

February 3, 2021

Re: Managing Fly Ash Supply in British Columbia

Dear Specifiers and Engineers,

The supply of locally sourced fly ash to our market has become more disrupted as utilities transition their fuel sourcing from coal over to natural gas. The disruption in fly ash supply from a given source in Western Canada is a temporary logistical issue.

As a result of this transition, multiple sourcing of fly ash by concrete producers may occur and this practice has implications for contractors, owners, and concrete suppliers. Changes in the fly ash source may affect the content and stability of entrained air, concrete set times, rate of strength gain, workability (slump), ultimate strength, and efficiency of admixtures. A fly ash change may require additional submittals to your projects, field testing and monitoring, concrete trials and/or additional qualification testing.

Additionally, there are some recommended measures the engineering and specifying community can take to limit disruption on site due to fly ash source changes:

1. Communication with the supplier regarding pours that would be affected by fly ash changes well in advance of the pour date, especially:
  - a. 56 day, and later age, strength specified mixes
  - b. mass pours with maximum heat requirements
  - c. LEED projects with recycled content expectations
  - d. High Volume Supplementary Cementing Material (HVSCM) mixes
  - e. 56-day strength specified mixes, and
  - f. volume of upcoming pours

These all allow better opportunities for the supplier to plan out future need of fly ash for your project.

2. Use Certified testing personnel at the job site. If you have a critical pour with tight owner onsite acceptance and mix adjustment tolerances, communicate with your concrete producer about having testing at the batch plant to limit the chances of issues on site. All testing personnel need a protocol for communicating results to someone with concrete knowledge, such as the concrete producer lab supervisor or Quality Control (QC) manager.
3. Implement a well-defined protocol for communication with contractors and owners regarding material changes.
4. For further information, please reference CSA A23.1-19, Clause 4.2.

The Fly Ash Technical Subcommittee of the Canadian cement standard CSA A3000 is actively working to update the current specification for fly ash to increase the potential sources of these materials. Be advised that approval of any proposed adjustments will likely take the better part of a year to attain.

Sincerely,



Carolyn Campbell  
Executive Director