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# Canada Gazette

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Vol. 139, No. 28 — July 9, 2005

## Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005 (2-Methoxyethanol, Pentachlorobenzene and Tetrachlorobenzenes)

*Statutory authority*

*Canadian Environmental Protection Act, 1999*

*Sponsoring departments*

Department of the Environment and Department of Health

### REGULATORY IMPACT ANALYSIS STATEMENT

*(This statement is not part of the Regulations.)*

#### **Description**

The purpose of the proposed *Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005 (2-Methoxyethanol, Pentachlorobenzene and Tetrachlorobenzenes)* [hereinafter referred to as the proposed Regulations] is to add 2-methoxyethanol (2-ME), pentachlorobenzene (QCB) and tetrachlorobenzenes (TeCBs) to the Prohibited Toxic Substances List in Schedule 1 of the *Prohibition of Certain Toxic Substances Regulations, 2005* (hereinafter referred to as the Prohibition Regulations).

On August 9, 2003, the ministers of the Environment and of Health published their final decision on the assessment of 2-ME in the *Canada Gazette* and recommended that 2-ME be added to the List of Toxic Substances in Schedule 1 of the *Canadian Environmental Protection Act, 1999* (CEPA 1999). The final version of the assessment report concluded that 2-ME is harmful to human health. However, 2-ME was not considered harmful to the environment or the environment on which life depends. On March 9, 2005, an order was

published in the *Canada Gazette*, Part II, adding 2-ME to the List of Toxic Substances in Schedule 1 of CEPA 1999.

The final assessment of QCB and TeCBs was published on April 3, 2004, in the *Canada Gazette*, Part I, and, on April 24, 2004, the substances were proposed to be added to the List of Toxic Substances in Schedule 1 of CEPA 1999. The assessment report concluded that QCB and TeCBs are harmful to the environment or its biological diversity. Therefore, it was recommended that these substances be declared toxic under CEPA 1999. Moreover, because QCB and TeCBs are considered to be toxic under the Act and are persistent, bioaccumulative and predominantly the result of human activity, they meet the criteria for virtual elimination under the Toxic Substances Management Policy.

Adding the three substances to the Prohibited Toxic Substances List in Schedule 1 of the Prohibition Regulations will enact a ban on the manufacture, use, sale, offer for sale and import of the three substances or any mixture or product containing these substances. The proposed amendment to the Prohibition Regulations will ensure that the environment and health of Canadians is protected from the potential harmful effects attributed to these toxic substances.

The proposed Regulations will come into force three months after registration by the Clerk of the Privy Council.

## Background

### **2-Methoxyethanol**

The purpose of adding 2-ME to Schedule 1 of the Prohibition Regulations is to protect the health of Canadians by eliminating the potential for human exposure to this substance. Human exposure to 2-ME results from the use of consumer products by the general population, as well as from potential air releases, leakages and accidental spills in military and industrial uses. Industrial uses include applications as a solvent, chemical intermediate and dispersion agent. The military uses 2-ME as an anti-icing agent for jet fuel and as a component of decontamination agents. Current information indicates that 2-ME is only being used in one consumer product—a cleaning solvent for white boards.

The use of 2-ME in the consumer product is estimated to be very small, compared to military and industrial uses, but it generates the greatest potential for human exposure. Human exposure would occur mainly through dermal contact with the product containing 2-ME, but also through inhalation of 2-ME evaporated during and after product use. Several countries have already recognized the health concern associated with 2-ME in consumer products. In particular, the European Union has forbidden the sale of products containing 2-ME to the general public since 1994, and France has banned the use of 2-ME in household products since 1997 and in cosmetics since 1998.

The human health risk posed by 2-ME is primarily associated with developmental and reproductive toxicity, including teratogenic effects seen in experimental animals. Some of the symptoms that have been identified as potential health outcomes of exposure to 2-ME are the occurrence of miscarriages and stillbirths, low birth weight babies, reduced fertility, and endocrine disruptions. The risk assessment report concluded that there are no safe thresholds for exposure to 2-ME. Therefore, the environmental objective is to reduce uncontrolled human exposure to 2-ME to the greatest extent possible.

