

St. Marys Cement Air Quality Monitoring – Updated Ontario Sulphur Dioxide Standards

The previous air standards for sulphur dioxide (SO₂) were set in the 1970s. The standards were updated to reflect current science and better protect human health and the environment. The Ontario government develops air standards by reviewing scientific information about the effects of contaminants on health and the environment, as well as approaches taken in setting air quality criteria by leading organizations such as the US Environmental Protection Agency, the World Health Organization, and Health Canada. In addition, information considered in the development of the Canadian Ambient Air Quality Standards for SO₂ was also used to inform Ontario's air standards. Comments received from stakeholders were also taken into consideration.

CLC Question: In the November report from the Ministry of the Environment, Conservation and Parks (MECP) on the portable monitoring data, the SO₂ Ambient Air Quality Criteria (AAQC) was reduced from 250 ppb to 40 ppb effective March 20, 2018. I do not recall this reduction being mentioned earlier. When did MECP London office know of the regulation change date?

The proposal for the changes to the SO₂ standard was published on the Environmental Registry at: <https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTMyOTQ1&statusId=MjAxOTQ3&language=en> on October 27, 2017.

In addition to being referenced in the 2nd interim St. Marys monitoring report as noted in the question, the new SO₂ standards were also referenced in the 1st interim St. Marys monitoring report dated January 2018. In January 2018, the new SO₂ standards had been proposed but not yet adopted. In anticipation of the change to the standard, the 1st interim report compared the SO₂ concentrations to both the existing and future air standards. There were no exceedances of either standard noted during that time period.

Please note that the ministry's air monitoring reports for St. Marys are available at: <http://www.townofstmarys.com/en/living-here/air-quality.aspx>

CLC Question: Are there differences in standards between AAQC and Local Air Quality Regulation (O.Reg. 419/05)? If so can you explain?

The ministry establishes an Ambient Air Quality Criteria (AAQC) based on a desirable concentration of a contaminant in air, and protection against adverse effects on health or the environment. The term "ambient" is used to reflect general air quality independent of location or source of a contaminant. AAQCs are most commonly used in environmental assessments, special studies using ambient air monitoring data, assessment of general air quality in a community and annual reporting on air quality across the province.

Air standards are used to assess the contributions of a contaminant to the local air by a regulated facility. If a facility can demonstrate that the maximum concentration of the contaminant emitted by the facility does not exceed the air standard, no additional requirements are necessary. Most facilities in Ontario meet the general air standards.

In situations where the air standard is or may be exceeded, facilities are required to collect more detailed information about exposure to the contaminant being modelled or measured. This information may be used to confirm that the air standard is met or may identify the need for additional action.

CLC Question: Is the regulation change effective immediately after March 20, 2018 or is there any phase in period?

The Ambient Air Quality Criteria (AAQC) took effect immediately on March 20, 2018.

The decision notice was published on the Environmental Registry at:

<https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTMyOTQ1&statusId=MjA1MjUz>.

The Local Air Quality Regulation (O.Reg. 419/05) standards have a five-year phase-in period. The new SO₂ standard takes effect on July 1, 2023.

CLC Question: Are there any non-attainment areas in Ontario with the new regulation? If so, how many and where are they?

According to the 2016 Air Quality in Ontario Report (<https://www.ontario.ca/document/air-quality-ontario-2016-report>) which publishes the data from the Ontario-wide air quality monitoring network, the 1-hour SO₂ concentration exceeded 40 ppb in Windsor, Sarnia, Hamilton, and Sudbury. This concentration was exceeded less than 1% of the time at all locations.