



Emission Reporting

Prepared for: SMC St. Marys Cement Plant
Community Liaison Committee Meeting

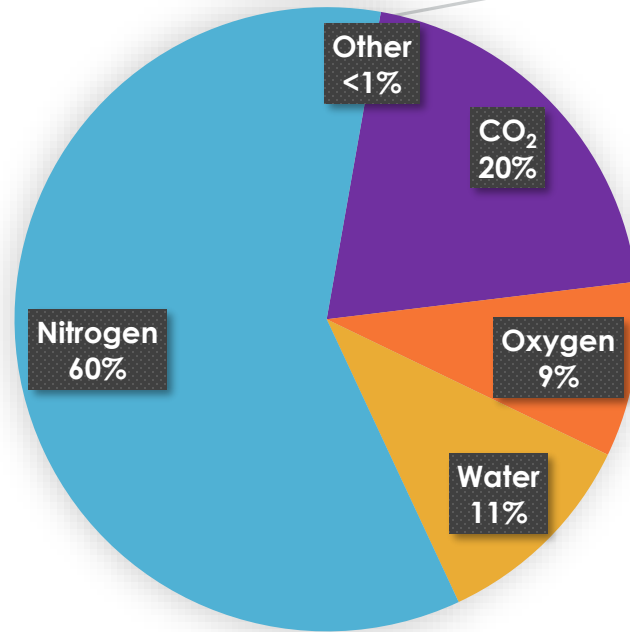
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BCX Environmental Consulting
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Outline

- ▶ What is in the Kiln Stack Emissions?
- ▶ Odour Emissions from the Kiln Stack
- ▶ Emission Reporting Programs

What is in the Kiln Stack Emissions?

- ▶ The majority of kiln stack emissions are nitrogen, oxygen, carbon dioxide and water vapour.



- ▶ Other emissions (<1%) include:
 - ▶ Carbon Monoxide (CO)
 - ▶ Nitrogen Oxides (NO_x)
 - ▶ Sulphur Dioxide (SO₂)
 - ▶ Other Sulphur Compounds
 - ▶ Volatile Organic Compounds (VOCs)
 - ▶ Hydrochloric Acid (HCl)
 - ▶ Particulates
 - ▶ Ammonia (NH₃)
 - ▶ Metals
 - ▶ Polycyclic Aromatic Hydrocarbons (PAHs)
 - ▶ Dioxins & Furans (D&F)s

Odour Emissions from the Kiln Stack

- ▶ Odour is a complex issue and results predominantly from the raw materials (i.e. limestone)
- ▶ SMC reviews the NO_x and SO₂ emissions when an odour complaint is received, but no correlation between odour events and these contaminants have been identified
- ▶ Odours are not caused by one single particular contaminant
- ▶ Occasional odour testing is performed by SMC at request of the Ministry

Emission Reporting Programs

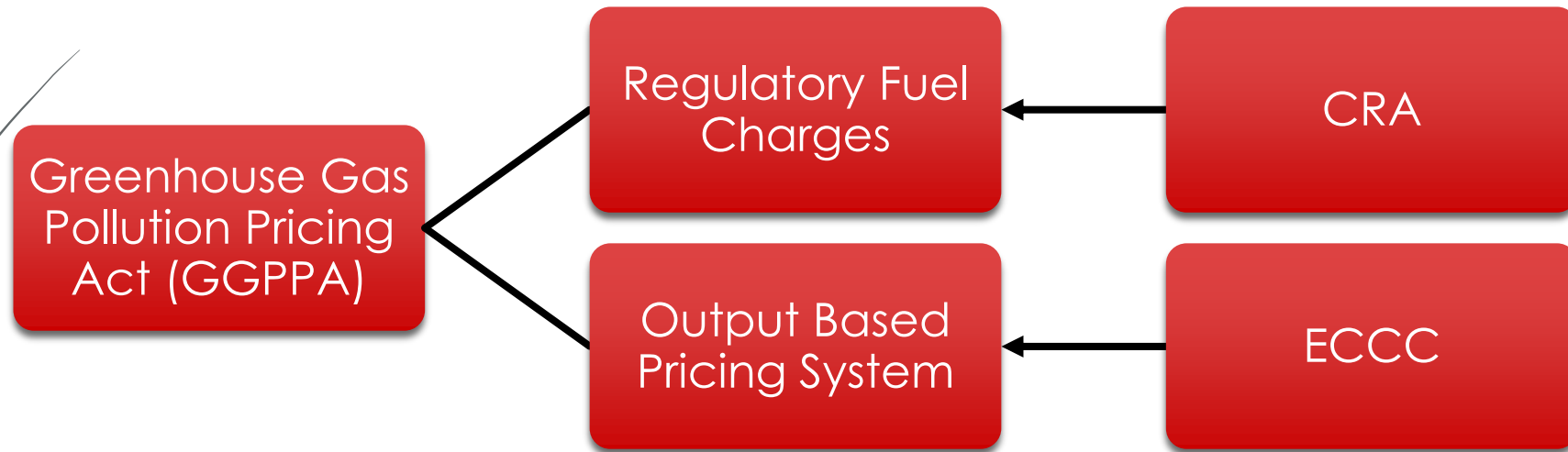
- The St. Marys Cement plant is required to report **facility-wide** emissions on an annual basis to the following federal and provincial reporting programs:

