Appendix "A", or are not listed in Table 2 of Appendix "A",~~ **an exposure limit greater than 1.0 mg/m³ as established under section 5.48 of the *Occupational Health and Safety Regulation*,** and
 - (b) appropriate eye protection is worn, and
 - (c) the compressed air supply is limited to 10 psig (69 kPag), or
 - (d) safety nozzles which have the same pressure limiting effect are used.

Explanatory Note

The proposed amendment references the new exposure limits established under section 5.48 of the *Occupational Health and Safety Regulation*, as amended. It replaces the permissible concentrations in the *Industrial Health and Safety Regulation*.

Proposed Amendments to the *Industrial Health and Safety Regulation* re: OELs

APPENDIX C

Workers Compensation Act

INDUSTRIAL HEALTH AND SAFETY REGULATION

[includes amendments up to B.C. Reg. 187/99]

APPENDIX A

~~Permissible Concentrations of Chemical Contaminants~~

Appendix A

[See B.C. Reg. 340/97]

~~Permissible Concentrations of Chemical Contaminants~~

~~Permissible concentrations refer to airborne concentrations of substances and represent conditions under which it is believed that nearly all workers may be repeatedly exposed day after day without adverse effect. Because of wide variation in individual susceptibility, however, a small percentage of workers may experience discomfort from some substances at concentrations at or below the permissible concentration; a smaller percentage may be affected more seriously by aggravation of a pre-existing condition or by development of an occupational illness.~~

~~The categories of permissible concentrations are specified as:~~

~~(a) 8 hour Exposure Limit — The time weighted average concentrations for a normal 8 hour workday or a 40 hour work week;~~

~~(b) 15 minute Exposure Limit — The maximal concentration to which workers can be exposed for a period up to 15 minutes without suffering from irritation, chronic or irreversible tissue change, or narcosis of sufficient degree to increase accident proneness, impair self rescue, or materially reduce work efficiency, provided that not more than 4 excursions per day are permitted with at least 60 minutes between exposure periods and provided that the 8 hour exposure limit is not exceeded. The 15 minute exposure limit is considered a maximal allowable concentration, or ceiling, not to be exceeded at any time during the 15 minute excursion period;~~

~~(c) Ceiling (C) — The concentration of a chemical substance that should not be exceeded at any time;~~

~~(d) (K) — Substances used in industry which have proven carcinogenic in man or have induced cancer in animals under appropriate experimental conditions, (see Appendix B), or for which there are no permissible concentrations; and~~

~~(e) "Skin" Notation — Substances which carry the notation of "Skin" refer to the potential contribution to the overall exposure by skin absorption including mucous membranes and eye, either by airborne or, more particularly, by direct contact with the substance.~~

Table 1

~~Permissible Concentrations for Airborne Contaminant Substances~~

[am. B.C. Regs. 267/93; 343/93.]

~~ppm = parts of vapour or gas per million parts of contaminated air by volume at 25° and 760 mm mercury pressure.~~

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mg/m³ = approximate milligrams of material per cubic meter of air.

	Substance	Permissible Concentrations 8-hr Limit		Permissible Concentrations 15-min. Limit	
		ppm	mg/m ³	ppm	mg/m ³
	Abate	—	10	—	10
	Acetaldehyde	100	180	150	270
	Acetic acid	10	25	5	37
C	Acetic anhydride	5	20	—	—
	Acetone	250	—	500	—
	Acetonitrile	40	70	60	105
	Acetylene	(See Table 5)			
	Acetylene dichloride, see 1, 2-Dichloroethylene	200	790	250	1000
	Acetylene tetrabromide	1	14	1.5	18
	Acrolein	0.1	0.25	0.3	0.8
	Acrylamide - Skin	—	0.3	—	0.6
K	Acrylonitrile - Skin	20	45	30	65
	Aldrin - Skin	—	0.25	—	0.75
	Allyl alcohol - Skin	2	5	4	10
	Allyl chloride	1	3	2	6
	Allyl glycidyl ether (AGE) - Skin	5	22	10	44
	Allyl propyl disulfide	2	12	3	18
	Alundum (Al ₂ O ₃)	(See Table 4)			
K	4-Aminodiphenyl - Skin	(See Appendix B)			
	2-Aminoethanol, see Ethanolamine	3	8	6	15
	2-Aminopyridine	0.5	2	2	4
	Ammonia	25	18	35	27
	Ammonium chloride fume	—	10	—	20
	Ammonium sulfamate (Ammate)	—	10	—	20
	n-Amyl acetate	100	530	150	800
	sec-Amyl acetate	125	670	150	800
	Aniline - Skin	5	19	—	—
	Anisidine (o-, p-isomers) - Skin	0.1	0.5	—	—
	Antimony & compounds (as Sb)	—	0.5	—	—
	Antimony trioxide, handling and use (as Sb)	—	0.5	—	—
K	Antimony trioxide production (as Sb)	—	0.5	—	—
	ANTU (a-Naphthyl thiourea)	—	0.3	—	0.9
	Argon	(See Table 5)			
	Arsenic & compounds (as As)	—	0.5	—	—
K	Arsenic trioxide production (as As)	—	0.05	—	—
	Arsine	0.05	0.2	—	—
K	Asbestos (all forms)	(See Table 3)			
	Asphalt (petroleum) fumes	—	5	—	10
	Atrazine	—	10	—	—
	Azinphos-methyl - Skin	—	0.2	—	0.6
	Barium, soluble compounds (as Ba)	—	0.5	—	—
	Baygon (Propoxur)	—	0.5	—	2
K,C	Benzene	10	30	—	—
K	Benzidine production - Skin	(See Appendix B)			
	p-Benzoquinone, see Quinone	0.1	0.4	0.3	2

