FAQs

1) How do we plan to reduce SO_2 and NO_x emissions?

With the new regulations and modelling results, Ash Grove Mississauga has budgeted more than $100M to complete a phased approach to reductions of both SO2 and NOx ground-level concentrations.

- Immediate Actions: reduce SO2 ground level concentrations to below the Upper Risk Threshold (URT) as soon as possible.
- Long term: to reduce SO2 and NOX ground level concentrations to meet Ontario's generic air quality standards.

With eight main action plan items, Ash Grove has committed to invest over $100M to implement the required strategies and steps mentioned in the action plan to meet the generic standards. These reductions will be in addition to the actual reductions over the past 20 years. The overview of the eight-stage Action Plan is outlined in the document, found here.

2) Why will the action plan take so long?

It is important to note that certain aspects of the plan will require further technical and engineering studies before they can be fully implemented and support emissions reduction. Additionally, there will be time required to complete validation, design, procurement and installation of the required actions.

3) What actions were taken in 2018 when the new limits were announced?

In 2018, Ash Grove Cement (AGC) reviewed the new 2023 limits using the accepted AERMOD modelling software for emissions which is typically used in Ontario. AGC found that our emissions performance was close to meeting generic standards with almost minimal operation changes and that AGC would meet the new standards.

4) Why has there been a change in models?

In 2021, due to the plant's proximity to the lake, the MECP requested AGC Mississauga adopt a new modelling software, CALPUFF. Our consultants developed and validated the latest model in response to the MECP's request, which took over 15 months and included MECP guidance and feedback. In 2023, the new model was validated and agreed upon by the MECP and AGC, and work on the action plan development began.

5) Why weren't you using this model before?

Prior to using CALPUFF, Ash Grove used AERMOD to model air emissions. AERMOD is an approved dispersion model by the MECP and is commonly used by industry in Ontario, and across North America.

6) Why didn't this happen sooner?

Ash Grove was close to compliance when the new regulatory limit was announced in 2018, according to one of the MECP's standard air emission models, AERMOD. Therefore, no significant changes were anticipated to be required. In 2022, with the requested change to CALPUFF modelling by the MECP, Ash Grove's modelled emissions in 2023 increased significantly, with no operational or process changes at the facility. The significant increase in emissions, caused by the change in air emission models, prompted the development of a site-specific standard application to be prepared.

7) **What are the sources of emissions?**

SO2 and NOx have different sources.

- SO2 is primarily coming from our raw materials (limestone), and
- NOx is a result of the combustion process.

8) **How do we calculate or track our emissions?**

Data from the plant's Continuous Emission Monitoring System (CEMS) is used to input plant emissions for modelling purposes. Modelled results, used for this compliance assessment, are the outputs of computer software, which calculates emission rates based on operational data.

The CALPUFF model uses the worst emissions scenario from the CEMS, with the worst weather conditions over a 5-year period. As such, CALPUFF provides a much more conservative estimate compared to AERMOD.

9) **Why is your SSS application so much higher than the limits?**

The Site-Specific Standard is based on the maximum emission scenario using a one-hour average, developed with the Ministry as described in questions #6 for the facility, i.e. the worst operating conditions coupled with the worst weather conditions. The Maximum Emission Scenario is what is being requested in the SSS, as outlined in the Site-Specific Standard Guidance provided by the MECP and we do not expect to exceed the maximum emission scenario throughout the duration of the SSS.

10) **What is the difference between modelled and monitored concentrations?**

Modelled concentrations are calculated using an air emissions model, such as AERMOD or CALPUFF, with emissions data from our Continuous Emissions Monitoring Software (CEMS) as inputs.

Our ambient monitoring program tracks emissions at two on-site stations that measure actual concentrations at the specific locations continuously. The ambient air monitoring stations and the corresponding management program are routinely audited by the MECP.

11) **What are the risks associated with these two substances?**

Guidance on SO2:
https://www.airqualityontario.com/science/pollutants/sulphur.php
Guidance on NOx:
https://www.airqualityontario.com/science/pollutants/nitrogen.php

12) **Why did you send us a notice in the mail?**

The Site Specific Standard application process involves consultation with residents, neighbours, and businesses to ensure that we address and capture any questions or comments in our application. Following the guidelines of the Site Specific Standard application process resulted in Ash Grove Mississauga distributing over 200,000 post cards via Canada Post in November 2023. Published notices also appeared on local newspaper websites inviting community members to attend our December 2023 public consultation session.