It is expected that the replacement of 2-ME is technically feasible in most if not all applications. Currently available substitutes also belong to the category of glycol ethers, but they present a lower risk to human health than 2-ME. In consumer products, which pose the highest health risk, and in other uses such as anti-icing agent for jet fuel, 2-ME can be directly replaced by substitutes. Overall, substitution is considered to be technically feasible and economically achievable, given the market prices and relative performances of available substitutes.

The proposed Regulations will offer the necessary measures to protect the health of Canadians from exposure to 2-ME in consumer products.

### **Pentachlorobenzene and tetrachlorobenzenes**

In 2004, QCB and TeCBs were declared toxic under CEPA 1999 based on the conclusion that QCB and TeCBs are entering the environment in a quantity or concentration or under conditions that have or may have an immediate or long-term harmful effect on the environment or on its biological diversity. Because these substances are persistent, bioaccumulative, predominantly anthropogenic and are considered toxic, QCB and TeCBs are targeted for virtual elimination from the environment.

QCB and TeCBs are known to cause both chronic and acute effects on sediment and soil-dwelling organisms. In general, sediment-dwelling organisms are more sensitive to these chlorobenzenes than soil-dwelling species, based on toxicity studies to date. Additionally, QCB and TeCBs are subject to atmospheric transport from their sources to remote areas.

Total QCB and TeCB emissions in the Canadian environment are estimated to be 41.8 kilograms (kg) per year and 68.2 kg per year, respectively. QCB and TeCBs are present in products as impurities or are unintentionally produced through waste incineration. The Canada-wide standards for dioxins and furans and the regulatory approaches in other Canadian jurisdictions to either prohibit open burning (including backyard and barrel burning of household waste) or permit it only under pre-approved conditions will indirectly contribute to the reduction of QCB and TeCB emissions.

Minor sources of QCB and TeCBs include wood treatment, pesticide use, dielectric fluids, magnesium production, solvent use and long-range transport. Revisions to the existing *Chlorobiphenyls Regulations*, the Wood Preservation Strategic Options Process, and the regulations for the control of perchloroethylene from the dry-cleaning sector all provide co-benefits by reducing QCB and TeCB releases from these sources.

Unintentional releases of QCB and TeCBs to water are controlled through the Canadian Council of Ministers of the Environment's interim chronic exposure water quality guideline at 0.0018 milligrams/litre (mg/L) for TeCBs and 0.006 mg/L for QCB. In addition, movement of wastes containing more than 8 parts per million of chlorobenzenes is controlled under the *Export and Import of Hazardous Wastes Regulations* (1992) and the *Interprovincial Movement of Hazardous Waste Regulations* (2002).

### **Alternatives**

#### **2-Methoxyethanol**

### *Status quo*

The health risks associated with 2-ME may be very serious. Furthermore, there is no safe margin of safety for human exposure. It was hence concluded that the status quo could not be allowed to persist and that some form of action to control exposure of the general population to 2-ME would need to be undertaken.

### *Economic instruments*

Economic instruments such as emission trading programs and environmental charges were considered. Emission trading programs provide a means for seeking cost-effective solutions to reducing exposure, usually below a predetermined level. However, there is no emission trading possible in a context of eliminating the potential for human exposure to this substance.

Environmental charges present the advantage that they can be aimed at the firms that produce, import, and/or sell 2-ME or products containing 2-ME. However, because charges under CEPA 1999 can only be raised to cover administration costs, there is a high probability that they will not provide enough of an incentive for firms to change their behaviour, therefore resulting in continued human exposure to 2-ME.

### *Voluntary measures*

Voluntary measures were considered inappropriate for controlling exposure to 2-ME. Potentially adverse health effects are serious and voluntary measures do not ensure that the use of 2-ME will be discontinued, especially in consumer products.

### *Regulations prohibiting the manufacture, import, offer for sale, sale and use of 2-ME in consumer products alone*

Prohibiting the use of 2-ME in consumer products would eliminate the most important current route of human exposure to 2-ME. However, health risks would still persist from industrial and military uses. In addition, industry and the Department of National Defence have been receptive to the health concerns associated with 2-ME, and have indicated that they are planning on moving away from this substance.