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	Benzoyl peroxide	—	5	—	—
K	Benzo (a) pyrene		(See Appendix B)		
	Benzyl chloride	1	5	—	—
K	Beryllium	—	0.002	—	0.025
	Biphenyl	0.2	1.5	0.6	4
C	Bisphenol A, see Diglycidal ether (DGE)	0.5	3.0	—	—
	Bismuth telluride	—	10	—	20
	Bismuth telluride, Selenium-doped	—	5	—	10
	Borates, tetra, sodium salts,				
	— Anhydrous	—	1	—	—
	— Decahydrate	—	5	—	—
	— Pentahydrate	—	1	—	—
	Boron oxide	—	10	—	20
	Boron Tribromide	1	10	3	30
C	Boron trifluoride	1	3	—	—
	Bromine	0.1	0.7	0.3	2
	Bromine pentafluoride	0.1	0.7	0.3	2
	Bromochloromethane/chlorobromomethane	200	1050	250	1300
	Bromoform - Skin	0.5	5	—	—
	Butadiene (1, 3-butadiene)	1000	2200	1250	2750
	Butane	600	1430	750	1780
	Butanethiol, see Butyl mercaptan		(See Table 2)		
	2-Butanone	200	590	300	885
	2-Butoxyethanol (Butyl Cellosolve) - Skin	50	240	150	720
	n-Butyl acetate	150	710	200	950
	sec-Butyl acetate	200	950	250	1190
	tert-Butyl acetate	200	950	250	1190
	Butyl acrylate	10	55	—	—
C	n-Butyl alcohol - Skin	50	150	—	—
	sec-Butyl alcohol	150	450	—	—
	tert-Butyl alcohol	100	300	150	450
C	Butylamine - Skin	5	15	—	—
C	tert-Butyl chromate (as CrO ₃) - Skin	—	0.1	—	—
	n-Butyl glycidyl ether (BGE)	50	270	—	—
	n-Butyl lactate	5	25	—	—
	Butyl mercaptan		(See Table 2)		
	p-tert-Butyltoluene	10	60	20	120
	Cadmium dust & salts (as Cd)	—	0.05	—	0.2
C	Cadmium oxide fume (as Cd)	—	0.05	—	—
K	Cadmium oxide production (as Cd)	—	0.05	—	—
	Calcium arsenate (as As)	—	1	—	—
	Calcium carbonate/marble		(See Table 4)		
	Calcium cyanamide	—	0.5	—	1
	Calcium hydroxide	—	5	—	—
	Calcium oxide	—	2	—	—
	Calcium silicate		(See Table 4)		
	Camphor, synthetic	2	12	3	18
	Caprolactam				
	— Dust	—	1	—	3
	— Vapour	5	20	10	40
	Captafol (Difolatan®) - Skin	—	0.1	—	—

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	Captan	—	5	—	15
	Carbaryl (Sevin®)	—	5	—	10
	Carbofuran (Furadan®)	—	0.1	—	—
	Carbon black	—	3.5	—	7
	Carbon dioxide	5000	9000	15 000	27 000
	Carbon disulfide - Skin	20	60	30	90
	Carbon monoxide	25	—	100	—
	Carbon tetrabromide	0.1	1.4	0.3	4
	Carbon tetrachloride - Skin	10	65	20	130
	Carbonyl chloride (Phosgene)	0.1	0.4	—	—
	Carbonyl fluoride	5	15	—	—
	Catechol (Pyrocatechol)	5	20	—	—
	Cellulose (paper fiber)		(See Table 4)		
	Cesium hydroxide	—	2	—	—
	Chlordane - Skin	—	0.5	—	2
	Chlorinated camphene - Skin	—	0.5	—	1
	Chlorinated diphenyl oxide	—	0.5	—	2
	Chlorine	0.5	—	1	—
	Chlorine dioxide	0.1	0.3	0.3	0.9
C	Chlorine trifluoride	0.1	0.4	—	—
C	Chloroacetaldehyde	1	3	—	—
	a-Chloroacetophenone (Phenacyl chloride)	0.05	0.3	—	—
	Chlorobenzene (Monochlorobenzene)	75	350	—	—
	a-Chlorobenzylidene malonitrile - Skin	0.05	0.4	0.15	1.0
	Chlorobromomethane/Bromochloromethane	200	1050	250	1300
	2-Chloro-1, 3-butadiene, — see b-Chloroprene - Skin	25	90	35	125
	Chlorodifluoromethane	1000	3500	1250	4375
	Chlorodiphenyl (42% Chlorine) - Skin	—	1	—	2
	Chlorodiphenyl (54% Chlorine) - Skin	—	0.5	—	1
	1-Chloro-, 2-, 3-epoxy propane (Epichlorohydrin) - Skin	5	20	10	40
C	2-Chloroethanol (Ethylene chlorohydrin) - Skin	1	3	—	—
K	Chloroethylene (vinyl chloride)	1	2.5	—	—
K	Chloroform (Trichloromethane)	10	50	—	—
K	bis-Chloromethyl ether	0.001	0.005	—	—
	1-Chloro-1-nitropropane	20	100	30	150
	Chloropicrin	0.1	0.7	0.3	2
	b-Chloroprene - Skin	25	90	35	135
	Chlorpyrifos (Dursban®) - Skin	—	0.2	—	0.6
	o-Chlorostyrene	50	285	75	430
	o-Chlorotoluene - Skin	50	250	75	375
	2-Chloro-6-(trichloromethyl) pyridine (N-Serve®)	—	10	—	20
K	Chromate, Insoluble lead and zinc, (as Cr)	—	0.05	—	—
	Chromic acid and Chromates, (as Cr)	—	0.05	—	—
K	Chromite ore processing (chromate), (as Cr)	—	0.05	—	—
	Chromium, Sol. chromic, chromous salts (as Cr)	—	0.5	—	—
	Clopidol (Coydon®)	—	10	—	20
K	Coal tar pitch volatiles, — see Particulate polycyclic aromatic hydrocarbons	—	0.2	—	—
K	Cobalt (elemental & inorganic, as Co)	—	0.02	—	—

