**Lime Manufacturing Monitoring Checklist**  
Subpart S, Greenhouse Gas Reporting Program

**What Must Be Monitored for Kilns?**

If NOT using a CEMS, measure these parameters…

For determining the monthly emission factor for each type of lime produced:

- ☐ Calcium oxide content for each lime type (metric tons CaO/metric ton lime), analyzed monthly.
- ☐ Magnesium oxide content for each lime type (metric tons MgO/metric ton lime), analyzed monthly.

For determining the monthly emission factor for each type of byproduct/waste sold (including lime kiln dust):

- ☐ Calcium oxide content for each solid lime byproduct/waste type (metric tons CaO/metric ton lime), analyzed monthly.
- ☐ Magnesium oxide content for each solid lime byproduct/waste type (metric tons MgO/metric ton lime), analyzed monthly.

For determining annual CO₂ emissions from each type of byproduct/waste that is not sold (including lime kiln dust and scrubber sludge):

- ☐ Calcium oxide content for each unsold lime byproduct/waste type (metric tons CaO/metric ton lime), analyzed annually.
- ☐ Magnesium oxide content for each unsold lime byproduct/waste type (metric tons MgO/metric ton lime), analyzed annually.
- ☐ Annual weight or mass of unsold byproducts/wastes for each lime type (tons).

For determining annual CO₂ process emissions for all kilns:

- ☐ Monthly weight or mass of each lime type produced (tons)
- ☐ Monthly weight or mass of byproducts/waste sold (such as lime kiln dust) for each lime type (tons)
For all kilns combined (i.e., for the whole facility):

- Annual average emission factors for each calcined byproduct/waste sold
- Annual average emission factors for each lime product type produced
- Annual quantity (tons) of lime product sold
- Annual amount of CO₂ captured for use in the onsite process (if applicable)
- Beginning and end of year inventories for each lime product
- Beginning and end of year inventories for lime byproducts/wastes
- Annual average results of chemical composition analysis of each type of lime product produced and calcined byproduct/waste sold
- Annual lime production capacity (tons)

If using a CEMS:

In addition to the monitoring requirements under 40 CFR subpart C for the Tier 4 Calculation Methodology, measure these parameters for each kiln:

- Annual amount of lime product sold, by type (tons)
- Annual amount of lime byproduct/waste sold, by type (tons)
- Annual amount of lime byproduct/waste not sold, by type (tons)
- Annual amount of lime product not sold, by type (tons)
- Beginning and end of year inventories for each lime product
- Beginning and end of year inventories for lime byproducts/wastes

See also the information sheet for Lime Manufacturing at: https://www.epa.gov/ghgreporting/subpart-s-information-sheet.

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