### *Adding 2-ME to Schedule 1 of the Prohibition of Certain Toxic Substances Regulations, 2005*

A total prohibition on the manufacture, import, sale, offer for sale and use of 2-ME presents the most sound and effective way of controlling human exposure. The proposed Regulations will provide a level playing field and ensure that the environmental objective of reducing the potential for human exposure to 2-ME is achieved.

## **Pentachlorobenzene and tetrachlorobenzenes**

### *Adding QCB and TeCBs to Schedule 1 of the Prohibition of Certain Toxic Substances Regulations, 2005*

QCB and TeCBs have been assessed to be toxic under CEPA 1999. Currently, QCB and TeCBs are not intentionally produced in Canada, nor used, sold, imported or exported in Canada. The way to ensure that QCB and TeCBs are not introduced into the Canadian market is through a ban, which can be implemented through the addition of these two substances to the Schedule 1 of the Prohibition Regulations. Furthermore, since these two substances meet the criteria for virtual elimination, it would be inconsistent for the federal government to allow the manufacture, use, sale, offer for sale or import of the substances. It was therefore concluded that a general prohibition will ensure virtual elimination and an effective way of removing the risks to the environment in Canada.

### ***Benefits and costs***

#### **2-Methoxyethanol**

##### *Use profile and baseline demand scenarios*

Currently, there is no 2-ME production in Canada. The substance 2-ME used in Canada is generally imported from the United States. The quantity of 2-ME imported showed a significant annual variation during the 1990s, fluctuating between 300 and 1 600 tonnes per year. Starting in 2000, imports of 2-ME stabilized around 400–600 tonnes per year and have since remained at that level.

It is estimated that uses of 2-ME are distributed in the following way: 80 percent are military uses in anti-icing agents for jet fuel and decontamination agents; 15 percent are chemical intermediates; 3 percent are dye dispersion agents; 2 percent are industrial processing solvents and analytical reagents (e.g. pharmaceutical processing, electronics manufacturing, electroplating, photographic chemicals, hydraulic and heat transfer fluids); and a very small amount (~0.1 percent) is used in consumer products.

Sectors where 2-ME has been used encompass chemicals, furniture manufacturing, rubber manufacturing, pharmaceutical, photographic, and electronics. It is estimated that approximately 20 to 36 companies have recently used or currently use 2-ME.

Based on historical data and trends on 2-ME imports, as well as information on firms that are already planning to reformulate away from 2-ME, two baseline demand scenarios were developed. The first is a high-demand scenario, which assumes that imports of 2-ME will be 481 tonnes in 2005, and then will slowly decrease in a linear fashion reaching 470 tonnes in 2014. After that, 2-ME imports will remain at 470 tonnes from 2014 until 2030. The second is a low-demand scenario, which assumes that imports will remain constant at 300 tonnes throughout the entire period of the analysis (2005–2030). Both scenarios assume that the current use pattern by sectors and applications will remain constant throughout the period of analysis.

The substitutes considered in this analysis are presented in Table 1, together with the applications where they might be used, their market price, and the expected substitution ratio for 2-ME.

**Table 1: 2-ME substitutes, applications where they might be used, market prices, and substitution ratios**

Substance	Application	2004 List Price (\$/kg)	Substitution Ratio for 2-ME
2-ME	- All	3.49	N/A
DEGME*	- Fuel additives / decontamination agents	2.78	1:1
	- Chemical intermediates	2.78	1.1
	- Industrial processing solvents / analytical agents	2.78	1.1
PGME**	- Dye dispersion agent	3.58	1:2
	- Consumer products	3.58	1:1
PGME and PGMEA*** (electrical grade)	- Industrial processing solvents / analytical agents	3.88	1:2
EcoSoft PE	- Dye dispersion agent	2.64	1:1
DEGBE****	- Consumer products	2.81	1:1

\* DEGME diethylene glycol methyl ether

\*\* PGME propylene glycol monomethyl ether

\*\*\* PGMEA propylene glycol monomethyl ether acetate

\*\*\*\* DEGBE diethylene glycol monobutyl ether

#### *Cost-benefit analysis framework*

The following are the relevant categories of costs and benefits considered in the analysis:

1. Industry compliance costs. For the purposes of this assessment, we define industry as importers and industrial users of 2-ME. These costs encompassed

- Reformulation costs
- Ongoing input costs

2. Government costs, including

- Enforcement costs
- Compliance promotion costs
- Ongoing input costs to the Department of National Defence

3. Benefits to Canadian Society:

- Reduced health risk

Costs and benefits were assessed over a 25-year time frame (2005 to 2030). It was assumed that the proposed Regulations will come into force in 2006 and that 2-ME will be completely substituted in 2007. The costs and benefits assessed are those that directly or indirectly affect Canada or Canadians. All costs and benefits were expressed in 2004 Canadian dollars.