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	Copper fume	—	-0.2	—	—
	———Dusts & Mists (as Cu)	—	1	—	2
	Corundum (Al ₂ O ₃)		(See Table 4)		
	Cotton dust raw	—	-0.2	—	-0.6
	Crag® herbicide	—	-10	—	-20
	Cresol, all isomers - Skin	-5	-22	—	—
	Crotonaldehyde	-2	-6	-6	-18
	Crufomate®	—	-5	—	-20
	Cumene - Skin	-50	-245	-75	-365
	Cyanamide	—	-2	—	—
	Cyanide (as CN) - Skin	—	-5	—	—
	Cyanogen	-10	-20	—	—
	Cyclohexane	-300	-1050	-375	-1300
	Cyclohexanol	-50	-200	—	—
	Cyclohexanone	-50	-200	—	—
	Cyclohexene	-300	-1015	—	—
	Cyclohexylamine - Skin	-10	-40	—	—
	Cyclopentadiene	-75	-200	-150	-400
	2,4-D (2,4-Dichlorophenoxyacetic acid)	—	-10	—	-20
	DDT (Dichlorodiphenyltrichloroethane)	—	-1	—	-3
	DDVP, see Dichlorvos - Skin	-0.1	-1	-0.3	-3
	Decaborane - Skin	-0.05	-0.3	-0.15	-0.9
	Demeton® - Skin	-0.01	-0.1	-0.03	-0.3
	Diacetone alcohol (4-hydroxy-4-methyl-2-pentanone)	-50	-240	-75	-360
	1,2-Diaminoethane, see Ethylenediamine	-10	-25	—	—
	Diazinon - Skin	—	-0.1	—	-0.3
	Diazomethane	-0.2	-0.4	—	—
	Diborane	-0.1	-0.1	—	—
K	1,2-Dibromoethane (Ethylene dibromide) - Skin	-20	-155	-30	-230
	Dibrom®	—	-3	—	-6
	Dibromodifluoromethane	-100	-860	-150	-1290
	2-N-Dibutylaminoethanol - Skin	-2	-14	-4	-28
	Dibutyl phosphate	-1	-5	-2	-10
	Dibutyl phthalate	—	-5	—	-10
C	Dichloroacetylene	-0.1	-0.4	—	—
C	o-Dichlorobenzene	-50	-300	—	—
	p-Dichlorobenzene	-75	-450	-110	-675
K	3,3-Dichlorobenzidine - Skin		(See Appendix B)		
	Dichlorodifluoromethane	-1000	-4950	-1250	-6200
	1,3-Dichloro-5,5-dimethyl hydantoin	—	-0.2	—	-0.4
	1,1-Dichloroethane	-200	-810	-250	-1010
	1,2-Dichloroethane	-50	-200	-75	-300
	1,2-Dichloroethylene	-200	-790	-250	-1000
	Dichloroethyl ether - Skin	-5	-30	-10	-60
	Dichloromethane, see Methylene chloride	-200	-700	-250	-870
	Dichloromonofluoromethane	-1000	-4200	—	—
C	1,1-Dichloro-1-nitroethane	-10	-60	—	—
	1,2-Dichloropropane, see Propylene dichloride	-75	-350	-110	-510
	Dichlorotetrafluoroethane	-1000	-7000	-1250	-8750
	Dichlorvos (DDVP) - Skin	-0.1	-1	-0.3	-3
	Dicrotophos (Bidrin®) - Skin	—	-0.25	—	—

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	Dicyclopentadiene	-5	-30	—	—
	Dicyclopentadienyl iron	—	-10	—	-20
	Dieldrin - Skin	—	-0.25	—	-0.75
	Diethylamine	-25	-75	—	—
	Diethylaminoethanol - Skin	-10	-50	—	—
	Diethylene triamine - Skin	4	4	—	—
	Diethyl ether, see Ethyl ether	-400	-1200	-500	-1500
	Diethyl phthalate	—	-5	—	-10
	Difluorodibromomethane	-100	-860	-150	-1290
C	Diglycidyl ether (DGE)	-0.5	-3	—	—
	Dihydroxybenzene, see Hydroquinone	—	-2	—	4
	Diisobutyl Ketone	-25	-150	—	—
	Diisopropylamine - Skin	-5	-20	—	—
	Dimethoxymethane, see Methylal	-1000	-3100	-1250	-3875
	Dimethyl acetamide - Skin	-10	-35	15	-50
K	Dimethyl carbamyl chloride		(See Appendix B)		
	Dimethylamine	-10	-18	—	—
	Dimethylaminobenzene, see Xylidene - Skin	-5	-25	-10	-50
	Dimethylaniline (N,N-Dimethylaniline) - Skin	-5	-25	-10	-50
	Dimethylbenzene, see Xylene - Skin	-100	-435	-150	-650
	Dimethyl-1,2-dibromo-2-dichloroethyl phosphate, see Dibrom®	—	-3	—	-6
	Dimethylformamide - Skin	-10	-30	-20	-60
	2,6-Dimethyl-4-heptanone, — see Diisobutyl ketone	25	150	—	—
	1,1-Dimethylhydrazine - Skin	-0.5	-1	-1	-2
	Dimethylphthalate	—	-5	—	-10
K,C	Dimethyl sulfate - Skin	-0.1	-0.5	—	—
	Dinitrobenzene (all isomers) - Skin	-0.15	-1	-0.5	-3
	Dinitro- <i>o</i> -cresol - Skin	—	-0.2	—	-0.6
	3,5-Dinitro- <i>o</i> -toluamide (Zonalene®)	—	-5	—	-10
	Dinitrotoluene - Skin	—	-1.5	—	-5
	Dioxane, tech. grade - Skin	-50	-180	—	—
	Dioxathion (Delnav®) - Skin	—	-0.2	—	—
	Diphenyl, see Biphenyl	-0.2	-1.5	-0.6	4
C	Diphenylamine	—	-10	—	-20
	Diphenylamine diisocyanate, — see Methylene bisphenyl isocyanate (MDI)	0.02	0.2	—	—
	Dipropylene glycol methyl ether - Skin	-100	-600	-150	-900
	Diquat (Reglone®)	—	-0.5	—	-1
	Di- <i>sec</i> , octyl phthalate (Di-2-ethylhexylphthalate)	—	-5	—	-10
	Disulfiram	—	-2	—	-5
	Disyston - Skin	—	-0.1	—	-0.3
	2,6-Ditert. Butyl- <i>p</i> -cresol	—	-10	—	-20
	Diuron	—	-10	—	—
	Dyfonate	—	-0.1	—	—
	Emery		(See Table 4)		
	Endosulfan (Thiodan®) - Skin	—	-0.1	—	-0.3
	Endrin - Skin	—	-0.1	—	-0.3
	Enflurane	-2	—	—	—
K	-Epichlorhydrin - Skin	-5	-20	-10	-40
	-EPN - Skin	—	-0.5	—	-2

