

Air Emissions and Dispersion Modelling

Compliance with the Ministry of the Environment, Conservation and Parks' Regulatory Air Limits

The Ministry has developed Province-wide Point of Impingement (POI) limits to protect human health and the environment.

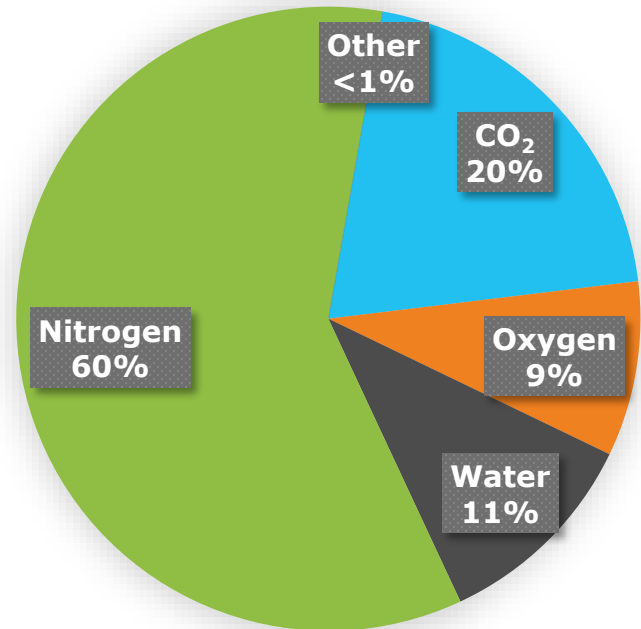
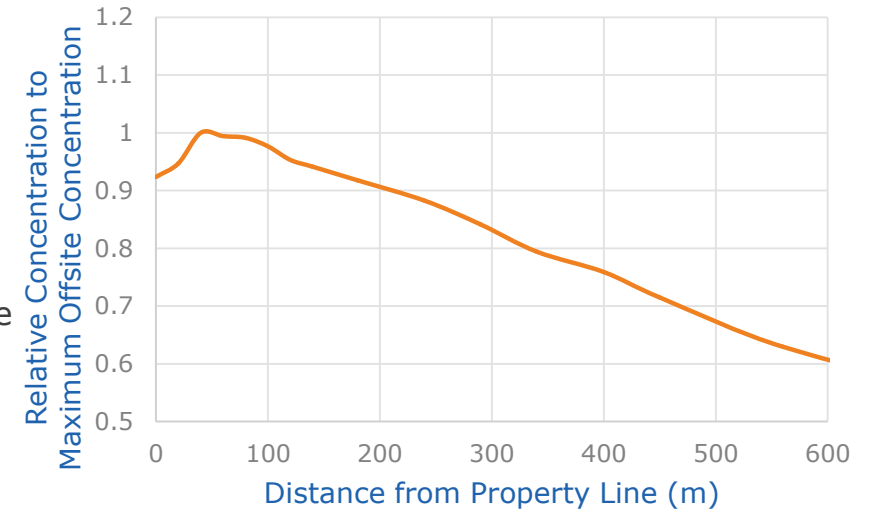
The modelled maximum POI concentrations from St. Marys Cement, based on maximum operating scenarios, are below these limits. Prior to implementing any changes at the facility, modelling is performed to confirm air compliance.

Emission Modelling and Dispersion

Modelled offsite maximum concentration resulting from the kiln stack reduces rapidly with distance.

Purpose of the stack is to promote dispersion. This is influenced by height, velocity and temperature.

From Kiln Stack to Northeast Direction



*Trace amounts including:

- Carbon Monoxide
- Nitrogen Oxides
- Sulphur Dioxide
- Other Sulphur Compounds
- Volatile Organic Compounds
- Hydrochloric Acid
- Particulates
- Ammonia
- Metals
- Polycyclic Aromatic Hydrocarbons
- Dioxins & Furans

The majority of kiln stack emissions are ambient air, carbon dioxide and water vapour.

Additional Regulatory Reporting Requirements

St. Marys Cement submits several air quality-related annual reports to the provincial and federal government, including:

- O.Reg. 194/05 (SO₂ & NO_x)
- O.Reg. 390/18 Greenhouse Gas (GHG) Reporting
- Ontario Toxics Reduction Program
- National Pollutant Release Inventory (NPRI)
- Federal GHG Reporting Program (GHGRP)