Wherever possible, economic impacts were reported as net present values. The real social discount rate used was 5.5 percent, and a sensitivity range of 3 percent and 10 percent was then applied. The distributional analysis evaluated the allocation of costs and benefits among sectors and regions. The sensitivity analysis considered uncertainty and risk affecting the discount rate, the relative volume and cost of substitutes, the baseline scenario assumptions, and the scale and monetary valuation of expected health benefits.

#### *Costs to the private sector*

It is expected that industry will respond to the ban on 2-ME by switching to alternative glycol ethers. Substituting 2-ME with other glycol ethers might require reformulation efforts for some applications. In particular, sectors using 2-ME as a chemical intermediate, reagent and solvent might need to reformulate their products. Some sectors, such as office supply manufacturers, will likely replace 2-ME directly with other glycol ethers without reformulating. In addition, the coatings sector using 2-ME as a dye dispersion agent has already started to reformulate to water-based coatings which do not contain 2-ME.

Reformulation costs were not quantified in this analysis because of a lack of information on 2-ME uses in some sectors. However, industrial uses of 2-ME are relatively small, hence potential reformulation costs are not expected to be significant from a sector- or economy-wide perspective.

The incremental input costs to the private sector were calculated using market prices and substitution ratios based on technical performance. Market prices of most substitutes were found to be lower than 2-ME, and many of them were also found to have similar performance ratios (Table 1). Therefore, the proposed Regulations are expected to result in cost savings for most sectors and/or applications. Nevertheless, it is possible that individual sectors or firms might have to use substitutes with a higher price or a lower performance ratio, which will entail input cost increases.

The final results indicate that, overall, the proposed Regulations will generate cost savings to the Canadian industry. Total cost savings were estimated at C\$0.5 million and C\$1.5 million (2004) for the low- and high-demand scenarios, respectively.

The proposed Regulations are not expected to require any changes in manufacturing equipment; thus, no incremental costs associated with capital investment were included. Firms will not have any administrative requirements, such as reporting or monitoring. Product availability and quality are not predicted to be a problem, as there are readily available substitutes that perform as well as 2-ME. Any other costs, such as indirect or transitional costs, were determined to be either non-existent or negligible.

#### *Costs to the Government*

Costs to the Government encompass compliance promotion and enforcement costs that Environment Canada will incur in implementing the proposed Regulations. They also include the costs to the Department of National Defence (DND) of replacing 2-ME in its current uses in jet-fuel anti-icing and decontamination agents.

DND will have to phase out the uses of 2-ME in jet fuel additives and decontamination agents. Given that alternative specifications for an anti-icing agent for jet fuel are available that do not contain 2-ME, it is expected that DND will not incur reformulation costs associated with this use. Reformulation of decontamination agents will be required, but cost estimates were not available. In addition, because the available substitute (i.e. diethylene glycol methyl ether [DEGME]) was cheaper in price and had a similar performance to 2-ME, it is estimated that DND will not incur any costs but rather will see cost savings from lower input costs. The net present value of cost savings to DND was estimated at C\$2 million and C\$3.2 million (2004) for the low- and high-demand scenarios, respectively.

Compliance promotion activities are intended to encourage the regulated community to achieve compliance. Compliance promotion costs would require an annual budget of C\$20,000 (2004) during the first year of coming into force of the proposed Regulations. Given the small size of the regulated community and the nature of the proposed Regulations, compliance promotion activities will be low-key. Activities could include mailing out the final Regulations, answering inquiries and developing and distributing promotional materials explaining the proposed Regulations (e.g. fact sheet, Web site material). In years two and three, compliance promotion activities will be at a maintenance level and will be limited to responding and tracking inquiries and contributing to the compliance promotion database. This would require an annual budget of C\$1,000 (2004). The net present value of compliance promotion activities was estimated at C\$20,700 (2004). Note that a higher level of effort for compliance promotion may be required if, following enforcement, compliance with the Regulations is found to be low.