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	1,2-Epoxypropane, see Propylene oxide	100	240	150	360
	2,3-Epoxy-1-propanol, see Glycidol	50	150	75	225
	Ethane		(See Table 5)		
	Ethaneethiol, see Ethyl mercaptan		(See Table 2)		
	Ethanolamine	3	8	6	15
	Ethion (Nialate®) - Skin	—	0.4	—	—
	2-Ethoxyethanol - Skin	100	370	150	560
	2-Ethoxyethyl acetate (Cellosolve acetate) - Skin	100	540	150	810
	Ethyl acetate	400	1400	—	—
	Ethyl acrylate - Skin	25	100	—	—
	Ethyl alcohol (Ethanol)	1000	1900	—	—
	Ethylamine	10	18	—	—
	Ethyl sec-amyl ketone (4-Methyl-3-heptanone)	25	130	—	—
	Ethyl benzene	100	435	125	545
	Ethyl bromide	200	890	250	1110
	Ethylbutyl ketone (3-Heptanone)	50	230	75	345
	Ethyl chloride	1000	2600	1250	3250
	Ethyl ether	400	1200	500	1500
	Ethyl formate	100	300	150	450
	Ethyl mercaptan		(See Table 2)		
	Ethyl silicate	100	850	—	—
	Ethylene		(See Table 5)		
C	Ethylene chlorohydrin - Skin	1	3	—	—
	Ethylenediamine	10	25	—	—
	Ethylene dibromide, see 1,2-Dibromoethane	20	155	30	230
	Ethylene dichloride, see 1,2-Dichloroethane	50	200	75	300
	Ethylene glycol,	—	10	—	20
	Particulate	100	200	125	325
	Vapour				
C	Ethylene glycol dinitrate and/or Nitroglycerin - Skin	0.2	2	—	—
	Ethylene glycol monomethyl ether acetate (Methyl cellosolve acetate) - Skin	25	120	35	170
K	Ethylene oxide	0.1	—	1	—
	Ethylenimine - Skin	0.5	1	—	—
	Ethylidene chloride, see 1,1-Dichloroethane	200	810	250	1010
C	Ethylidene norbornene	5	25	—	—
	N-Ethylmorpholine - Skin	20	94	—	—
	Fensulfothion (Dasanit®)	—	0.1	—	—
	Ferbam	—	10	—	20
	Ferrovandium dust	—	1	—	3.0
	Fluoride (as F)	—	2.5	—	—
	Fluorine	1	2	2	4
	Fluorotrichloromethane	1000	5600	1250	7000
C	Formaldehyde	2	3	—	—
	Formamide	20	30	30	45
	Formic acid	5	9	—	—
	Furfural - Skin	5	20	15	60
	Furfuryl alcohol - Skin	5	20	10	40
	Gasoline		(See Table 2)		
	Germanium tetrahydride	0.2	0.6	0.6	1.8
	Glass, fibrous or dust		(See Table 4)		
C	Glutaraldehyde, activated or unactivated	—	0.25	—	—

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	Glycerin mist		(See Table 4)	
	Glycidol (2,3-Epoxy-1-propanol)	-50	-150	-75
	Glycol monoethyl ether,	100	370	150
	— see 2-Ethoxyethanol — Skin			560
	Graphite (synthetic)		(See Table 4)	
	Guthion®, see Azinphos-methyl — Skin	—	-0.2	—
	Gypsum		(See Table 4)	
	Hafnium	—	-0.5	—
	Halothane	-2	—	—
	Helium		(See Table 5)	
	Heptachlor — Skin	—	-0.5	—
	Heptane (n-Heptane)	-400	-1600	-500
	Hexachlorocyclopentadiene	-0.04	-0.1	-0.03
	Hexachloroethane — Skin	-4	-10	-3
	Hexachloronaphthalene — Skin	—	-0.2	—
	Hexafluoroacetone	-0.4	-0.7	-0.3
	Hexane (n-hexane)	-100	-360	-125
K	Hexamethyl phosphoramide — Skin		(See Appendix B)	
	2-Hexanone, see Methyl butyl ketone — Skin	-25	-100	-40
	Hexone (Methyl isobutyl ketone) — Skin	-100	-410	-125
	sec-Hexyl acetate	-50	-300	—
C	Hexylene glycol	-25	-125	—
K	Hydrazine — Skin	-0.4	-0.1	—
	Hydrogen		(See Table 5)	
	Hydrogenated terphenyls	-0.5	-5	—
	Hydrogen bromide	-3	-10	—
C	Hydrogen chloride	-5	-7	—
	Hydrogen cyanide — Skin	-10	-14	-15
	Hydrogen fluoride	-3	-2	—
	Hydrogen peroxide	-4	-1.5	-2
	Hydrogen selenide	-0.05	-0.2	—
	Hydrogen sulfide	-10	-15	-15
	Hydroquinone	—	-2	—
	Indene	-10	-45	-15
	Indium & compounds (as In)	—	-0.1	—
C	Iodine	-0.4	-4	—
	Iodoform	-0.6	-10	-4
	Iron oxide fume (as Fe₂O₃)	—	-5	—
	Iron pentacarbonyl	-0.04	-0.08	—
	Iron salts, soluble (as Fe)	—	-4	—
	Isoamyl acetate	-100	-525	-125
	Isoamyl alcohol	-100	-360	-125
	Isobutyl acetate	-150	-700	-187
	Isobutyl alcohol	-50	-150	-75
C	Isophorone	-5	-25	—
	Isophorone diisocyanate — Skin	-0.04	-0.09	—
	Isopropyl acetate	-250	-950	-310
	Isopropyl alcohol — Skin	-400	-980	-500
	Isopropylamine	-5	-12	-10
	Isopropyl ether	-250	-1050	-340
	Isopropyl glycidyl ether (IGE)	-50	-240	-75
	Kaolin		(See Table 4)	

