

## **SUBJECT: Canadian Air Quality Management System (AQMS)**

### **SUBMITTED BY: Environment Committee**

#### **BACKGROUND**

In recent years, the federal government had begun efforts to control air emissions under the *Canadian Environmental Protection Act, 1999* (CEPA). Canada now plans to adopt new air quality standards for industry and other emitters. The Air Quality Management System (AQMS) will set consistent ambient air quality and industrial emissions standards across the country. It is designed to deliver flexibility to address regional differences in air quality issues Canada-wide. AQMS will establish regionally coordinated air sheds and air management zones, and will allow Canadians access to air quality information through public reporting, modeling and monitoring mechanisms.

The Canadian Council of Ministers of the Environment (CCME) approved AQMS in October 2010. CCME is working with industry, government, and non-government organizations to implement it. Stakeholders in the regulated community support this approach to air management.

#### **ISSUE**

The new comprehensive air management system is outcome-based, defining the desired ambient air quality through the setting of Canadian Ambient Air Quality Standards (CAAQS). It is also a place-based system with air zones for management established within air-sheds across provinces and territories, providing joint action in resolving trans-boundary air quality issues. AQMS is comprehensive because it will deal with all sources of air pollutants and requires a base level of environmental performance by key industrial sectors. It is collaborative in that it relies on the engagement of the federal, provincial and territorial governments to work together with stakeholders to develop standards, ensure continuous improvement in the overall system and avoid duplicate regulation. AQMS will use the air pollution control regulatory schemes already extant in the provinces.

The key components of AQMS are:

#### 1) Canadian Ambient Air Quality Standards (CAAQS)

On May 24, 2013, the federal government published in the *Canada Gazette*, Part 1, CAAQS for Fine Particulate Matter<sup>1</sup> and Ground Level Ozone<sup>2</sup> as objectives under CEPA. Ambient air standards for other pollutants will be developed. These standards

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<sup>1</sup> Fine (less than 2.5 microns in size) Particulate Matter standards are based on a 24 hour Average and will consist of 28 - 29  $\mu\text{g}/\text{m}^3$  based on the annual 98<sup>th</sup> percentile value of the 24 hour ambient measured averages over 3 consecutive years.

<sup>2</sup> Ground Level Ozone ( $\text{O}_3$ ) standards are based on an 8 hour Average and will consist of 60 - 62 parts-per-billion (ppb) based on the annual 4<sup>th</sup> highest of the 8 hour Averages, averaged over 3 consecutive years.

will drive air quality management in all jurisdictions. The ambient air quality standards will build on and be more stringent than the existing Canada-wide Standards (CWS). CAAQS for Fine Particulate Matter and Ground Level Ozone become effective in 2015.

## 2) Place-based air quality management

*Regional air-sheds* - Six regional air-sheds have been established covering all of Canada. The federal government will work to understand regional air quality issues and coordinate action to address air pollution, including trans-boundary pollution from the United States and elsewhere. The federal government will help to coordinate the resolution of provincial and international trans-boundary air quality issues.

*Air zones* - Provinces and territories will manage air quality in air zones that they will establish within their boundaries, and work to ensure that ambient air standards are met in all air zones. Saskatchewan has now established three of its planned air zones.

In Canada, the transportation sector is the most significant contributor to ambient air concentrations of nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs), and also contributes to sulphur dioxide (SO<sub>2</sub>). Addressing transportation emissions will be a key component of air zone management in every heavily populated area. The CCME established the Mobile Sources Working Group (MSWG) in 2011. The MSWG, in consultation with stakeholders, has identified the following priority areas as the basis for an action plan to complement the work already underway to reduce emissions:

- I. Using advanced transportation technologies.
- II. Using proper vehicle maintenance.
- III. Managing in-use diesel vehicles, and engines.
- IV. Greening fleets.

Provinces and territories will be primarily responsible for air zone monitoring, and for reporting to the general public in their own jurisdictions on air-zone air quality and measures taken. The federal government will facilitate monitoring and analysis under its National Air Pollution Surveillance Program.

## 3) Base-Level Industrial Emissions Requirements (BLIERS)

AQMS will establish BLIERS in major industrial sectors, initially for SO<sub>2</sub>, NO<sub>x</sub>, VOCs, polycyclic aromatic hydrocarbons (PAHs), total particulate matter (TPM), and ammonia (NH<sub>3</sub>). The federal government also intends to publish the Multi-Sector Air Pollutants Regulations in the *Canada Gazette* in spring 2014. These regulations will include requirements for industrial boilers and heaters, reciprocating engines and cement facilities. BLIERS are intended to ensure that all significant industrial air emissions sources in Canada meet a good base-level of environmental performance.

The BLIERS are to be based on what leading jurisdictions are requiring of industry in areas achieving their air quality standards, adjusted as needed for Canadian circumstances. New facilities will have to meet their BLIERS beginning the first day of operation. Existing facilities will be expected to meet the BLIERS for their sector by a

specified date. AQMS is to provide regulatory assurance that the BLIERs are applied effectively everywhere in Canada. Provinces and territories will implement the BLIERs and federal regulatory assurance would be achieved through CEPA.

When implemented, BLIERs is expected to reduce industrial emissions by 19 percent for NO<sub>x</sub>, 24 percent for SO<sub>2</sub>, and 9 percent for TPM. With AQMS, greater reductions from all sources could be achieved in air zones over time. Provinces and territories are expected to delineate air zones and prioritize local action. Management strategies may involve provincial actions to impose more stringent emission limits on industry and/or address additional sources.

The Air Chapter of the Saskatchewan Environmental Code proposes to have two appendices: one outlining emission levels that would align with the national BLIERs, and another for ambient air quality standards that adopt CWS and CAAQS. Saskatchewan will work to ensure that the jurisdictional roles and responsibilities fit with their Ministry's proposed results-based regulatory model and the Government of Saskatchewan's current air-shed management approach.

This collaborative federal, provincial, territorial and stakeholder framework will:

- a. Focus on air quality and all the sources that contribute to it.
- b. Ensure that a common standard of industrial performance exists across Canada.
- c. Provide for increasingly stringent measures where local conditions require them.
- d. Build on the existing expertise and strengths of governments.
- e. Establish a new collaborative partnership with governments as well as stakeholders.
- f. Provide greater public transparency and stronger assurance of action on air quality.

### **RECOMMENDED**

- 1) That the Government of Saskatchewan be asked to continue to support AQMS, and to actively implement it.
- 2) That the Government of Canada be asked to remain involved in AQMS through CCME, as the preferred model for managing air quality in Canada, and that the federal role be focused on the CAAQS, BLIERs and air-zones development and establishment, and on controls related to transportation, and not create control of air emissions under CEPA that would be duplicative of the provincial controls in place.
- 3) That the Government of Canada be asked to increase its national ambient air monitoring network, integrating to provincial and municipal systems, and establish prompt and public reporting of the data there-from.