Enforcement activities encompass off-site inspection, on-site inspection, response to alleged violation, re-inspection, investigation, and prosecution. Annual enforcement costs were estimated at C\$54,017 (2004) per year, starting in 2007. The net present value of enforcement costs spent from 2007 to 2030 was calculated to be C\$605,000 (2004).

#### *Total costs*

The proposed Regulations are expected to result in net cost savings to both the private and public sector. The total cost savings to Canadian society was calculated by aggregating all cost savings, including those of the private and public sector. The net present value estimates of total cost savings were C\$2,126,000 (2004) and C\$2,326,000 (2004) for the low- and high-demand scenarios, respectively.

#### *Benefits to Canadians*

##### *Health benefits*

The proposed ban on 2-ME will bear the largest benefit in terms of lower risks to human health. In particular, this substance was associated in test animals with reproductive and developmental complications, including adverse effects on the development of the fetus



at levels that are not toxic to the mother (teratogenicity). In contrast, the substitutes that will likely replace 2-ME in the consumer product present a lower level of toxicity. These substitutes are not associated with teratogenic effects and do not present some of the reproductive effects shown by 2-ME. In addition, glycol ethers that will likely be used as 2-ME replacements in industrial and military applications also present a more benign toxicological profile, including lower dermal absorption rates and higher health risk thresholds than 2-ME.

A quantitative analysis of baseline consumer exposure was conducted using the ConsExpo model developed by the National Institute for Public Health and the Environment (RIVM) in the Netherlands. The parameters used in developing the exposure scenarios included consumer product properties, use-setting characteristics, contact exposure information, evaporation and dermal absorption rates, and physiology and anatomy of users and bystanders. The results indicated that, under normal circumstances, users of whiteboard cleaners that contain 2-ME are being exposed to potentially harmful levels.

Four health end-points were used to determine the baseline health risk to consumer product users, namely miscarriages, low birth weight babies, infertility, and endocrine symptoms. Three possible health scenarios were then developed using the consumer exposure modeling to assess the implications of the proposed Regulations in reducing the human health risk. The results indicated that a ban on 2-ME would reduce the risk of up to 22 cases of miscarriages, up to 22 cases of low birth weight babies, up to 100 cases of infertility, and close to 5 000 cases of individuals suffering from endocrine symptoms.

Finally, the reduction in health risks was converted to monetary values using available estimates. The only health outcome that was not monetized was the risk of miscarriages, due to the lack of guidance and monetary estimates in the professional literature and the work of other regulatory entities. The other health risks, encompassing low birth weight babies, reduced fertility and endocrine symptoms, were monetized using the cost of illness approach. This approach reflects the costs of treating an illness incurred by both the individual and the society. Costs of illness estimates used were C\$150,178 (2004) for each case of low birth weight baby, C\$10,330 (2004) for each case of infertility, and C\$62 (2004) for each case of endocrine symptoms. Because these values do not include all possible costs related to the health risk, they should be considered lower bounds of actual benefits.

#### *Total benefits*

The net present value of total benefits was estimated at C\$33.4 million (2004), with a range of \$16 to \$48 million (2004). In addition, it was estimated that up to 22 cases of miscarriages, which were not monetized, will be avoided by establishing a ban on 2-ME.

#### *Total net benefits*

Total net benefits to Canadian society were estimated to be positive. The present value of net benefits was calculated to be in the range of C\$13.9 to C\$45.7 million (2004), depending on the demand and health outcome scenario considered, using a discount rate of 5.5 percent. Because the estimated risk reduction of up to 22 cases of miscarriage could not be monetized, due to methodology and data limitations, it is realistic to assume

that the estimates of net benefits provided here are lower bounds of the actual net benefits.

In addition to testing the sensitivity of net benefits to possible demand and health risk scenarios, sensitivity analysis of net benefits was conducted on the discount rate and the input cost of substitutes. The objective of this sensitivity analysis was to determine the confidence in the calculated estimate of net benefits and whether or not the proposed Regulations have inherent risks that may significantly impact the value of the net benefit estimate. The results of the sensitivity analysis indicated that the net benefits remain positive within the ranges of discount rate and input cost of substitutes tested. Therefore, it can be concluded that the proposed Regulations are desirable from an economic-efficiency perspective.