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	Ketene	0.5	0.9	1.5	3
K	Lead (inorganic, as Pb)	—	0.05	—	—
	Limestone		(See Table 4)		
	Lindane - Skin	—	0.05	—	1.5
	Lithium Hydride	—	0.025	—	—
	L.P.G. (Liquified petroleum gas)	1000	1800	1250	2250
	Magnesite		(See Table 4)		
	Magnesium oxide fume (as Mg)	—	10	—	—
	Malathion - Skin	—	10	—	—
	Maleic anhydride	0.25	1	—	—
C	Manganese & compounds (as Mn)	—	5	—	—
	Manganese cyclopentadienyl tricarbonyl (as Mn) - Skin	—	0.1	—	0.3
	Manganese tetroxide	—	1	—	—
	Marble/calcium carbonate		(See Table 4)		
	Mercury, alkyl compounds (as Hg) - Skin	0.001	0.01	0.003	0.03
	Mercury, all forms except alkyl (as Hg)	—	0.05	—	0.15
	Mesityl oxide	25	100	—	—
	Methane		(See Table 5)		
	Methanethiol, see Methyl mercaptan		(See Table 2)		
	Methomyl (Lannate®) - Skin	—	2.5	—	—
	Methoxychlor	—	10	—	—
	2-Methoxyethanol - Skin (Methyl cellosolve)	25	80	35	120
	Methyl acetate	200	610	250	760
	Methyl acetylene (propyne)	1000	1650	1250	2040
	Methyl acetylene-propadiene mixture (MAPP)	1000	1800	1250	2250
	Methyl acrylate - Skin	10	35	—	—
	Methylacrylonitrile - Skin	1	3	2	6
	Methylal (dimethoxymethane)	1000	3100	1250	3875
	Methyl alcohol (methanol) - Skin	200	260	250	310
	Methylamine	10	12	—	—
	Methyl amyl alcohol, see Methyl isobutyl carbinol - Skin	25	100	40	160
	Methyl n-amyl ketone (2-Heptanone)	100	465	150	710
	Methyl bromide - Skin	15	60	—	—
	Methyl butyl ketone, see 2-Hexanone - Skin	25	100	40	165
	Methyl cellosolve - Skin, see 2-Methoxyethanol	25	80	35	120
	Methyl cellosolve acetate - Skin, see Ethylene glycol monomethyl ether acetate	25	120	35	170
	Methyl chloride	100	210	125	260
	Methyl chloroform (1,1,1-Trichloroethane)	350	1900	450	2380
	Methyl 2-cyanoacrylate	2	8	4	16
	Methylcyclohexane	400	160	500	2000
	Methylcyclohexanol	50	235	75	350
	o-Methylcyclohexanone - Skin	50	230	75	345
	Methylcyclopentadienyl manganese tricarbonyl (as Mn) - Skin	0.1	0.2	0.3	0.6
	Methyl demeton - Skin	—	0.5	—	1.5
C	Methylene bisphenyl isocyanate (MDI)	0.02	0.2	—	—
	Methylene chloride (dichloromethane)	200	700	250	870
K	4,4' Methylene bis (2-chloroaniline) - Skin	0.02	0.2	—	—
C	Methylene bis (4-cyclohexylisocyanate)	0.04	0.11	—	—

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	Methyl ethyl ketone (MEK), see 2-Butanone	200	590	300	885
C	Methyl ethyl ketone peroxide	0.2	1.5	—	—
	Methyl formate	100	250	150	375
	Methyl iodide - Skin	5	28	10	56
	Methyl isoamyl ketone	100	475	150	710
	Methyl isobutyl carbinol - Skin	25	100	40	165
	Methyl isobutyl ketone, see Hexone - Skin	100	410	125	510
	Methyl isocyanate - Skin	0.02	0.05	—	—
	Methyl mercaptan		(See Table 2)		
	Methyl methacrylate	100	410	125	510
	Methyl parathion - Skin	—	0.2	—	0.6
	Methyl propyl Ketone, see 2-Pentanone	200	700	250	875
C	Methyl silicate	5	30	—	—
C	α-Methyl styrene	100	480	—	—
	Mineral wool fibre		(See Table 4)		
	Molybdenum (as Mo)				
	— Soluble compounds	—	5	—	10
	— Insoluble compounds	—	10	—	20
	Monocrotophos (Azodrin®)	—	0.25	—	—
	Monomethyl aniline - Skin	2	9	4	18
C	Monomethyl hydrazine - Skin	0.2	0.35	—	—
	Morpholine - Skin	20	70	30	105
	Naphthalene	10	50	15	75
K	β-Naphthylamine		(See Appendix B)		
	Neon		(See Table 5)		
K	Nickel (metal, soluble & insoluble, as Ni)	—	0.05	—	—
	Nicotine - Skin	—	0.5	—	1.5
	Nitric acid	2	5	4	10
	Nitric oxide	25	30	35	45
	p-Nitroaniline - Skin	1	6	2	12
	Nitrobenzene - Skin	1	5	2	10
	p-Nitrochlorobenzene - Skin	—	1	—	2
K	4-Nitrodiphenyl		(See Appendix B)		
	Nitroethane	100	310	150	465
	Nitrogen		(See Table 5)		
C	Nitrogen dioxide	1	—	—	—
	Nitrogen trifluoride	10	29	15	45
C	Nitroglycerin - Skin	0.2	2	—	—
	Nitromethane	100	250	150	375
	1-Nitropropane	25	90	35	135
K	2-Nitropropane	25	90	—	—
K	N-Nitrosodimethylamine (dimethylnitrosoamine) - Skin		(See Appendix B)		
	Nitrotoluene - Skin	5	30	10	60
	Nitrotrichloromethane, see Chloropicrin	0.1	0.7	0.3	2
	Nitrous oxide	25	—	—	—
	Nonane	200	1050	250	1300
	Octachloronaphthalene - Skin	—	0.1	—	0.3
	Octane	300	1450	375	1800
	Oil mist, mineral	—	5	—	10
	Osmium tetroxide (as Os)	0.0002	0.002	0.0006	0.006
	Oxalic acid	—	1	—	2

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	Oxygen difluoride	-0.05	-0.1	-0.15	-0.3
	Ozone	-0.1	-0.2	-0.3	-0.6
	Paraffin wax fume	—	2	—	6
	Paraquat (Gramoxone®) respirable sizes	—	-0.1	—	-0.3
	Parathion - Skin	—	-0.1	—	-0.3
K	Particulate polycyclic aromatic hydrocarbons (PPAH), as benzene solubles	—	-0.2	—	—
	Pentaborane	-0.005	-0.01	-0.015	-0.03
	Pentachloronaphthalene	—	-0.5	—	2
	Pentachlorophenol - Skin	—	-0.5	—	1.5
	Pentaerythritol		(See Table 4)		
	Pentane	600	1800	750	2250
	2-Pentanone	200	700	250	875
K	Perchloroethylene - Skin	25	—	75	—
	Perchloromethyl mercaptan	-0.1	-0.8	—	—
	Perchloryl fluoride	3	14	6	28
	Phenol - Skin	5	19	10	38
	Phenothiazine - Skin	—	5	—	10
	p-Phenylene diamine - Skin	—	-0.1	—	—
	Phenyl ether (vapour)	1	7	2	14
	Phenyl ether-Diphenyl mixture (vapour)	1	7	2	14
	Phenylethylene, see Styrene	50	—	75	—
	Phenyl glycidyl ether (PGE)	10	60	15	90
	Phenyl mercaptan	-0.5	2	—	—
	Phenylhydrazine - Skin	5	22	10	44
C	Phenylphosphine	-0.05	-0.25	—	—
	Phorate (Thimet®) - Skin	—	-0.05	—	-0.2
	Phosdrin (Mevinphos®) - Skin	-0.01	-0.1	-0.03	-0.3
	Phosgene Carbonyl chloride)	-0.1	-0.4	—	—
	Phosphine	-0.3	-0.4	1	1
	Phosphoric acid	—	1	—	3
	Phosphorus (yellow)	—	-0.1	—	-0.3
	Phosphorus pentachloride	—	1	—	3
	Phosphorus pentasulfide	—	1	—	3
	Phosphorus trichloride	-0.5	3	—	—
	Phthalic anhydride	1	6	4	24
	m-Phthalodinitrile	—	5	—	—
	Picloram (Tordon®)	—	10	—	20
	Picric acid - Skin	—	-0.1	—	-0.3
	Pival® (2-Pivalyl-1,3-indandione)	—	-0.1	—	-0.3
	Plaster of Paris		(See Table 4)		
	Platinum, soluble salts (as Pt)	—	-0.002	—	—
	Polychlorobiphenyls - Skin (see Chlorodiphenyls)	—	—	—	—
	Polytetrafluoroethylene decomposition products (as Fluorine)	—	2.5	—	—
	Portland cement		(See Table 4)		
C	Potassium hydroxide	—	2	—	—
	Propane		(See Table 5)		
K	β-Propiolactone		(See Appendix B)		
	Propargyl alcohol - Skin	1	2	3	6
	n-Propyl acetate	200	840	250	1050

