

## **Cement Manufacturing Facilities**

---

### General Requirements:

- All cement manufacturing facilities are subject to the proposed greenhouse gas reporting rule
- Cement production source category consists of:
  - “each kiln and in-line kiln/raw mill at any portland cement manufacturing facility including alkali bypasses, and includes [those] that burn hazardous waste.”

### Emissions Determination:

- Kilns with qualifying CEMs: use CEMs data to quantify total CO<sub>2</sub> emissions
- Kilns without qualifying CEMs: calculate CO<sub>2</sub> process emissions based on:
  - Production rates and analysis of clinker and CKD from each kiln
    - Measure monthly clinker production
    - Develop a kiln-specific, monthly emission factor from measured CaO content of the clinker
    - Track CKD discarded quarterly
    - Measure CaO content of CKD discarded from each kiln or use a default value
  - Organic carbon content of feed materials
    - Measure annual consumption of raw materials
    - Measure organic carbon content in raw material annually or use a default value of 0.2%
- Calculate CH<sub>4</sub> and N<sub>2</sub>O (and CO<sub>2</sub> if no CEMs) combustion emissions using emission factors and fuel-use quantities described in the proposed rule
  - Facilities with monthly values from the fuel supplier must use those heat values when estimating emissions
  - Use EPA’s default heat content values if no heat content data are available from the fuel supplier

### Reporting Requirements:

- General information, including:
  - Total fuel use
  - Emission factors used

*Proposed Greenhouse Gas Reporting Rule Outline*

- Responsible official
- Annual CO<sub>2</sub>e process and combustion emissions
- Annual clinker production
- Number of kilns at the facility
- Annual cement kiln dust production and the total annual fraction recycled to the kiln
- Annual average carbonate composition in the clinker(s)
- Annual average fraction of calcination achieved at each kiln for each carbonate
- All emission factors developed on-site
- Percent of organic carbon content of the raw material
- Annual consumption of raw materials
- CEMs data (if applicable)

Other Requirements:

- Prepare a written Quality Assurance Plan describing calculation methodology, record retention, emission factors, and CEMs calibrations
- Keep records of production, sampling analysis, fuel use, CEMs certification, etc., for 5 years and make available for auditing by EPA