

Canadian Council of Ministers of the Environment

CANADA-WIDE STANDARD

for

BENZENE

PHASE 2

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This Canada-Wide Standard (CWS) for benzene is established pursuant to the 1998 Canada-wide Accord on Environmental Harmonization of the Canadian Council of Ministers of the Environment (CCME) and its Canada-wide Environmental Standards Sub-Agreement.

RATIONALE

In selecting benzene as a Canada-wide environmental priority for development of a CWS, Ministers recognized that, on the basis of available data, benzene is classified as carcinogenic to humans. That is, benzene is a non-threshold toxicant – a substance for which there is considered to be some probability of harmful effects at any level of exposure. The implementation of this CWS for benzene will reduce Canadian's exposure to this known human carcinogen.

CONTEXT

The CWS for benzene represents a balance between the desire to achieve the best health and environmental protection possible and the feasibility and costs of reducing the emissions that contribute to elevated levels of benzene in ambient air. The primary long-term air quality management goal for non-threshold toxicants like benzene is to reduce exposure to the extent possible and practicable, thereby reducing the risk of the adverse effects of this pollutant on human health.

A phased approach to benzene reductions was endorsed by Ministers of the Environment in June, 2000, when they ratified the Canada-Wide Standard for Benzene Phase 1. Phase 1 called for a 30% reduction in total benzene emissions (from 1995 emission inventory levels) by the end of 2000. The implementation of the Phase 1 Canada-wide control strategy for benzene has reduced Canadians' exposure to this pollutant. Emission reduction actions have improved air quality where ambient levels are elevated, and prevented or minimised deterioration of air quality in areas that have good air quality.

Due to the ongoing nature of the initiatives of Phase 1, emission reductions will continue beyond the timeframe of the Phase 1 CWS. The Phase 2 CWS makes follow-through on these initiatives a priority, thus ensuring these further reductions occur. Phase 2 also recognizes best management practices and jurisdictional regulations that will minimize emissions from new and expanding facilities across the country and develops the foundation for additional reductions that will be achieved through joint actions in conjunction with other air issue programs (including other Canada-wide Standards).

This specific agreement is the Phase 2 of the benzene CWS and considers information made available since the drafting of the Phase 1 CWS. Specifically, *Technical Options and Costs to Reduce Environmental Releases of Benzene From Selected Sources* and *Benzene Emissions Inventory for Canada (1990-2010)* helped form the basis of the Phase 2 CWS. Co-benefits from other Canada-wide standards, which may be achieved through a multi-pollutant, sector-by-sector approach, were also considered in the development of Phase 2 of the Benzene CWS. In those sectors where emissions are poorly understood, Phase 2 proposes a collaborative approach to inventory improvements and sector-specific reductions with other Canada-Wide Standard initiatives.

PART 1:

NUMERICAL TARGETS and TIMEFRAMES

The Canada-Wide Standard for Benzene: Phase 2 contains:

For existing facilities addressed under Phase 1: A further 6-kilotonne reduction in benzene emissions (based on 1995 emission inventory levels) to be realized by the end of year 2010 from Phase 1 benzene emission reduction initiatives which continue beyond the end of year 2000 (end of Phase 1 CWS);

AND

For new and expanding facilities: minimise benzene emissions by the application of best available pollution prevention and control techniques, as recognized in sector-specific Best Management Practices and jurisdictional regulations (examples are included in Part 2 of the Companion Document that follows), or as developed through other air issue programs.

PART 2:

IMPLEMENTATION

Implementation of the CWS for Benzene: Phase 2 will consist of:

- (1) Follow-up on existing initiatives from Phase 1 that will contribute a further 6-kilotonne reduction in total benzene emissions (based on 1995 emissions inventory levels) as summarized in Table 2 of the Companion Document that follows, and

The promotion and application of Best Management Practices to new and existing facilities;

- (2) Determining and tracking ancillary emission reductions of benzene achieved through other CWS initiatives, as well as improved sector-specific emission data; and
- (3) Monitoring and reporting as described in the Annex for Phase 2 and review of monitoring and reporting requirements for Phase 1.