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	Propyl alcohol - Skin	200	500	250	625
	n-Propyl nitrate	25	105	40	470
	Propylene		(See Table 5)		
	Propylene dichloride (1,2-Dichloropropane)	75	350	110	510
C	Propylene glycol dinitrate - Skin	0.2	2	—	—
	Propylene glycol monomethyl ether	100	360	150	540
	Propylene imine - Skin	2	5	—	—
	Propylene oxide	100	240	150	360
	Propyne (see Methyl acetylene)	1000	1650	1250	2040
	Pyrethrum	—	5	—	10
	Pyridine	5	15	10	30
	Quinone	0.1	0.4	0.3	2
	RDX® - Skin	—	1.5	—	3
	Resorcinol	10	45	20	90
	Rhodium, metal fume and dusts (as Rh)	—	0.1	—	0.3
	soluble salts (as Rh)	—	0.001	—	0.003
	Rennet	—	10	—	—
	Rosin core solder pyrolysis products (as Formaldehyde)	—	0.1	—	0.3
	Rotenone (commercial)	—	5	—	10
	Rouge		(See Table 4)		
	Rubber solvent (Naphtha)	400	1600	—	—
	Selenium compounds (as Se)	—	0.2	—	—
	Selenium hexafluoride (as Se)	0.05	0.4	0.05	0.4
	Sevin® (see Carbaryl)	—	5	—	10
	Silane (see Silicon tetrahydride)	0.5	7	1	2
	Silicon		(See Table 4)		
	Silicon carbide		(See Table 4)		
	Silicon tetrahydride (Silane)	0.5	0.7	1	2
	Silver, metal and soluble compounds (as Ag)	—	0.01	—	0.03
C	Sodium azide	0.1	0.3	—	—
	Sodium fluoroacetate (1080) - Skin	—	0.05	—	0.15
C	Sodium hydroxide	—	2	—	—
	Starch		(See Table 4)		
	Stibine	0.1	0.5	0.3	1.5
	Stoddard solvent	100	575	125	720
	Strychnine	—	0.15	—	0.45
K	Styrene	50	—	75	—
C	Subtilisins (Proteolytic enzymes as 100% pure crystalline enzyme)	—	0.00006	—	—
	Sucrose		(See Table 4)		
	Sulfur dioxide	2	—	5	—
	Sulfur hexafluoride	1000	6000	1250	7500
	Sulfuric acid	—	1	—	—
	Sulfur monochloride	1	6	3	18
	Sulfur pentafluoride	0.025	0.25	0.075	0.75
	Sulfur tetrafluoride	0.1	0.4	0.3	1
	Sulfuryl fluoride	5	20	10	40
	Systox, see Demeton® - Skin	0.01	0.1	0.03	0.3
	2,4,5-T	—	10	—	20
	Tantalum	—	5	—	10
	TEDP - Skin	—	0.2	—	0.6

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	Teflon® decomposition products (as Fluorine)	—	2.5	—	—
	Tellurium & compounds (as Te)	—	0.1	—	—
	Tellurium hexafluoride (as Te)	0.02	0.2	—	—
	TEPP - Skin	0.004	0.05	0.04	0.2
C	Terphenyls	4	9	—	—
	1,1,1,2-Tetrachloro-2,2-difluoroethane	500	4170	625	5210
	1,1,2,2-Tetrachloro-1,2-difluoroethane	500	4170	625	5210
	1,1,2,2-Tetrachloroethane - Skin	5	35	10	70
	Tetrachloroethylene,	25	—	75	—
	see Perchloroethylene - Skin				
	Tetrachloromethane,	10	65	20	130
	see Carbon tetrachloride - Skin				
	Tetrachloronaphthalene	—	2	—	4
	Tetraethyl lead (as Pb) - Skin	—	0.1	—	0.3
	Tetrahydrofuran	200	590	250	735
	Tetramethyl lead (as Pb) - Skin	—	0.15	—	0.5
	Tetramethyl succinonitrile - Skin	0.5	3	2	9
	Tetranitromethane	4	8	—	—
	Tetryl (2, 4, 6-trinitrophenylmethyl nitramine) - Skin	—	1.5	—	3.0
	Thallium, soluble compounds (as Tl) - Skin	—	0.1	—	—
	4,4' Thiobis (6-tert. butyl-m-cresol)	—	10	—	20
	Thioglycolic acid	4	5	—	—
	Thiram®	—	5	—	10
	Tin, inorganic compounds, except SnH4 and SnO2 (as Sn)	—	2	—	4
	Tin, organic compounds (as Sn) - Skin	—	0.1	—	0.2
	Tin oxide (as Sn)		(See Table 4)		
	Titanium dioxide (as Ti)		(See Table 4)		
	Toluene (Toluol) - Skin	100	375	150	560
C	Toluene-2,4-diisocyanate (TDI)	0.02	0.14	—	—
	o-Toluidine	5	22	10	44
	Toxaphene, see Chlorinated camphene - Skin	—	0.5	—	2.0
	Tributyl phosphate	—	5	—	5
C	1,2,4-Trichlorobenzene	5	40	—	—
	1,1,1-Trichloroethane, see Methyl chloroform	350	1900	440	2380
	1,1,2-Trichloroethane - Skin	10	45	20	90
	Trichloroethylene	100	535	150	800
K	Trichloromethane, see Chloroform	10	50	—	—
	Trichloronaphthalene	—	5	—	10
	1,2,3-Trichloropropane	50	300	75	450
	1,1,2-Trichloro-1,2,2-trifluoroethane	1000	7600	1250	9500
	Tricyclohexyltin hydroxide (Plictran®)	—	5	—	10
	Triethylamine	25	100	40	160
	Trifluoromonobromomethane	1000	6100	1200	7300
	Trimethyl benzene	25	125	35	170
	2,4,6-Trinitrophenol, see Picric acid - Skin	—	0.1	—	0.3
	2,4,6-Trinitrophenylmethyl nitramine,	—	1.5	—	3.0
	see Tetryl - Skin				
C	2,4,6-Trinitrotoluene (TNT)	—	0.5	—	—
	Triorthocresyl phosphate	—	0.1	—	0.3
	Triphenyl phosphate	—	3	—	6
	Tungsten & compounds (as W)				

