

# 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:**

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|--|--|
| <input type="checkbox"/> Calcium oxide content for each lime type (metric tons CaO/metric ton lime), analyzed monthly. | <input type="checkbox"/> Magnesium oxide content for each lime type (metric tons MgO/metric ton lime), analyzed monthly. |
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##### **For determining the monthly emission factor for each type of byproduct/waste sold (including lime kiln dust):**

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|--|--|
| <input type="checkbox"/> Calcium oxide content for each solid lime byproduct/waste type (metric tons CaO/metric ton lime), analyzed monthly. | <input type="checkbox"/> Magnesium oxide content for each solid lime byproduct/waste type (metric tons MgO/metric ton lime), analyzed monthly. |
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##### **For determining annual CO<sub>2</sub> emissions from each type of byproduct/waste that is not sold (including lime kiln dust and scrubber sludge):**

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| <input type="checkbox"/> Calcium oxide content for each unsold lime byproduct/waste type (metric tons CaO/metric ton lime), analyzed annually.   | <input type="checkbox"/> Annual weight or mass of unsold byproducts/wastes for each lime type (tons). |
| <input type="checkbox"/> Magnesium oxide content for each unsold lime byproduct/waste type (metric tons MgO/metric ton lime), analyzed annually. |   |

##### **For determining annual CO<sub>2</sub> process emissions for all kilns:**

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| <input type="checkbox"/> Monthly weight or mass of each lime type produced (tons) | <input type="checkbox"/> Monthly weight or mass of byproducts/waste sold (such as lime kiln dust) for each lime type (tons) |
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**For all kilns combined (i.e., for the whole facility):**

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|--|--|
| <input type="checkbox"/> Annual average emission factors for each calcined byproduct/waste sold                  | <input type="checkbox"/> Beginning and end of year inventories for each lime product   |
| <input type="checkbox"/> Annual average emission factors for each lime product type produced                     | <input type="checkbox"/> Beginning and end of year inventories for lime byproducts/wastes  |
| <input type="checkbox"/> Annual quantity (tons) of lime product sold   | <input type="checkbox"/> Annual average results of chemical composition analysis of each type of lime product produced and calcined byproduct/waste sold |
| <input type="checkbox"/> Annual amount of CO <sub>2</sub> captured for use in the onsite process (if applicable) | <input type="checkbox"/> 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...**

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|---|---|
| <input type="checkbox"/> Annual amount of lime product sold, by type (tons)             | <input type="checkbox"/> Annual amount of lime product not sold, by type (tons)           |
| <input type="checkbox"/> Annual amount of lime byproduct/waste sold, by type (tons)     | <input type="checkbox"/> Beginning and end of year inventories for each lime product      |
| <input type="checkbox"/> Annual amount of lime byproduct/waste not sold, by type (tons) | <input type="checkbox"/> 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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