

**Approval for Site-specific Standards Issued
Pursuant to s.35(1) of O. Reg. 419/05**

Approval Number: 2245-DC3KCQ

Reference Number: 1875-CZUK7E

Issue Date: XX XX, 20XX

Expiry Date: June 30, 2031

Site-specific
Standard Issued
to: CRH Canada Group Inc. operating as Ash Grove
2391 Lakeshore Road West
Mississauga, Ontario
L5J 1K1

Site Location: Ash Grove Mississauga Cement Plant
2391 Lakeshore Road West
Mississauga City, Regional Municipality of Peel

DEFINITIONS - TERMS

For the purpose of this site-specific standard approval for Sulphur Dioxide, the following definitions apply:

- (1) "Action Plan" means the document entitled "Action Plan", dated December 19, 2023 and an addendum dated November 27, 2024 submitted by the Company as part of its Request. The Action Plan includes but is not limited to the items summarized in Appendix 1 of this Approval, and Appendix 1 also includes the anticipated completion dates for these items.
- (2) "Approval" means this site-specific standard approval (Approval Number 2245-DC3KCQ), reference number 1875-CZUK7E issued XX XX, 202X.
- (3) "Company" means CRH Canada Group Inc. and includes any successors and assigns in accordance with section 19 of the EPA.
- (4) "Director" means a public servant who works in the Ministry and is appointed pursuant to section 5 of the EPA for the purpose of section 35 of the Regulation.
- (5) "EPA" means the Environmental Protection Act, R.S.O. 1990, c. E.19, as amended from time to time.
- (6) "Facility" means the Company facility referred to as Ash Grove Mississauga Cement Plant or Ash Grove and located at 2391 Lakeshore Road West, Mississauga, Ontario.
- (7) "Ministry" means the Ontario Ministry of the Environment, Conservation and Parks.
- (8) "Ministry Review Report" means the report, dated XX XX, 20XX that provides a written review by Ministry staff of the Request by the Company for a site-specific standard for Sulphur Dioxide for a 1-hour averaging period.

- (9) "POI" means point of impingement and has the same definition as section 2 of the Ontario Regulation 419/05.
- (10) "Regulation" means Ontario Regulation 419/05: Air Pollution – Local Air Quality made under the EPA.
- (11) "Request" means the request made under section 32 of the Regulation dated December 15, 2023 and all additional supporting information, submitted by the Company with respect to the Sulphur Dioxide 1-hour averaging period standard listed in Schedule 3 of the Regulation and includes,
- i. the request document signed by Raul Morales;
 - ii. an Emission Summary and Dispersion Modelling Report;
 - iii. a Technology Benchmarking Report;
 - iv. a Public Consultation Report;
 - v. the Action Plan; and
 - vi. the additional supporting documents provided on August 13, 2024, November 27, 2024 and February 7, 2025.
- (12) "Section 7 Director" means a public servant who works in the Ministry and is appointed for the purpose of section 7 of the Regulation.
- (13) "Sulphur Dioxide" means the contaminant identified by the Chemical Abstract Number 7446-09-5.

GROUND'S FOR APPROVAL

In accordance with section 35 of the Regulation,

A. I, the Director, am satisfied that:

1. The Request is consistent with subsection 32(1), paragraph 7 of the Regulation.
 - a. Because of a notice given by the Section 7 Director on October 20, 2022 under subsection 7 (1) of the Regulation, there is only one approved dispersion model that may be used by the Company with respect to Sulphur Dioxide over a 1-hour averaging period, namely CALPUFF version 7.2.1, level 150618 used in conjunction with the CALMET version 6.5.0, level 150223, and that approved dispersion model is not referred to in paragraphs 1 to 5 of subsection 6 (1) of the Regulation,
 - b. The Company discharges or causes or permits the discharge of Sulphur Dioxide from the Facility, and
 - c. According to CALPUFF version 7.2.1, level 150618 used in conjunction with the CALMET version 6.5.0, level 150223 discharges of Sulphur Dioxide from the Facility would result in the concentration of Sulphur Dioxide at a POI exceeding the air standard set out in Schedule 3 of the Regulation for Sulphur Dioxide over a 1-hour averaging period.