| Reporting Program | Federal/Ontario | Contaminants |
|---|-----------------|-------------------------|
| National Pollutant Release Inventory (NPRI) | Federal | Multiple |
| Toxic Reduction Act (TRA) | Ontario | Same as NPRI |
| Federal Greenhouse Gas Reporting Program (GHGRP) and Output Based Pricing System (OBPS) | Federal | GHGs |
| Ontario Greenhouse Gas Reporting Program (O. Reg. 390/18) | Ontario | GHGs |
| O. Reg. 194 Reporting | Ontario | NOx and SO ₂ |
| Multi-Sector Air Pollutant Regulations | Federal | NOx and SO ₂ |

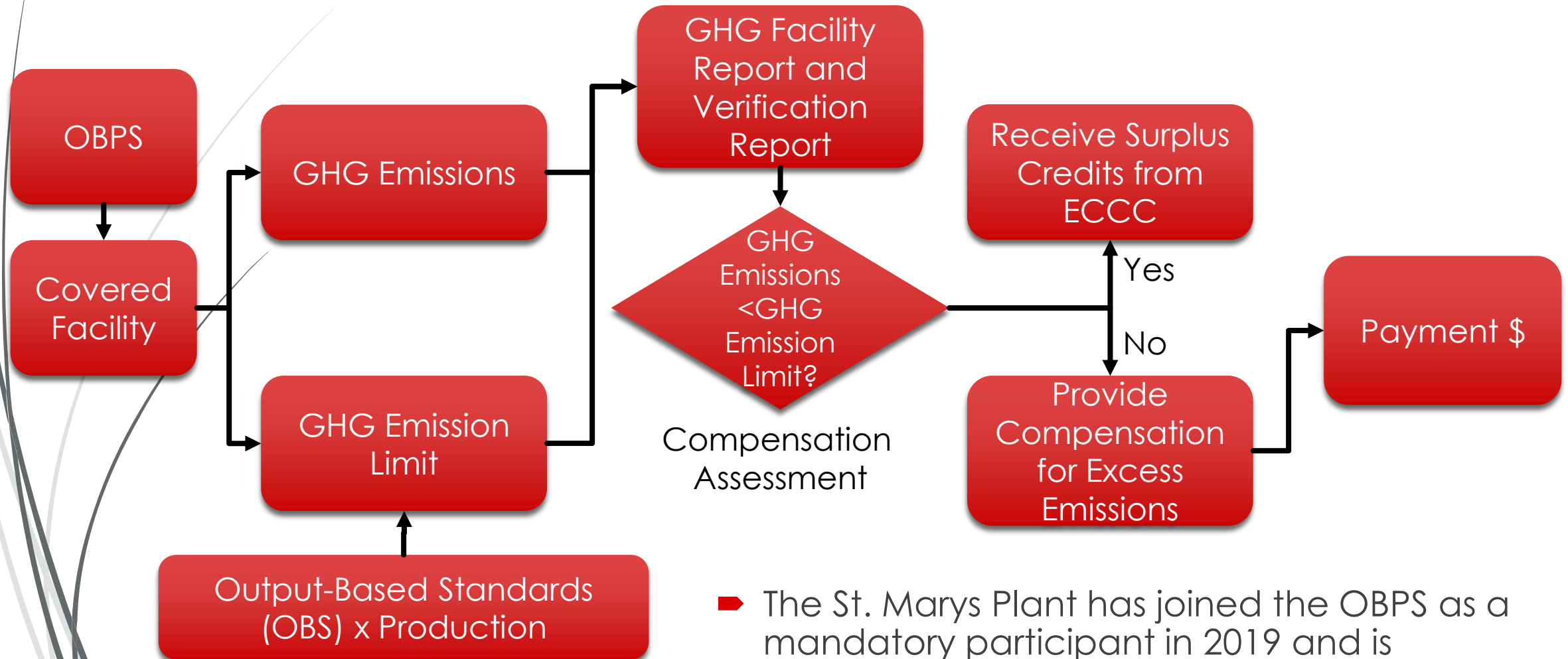
GHG Reporting Programs

- ▶ The St. Marys Plant is required to report/verify their GHG emissions annually for both federal and Ontario GHG reporting programs
- ▶ GHG emissions are estimated using emission factors with site specific inputs, including:
 - ▶ Raw material consumption rates
 - ▶ Clinker composition
 - ▶ Fuel consumption rates
 - ▶ Fuel specifications

Overview of the Federal Carbon Pollution Pricing System – “Carbon Tax”



OBPS "Carbon Tax" Flow Diagram



- The St. Marys Plant has joined the OBPS as a mandatory participant in 2019 and is currently paying "carbon tax"

Thank you!

Please email your questions to St. Marys
Cement after the meeting.