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	Soluble	—	4	—	3
	Insoluble	—	5	—	10
	Turpentine	100	560	150	840
	Uranium (natural) soluble & insoluble compounds (as U)	—	0.2	—	0.6
C	Vanadium (V2O5), (as V)				
	Dust	—	0.5	—	1.5
	Fume	—	0.05	—	—
	Valeraldehyde	50	175	—	—
	Vinyl acetate	10	30	20	60
	Vinyl benzene, see Styrene	100	420	150	630
	Vinyl bromide	250	1100	—	—
K	Vinyl chloride	1	2.5	—	—
	Vinyl cyanide, see Acrylonitrile - Skin	20	45	30	65
	Vinyl cyclohexene dioxide	10	60	—	—
	Vinylidene chloride	10	40	20	80
	Vinyl toluene	100	480	150	720
	Warfarin	—	0.1	—	0.3
	Welding fumes	—	5.0	—	10
	Wood dust (nonallergenic)	—	5	—	10
	Xylene (o-, m-, p- isomers) - Skin	100	435	150	655
C	m-Xylene-a-a' diamine	—	0.1	—	—
	Xylidene - Skin	5	25	10	50
	Yttrium	—	1	—	3
	Zinc chloride fume	—	1	—	2
K	Zinc chromate (as Cr)	—	0.05	—	—
	Zinc oxide				
	fume	—	5	—	—
	dust		(See		10
			Table 4)		
	Zinc stearate		(See Table 4)		
	Zirconium compounds (as Zr)	—	5	—	10

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**Table 2
Air Contaminants**

[am. B.C. Reg. 267/93.]

Substance	Permissible Concentrations 8-hr Limit		Permissible Concentrations 15 min. Limit	
	ppm	mg/m ³	ppm	mg/m ³
C Butyl mercaptan	3	9.3	—	—
C Ethyl mercaptan	3	7.6	—	—
C Methyl mercaptan	3	5.9	—	—
Wood dust, allergenic (excluding Western Red Cedar (e.g. mahogany, teak))	—	2.5	—	5
Wood dust, allergenic Western Red Cedar	—	4	—	5
Gasoline ^a	500	625	—	—

Substance	Permissible Concentrations	
	Impinger ^b (mppcf)	Respirable Mass ^c (mg/m ³)
Foundry dust		
Silica sand	5	1.2 ^d
Olivine sand	5	3.3 ^d

* Values established by the WCB of B.C.

a. Approximate value as composition may vary. Concentration as measured by a combustible vapour indicator calibrated for hexane.

b. See footnote (c) Table 3.

c. See footnote (d) Table 3.

d. The values apply where the quartz content in the respirable mass is less than 0.1 mg/m³. Where this is not the case, the maximum permitted concentration for quartz as calculated in footnote (g) Table 3 shall apply.

**Table 3
Mineral Dusts**

[am. B.C. Reg. 267/93.]

(Each substance must comply with at least one of the relevant requirements as determined by the air sampling technique used.)

Substance	(a) Permissible Concentrations (fibres per ml)	
	8-hr Limit	15-min. Limit
K Asbestos (all forms)	0.1	—

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~~Talc~~ ~~0.5~~ ~~5~~

Substance	Permissible Concentrations (8 hour Limit)		
	Column I Konimeter (b) (particles/ml)	Column II Impinger (c) (mppcf)	Column III Respirable Mass (d) (mg/m ³)
Silica:			
Quartz, crystalline	300	(e)	(g)
Cristobalite	150	(f)	(1/2 quartz value)
Tridymite	150	(f)	(1/2 quartz value)
Silica, fused or flour	300	(e)	(quartz value)
Tripoli	300	(e)	(quartz value)
Silica, amorphous	300	20	2
Diatomaceous earth	300	20	1.5
Silicates:			
Mica	—	20	—
Mineral wool fibre	—	—	10
Perlite	—	30	—
Portland Cement	—	30	—
Soapstone	—	20	—
Talc (non-asbestos form)	—	20	—
Graphite	—	—	2
Coal	—	—	2

(a) ~~Fibres collected on a membrane filter held in an open-face holder and counted at 400-500x magnification (4 mm objective — N.A. 0.65) under phase contrast illumination. Only fibres with length to breadth ratio equal to or greater than 3 to 1 and length greater than 5 micrometers to be counted.~~

(b) ~~Samples counted at 150 x magnification under dark field illumination.~~

(c) ~~Samples counted at 100 x magnification under light field illumination.~~

(d) ~~The concentration as determined by collecting that fraction of the total airborne contaminant which passes a size selector meeting the British Research Council Criteria.~~

(e) ~~Calculate maximum permitted particle count as:~~

$$\text{mppcf} = \frac{300}{\% \text{ SiO}_2 + 10}$$

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(f) Calculate maximum permitted particle count as:

$$\text{mppcf} = \frac{300}{2(\% \text{ SiO}_2 + 10)}$$

(g) Calculate maximum permitted respirable mass as:

$$\frac{10 \text{ mg/m}^3 \text{ Respirable dust collected}}{\% \text{ Respirable Quartz} + 2}$$

or

$$\frac{30 \text{ mg/m}^3 \text{ Total dust collected}}{\% \text{ Quartz} + 3}$$

**Table 4
Nuisance Dust, Mists and Fumes**

(Each substance contained in this table must comply with at least one of the relevant requirements.)