2. The requirements of section 32 of the Regulation have been met.
 3. The Request satisfies the requirements of section 33 and other relevant portions of the Regulation.
 4. The notification and holding of a public meeting and follow-up to the public meeting by the Company met the requirements under Section 34 of the Regulation.
- B.** Based on the above conclusions and the information that I have reviewed, including the Request, the Ministry Review Report, the Facility description in the Request and various interactions with the Company, I am of the opinion that:
1. The Company cannot comply with section 20 of the Regulation with respect to the Sulphur Dioxide standard of 100 micrograms per cubic metre over a 1-hour averaging period in Schedule 3 of the Regulation because it is not technically feasible for the Company to comply.
 2. For each applicable time period set out in Table 1 below, the site-specific standard for Sulphur Dioxide, set out in Table 1 below for the time period, is the minimum difference necessary to enable the Company to comply with section 20 of the Regulation.
 3. The end date for the Approval is appropriate having considered the following:
 - a. The nature of Sulphur Dioxide;
 - b. The frequency with which the inability to comply with section 20 referred to in sub clause 35 (1)(b)(i) of the Regulation would occur; and,
 - c. Whether there are any acute effects associated with Sulphur Dioxide.
 4. There is no public interest reason sufficient to require denial of the Request.
 5. For each applicable time period set out in Table 1 below, the site-specific Sulphur Dioxide standard is not likely to permit discharges of the contaminant that too frequently result in the concentration of the contaminant at a POI located on a place referred to in subsection 30(8) of the Regulation exceeding the other time period upper risk threshold set out for Sulphur Dioxide in Schedule 6 of the Regulation.
 6. Compliance with this Approval will result in improvements to reduce discharges to air.
- C.** The Company was provided a draft copy of the Approval on December 19, 2024 and was provided an opportunity to make written submissions to the Director during the period that ended 30 days after the draft was given.

SITE-SPECIFIC STANDARD APPROVED

Pursuant to s.35 (1), (4), (4.1) and (5) of the Regulation, with respect to discharges from the Facility, references in the Regulation to a standard set out in Schedule 3 for Sulphur Dioxide shall be deemed, for each applicable time period set out in Table 1, to be references to the corresponding site-specific standard set out in Table 1 for the averaging period set out in Table 1.

The standard with an annual averaging period for Sulphur Dioxide set out in Schedule 3 of the Regulation remains applicable to the discharges from the Facility.

Table 1: Site-Specific Standard for the Facility

| Contaminant | Contaminant Chemical Abstracts Service No. | Applicable Time Period | Site- specific Standard ($\mu\text{g}/\text{m}^3$) | Site-specific Standard Averaging Period |
|-----------------|--|---|--|---|
| Sulphur Dioxide | 7446-09-5 | From the Date of this Approval to June 30, 2027 | 1256 | 1-hour |
| Sulphur Dioxide | 7446-09-5 | From July 1, 2027 to December 31, 2028 | 690 | 1-hour |
| Sulphur Dioxide | 7446-09-5 | From January 1, 2029 to June 30, 2031 | 320 | 1-hour |

EXPIRY

In accordance with subsection 35 (9) of the Regulation, this Approval shall expire on June 30, 2031 after which the standard set out in Schedule 3 to the Regulation for the 1-hour averaging period will apply to discharges of Sulphur Dioxide from the Facility.

The above noted Request is approved under Section 35 of the Regulation.

This Approval is issued this XXth day of XX 202X.

XXXXXXXXXX

Director, Section 35, O. Reg. 419/05
Air Policy and Programs Branch

Appendix 1: Summary of Action Plan Items

| Milestone | Action | Details | Anticipated Completion Date |
|-----------|---|---|---|
| 1 | Improve operating procedures and process optimization | Process Optimization | From the date of this Approval to December 31, 2026 |
| | | Investigate peak Sulphur Dioxide emissions, establish standard operating procedures (SOPs), train/retrain operators | |
| | | Establish best practice SOPs and train/retrain operators | |
| | | Implement improved SOPs and continuous monitoring | |
| | Install new or modified sorbent injection system for Main Stack and ABP Stack | Conduct sorbent trials/efficiency studies/investigation, feasibility assessment and preliminary engineering | |
| | | Complete detailed engineering and procurement processes | |
| | | Implement sorbent injection system improvements | |
| | Verify effectiveness of the action steps under Milestone 1 | Performance verification period (6 months duration) | June 30, 2027 |
| 2 | Install new or modified sorbent injection system for VRM Stack and AFM Stack | Conduct sorbent trials/efficiency studies/investigation, feasibility assessment and preliminary engineering | June 30, 2028 |
| | | Complete detailed engineering and procurement processes | |
| | | Implement sorbent injection system improvements | |
| | Verify effectiveness of the action steps under Milestone 2 | Performance verification period (6 months duration) | December 31, 2028 |
| 3 | Discharge through Main Stack | Conduct trade-off study and preliminary engineering for ducting ABP, AFM and VRM gases to the Main Stack | December 31, 2030 |
| | | Complete detailed engineering, procurement and execution/commissioning | |
| | Verify effectiveness of the action steps under Milestone 3 | Performance verification period (6 months duration) | June 30, 2031 |

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