Jurisdictions are responsible for developing and executing implementation plans to ensure that Phase 2 target of the CWS is achieved.

REVIEW

The CWS for benzene will be reviewed following completion of the comprehensive report of 2011 (see REPORTING on PROGRESS). The purpose of the review will be to determine the adequacy of the Benzene CWS. Annual and comprehensive reports and new science will form the basis for this review.

REPORTING on PROGRESS

Progress towards meeting the above provisions will be reported as follows:

- (a) to the respective publics of each jurisdiction on a regular basis, the timing and scope of reporting to be determined by each jurisdiction;
- (b) to Ministers and the public, with comprehensive reports in years 2006 and 2011 and reports on achievement and maintenance of the CWS annually beginning in 2002 and ending on or before 2012, in accordance with guidance provided in the following Annex.

ADMINISTRATION

Jurisdictions will review and renew Part 2 and Annex five years from coming into effect.

Any party may withdraw from this Canada-Wide Standard upon three month's notice.

This Canada-Wide Standard comes into effect for each jurisdiction on the date of signature by the jurisdiction.

ANNEX

MONITORING AND REPORTING ON PROGRESS TOWARDS ACHIEVEMENT OF THE CANADA-WIDE STANDARD FOR BENZENE - PHASE 2

1 *Introduction*

It is intended under the Harmonization Accord and its Standards Sub-Agreement that all jurisdictions will report on a regular basis to their publics and to Ministers of the Canadian Council of Ministers of the Environment on their progress towards achieving the Phase 2 CWS for benzene.

2 *Frequency, Timing and Scope of Reporting*

There will be two types of reporting by jurisdictions:

1) Annual Reporting Towards Achievement of the CWS

These reports will be completed by each jurisdiction in a standardized "report card" format, the format to be developed and agreed to by all jurisdictions, and provided to Ministers and the public by 30 September each year, beginning in 2002 and ending on or before 2012. These annual reports will be limited in scope containing mainly summary information on emission levels and trends, and, where available, ambient benzene concentrations using data agreed to by all jurisdictions. The annual reports may also note the reason for any significant change in emission or ambient levels or trends from previous years.

2) Five-Year Reports

These reports will be completed for the years 2006 and 2011 and provided to Ministers and the public by 30 September of the following year. The report for 2006 will be an interim report on progress towards meeting the CWS.

These two five-year reports will be comprehensive, assessing progress on all provisions of the CWS. The format and general content will be determined and agreed to by all jurisdictions two years in advance of the reporting year.

The CCME will co-ordinate the collation of the information from the various jurisdictional reports in (2) above into a national overview report for the public, CCME Ministers and international audiences by December 31 of 2007 and 2012.

In addition to the reporting in (1) and (2) above, individual jurisdictions may report to their publics on a more frequent basis. The scope and timing of any such reporting would be determined by the jurisdiction.

3 *Monitoring*

The above reporting will be accomplished using data from new and existing monitoring sites. The data used in reporting are to be agreed to by all jurisdictions. Jurisdictions may also report any additional monitoring information as appropriate.

Canada-wide Standard for Benzene Phase 2

Signed by:

British Columbia	Honourable Joyce Murray
Alberta	Honourable Lorne Taylor
Saskatchewan	Honourable Buckley Belanger
Manitoba	Honourable Oscar Lathlin
Ontario	Honourable Elizabeth Witmer
Environment Canada	Honourable David Anderson
New Brunswick	Honourable Kim Jardine
Nova Scotia	Honourable David Morse
Prince Edward Island	Honourable Chester Gillan
Newfoundland and Labrador	Honourable Ralph Wiseman Honourable Tom Lush
Yukon	Honourable Dale Eftoda
Northwest Territories	Honourable Jim Antoine
Nunavut	Honourable Olayuk Akesuk

Note: Québec has not endorsed the Canada-wide Accord on Environmental Harmonization or the Canada-wide Environmental Standards Sub-agreement.