

Kathleen Truesdell

From: Gregory Darvin <darvin@atmosphericdynamics.com>
Sent: Friday, October 22, 2010 4:02 PM
To: Kathleen Truesdell
Cc: Jim McLucas
Subject: FW: OGS startup emissions

Kathleen, the GE startup and shutdown emissions, in lbs/event, are only for the start/shutdown cycle and do not include any of the emissions that would be used to determine compliance at the end of the start cycle. The BAAQMD requires two consecutive CEMs data points at the normal operational BACT levels to determine the end of the start cycle/beginning of the normal operations portion of the process.

Therefore, we would need to add 1 minute of normal operating emissions to GE's startup values. This minute would be to account for the minute in which the startup ends. In this case, the startup emission in draft permit condition 17 would be:

| Pollutant | Maximum Emissions Per Hot/Warm Startup (lb/startup) | Maximum Emissions Per Cold Startup (lb/startup) | Maximum Emissions During Hour Containing a Startup (lb/hour) | Maximum Emissions Per Shutdown (lb/shutdown) |
|---------------------------------------|--|--|---|---|
| NO _x (as NO ₂) | 22.3 | 96.3 | 99.9 | 39.3 |
| CO | 85.2 | 360.2 | 362.4 | 140.2 |
| POC (as CH ₄) | 31.1 | 67.1 | 67.7 | 17.1 |

This is simply calculated as the emissions during a startup/shutdown in lbs/event plus one (1) minute in normal operations (assuming the worst-case full load day during winter conditions. As an example, for NO_x:

NO_x Warm/Hot start in lbs/event = 22.0 lbs

One minute of NO_x emissions during winter full load is calculated as (15.52 lb/hr) * (1 hr/60 min) = 0.3 lb/min

22.0 lbs/event + 0.3 lbs = 22.3 lbs/event

For CO, the additional minute produces 0.2 lbs.

For POC, the additional minute produces 0.1 lbs.

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