



Economic Feasibility Executive Summary – DRAFT

This Economic Feasibility Report has been prepared to support the Owens Corning Guelph Glass request for a site specific annual standard for hexavalent chromium under Section 32 of Ontario Regulation 419/05: Air Pollution – Local Air Quality (O. Reg. 419/05). This report is an optional element of the request for the site specific standard and has been prepared in accordance with the Ministry of the Environment and Climate Change (MOECC) publications “*Guide to Requesting an Alternative Air Standard*” (GRAAS), December, 2007, and the “*Guideline for the Implementation of Air Standards in Ontario*” (GIASO), March 2009.

The Owens Corning facility is located at 247 York Road in Guelph Ontario. The facility produces textile glass yarn and fiberglass for reinforcements for commercial and industrial markets worldwide. This facility is the sole producer of fiberglass for reinforcements in Ontario and Canada and has been operating in Guelph since 1951. Due to the nature of the process, the facility operates continuously 24 hours per day, 365 days per year. Detailed process descriptions and documentation of emission estimates are located in the Emission Summary and Dispersion Modeling (ESDM) Report.

This is one of the companion documents to the ESDM Report where modeling indicates that the facility would not meet the future hexavalent chromium standard and that a site specific standard is necessary. The other primary companion document is the Technical Benchmarking Report which provides an assessment of the available technologies to reduce point of impingement (POI) concentrations of hexavalent chromium using the top down approach prescribed by Appendix A of the MOECC GRAAS guidance document.

This economic analysis is an important component for further evaluation of technically feasible pollution control strategies. The Technical Benchmarking Report and the Economic Feasibility Report are the primary documents for developing the Action Plan for reducing point of impingement concentrations. The economic assessment methodology employed derives a dimensionless value that provides an indicator of Total Resource Effectiveness (TRE) for the POI reduction strategy being evaluated. For each strategy, the TRE calculation considers the potential POI reduction that could be achieved, contrasted with the costs required to obtain, install and operate it.

Owens Corning has followed the general guidelines below as provided by the MOECC as part of the economic feasibility assessment. The TRE values provide an indication of the relative effectiveness of potential POI reduction methods, and is useful to assess the relative effectiveness of one option versus another. It is not intended to be a bright-line test.

- TRE values less than 1 generally indicates a reasonably effective use of resources to achieve the POI improvement
- TRE values between 1 and up to about 10 may suggest further consideration is appropriate and/or refinement of assumptions are required

- TRE values over 10 generally indicate the potential POI reduction technique is not a good use of resources and perhaps other options should be considered

The following table presents the technically feasible pollution control strategies along with the strategy ranking in terms of POI reduction achieved and the total resource effectiveness.

Summary of the Economic Feasibility Assessment of Technically Feasible Pollution Control Strategies

Pollution Control Strategy Description	Rank	TRE Value(s)	Consideration for Implementation
Control Strategies that include an Electrostatic Precipitator (DEP/WEP) or Dust Collector on furnace and forehearth stacks with various other technologies.	1 - 5	65 - 89	Not selected - economic assessment indicates these technologies are not a good use of resources
Installation of state of the art combustion controls systems and use of improved construction techniques on all remaining sections of the process (forehearths). Additional re-engineering of 4 stacks to overcome dispersion challenges.	6	11	Incorporate into the Action Plan even though the economic feasibility assessment indicates it may not be a good use of resources
Converting the forehearth to air/gas combustion and installation of a scrubber on the forehearth stack.	7	102	Not selected - economic assessment indicates these technologies are not a good use of resources
Converting the forehearth to air/gas combustion.	8	25	Not selected - economic assessment indicates this technology is not a good use of resources
Five additional technically feasible pollution control strategies were evaluated.	9 -13	7 - 122	Not selected - economic assessment indicates this technology is not a good use of resources

Economic feasibility decisions were based upon the TRE values as the accepted methodology by the MOECC. Owens Corning has selected to implement the pollution control strategy that includes installation of state of the art combustion controls systems and use of improved construction techniques on all remaining sections of the process (forehearths). Additionally, 4 exhaust stacks will be re-engineered to overcome dispersion challenges.

This pollution control strategy (Action Plan) has a TRE value greater than 10 (which may not be considered a good use of resources) however, this strategy achieves significant reductions in the POI concentration.