Substance	Permissible Concentrations (a)			
	8 hr. Limit	15 min. Limit		
	Impinger* (mppcf)	Gravimetric** (mg/m3)	Gravimetric** (mg/m3)	
Alundum (Al ₂ O ₃)		30	10	20
Calcium carbonate		30	10	20
Calcium silicate		30	10	
Cellulose (paper fibre)		30	10	20
Corundum (Al ₂ O ₃)		30	10	
Emery		30	10	20
Glass, fibrous or dust		30 (b)	10	—
Glycerin mist		30	10	—
Graphite (synthetic)		30	10	—
Gypsum		30	10	20
Kaolin		30	10	20
Limestone		30	10	20
Marble		30	10	20
Magnesite		30	10	20
Mineral wool fibre		30	10	—
Pentaerythritol		30	10	20
Plaster of Paris		30	10	20
Portland Cement		30	10	20
Rouge		30	10	20
Silicon		30	10	20
Silicon carbide		30	10	20
Starch		30	10	20
Sucrose		30	10	20

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Tin oxide	30	40	20
Titanium dioxide	30	40	20
Zinc oxide dust	30	40	—
Vegetable oil mists —(except castor, cashew nut, or similar irritating oils)	—	40	—
Zinc Stearate	30	40	20

* Impinger samples counted at 100 magnification under light field illumination. Concentration expressed in millions of particles per cubic foot of air.

** Weight of total airborne dust, fumes or mists collected on filter paper divided by the volume of air sampled through the filter.

(a) Permissible concentrations apply when toxic impurities are not present, when the quartz content is less than 1% and where the amount of respirable size dust is 5 mg/m³ or less.

(b) All fibres less than 7 micrometers in diameter to be counted.

**Table 5
Asphyxiant Substances Which Must be Controlled to Ensure that
No Atmosphere is Oxygen Deficient (Less than 18% Oxygen) at any Time**

Acetylene

Argon

Ethane

Ethylene

Helium

Hydrogen

Methane

Neon

Nitrogen

Propane

Propylene

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**Table 6
Maximum Acceptable Body Burdens**

[en. B.C. Reg. 374/79, s. 59.]

Substance	Maximum Concentration	
	Blood µg/100 ml	Urine µg/l*
Arsenic	50	1500
Cadmium	10	35
Lead inorganic	80	200
—alkyl compounds		160
Manganese	—	75
Mercury inorganic	—	500
—alkyl compounds		40
Vanadium	—	150
Selenium	—	300
Fluoride	—	5000**
Carbon Monoxide	10% as carboxyhaemoglobin	—

* corrected to SG 1.024

** samples collected 48 hours after last exposure

Explanatory Note

Amendments are proposed to the *Regulations for Agricultural Operations* to reference the American Conference of Governmental Industrial Hygienists instead of Appendix A to the *Industrial Health and Safety Regulation* (“*IHSR*”). In addition Appendix A references exposure limit found in Appendix B. Therefore, it is proposed that both Appendix A and Appendix B from the *IHSR* be deleted.

Proposed Amendments to the *Industrial Health and Safety Regulation* re: OELs

APPENDIX C

Workers Compensation Act

INDUSTRIAL HEALTH AND SAFETY REGULATION

[includes amendments up to B.C. Reg. 187/99]

**APPENDIX B
Carcinogens**

Appendix B

[See B.C. Reg. 340/97]

A carcinogen is an agent which when absorbed into or onto the body may initiate uncontrolled cell growth. These substances listed in this Appendix are used in industry and have proven carcinogenic in man or have induced cancer in animals under appropriate experimental conditions.

**Table 1
Carcinogens with a Permitted Exposure**

[am. B.C. Regs. 267/93; 343/93.]

Substance	Permissible Concentrations (8-hour Limit)	
	ppm	mg/m ³
Antimony trioxide production (as Sb)	—	0.5
Arsenic trioxide production		
— As ₂ O ₃ as As	—	0.05
— SO ₂	C5	—
Asbestos	(see Table 3 Appendix A)	
Acrylonitrile	20	45
Benzene	C10	32
Beryllium	—	0.002
Cadmium oxide production (as Cd)	—	0.05
Chloroethylene (vinyl chloride)	1	2.5
Chloroform (trichloromethane)	10	50
bis-Chloromethyl ether	0.004	—
Chromite ore processing (chromate), as Cr	0.1	0.1
Cobalt (elemental & inorganic, as Co)	—	0.02
1,2-Dibromoethane	20	145
Dimethyl sulfate - skin	0.1	0.5
Epichlorhydrin	5	20
Ethylene Oxide	0.1	—
Hydrazine	0.1	0.1
Lead (inorganic, as Pb)	—	0.05
Lead chromate, as Cr	—	0.05
4,4'-Methylene bis (2-chloraniline) - skin	0.02	—
Nickel (metal, soluble & insoluble, as Ni)	—	0.05
Nickel sulfide roasting (fume and dust), as Ni	—	1

Proposed Amendments to the *Industrial Health and Safety Regulation* re: OELs

APPENDIX C

2-Nitropropane	25	90
Particulate Polycyclic Aromatic Hydrocarbons — (as benzene solubles) (Coal Tar Pitch Volatiles)	—	0.2
Perchloroethylene - skin	25	—
Styrene	50	—
Trichloromethane (chloroform)	40	50
Vinyl chloride (chloroethylene)	1	2.5
Zinc chromate (as Cr)	—	0.05

Table 2

Carcinogens with No Permitted Exposure or Contact by any Route (respiratory, skin or oral). No exposure or contact means isolating the process or operation by the best practical engineering methods. The worker should be equipped with personal protective equipment to ensure virtually no contact with the carcinogen.

- 4-Aminodiphenyl - skin
- Benzidine production - skin
- 3,3-Dichlorobenzidine - skin
- 4-Nitrodiphenyl

Table 3

[en. B.C. Reg. 374/79, s. 60.]

Carcinogens with No Established Permitted Concentration. Exposure to be carefully controlled and minimized.

- Benzo (a) pyrene
- Dimethyl carbamyl chloride
- Hexamethyl phosphoramidate - skin
- β-Naphthylamine
- N-Nitrosodimethylamine (dimethylnitrosoamine) - skin
- β-Propiolactone

Explanatory Note

Amendments are proposed to the *Regulations for Agricultural Operations* to reference the American Conference of Governmental Industrial Hygienists instead of Appendix A to the *Industrial Health and Safety Regulation* ("*IHSR*"). In addition Appendix A references exposure limit found in Appendix B. Therefore, it is proposed that both Appendix A and Appendix B from the *IHSR* be deleted.