### *Competitiveness*

The substance 2-ME is not manufactured in Canada and demand is satisfied entirely with imports. The primary substitutes to 2-ME are other glycol ethers. Most of these substitutes would also be imported. As a result, net impacts on importers are expected to be limited. In addition, the volumes of 2-ME used are very small, in comparison to total trade, so there would be no significant impact on Canada's trade balance, even if the required volume or import price of substitutes were different from 2-ME. Finally, no other upstream or downstream impacts on exports or imports are anticipated.

The analysis indicated that many available substitutes are cost-effective alternatives, while others might represent cost increases. Given the small quantities of 2-ME used, the proposed Regulations are not expected to have negative impacts in the competitiveness of the Canadian economy. However, individual firms might have difficulties finding appropriate substitutes or might find more costly ones. This analysis did not find substantial information indicating that the implementation of the Regulations would result in employment losses or plant closures. In the absence of significant demand feedbacks, such as reductions in the overall demand for products produced using 2-ME, no impacts on employment in other sectors are anticipated.

### **Pentachlorobenzene and tetrachlorobenzenes**

QCB and TeCBs are not intentionally produced in Canada, and there is no commercial domestic demand for these substances. There are also no known natural sources of QCB or TeCBs. QCB and TeCBs are present in products as impurities or are unintentionally produced through waste incineration.

Various initiatives, such as the Canada-wide Standards for dioxins and furans, the regulatory approaches in other Canadian jurisdictions to either prohibit open burning, or permit it only under pre-approved conditions, revisions to the existing *Chlorobiphenyls Regulations*, the Wood Preservation Strategic Options Process, and the regulations for the control of perchloroethylene from the dry-cleaning sector, indirectly contribute to reductions in QCB and TeCB emissions. Moreover, there is no manufacture of QCB or TeCBs, nor any commercial demand for these substances in Canada. The purpose of adding QCB and TeCBs to Schedule 1 of the Prohibition Regulations is to ensure that QCB and TeCBs are not introduced into Canada.

As a consequence, no significant incremental costs or benefits will accrue as a result of

placing the two substances on Schedule 1 of the Prohibition Regulations. The federal government may incur some minor costs to ensure that QCB and TeCBs are not reintroduced in Canada.

### **Consultation**

#### **2-Methoxyethanol**

Two formal public consultation sessions and ongoing informal consultations with representatives from environmental non-governmental organizations, industry and other government departments were conducted as part of the risk management process of 2-ME.

Overall, stakeholders support the proposed Regulations. However, one importer expressed concern about the potential socio-economic impacts of prohibiting the use of 2-ME on the sectors using the substance as a chemical intermediate. The stakeholder also suggested that 2-ME be added to Schedule 2 of the Prohibition Regulations instead of Schedule 1, thus permitting the use of 2-ME as a chemical intermediate. As it cannot be precluded that there is some probability of occurrence of effects at any level of exposure to 2-ME, and since substitution is considered to be technically feasible and economically achievable and all companies using 2-ME contacted by Environment Canada have indicated they are moving toward alternatives to replace 2-ME, 2-ME is proposed to be added to Schedule 1 of the Prohibition Regulations.

#### **Pentachlorobenzene and tetrachlorobenzenes**

Public consultation was conducted as part of the risk management process for QCB and TeCBs. The proposed risk management strategy was posted on Environment Canada's Web site for formal consultation with stakeholders of affected sectors (municipal incineration facilities, hazardous waste incineration facilities, importers and users of perchloroethylene, the Pest Management Regulatory Agency, Industry Canada, Agriculture and Agri-Food Canada, and environmental non-governmental organizations). Comments were received from two industries and one industry association.

No major issues were raised with regard to the proposed addition of QCB and TeCBs to the *Prohibition of Certain Toxic Substances Regulations, 2005*. One industry raised concern over potential economic costs associated with the addition of these substances to the Prohibition Regulations, if they were to apply to products that incidentally contain QCB or TeCBs. The proposed Regulations will not be applicable to products that incidentally contain QCB or TeCBs. It was also commented that the addition of QCB and TeCBs to Schedule 1 of the Prohibition Regulations will not address all of the sources of these two substances. Environment Canada has proposed the addition of QCB and TeCBs to Schedule 1 of the Prohibition Regulations to ensure that they are not introduced into the Canadian market. Various initiatives, mentioned previously, will contribute to reductions in incidental QCB and TeCB emissions from other sources.

