

## Director Approval

WHEREAS, under subsection 22(1) of the *Occupational Health and Safety Act*, a Director may in accordance with the regulations or the OHS Code, issue an approval to any person provided the person meets any terms or conditions that the Director considers necessary to maintain the health or safety of a person,

AND WHEREAS, under subsection 22(3) of the *Occupational Health and Safety Act*, the Director may impose terms and conditions the Director considers necessary on the approval and those terms and conditions are part of the approval,

AND WHEREAS the *Occupational Health and Safety Code* includes a provision pertaining to the adjustment of Occupational Exposure Limits for substances for work shifts longer than 8 hours,

AND WHEREAS for work shifts longer than 8 hours, an employer must adjust the Occupational Exposure Limit of a substance by a generic formula that is not specific to a given substance ('Brief & Scala' model) prescribed in the *Occupational Health and Safety Code* or by another method that uses recognized scientific principles that is approved by a Director,

AND WHEREAS recognized scientific principles exist for the adjustment of the Occupational Exposure Limit for work shifts longer than 8 hours, one of which is published by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST) du Québec ("Quebec model") that uses the Haber method to calculate adjusted exposure limits, which is recognized by the American Conference of Governmental Industrial Hygienists which publishes Threshold Limit Values for chemical substances, which Alberta's Occupational Exposure Limits for chemical substances are largely based,

AND WHEREAS for the substance of **respirable crystalline silica** (CAS numbers 14464-46-1 and 14808-60-7), the Quebec model can be used to calculate an adjusted exposure limit for work shifts longer than 8 hours,

AND WHEREAS I, Mark Rice, a Director designated under the *Occupational Health and Safety Act*, am satisfied that the Quebec model meets the requirements under section 18(3) of the *Occupational Health and Safety Code* as provided for in this approval,

I hereby approve that:

- 1 Pursuant to section 18(3) of the *Occupational Health and Safety Code*, the method described in *Guide for the adjustment of permissible exposure values (PEVs) for*

*unusual work schedules*, Technical Guide T-22, 4<sup>th</sup> edition (2015), published by the Institute de Recherche en Sante et en Securite du Travail (IRSST) du Quebec (“Quebec model”) is approved for use in Alberta to adjust the Occupational Exposure Limit for the substance of **respirable crystalline silica** (CAS numbers 14464-46-1 and 14808-60-7) for work shifts longer than 8 hours.

This approval applies to the following persons:

1. Any employer to which section 18 of the *Occupational Health and Safety Code* applies.

This approval is subject to the following terms and conditions, which are part of this approval:

1. The employer must:
  - (a) use Alberta’s Occupational Exposure Limit for respirable crystalline silica as listed in Schedule 1, Table 2 of the *Occupational Health and Safety Code* when applying the Quebec model (“**complex method**”), or
  - (b) use the following adjusted Occupational Exposure Limits for respirable crystalline silica (based on applying the Quebec model) (“**simple method**”),
    - i. **0.025 mg/m<sup>3</sup>** for work schedules averaging **less than 40 hours per week** (e.g., three 12-hour shifts followed by four days of rest),
    - ii. **0.025 mg/m<sup>3</sup>** for work schedules averaging **40 hours per week** (e.g., four 10-hour shifts followed by three days of rest),
    - iii. **0.024 mg/m<sup>3</sup>** for work schedules averaging **42 hours per week** (e.g., seven 12-hour shifts followed by seven days of rest, or fourteen 12-hour shifts followed by fourteen days of rest),
    - iv. **0.021 mg/m<sup>3</sup>** for work schedules averaging **48 hours per week** (e.g., six 8-hour shifts followed by one day of rest or four 12-hour shifts followed by three days of rest),
    - v. **0.020 mg/m<sup>3</sup>** for work schedules averaging **50 hours per week** (e.g., five 10-hour shifts followed by two days of rest),
    - vi. **0.017 mg/m<sup>3</sup>** for work schedules averaging **60 hours per week** (e.g., six 10-hour shifts followed by one day of rest, twelve 10-hour shifts followed by two days of rest, five 12-hour shifts followed by two days of rest, or ten 12-hour shifts followed by four days of rest),
    - vii. **0.014 mg/m<sup>3</sup>** for work schedules averaging **72 hours per week** (e.g., six 12-hour shifts followed by one day of rest, twelve 12-hour shifts followed by two days of rest, or twenty-four 12-hour shifts followed by four days of rest), or
    - viii. the lower of the two Occupational Exposure Limits specified in this list if the average hours in a work schedule falls between two adjacent items in this list.

**This approval comes into effect on July 12, 2023.** This approval shall be effective for a period of ten (10) years from the effective date, unless varied, suspended or revoked under subsection 22(6) of the *Occupational Health and Safety Act*.

This approval may be varied, suspended or revoked by a Director at any time.

The terms and conditions of this approval are enforceable and must be followed if the approval is used: as per subsection 22(4) of the *Occupational Health and Safety Act*, a person to whom this approval applies shall ensure that this approval or the original legislative requirement is complied with. All other requirements of the occupational health and safety legislation must continue to be met.

DATED at Edmonton, Alberta this 12 day of July, 2023.

---

Mark Rice  
Director, Occupational Health and Safety