### **Compliance and enforcement**

Since the proposed Regulations are promulgated under CEPA 1999, enforcement officers will, when verifying compliance with the Regulations, apply the Compliance and

Enforcement Policy implemented under the Act. The Policy outlines measures designed to promote compliance, including education, information, the promotion of technology development, and consultation on the development of the Regulations. It also sets out the range of possible responses to violations, including warnings, directions, environmental protection compliance orders, ticketing, ministerial orders, injunctions, prosecution, and environmental protection alternative measures (which are an alternative to a court trial after the laying of charges for a CEPA 1999 violation). In addition, the Policy explains when Environment Canada will resort to civil suits by the Crown for costs recovery.

When, following an inspection or an investigation, an enforcement officer discovers an alleged violation, the officer will choose the appropriate enforcement action based on the following factors:

- *Nature of the alleged violation:* This includes consideration of the damage, the intent of the alleged violator, whether it is a repeat violation, and whether an attempt has been made to conceal information or otherwise subvert the objectives and requirements of the Act.
- *Effectiveness in achieving the desired result with the alleged violator:* The desired result is compliance within the shortest possible time and with no further repetition of the violation. Factors to be considered include the violator's history of compliance with the Act, willingness to co-operate with enforcement officers, and evidence of corrective action already taken.
- *Consistency:* Enforcement officers will consider how similar situations have been handled in determining the measures to be taken to enforce the Act.

## **Contacts**

### **2-Methoxyethanol**

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### **Pentachlorobenzene and tetrachlorobenzenes**

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## **PROPOSED REGULATORY TEXT**

Notice is hereby given, pursuant to subsection 332(1) ([see footnote a](#)) of the *Canadian Environmental Protection Act, 1999* ([see footnote b](#)), that the Governor in Council proposes, pursuant to subsection 93(1) of that Act, to make the annexed *Regulations Amending the Prohibition of Certain Toxic Substances Regulations, 2005* (2-

*Methoxyethanol, Pentachlorobenzene and Tetrachlorobenzenes*).

Any person may, within 60 days after the date of publication of this notice, file with the Minister of the Environment comments with respect to the proposed Regulations or a notice of objection requesting that a board of review be established under section 333 of that Act and stating the reasons for the objection. All comments and notices must cite the *Canada Gazette*, Part I, and the date of publication of this notice, and be sent to the Director, Chemicals Control Branch, Environmental Protection Service, Department of the Environment, Ottawa, Ontario K1A 0H3.

A person who provides information to the Minister may submit with the information a request for confidentiality under section 313 of that Act.

Ottawa, June 27, 2005

EILEEN BOYD  
*Assistant Clerk of the Privy Council*

**REGULATIONS AMENDING THE PROHIBITION OF CERTAIN TOXIC SUBSTANCES  
REGULATIONS, 2005 (2-METHOXYETHANOL, PENTACHLOROBENZENE AND  
TETRACHLOROBENZENES)**

AMENDMENT

**1. Schedule I to the *Prohibition of Certain Toxic Substances Regulations, 2005* ([see footnote 1](#)) is amended by adding the following after item 9:**

Item	Toxic Substances
10.	2-Methoxyethanol, which has the molecular formula $C_3H_8O_2$
11.	Pentachlorobenzene, which has the molecular formula $C_6HC1_5$
12.	Tetrachlorobenzenes, which have the molecular formula $C_6H_2C1_4$

COMING INTO FORCE

**2. These Regulations come into force three months after the day on which they are registered.**

[28-1-o]

[Footnote a](#)

S.C. 2004, c. 15, s. 31

[Footnote b](#)

S.C. 1999, c. 33

[Footnote 1](#)

SOR/2005-41

**NOTICE:**

The format of the electronic version of this issue of the Canada Gazette was modified in order to be compatible with hypertext language (HTML). Its content is very similar except for the footnotes, the symbols and the tables.

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